



# **Exploration Drilling within Block ER236, off the East Coast of South Africa**

## Supplementary Comments and Responses Report

February 2019

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# Exploration Drilling within Block ER236, off the East Coast of South Africa

Eni

Supplementary Comments and Responses Report

February 2019

For and on behalf of Environmental Resources  
Management

Approved by: Ingeborg McNicoll

Signed:



Position: Senior Partner

Date: 22 February 2019

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Eni South Africa B.V. (“Eni”), and Sasol Africa (Pty) Ltd (“Sasol”) hold an Exploration Right off the East Coast of South Africa. Eni and Sasol are considering the possibility of conducting an exploration drilling programme in Block ER236 (12/3/236) to assess the commercial viability of the hydrocarbon reservoir for future development. The project requires Environmental Authorisation (EA) from the National Department of Mineral Resources (DMR) under the National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended, through an Environmental Impact Assessment (EIA) process.

Acting as an independent assessment practitioner, ERM submitted the Final EIA Report to PASA for adjudication on 14 December 2018.

It has subsequently come to ERM’s attention that there was an oversight during the collation of the Comments and Response Report (CRR) (Annex B8 of the Final EIA Report) and supporting evidence of comments submitted (Annex B9 of the Final EIA Report). Some of the comments received were mistakenly omitted from the CRR and were not responded to by ERM (Annex A). Having carefully reviewed the omitted comments, ERM concludes that no information was presented in those comments that has not been addressed by responses in previous comments received earlier in the public participation process.

ERM has incorporated the above comments into this Supplementary CRR (“SCRR”).

Because there was no new information in the omitted comments, responses to them, or the Final EIA Report, it follows that there was no legal obligation to circulate the SCRR for comment to the Interested and Affected Parties (“I&APs”) before submitting it to the decision-maker.

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Name	Surname	Organisation	Comment	Response
Adrian	Pole	Adrian Pole and Kirsten Youens representing WILDTRUST	<p>1. Introduction</p> <p>These comments are submitted on behalf of WILDTRUST. WILDTRUST, through its WILDOCEANS Programme, has recently launched a campaign called "Only This Much", which seeks to mobilise a regional movement for increased protection across all African national waters and Africa's Southern Ocean territories. This campaign builds on the marine protected area advocacy work being done by a number of organisations including Ocean Unite, WWF-SA, Centre for Environmental Rights and the South African Association for Marine Biological Research (SAAMBR).</p>	<p>It is noted that you represent WILDTRUST and have been appointed to comment on the EIA Report for Exploration Drilling within Offshore Block ER236.</p>
			<p>The initial 30 day period afforded to interested &amp; affected parties (I&amp;APs) to comment on the draft Environmental Impact Assessment (EIA) report ended on 25 October 2018 and, given the complexity and volume of information contained in the draft EIA document and the need for expert input, this comment period was insufficient for WILDOCEANS to obtain the necessary expert input and draft meaningful comments.</p>	<p>ERM extended the comment period by 2 weeks: which closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 calendar days and ERM extended this to 45 calendar days, which is more than the minimum required by law.</p> <p>Under the NEMA EIA Regulation 23(1)(a), the Final EIA Report must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, and/ or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, the ERM EAP was not able to extend the comment period beyond two weeks, as the EAP would then not be able to respond to all comments and finalize in the EIA within the legally prescribed time period allowed for the EIA phase and the application would lapse.</p> <p>In any event, ERM submits that a reasonable time period was provided to stakeholders and I&amp;APs to consider and comment on the Draft EIA Report.</p>
			<p>ERM themselves "experienced unforeseen delays in the finalising of specialist studies for the Exploration Drilling within Block ER236, which resulted in subsequent delays in the drafting of certain chapters of the EIA Report." Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the Final EIA Report by the 3 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the current EIA Application lapsed on the 3 August 2018.</p>	<p>The application for Environmental Authorization lapsed on the 3 August 2018 due to unforeseen delays in the finalising of specialist studies for the Exploration Drilling within Block ER236, which resulted in subsequent delays in the drafting of certain chapters of the EIA Report. The lapse was discussed with the Competent Authority and the relevant decision is reported in Annex C of the Final EIA Report (29 August 2018). PASA consented to lapse the Application and Eni initiated a new EIA process for the project. Due to non-substantial changes from the Scoping Report, the process commenced with submission of an amended application form and the release of the Draft EIA Report for comment.</p> <p>On 13 August 2018 all registered I&amp;APs were sent a notification</p>

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				<p>informing them that the Application had lapsed, and that Eni were initiating a new EIA process for the project</p> <p>On 25 September 2018, an English version of the Draft EIA Report and EMPr was made available to stakeholders and the relevant authorities, for a 30-calendar day comment period (extended later to 45 calendar days) comment period.</p>
			<p>On 11 October 2018 WILDOCEANS requested a 30 day extension of time for the submission of comments. Unfortunately, I&amp;APs were only given a 14 day extension. It is submitted that the extended commenting period was still an unreasonable amount of time in which to obtain necessary expert input on the voluminous and complex EIA Report document. It also resulted in ERM being unable to furnish responses to queries submitted by WILDOCEANS on 3 November 2018. Notwithstanding these problems, this submission is made based on information available at the time. In the circumstances, WILDOCEANS reserves the right to supplement this submission once the draft EIA Report has been finalised, and after ERM has responded to WILDOCEANS queries and to the issues raised herein.</p> <p>We point out that, in terms of regulation 3(8) of the Environmental Impact Assessment Regulations, 2014 (EIA Regulations), a 30 day commenting period is the minimum period for public participation. In terms of regulation 41(6)(b) of the EIA Regulations, the person conducting the public participation process must ensure that participation by potential or registered interested and affected parties (I&amp;APs) is facilitated in such a manner that all such I&amp;APs are provided with a reasonable opportunity to comment on the application.</p>	<p>ERM extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 calendar days and ERM extended this to 45 calendar days, which is more than the minimum required by law. ERM therefore is of the view that a reasonable and sufficient time period was afforded to I&amp;APs to provide comments.</p> <p>ERM notes further that under the NEMA EIA Regulations (Regulation 23(1)(a)), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, extending the comment period by longer than two weeks would have hindered the EAP from responding to all comments appropriately and finalising in the EIA within the legally prescribed time period.</p> <p>The claim that ERM did not respond to queries submitted by WILDOCEANS on 3 November 2018 is incorrect and you are referred to Annexure B8 (Comments and Responses Report) attached to the Final EIA Report, which was submitted for adjudication. Furthermore, refer to your own comment in your correspondence dated 6 November 2018 (page 10), which reads: <i>"On 5 November 2018 ERM responded to the 3 November 2018 letter acknowledging receipt, and advising that ERM 'are currently preparing a response to the questions'. On 6 November 2018 ERM wrote a further email in response, advising as follows: Your letter dated 03 November 2018, received by ERM on Monday 05 November 2018 refers. Based on the volume and detailed nature of the questions, we require coordinated input from the relevant parties (some outside of South Africa) to appropriately address them. We have enlisted the appropriate people to contribute to a response, however, given the short timeframe, we will not be able to provide a response to your questions by COB today as requested. Responses to your questions will be provided in the comments and response report in the Final EIA Report. We</i></p>

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				<i>welcome any additional comments on the EIA Report by 8 November 2018 and these comments will also be included in the Final EIA Report." Refer to Annexure B8 for such comments and the corresponding responses.</i>
			<p>Furthermore, in terms of section 2(4)(f) of the National Environmental Management Act (NEMA), the participation of all I&amp;APs in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured. The NEMA Public Participation Guideline points out that 'Public participation is one of the most important aspects of the environmental authorisation process. It is considered so important that it is the only requirement for which exemption cannot be given. This is because people have a right to be informed about potential decisions that may affect them and to be afforded an opportunity to influence those decisions. Effective public participation also facilitates informed decision-making by the competent authority and may result in better decisions as the views of all parties are considered'.<sup>1</sup></p> <p>1 - GN 807 of 10 October 2012.</p>	<p>The Public Participation process was conducted as per the requirements set out in the applicable legislation. Refer to Chapter 6 of the Scoping Report and Chapter 5 of the EIA Report for a detailed description of the context, purpose, objectives and conduct of the Public Participation Process. Public participation with regards to EIA's in South Africa is determined by the principles of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and elaborated upon in 'GN 657: Guideline 4: Public Participation' (Department of Environmental Affairs, 2017), which states that: <i>"Public participation process in relation to the assessment of the environmental impact of any application for an environmental authorisation, is defined in terms of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) as a process by which potential interested and affected parties are given opportunity to comment on, or raise issues relevant to, the application."</i> ERM has complied with the requirements set out for a fair and inclusive process as detailed (and proven) in the EIA Report.</p> <p>Chapter 5.1 of the EIA states that Public consultation is an inclusive and culturally appropriate process, which involves sharing information and knowledge, seeking to understand the concerns of others and building relationships based on collaboration. It allows stakeholders to understand the risks, impacts and opportunities of the project in order to achieve positive outcomes. The public participation process is designed to provide information to and receive feedback from I&amp;APs throughout the EIA process, thus providing organisations and individuals with an opportunity to raise concerns, make comments and suggestions regarding the proposed project. Stakeholders and I&amp;APs were encouraged to register and participate throughout the process, as detailed in Table 5.1 of the EIA Report.</p> <p>As stated previously, an extensive public participation process was conducted, which complies substantially with the legal requirement to provide a sufficient period for stakeholders to consider the Draft EIA Report so as to form an informed opinion as to the proposed activity.</p>



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Name	Surname	Organisation	Comment	Response
			<p>2.1 Oil Spill Modelling and associated Impact Significance Assessments fatally flawed</p> <p>That a catastrophic oil spill can result in significant environmental and socio-economic impacts is clearly illustrated by the 2010 Deepwater Horizon catastrophe:</p> <p>In addition to the loss of 11 lives, that single event resulted in the release of 124 million gallons of oil, which spread over 43,300 square miles of the GOM [Gulf of Mexico] and 1,300 miles of shoreline in several states. The environmental and other damages caused by the Deepwater Horizon incident were immense and have had long-lasting and widespread impacts on the Gulf and the affected states. For example, as part of a settlement between BP and Federal and state governments, BP has agreed to pay over \$8 billion for natural resource damages caused by the spill and for restoration of natural resources in the Gulf of Mexico region (GOMR). Those damages include severe adverse effects on wildlife, wetlands and other wildlife habitat, recreation and tourism, and commercial fishing... The released oil "was toxic to a wide range of organisms, including fish, invertebrates, plankton, birds, turtles and mammals... [and] caused a wide array of toxic effects, including death, disease, reduced growth, impacted reproduction, and physiological impairments that made it more difficult for organisms to survive and reproduce." In addition, state and local government economic damage claims arising from the Deepwater Horizon incident were significant and have been settled for another \$5.9 billion.<sup>22</sup> - Federal Register Vol. 81 No.83 April 20, 2016 Part III, Department of Interior – Bureau of Safety and Environmental Enforcement, 30 CFR Part 250 – Oil and Gas and Sulfur Operations in the Outer Continental Shelf – Blowout Preventer Systems and Well Control; Final Rule, at p25890.</p>	<p>The Oil Spill Modelling Report is not fatally flawed as suggested by this comment. The reason this report is sound is that it was undertaken by suitably qualified and experienced modellers and was externally peer reviewed to ensure the accuracy of the information presented.</p> <p>Comparisons to Deepwater Horizon cannot be made as it implies that the consequences and impacts of the worst spill disaster in recorded history should be identical despite very different physical conditions related to the oil reservoirs at this location.</p> <p>In fact during Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to Eni's extensive experience in similar lithology in West Africa.</p> <p>PRDW independently verified that the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011). The justification for the blowout scenario is provided in Section 5.5 of the Oil Spill Modelling Report (Annex D4).</p>
			<p>The draft EIA Report acknowledges that '[i]t is not possible to completely eliminate the risk of accidental events occurring',<sup>3</sup> and admits that '[t]he risk of an oil spill (including crude oil and diesel) into the marine environment is inherent in all offshore oil exploration and appraisal projects'.</p> <p>3 - Draft EIA Report, p219. 4 - Draft EIA Report, p220</p>	<p>This statement is correct, however the probability of a release of crude oil from a well blowout is considered rare, with a frequency of incident worldwide being estimated to be 1 in 4,000 wells (<math>2.5 \times 10^{-4}</math>) for exploratory wells drilled where international best practice methods are applied (according to IOGP Report 434-02, 2010). Eni has implemented several measures to reduce the risk associated with geological factors, tools reliability and human errors:</p> <ul style="list-style-type: none"> <li>• Well design</li> <li>• Adopting mitigation and preventing actions and procedures.</li> <li>• Advanced planning and development of contingency plan</li> <li>• Use of performance tools, real time monitoring technologies.</li> </ul> <p>This is necessary to significantly reduce the risk associated with</p>

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				<p>geological factors, tools reliability and human errors.</p> <p>Eni's adoption of top industry and development of new technologies, the adherence and respect of international best practice, standard and procedures, reduces the risk of the blowout frequency from <math>2.5 \times 10^{-4}</math> down to <math>2.5 \times 10^{-6}</math> i.e. 1 case in 400,000 wells drilled.</p>
			<p>However, the draft EIA Report concludes that the post-mitigation potential risks of a catastrophic oil spill are either 'minor' or 'moderate'. To achieve this, ERM relies on risk significance ratings based on likelihood and consequence, combined with the results of its own Oil Spill Modelling (OSM) report.</p>	<p>The 2012, ERM Impact Assessment Standard and methodology was used to determine the risk significance of unplanned events. Refer to Section 7 of the EIA Report for the detailed methodology used. It is important to note that "likelihood" and "consequence" are key indicators used to assess risks as these provide for an indication of the probability and significance (magnitude/ importance) respectively. Without these two indicators, any and/ or all perceived risks could be assessed without appropriate boundaries. This would prove to be an ineffective and time-consuming method of assessment, causing the EAP, specialists and the Competent Authority to focus on potential risks that are improbable or expected to have little significance.</p>
			<p>ERM's approach to this probabilistic risk assessment is replete with subjective value judgments, unsubstantiated assumptions, incomplete or missing information and plans, use of (at best) misleading data and inappropriate critical threshold values. The OSM report is fatally flawed, and taints the Accident Event assessment as well as other impact assessments conducted that rely on this OSM report (such as the Marine Ecology and Fisheries impact assessments and associated specialist studies). Any decision authorising the proposed project based on the draft EIA Report would as a consequence also be fatally flawed, and subject to being set aside on appeal or judicial review.</p>	<p>The Oil Spill Modelling Report (Annex D4) was undertaken by well qualified and suitably experienced professionals using a robust and tried and tested model. The Oil Spill Modelling Report was also independently reviewed and subsequently updated to address the major comments highlighted by the peer reviewer. Therefore, the Oil Spill Modelling Report is not fatally flawed as suggested by this comment.</p> <p>The marine ecology and fisheries studies are also sound as they were undertaken by suitably qualified and experienced specialists. As part of the assessment the marine ecology and fisheries specialists used the peer reviewed Oil Spill Modelling Report to assess the consequence of a spill on marine ecology and the fisheries present in the area of indirect influence.</p>
			<p>Given the limited amount of time afforded to I&amp;APs to comment on the draft EIA Report and specialist studies, it is not possible to document all of the shortcomings identified in ERM's approach. However, some of these shortcomings are highlighted below.</p>	<p>As previously stated ERM extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 calendar days and ERM extended this to 45 calendar days, which is more than the minimum required by law. In any event, ERM submits that a reasonable time period has been provided for stakeholders and I&amp;APs to consider and comment on the Draft EIA Report.</p>



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Name	Surname	Organisation	Comment	Response
			<p>2.1.1 Accidental Events</p> <p>ERM indicate that an unplanned/accidental event is defined as ‘a reasonably foreseeable incident that is not anticipated to occur as part of the proposed project, but which may conceivably occur as a result of project activities (e.g. vessel accidents and loss of well containment/blowout), <b>but with a low probability</b>’ (emphasis added).<sup>5</sup></p> <p>This definition is unreferenced, but incorporates a value-judgment at the outset – namely that unplanned/accidental events (such as a catastrophic oil spill) have a low probability. ERM thus sets the stage for using the low probability of a catastrophic event occurring to justify its core message – that a catastrophic oil spill will have no more than a moderate impact on the environment.</p> <p>5 - Draft EIA Report, at p 217.</p>	<p>The definition for an unplanned event is from ERM Impact Assessment Standard (The ERM Impact Assessment Standard v1.1, August 2012), which ERM has applied successfully to multiple oil and gas projects across the world.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. However, the likelihood (probability) of significant oil spills (i.e. those that can reach the coastline or other sensitive areas) is very low with most oil spills being very small and having only limited environmental effects</p> <p>Eni’s adoption of top industry and development of new technologies, the adherence and respect of international best practice, standard and procedures, reduces the risk of the blowout frequency from <math>2.5 \times 10^{-4}</math> down to <math>2.5 \times 10^{-6}</math> i.e. 1 case in 400,000 wells drilled.</p> <p>The results of the Oil Spill Modelling Report commissioned as part of the EIA process, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the Draft and Final EIA Reports, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Any small spills on the deck of the drillship will be contained with the spill management equipment onboard. Spills at sea will be immediately contained by the supply vessels, which host onboard, offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base; ready and available for deployment in the event of a spill. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene within 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p>

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			<p>In contrast, the International Association of Drilling Contractors (IADC) defines an 'accidental event' as meaning an 'unplanned or unexpected event or circumstance or series of events or circumstances that may lead to loss of life or damage to the environment'.<sup>6</sup> No reference is made to an accidental event having a low probability.</p> <p>6 - <a href="http://www.iadclexicon.org/accidental-event/">http://www.iadclexicon.org/accidental-event/</a></p>	<p>The IAGC statement quoted is a definition and not a risk assessment. The statement identifies that an unplanned event may lead to a serious consequence. The risk assessment undertaken by ERM in Chapter 8 assesses the risk based on the probability of the event happening and the severity of the consequence and takes into account the sensitivity of the receiving environment, management measures in place, project controls etc.</p> <p>The potential impacts associated with spills are described in the Draft and Final EIA Report in Chapters 3, 8 and 9.</p>
			<p>Notwithstanding the probability or likelihood of a catastrophic spill occurring, the unavoidable reality is that catastrophic oil spills can and do occur. It is for this very reason that the environmental and socio-economic impacts of such an event must be accurately described, quantified and assessed. Without such an assessment, the decision-maker is unable to balance the perceived benefits of the project against its costs to make an informed decision. Nor can appropriate control measures be properly assessed, or the adequacy of financial provisions or insurances to protect those who rely on the ocean and coast to subsist (including historically disadvantaged communities and persons), as well as the South African taxpayer who may have to foot the bill for any clean-up costs that are not adequately covered.</p>	<p>The potential impacts associated with an unplanned event are assessed in Chapter 8 of the Draft and Final EIA Reports, together with mitigation measures, which will be put into place in the event of an accidental spill. The potential risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects.</p> <p>There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship, drill site (offshore) to respond immediately to unlikely spill events.</p> <p>Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event in short time within 48 hours. For instance part of Equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available on board of stand-by vessels and in the logistic base close to operations with short lead times to access and execute response strategies (Section 9.9 and Annex F of the EIA Report).</p>
			<p>2.1.2 Methodology</p> <p>ERM indicates in its draft EIA Report that:</p> <p>The methodology used to assess the significance of risks associated with accidental events differs from the impact assessment methodology set out in Chapter 6 of this report. Risk significance for accidental events is based on a combination of the likelihood (or frequency) of incident occurrence</p>	<p>Chapter 8.2 of the Final EIA Report details the methodology used to assess the significance of risks associated with unplanned events (as brought forward from the Scoping Phase). Refer to Box 8.1 of the Final EIA Report for a summary of the significance criteria for accidental events and Table 8.2 of the Final EIA Report for the significance rating table for risks associated with accidental</p>

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			and the consequences of the incident should it occur. The assessment of likelihood and consequence of the event also includes the existing compliance and control measures for this project. <sup>7</sup> 7 - Draft EIA Report, p218.	events.  As stated in Chapter 8 of the Final EIA Report, "it is not possible to completely eliminate the risk of accidental events occurring. However, the mitigation strategy to minimise the risk of the occurrence of accidental events is outlined in Box 8.2."
			ERM states that the assessment of <b>likelihood</b> takes a qualitative approach based on professional judgment, experience from similar projects and interaction with the technical team. <sup>8</sup>  8 - Draft EIA Report, p218.	Chapter 8.2 of the Final EIA Report details the methodology used to assess the significance of risks associated with unplanned events (as brought forward from the Scoping Phase). Refer to Box 8.1 of the Final EIA Report for a summary of the significance criteria for accidental events and Table 8.2 of the Final EIA Report for the significance rating table for risks associated with accidental events.
			ERM states further that the assessment of <b>consequence</b> is based on specialists' input and their professional experience gained from similar projects, and informed by the results of various modelling studies undertaken to confirm the extent and duration of an oil spill. ERM points out that 'in order to determine the potential extent and duration of accidental oil spills (in the unlikely event that they occur) an oil spill modelling study was conducted for this project (Annex D)'. <sup>9</sup>  9 - Draft EIA Report, p218.	Chapter 8.2 of the Final EIA Report details the methodology used to assess the significance of risks associated with unplanned events (as brought forward from the Scoping Phase). Refer to Box 8.1 of the Final EIA Report for a summary of the significance criteria for accidental events and Table 8.2 of the Final EIA Report for the significance rating table for risks associated with accidental events.
			The flaws and/or shortcomings with this approach include the following:  -No explanation or clear justification is provided for a deviation from the impact assessment methodology set out in Chapter 6 of the draft EIA Report;  -ERM indicate that the assessment of likelihood and consequence includes existing compliance and control measures for this project. As has been pointed out elsewhere in this report, these compliance and control measures are not adequate (e.g. blowout preventers do not meet international standards; location of spill response equipment at Saldanha) or are not yet in existence (e.g. the Oil Spill Contingency Plan (OSCP) and Emergency Response Plan (ERP) relied upon are not included in the draft EIA Report).	Section 8.22 of the EIA Report explains in detail that for unplanned events the assessment based on the significance of the risks associated with accidental events differs from the impact assessment methodology set out in Chapter 6 of this report. Risk significance for accidental events is based on a combination of the likelihood (or frequency) of incident occurrence and the consequences of the incident should it occur. The assessment of likelihood and consequence of the event also includes the existing compliance and control measures for this project.  Oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills, were undertaken as part of the EIA Report. An emergency response plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included

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				<p>within the plan. The OSCP must be submitted to the relevant South African Authority (PASA and SAMSA) for approval before the start of any drilling operation, so not only international but also local requirements will be taken into consideration.</p> <p>The Blow-Out Preventers (BOP), that will be installed from the drilling ship on top of the wellhead, will fully meet international (API/ISO) standards at design, manufacturing, installation, testing, maintenance and operative phases.</p> <p>Chapter 9 of the EIA Report includes details on the required contents of the OSCP and information regarding South African response capacity; however, the plan itself will be developed once the details, as outlined above, are known.</p> <p>As detailed in Chapter 9 of the Final EIA Report, An Emergency Response Plan (ERP) is a requirement of the International Finance Corporation (IFC) Performance Standards and EHS Guidelines. This plan will include each stage of the project lifecycle (mobilisation, drilling and demobilisation) and commensurate with the potential risks and impacts identified in the EIA Report. Furthermore, Chapter 9 of the Final EIA Report states that Eni will develop a project- specific Oil Spill Contingency Plan (OSCP). This plan will be developed in terms of the nationally adopted Incident Management System for spills and the National OSCP. This plan would instruct employees as to the correct response procedures for any unlikely oil spill that may occur during the exploration drilling operation. This plan of intervention, providing contacts lists and mobilization procedures will be drafted prior to the commencement of drilling activities. Additionally, Chapter 9 of the Final EIA Report states that Eni will develop its own Oiled Wildlife Response Plan (OWRP) according to the National Oiled Wildlife Preparedness &amp; Response Plan (NOWCP) as part of its OSCP.</p> <p>The development of such documents are listed as mitigation/ management and enhancement commitments in the EMPr Commitments Register (Table 9.8 of the Final EIA Report).</p>
			-ERM admits that a qualitative approach is taken to the assessment of likelihood based on professional judgment, experience from similar projects and interaction with the technical team. This approach is highly subjective, and fails to specify whose professional judgement is relied upon	<p>The assessment of potential impacts and risks (i.e. unplanned, foreseeable events) has been undertaken by the ERM Environmental Assessment Practitioner (as listed in Box 1.2 of the Final EIA Report) and the specialist team as listed in Table 1.1 of</p>

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			(e.g. ERM EIA team members, Eni staff, other?), whose experience is relied upon (ERM EIA team members, Eni staff, other?) or who makes up the technical team interacted with (ERM EIA team, Eni, other?), or what form this interaction took (informal verbal discussions, formal minuted meetings, formal reports?).	the Final EIA Report. Information that informed this assessment included statistics presented in IOGP 2010 report on blowout frequencies for Offshore Operations of North Sea Standard describing the probability of a blowout of oil is very low as the frequency of occurrence is $2.5 \times 10^{-4}$ , 1 case in 4,000 drilled wells (IOGP Report, 2010).
			ERM admit that the assessment of consequence is based on specialists' input and their professional experience gained from similar projects, but does not clearly identify who these specialists are.	The specialists are clearly listed and their organisation, role and qualifications are presented in Table 1.1 (Chapter 1) of the Draft and Final EIA Reports.
			ERM readily admits that the consequence assessment is informed by the results the oil spill modelling. Numerous significant flaws in the oil spill modelling are discussed in detail separately below.	The consequence assessment was based on the results of the Oil Spill Modelling Report (Annex D4 Final EIA Report). The Oil Spill Modelling Report is not fatally flawed as suggested by this comment. The reason this report is sound is that it was undertaken by suitably qualified and experienced modellers and was externally peer reviewed to ensure the accuracy of the information presented.
			<p>2.1.3 ERM's Oil Spill Modelling is fatally flawed</p> <p>It is pointed out in the draft EIA Report that the purpose of the oil spill modelling is 'to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline and nearshore receptors'<sup>10</sup> and that 'modelling of the worst case scenario is in line with best practice and is required for the development of the Emergency Response Plan and OSCP'.<sup>11</sup> As has been stated above, the OSM report is fatally flawed, and taints the Accident Event assessment as well as other impact assessments conducted that rely on this OSM report (such as the Marine Ecology and Fisheries impact assessments and associated specialist studies). Some of the key shortcomings and flaws in the OSM report are outlined below.</p> <p>10 - Draft EIA Report, p221. 11 - Draft EIA Report, p222.</p>	<p>As stated above, the Oil Spill Modelling Report is not fatally flawed as suggested by this comment. The reason this report is sound is that it was undertaken by suitably qualified and experienced modellers and was externally peer reviewed to ensure the accuracy of the information presented. Therefore, the Oil Spill Modelling Report is not fatally flawed as suggested by this comment.</p> <p>The marine ecology and fisheries studies are also sound as they were undertaken by suitably qualified and experienced specialists. As part of the assessment the marine ecology and fisheries specialists used the peer reviewed Oil Spill Modelling Report to assess the consequence of a spill on marine ecology and the fisheries present in the area of indirect influence.</p>
			<p><sup>(a)</sup> <u>Duration of Scenario 2a Crude Blowout – Hole Collapse and Scenario 2b Crude Blowout – Cap Install not adequately explained, substantiated or validated</u></p> <p>The OSM report indicates that for the 'hole collapse scenario', it was assumed that a specified volume of crude oil would be released from the wellhead over a period of 7 days, while for the 'capping system event scenario', it was assumed that a specified volume of oil would be released from the wellhead over a period of 20 days.<sup>12</sup></p> <p>12 - OSM report, p12.</p>	<p>It is not the responsibility of the impact assessment report to provide an education in the mechanisms of a reservoir failure and how a hole collapse can occur to naturally plug a release, nor how capping takes place. A range of reasonable times were provided in the study to show a range of possible outcomes. One week for a hypothetical hole collapse is perfectly reasonable. It could take place within a day or two of the incident, but one week was a reasonable amount of time for a short-duration scenario.</p> <p>Likewise 20 day to install a cap was determined by Eni as a feasible amount of time. Eni engineers are experts in performing</p>

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				spill drill exercises and planning the logistics for the installation of a capping system and estimating a reasonable feasible time to complete the task.
			<p>Neither the draft EIA Report nor the OSM report substantiate why periods of only 7 and 20 days respectively were used for the modelling, especially given that ERM concedes that it is required to model the worst case scenario in line with best practice and for the development of the ERP and OSCP.</p> <p>By contrast, the Deepwater Horizon oil spill duration was 87 days (before it was finally capped).<sup>13</sup></p> <p>13 - <a href="https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill">https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill</a>.</p>	<p>The EIA Report, in Chapter 9, assesses the risk of a catastrophic event in the event of a well blowout. The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events. As such, the EIA Report adequately assesses the appropriateness of mitigation measures proposed in the event of an unplanned event.</p> <p>South African law (through the National Environmental Management Act and the Mineral and Petroleum Resources Development Act) entails numerous protections designed to ensure that those responsible for harming the environment pay for its remediation (see for example the 'polluter pays' principle established in section 28 of NEMA, or the financial provisioning requirements applicable to an exploration right). Eni is bound to comply with all such laws, and is not required to set out details of each and every legal obligation imposed on Eni under South African law. ERM is confident that the applicable governmental authority is aware of these protections and will enforce their compliance.</p>
			<p>By further contrast, oil spill modelling by RPS carried out in relation to an impact assessment conducted by ERM for the Tamarind Resources – Tui Field in New Zealand covered a 45-day and 110-day well blowout scenario.<sup>14</sup></p> <p>14 Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New</p>	<p>The availability of the necessary technology and the feasibility of delivery of such technology in various locations of the world vary from place to place, and varies for different oil companies. Similarly, the geology of the reservoir varies from location to location – so a 20-day response may be feasible here but possibly not in other locations in the world.</p> <p>The situation in New Zealand cannot be used as a point of</p>



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			Zealand Environmental Protection Authority (26 June 2018), at pages 3 – 4. Available online at <a href="https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf">https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf</a>	comparison. Eni has the technology and expertise and availability of equipment in this location to say with confidence that a well can be capped in 20 days.
			The duration of a blowout is clearly a key input into an OSM modelling. An assumed low duration will necessarily lower the prediction of the amount of oil that may be spilled into the ocean, and will also lower the significance of potential environmental and socio-economic impacts arising from any catastrophic spill.	The assumed low duration, 7 days, was used to provide a range of output compared to the high duration of 20 days.
			The failure to substantiate and ensure public participation on the assumed 7-day Scenario 2a blowout duration and assumed 20-day Scenario 2b blowout duration constitutes a fatal flaw in the environmental impact assessment process. Any decision authorising the proposed project based on the draft EIA Report and OSM modelling report would as a consequence also be fatally flawed, and subject to being set aside on appeal or judicial review.	In Scenario 2a, the model simulated a release lasting seven days due to a blowout at the reservoir. This is a self-killing event in which the reservoir hole naturally collapses upon itself, thereby terminating the release. The transport and fate of the oil continued to be tracked by the model for an additional 14 days after the termination of the release for a total of 21 days simulated. In Scenario 2b, the model simulated a release lasting 20 days due to a blowout at the reservoir. On the 20th day, a capping stack is successfully installed and the release is terminated. The transport and fate of the oil continued to be tracked by the model for an additional 14 days after the termination of the release for a total of 34 days simulated. Both of these scenarios modelled are credible and would not be considered a fatal flaw.
			(b) <u>Volume of Scenario 2a Crude Blowout – Hole Collapse and Scenario 2b Crude Blowout – Cap Install not adequately substantiated or validated</u> The OSM report indicates that for the ‘hole collapse scenario’, it was assumed that 750m <sup>3</sup> /day of crude oil would be released from the north wellhead over a period of 7 days (i.e. a total of 5250m <sup>3</sup> ), while 1050 m <sup>3</sup> /day of crude oil would be released from the south wellhead over a period of 7 days (i.e. a total of 7350 m <sup>3</sup> ). The same release rates were applied for the 20-day release ‘capping system event scenario’ (namely a total of 15000m <sup>3</sup> would be released from the north wellhead and a total of 20,000m <sup>3</sup> from the south wellhead).	In particular the results of the seismic interpretation carried out with the 3D seismic data confirmed Eni’s analysis, allowing to ensure a more robust data set and to advocate the use of the West African analogue based on similar field characteristics, thus the computation of the field productivity index (PI), pore pressure prediction computation and the consequent flowrate to be used in the oil spill modelling. This is a normal industry practice to determine the model input parameters and the drilling of the first well will confirm the geological interpretation. The use of the same rate for the 7-day and 20-day scenarios is a conservative estimate, since the rates would likely decrease over time.
			By contrast, the Deepwater Horizon oil spill released an estimated 134 million gallons of crude oil, <sup>15</sup> or approximately 507,245m <sup>3</sup> (or 5830 m <sup>3</sup> /day over 87 days). 15 - <a href="https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill">https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill</a>	During Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and

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				different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to Eni's extensive experience in similar lithology in West Africa.
			<p>By further contrast, oil spill modelling by RPS conducted in relation to an impact assessment conducted by ERM for the Tamarind Resources – Tui Field in New Zealand estimated a total release of 56,721 m<sup>3</sup> (or 1260 m<sup>3</sup>/day over a 45-day period) and 104,068 m<sup>3</sup> (or 946 m<sup>3</sup>/day over a 110-day well blowout scenario).<sup>16</sup></p> <p>16 - Per Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3–4. Available online at <a href="https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf">https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf</a></p>	<p>The availability of the necessary technology and the feasibility of delivery of such technology in various locations of the world vary from place to place, and varies for different oil companies. Similarly, the geology of the reservoir varies from location to location – so a 20-day response may be feasible here but possibly not in other locations in the world.</p> <p>The situation is New Zealand cannot be used as a point of comparison. Eni has the technology and expertise and availability of equipment in this location to say with confidence that a well can be capped in 20 days.</p>
			The volume of a blowout release is clearly a key input into an OSM modelling. An assumed low volume of release will necessarily lower the prediction of the amount of oil that may be spilled into the ocean, and will also lower the significance of potential environmental and socio-economic impacts arising from any catastrophic spill.	<p>The methodology employed by Eni to justify the oil volumes is described in the Oil Spill Modelling Report (Annex D4, pg 43, 56, 72 &amp; 87). Although the underlying data used by Eni was not validated as part of the review (being Eni's proprietary information), the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011).</p> <p>PRDW independently verified that the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011). The justification for the blowout scenario is provided in Section 5.5 of the Oil Spill Modelling Report (Annex D4).</p>
			<p>A technical review of the ERM OSM modelling by ERM EIA team member PRDW (Annex D6 – Peer Review of ERM Oils Spill Report, 7 September 2018, hereinafter referred to as 'PRDW report') questioned the crude oil release rates used by ERM in its modelling (indicated as a major comment).</p> <p>At paragraph 3.1 of the PRDW report, PRDW recorded the following comment:</p> <p>Comment #2 – Scenario 2</p>	The justification for the blowout scenario is provided in Section 5.5 of the Oil Spill Modelling Report (Annex D4).

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			The crude oil release rates of 4,717 bpd and 6,604 bpd for the two blowout scenarios requires a thorough justification. These seem low compared to previous studies off the west coast of South Africa and Namibia undertaken for international companies where the modelled oil release rates for blowouts ranged between 10,000 and 80,000 bpd. For reference, the Macondo/Deepwater Horizon blowout in the Gulf of Mexico released 4.9 million bbl over for 87 days giving an average of 56,300 bpd...	
			<p>In response to this review comment, Eni provided the following reasons for the flow rates for Scenario 2:</p> <p>The input data provided for the model run are based on lithology and preliminary reservoir assessment and interpretation starting from seismic data. During the 2Q of 2018, new data interpretation were available from 2D/3D seismic data acquired by some multi-client providers in 2016-2018. Based on the analysis already finalized, the reservoir and production profiles are expected to be very similar to the same available in other subsea fields developed by Eni in Africa. For this reason the PI (productivity index), porosity, hydrocarbon properties and expected flow rate have been recalculated and optimized using real data from those similar fields. The confirmation of those assumptions will be provided after drilling of the first explorative well.</p> <p>Further to this response from Eni, the following comments stand: Please include this justification for Scenario 2 in the main report. Since these oil release rates still need to be confirmed after drilling the first well, it seems that these may not be the worst- case flow rates in the case of a blowout. Why were conservatively high rates not used for the modelling?</p>	<p>This is not a case of omitting a conservatively higher rates in light of uncertainty. Rather, uncertainty was reduced. The re-evaluation provided new, more accurate information, and provided a better estimate.</p> <p>The recalculation and optimization of PI (productivity index), porosity, hydrocarbon properties and expected flow rates have been undertaken by Eni to ensure a more robust and optimized data set, which is based on West African analogues with similar field characteristics. Calculation of such parameters through an analogue field index is an accepted practice in the industry where there are no other reference explorative wells in the area.</p> <p>The justification for the blowout scenario is provided in Section 5.5 of the Oil Spill Modelling Report (Annex D4).</p>
			<p>At paragraph 10 of the OSM report A1 Addendum: Response to Technical Review, this comment is reproduced (save for omitting the comment that the justification by Eni quoted above be included in the report, as well as the comment that since the oil release rates still need to be confirmed after drilling the first well these may not be the worst-case flow rates in the case of a blowout). In addition to the initial response referred to above (although not attributed to Eni, thereby misleading the reader of the OSM report A1 Addendum), the following additional comment is added (also not attributed to Eni):</p> <p>In addition: The pore pressure prediction is computed using a sophisticated technology from the velocity analysis coming from the recent (2016) 3D seismic volume. Moreover, for all the wells drilled in similar deepwater environment, an analogue approach has been utilized for preparing the casing design and mud density, to keep the well under control while drilling. In the recent development of some African deepwater field, Eni has</p>	<p>See response above. Of course the actual amount won't be known until drilling takes place because the presence, flowrates and total volume of hydrocarbons in the reservoir can only be technically confirmed after the drilling of first exploration wells and well testing of appraisal wells.</p> <p>This concept is not misleading – it is reminding the reader that the dataset provided is an estimate, thus supporting a calculative approach to maximize effectiveness of tools/equipment selection, analyse potential environmental impact and consequently define adequate mitigation and corrective action.</p> <p>In fact, as common engineering practice, Petroleum engineers estimates are necessary as precautionary approach and for safety perspective, because predicted values must be calculated not only for oil spill modelling preparation but in order to guarantee the</p>

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			<p>confirmed that those estimation has been confirmed during the subsequent drilling of the wells (sic).</p> <p>- During the Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to ENI's experience in similar lithology in West Africa, which has allowed for optimizing the flow rate and PI parameters, in the unrealistic situation that no mitigation (e.g. no BOP closure) will be applied, that should provide a better estimation of flow rates.</p>	<p>correct selection of equipment, tools (e.g. BOP and vessel), products (e.g. mud) suitable to perform drilling operations in safely.</p>
			<p>In a letter attached to Annex D6, PRDW states (among other things) that it was appointed by ERM to undertake an independent peer review of the oil spill study (this independence is disputed in this submission, given that PRDW is indicated as being part of ERM's EIA team – see draft EIR report, Table 1.1 at page 10), that ERM issued a revised study report to PRDW on 18 September 2018, and concludes by stating that: This letter confirms that all four major comments raised by PRDW have been adequately addressed.<sup>17</sup></p> <p>17 - PRDW letter dated 18 September 2018 attached to Annex D6 – Peer Review of ERM Oils Spill Report, 7 September 2018.</p> <p>Given that PRDW states that ERM issued the revised report with its additional response on 18 September 2018 (the same date as PRDW's letter confirming that all four major comments had been adequately addressed), it is unclear how PRDW had sufficient time to apply its mind properly to the response, call for and analyse underlying data upon which statements were based, or validate the response received from Eni (via ERM). No rationale is provided for the statement that this (and other) major comment has been addressed. This invites an inference that Eni's responses, untested and unvalidated in the EIA process, have simply been accepted by ERM and PRDW.</p>	<p>PRDW was included in the EIA team as they were involved in the peer review of the oil spill modelling report. However, they remain independent from ERM and are an independent consultancy.</p> <p>Nonetheless, there is no requirement for specialists to be external from the EIA consultancy and many consulting firms have in-house specialists who conduct work and provide specialists reports as part of the EIA Reporting. The specialist used for this EIA however, are not employed by ERM, but are rather sub contracted to conduct work in their areas of expertise.</p> <p>Regarding the timing of the review, PRDW issued the first review letter raising four major issues on 7 September 2018. In response to these issues, ERM issued a sequence of revisions to the report between 13 and 18 September 2018, with the final revision received by PRDW on 18 September 2018. This process provided sufficient time for PRDW apply its mind properly and PRDW's rationale for stating that all four comments had been addressed was as follows:</p> <p>a) <b>PRDW Comment 1: Justify the volumes of oil for the three spill scenarios.</b> The methodology employed by Eni to justify the oil volumes is described in the Oil Spill Modelling Report (Annex D4, pg 43, 56, 72 &amp; 87). Although the underlying data used by Eni was not validated as part of the review, the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton</p>

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				<p>Report Number: AA/77-01-01/11959, November 2011). The peer review should have clarified that PRDW's expertise is in oil spill modelling and does not extend to petroleum geology and that PRDW thus relied on the expertise of Eni and ERM for the geological assessment.</p> <p><b>b) Comment 2: Address impacts associated with dissolved aromatic Hydrocarbons</b> This is addressed in Section 5.8 of the report (Annex D4), including the use of a conservative threshold for DAH of 5 ppb and the inclusion of worst-case contour plots.</p> <p><b>c) Comment 3: Explain the relatively low impact of blowouts</b> This is addressed on pages 112 and 113 of the report, i.e. the longer release leading to a persistent subsurface plume rather than a short-term surface plume, the large depth reducing the percentage of oil reaching the surface and the strong shore-parallel currents spreading the oil below the threshold thickness prior to reaching the shoreline.</p> <p><b>d) Comment 4: Modify and update the conclusions section</b> The suggested additions were made in Section 6 of the Oil Spill Modelling Report that was attached to the Draft EIA Report. There was a typographical error in the units provided which has been corrected in Section 6 of the Final Oil Spill Modelling Report (Annex D4 of the Final EIA Report).</p> <p>Neither ERM nor PRDW reviewed the analogue or seismic data as they are not petroleum geologists and review of data of this nature is outside of their responsibility. ERM and PRDW relied on the expertise of the Company (Eni) for the geological assessment, which is standard international practice. The seismic data (both previous and latest) is licensed from multi-client sources and is commercially sensitive and confidential information.</p> <p>Eni's licensed seismic data relates to the prospectively of the area in question and is not relevant to evaluating the environmental impact of Eni's proposed activities. Accordingly, Eni is not obliged to disclose this information.</p>
			An attempt to seek clarity from PRDW telephonically on 2 November 2018 was met with a response to email any queries to ERM (again demonstrating PRDW's lack of independence from the EIA team). A letter	Stephen Luger, from PRDW, was appointed as an independent peer reviewer and is independent from the ERM modelling team. Stephen advised WILDTRUST to submit their comments/

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			was subsequently emailed to ERM on 3 November 2018 raising a number of queries relating to the OSM report A1 Addendum: Response to Technical Review and to the PRDW letter dated 18 September 2018. A copy of this letter is attached to this submission marked Annexure WO1, the contents of which should be read as incorporated into this submission.	questions directly to ERM. This was to ensure the comments/questions could be addressed and recorded as part of the EIA process. All the queries raised in the 3 November WILDTRUST letter were responded to in writing by PRDW and ERM (Annexure B8, (Comments and Responses Report)).
			<p>On 5 November 2018 ERM responded to the 3 November 2018 letter acknowledging receipt, and advising that ERM 'are currently preparing a response to the questions'. On 6 November 2018 ERM wrote a further email in response, advising as follows:</p> <p>Your letter dated 03 November 2018, received by ERM on Monday 05 November 2018 refers. Based on the volume and detailed nature of the questions, we require coordinated input from the relevant parties (some outside of South Africa) to appropriately address them. We have enlisted the appropriate people to contribute to a response, however, given the short timeframe, we will not be able to provide a response to your questions by COB today as requested. Responses to your questions will be provided in the comments and response report in the Final EIA Report. We welcome any additional comments on the EIA Report by 8 November 2018 and these comments will also be included in the Final EIA Report.</p>	This is correct and ERM had on two occasions provided initial responses to the letter dated 3 November 2018. Refer to Annexure B8 of the Final EIA Report for such comments and the corresponding responses, as stated by ERM.
			This response is regrettable, and taints the fairness of the EIA process. In light of the above, it is clear that the draft EIA Report cannot simply be finalised by the addition of I&AP comments and ERM/PRDW/Eni's responses thereto. At the very least, a revised version of the report fully responding to the queries raised will need to be made available to I&APs for further comment. A failure to do so will be a serious breach of I&APs constitutional and statutory rights to fair administrative action, as well as I&APs legal rights to participate meaningfully in the EIA process.	Section 7.4 of the Public Participation Guideline (No. 807 of 2012) states that: "It is best practise that all comments received from I&APs are acknowledged by the EAP, with the EAP indicating how the comments received will be responded to (even if just referring to the fact that a response will be contained in the "comments and responses report")". Therefore the ERM EAP complied with best practise by providing initial responses to the letter dated 3 November 2018 on two occasions (i.e. 3 November 2018 and 5 November 2018) and advising the commenter that responses to comments will be included in the Final EIA Report - refer to Annexure B8 of the Final EIA Report for such comments and the corresponding responses, as stated by ERM.
			In addition, it is submitted that the OSM report and PRDW technical review must be subject to robust independent validation (by suitably qualified experts not forming part of ERM's EIA team, chosen by the competent authority in consultation with I&APs).	<p>PRDW has conducted multiple oil spill modelling studies in South Africa and are suitably qualified and experienced oil spill modelling to conduct a peer review of the report.</p> <p>For this reason, the EAP considers this suitable and fully in compliance with the Authority's and I&amp;APs' requests, in the scoping phase and public consultation of February 2018, to provide a competent and robust independent validation of the Oil Spill Modelling Report.</p>



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				The commenter is welcome to initiate such a technical peer review of the OSM report and ERM advises that the commenter engage directly with the competent authority and I&APs to facilitate such review. Such requested review must be conducted outside the timeframe of this EIA however and will not be paid for by ERM or Eni. However, ERM kindly requests that a copy of the peer review be submitted to ERM and Eni for comment if it is commissioned by Adrian Pole, WILDTRUST or any other party
			<p>(c) <u>Misleading critical threshold assumptions used for oil spill modelling and interpretation of results</u></p> <p>The draft EIA Report indicates that '[t]hree critical threshold assumptions were used in the design of the models and interpretation of results. These assumptions address critical thresholds for oil slick thickness (as described in Annex D), shoreline flux and DAH concentration and relate directly to the ecological effects'.<sup>18</sup></p> <p>18 - Draft EIA Report, p224.</p> <p>The following assumptions are made in the draft EIA Report:</p> <ul style="list-style-type: none"> <li>- Significant slick thickness – 1.0 µm</li> <li>- Significant shoreline mass flux – 100g oil per/m<sup>2</sup> of shoreline</li> <li>- Dissolved Aromatic Hydrocarbons (DAH) – 5 ppb</li> </ul> <p>ERM refer to significant surface oiling as being defined as 'any oil having a thickness above the minimum thickness threshold, a value that delineates where oil becomes visible and below which aquatic biota are at near zero risk of smothering from a crude oil'.<sup>19</sup> This definition is problematic. The value is delineating in relation to the 'smothering' of aquatic biota, and fails to take into account other issues, such as toxicity, ecological changes, indirect effects and socio-economic impacts.</p>	There is nothing misleading about these thresholds. These are standard values used across the industry and governments. Our document has provided published literature to justify use of the thresholds. Implying impacts at values below these thresholds would be misleading.
			<p><b>i. Significant Slick Thickness</b></p> <p>With regard to this 'oil on surface' critical threshold, ERM cite certain studies suggesting that oil slicks less than 1.0 µm are not harmful to seabirds, and that visible oil between 0.1 µm and 1.0 µm was chosen as the low risk exposure thickness range. This is important, as ERM indicate that 'model output of the surface oiling and arrival time is filtered to remove oil thinner than 1 µm'.<sup>20</sup> This means that visible oil in the 0.1 µm and 1.0 µm range has been filtered out, and are not reflected in the oil spill models and diagrams.</p> <p>20- Draft EIA Report, p225.</p>	Correct. Thin sheens of oil may just become visible, but yet have been shown to be below levels that could cause adverse effects to birds and wildlife.
			In its OSM report, ERM indicates that the 'first clearly visible oil appears as a silvery sheen at thickness between 0.04 µm to 0.3 µm based on values	The "visible threshold" at such small values is subjective to individual's perception. A cut off of 0.1 µm is a reasonable

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			<p>cataloged (sic) in the 2006 Bonn Agreement Oil Appearance Code (BAOAC)(Lewis, 2007)... A minimum threshold thickness value was defined as 0.1 µm. Oil at this thickness may be visible and potentially wash upon the shore as a silver sheen, but is not expected to cause physical injury (e.g., oiling, smothering) to wildlife contacting it.... Model output of the surface oiling and arrival time is filtered to remove oil thinner than 1 µm'.<sup>21</sup></p> <p>21 - OSM report, p18-19.</p>	<p>threshold for purposes of describing what the visible characteristics of the thin sheen are. This may be useful during a spill to help responders to delineate where oil is for cleaning, but it is not indicative of impact. That is potentially at 1 µm and more likely at higher thicknesses.</p>
			<p>In contrast, a recent (26 June 2018) technical review of an oil spill modelling commissioned by the New Zealand EPA<sup>22</sup> (in respect of an oil spill modelling conducted by RPS in relation to an impact assessment conducted by ERM for the Tamarind Resources – Tui Field in New Zealand, hereinafter referred to as the 'New Zealand EPA Tamarind Technical Review') criticised the minimum thickness for tracking of 0.5 µm used in the stochastic methods model settings:</p> <p>For comparison purpose, the same company, RPS ASA, conducted similar spill modelling in the North Atlantic in 2014 (RPS ASA 2014a) in support of the Shelburne Basin Exploration Drilling Programme. Blowout and surface spills were simulated. <b>Ocean conditions as well as depth of discharge are different. Nonetheless, the method stays the same and can be used here for comparison.</b></p> <p><b>The minimum thickness for tracking considered in the RPS APASA Tamarind report was 0.5 µm for oil on surface</b> (RPS Section 6.2.1). That is, <b>once a part of the slick became less than 0.5 µm, that part of the slick was omitted from the results. This thickness is still significant.</b> Based on RPS APASA Tamarind Table 6. <b>The omission of any thickness less than 0.5 µm means that the RPS APASA Tamarind report did not consider a sheen on surface for exposure calculation.</b> The RPS ASA (2014a) report <b>considered 0.04 µm for cut-off in surface oil thickness, with the rationale that this would be the minimum thickness to determine impact on socioeconomic resources.</b><sup>23</sup> (emphasis added)</p> <p>22 - Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3–4. Available online at <a href="https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-">https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-</a></p>	<p>The thickness threshold is all about the context. This comparison to the criticisms of the New Zealand case is not relevant since the purpose of the thickness cut-off in ERM's report is to delineate impacts to birds and wildlife. This definition of "significant" is subjective depending on the context. For a spill response overflight, one could say visibility equals significance. However, for deployment of a skimmer, attempting to recover a film of 0.04 µm is impractical.</p> <p>Note that the thickness threshold does not affect the model's tracking of oil reaching shorelines. Thin oil can still reach shorelines and accumulate despite their absence from the thickness plots and area calculations.</p>

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			<a href="#">modelling-v3-26-06-2018-EEZ100016.pdf</a>  23 - New Zealand EPA Tamarind Technical Review, at p 9.	
			<p>The New Zealand EPA Tamarind Technical Review thus:</p> <ul style="list-style-type: none"> <li>- Indicates that the methodology for simulating blowouts and surface spills remains the same and can be used for comparison despite different ocean conditions and well depths (namely in respect of the North Atlantic Shelburne Exploration Drilling Programme and the New Zealand Tui Field);</li> <li>- Criticises the omission of slicks less than 0.5 µm from the modelling results and exposure calculation, remarking that surface oil at this thickness is still significant; and</li> <li>- Points out that in the Shelburne North Atlantic modelling a surface oil thickness of 0.04 µm was used because this would be the minimum thickness to determine impact on socio-economic resources.</li> </ul>	<p>See response above. The model predicts that oil will be barely visible to the naked eye. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities, which supports the outcome of Chapter 8 of the EIA Report.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>The ERM ER236 OSM model output of the surface oiling and arrival time has been filtered by ERM to remove oil thinner than 1 µm. Given that the New Zealand EPA Tamarind Technical Review indicates that a surface slick of 0.5 µm is still significant and that a surface sheen should be considered for exposure calculation, and that the Shelburne oil modelling used a surface oil thickness of 0.04 µm as its cut-off on the basis that this would be the minimum thickness to determine impact on socioeconomic resources, ERM's filtering has effectively excluded results from its modelling that are necessary for exposure calculation and in order to determine socio-economic impacts. <b>The exclusion by ERM of surface oil thickness of below 1.0 µm thus grossly underrepresents the nature and extent of a surface oil slick.</b> ERM's modelling report relies upon this inappropriate threshold to claim in respect of Spill Scenario 2A that '[i]t is highly likely that such a spill at either of the two spill locations (N1 and S) with thickness greater than the minimum smothering thickness (1.0 µm) would remain out to sea before weathering away into a thin sheen. In the</p>	<p>This New Zealand EPA technical review criticism is an outlier. ERM has seen hundreds of similar studies using 1.0 µm as a minimum threshold accepted by regulatory agencies around the world.</p>

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			<p>absence of response efforts, the smothering slick of oil is able to travel almost 50 km and 150 km from the release points N1 and S respectively before weathering away into a thinner sheen'<sup>24</sup> and in respect of Spill Scenario 2B that '[i]t is highly likely that such a spill at either of the two spill locations (N1 and S) with thickness greater than the minimum smothering thickness (1.0 µm) would remain out to sea before weathering away into a thin sheen. In the absence of response efforts, the smothering slick of oil is able to travel almost 100 km and 250 km from the release points N1 and S respectively before weathering away into a thinner sheen'.<sup>25</sup></p> <p>24 - OSM report, p53. 25 - OSM report, p68.</p>	
			<p>The use of inappropriate critical thresholds in the OSM modelling in turn impacts on reliability and accuracy of the risk significance description set out in ERM's draft EIA Report. This point is again demonstrated in the New Zealand EPA Tamarind Technical Review (which used much stricter thresholds than were used in the ER236 draft EIA Report and OSM report): Thresholds. <b>The potential discrepancy of using a higher threshold to assess exposure and produce maps of oil presence can have a significant impact.</b> Other similar studies considered <b>a threshold ten times lower, which could significantly change the amount of oil reported to reach shore, as well as the exposure on the surface and in the water column. The impact on decision- making is high</b> because of the <b>potential for 'hiding' results with thresholds, and the discrepancy with similar studies.</b><sup>26</sup> (emphasis added). 26 - New Zealand EPA Tamarind Technical Review, at p11.</p>	As stated previously, this New Zealand EPA technical review criticism is an outlier. ERM's experience on numerous similar studies has shown that using 1.0 µm as a minimum threshold is largely accepted by regulatory agencies around the world.
			<p>The ER236 OSM modelling uses a critical threshold for 'oil on surface' that is double the threshold used in the Tamarind Tui Field modelling, and 25 times higher than was used in the Shelburne North Atlantic modelling. This clearly has the effect of 'hiding results', and would significantly impact significantly on the ERM OSM modelling and subsequent significance assessment.</p>	As stated previously, the 100 g/m <sup>2</sup> value is an appropriate threshold for environmental impacts. Smaller values were documented in the same publication which recommended 100 g/m <sup>2</sup> given the explanation that an area of beach which contacts oil will be patchy and therefore the higher threshold is more realistic.
			<p>ERM's filtering of the modelling results and use of an inappropriate critical threshold is misleading and highly questionable, and shows that the modelling needs to be re-run with appropriate critical threshold assumptions, and must be subject to robust independent validation (by suitably qualified experts not forming part of ERM's EIA team, chosen by the competent authority in consultation with I&amp;APs).</p>	<p>As stated before the thresholds are standard values used across the industry and governments. Our document has provided published literature to justify use of the thresholds. Implying impacts at values below these thresholds would be misleading.</p> <p>The commenter is welcome to commission a "re-run" of the modelling and an external validation thereof. ERM advises that the commenter engage directly with the competent authority and I&amp;APs to facilitate such review. The requested re-run and review must be conducted outside the timeframe of this EIA however, and</p>

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				will not be paid for by ERM or Eni. However, ERM kindly requests that a copy of the peer review be submitted to ERM and Eni for comment if it is commissioned by Adrian Pole, WILDTRUSTs or any other party.
			Any decision authorising the proposed project based on the draft EIA Report and OSM modelling report would be fatally flawed, and subject to being set aside on appeal or judicial review.	<p>The EIA Report is compliant with the NEMA, as amended (which it is intended to satisfy) and has followed the regulated process and requirements in terms of reporting. The EIA Report is therefore not fatally flawed and this is for the Competent Authority to decide upon. All registered I&amp;APs will be notified when a decision is made and provided with the opportunity to appeal the Environmental Authorisation (if granted). Any appeals submitted against the Environmental Authorisation do not “automatically/ instantly” imply that the Authorisation is set aside- please refer to the National Appeal Regulations for details of how appeals are adjudicated.</p> <p>The Oil Spill Modelling Report (Annex D4) is also not fatally flawed as suggested by this comment. The reason this report is sound is that it was undertaken by suitably qualified and experienced modellers and was externally peer reviewed to ensure the accuracy of the information presented</p>
			<p><b>ii. Significant shoreline mass flux</b>  With regard to the ‘significant shoreline mass flux’ critical threshold, ERM cite a 2009 study (French-McCay, 2009) recommending a threshold of 100 g/m<sup>2</sup> as a reasonable value to indicate when a sufficient amount of oil mass per area unit may cause an impact to shorebirds and wildlife on or along the shore.<sup>27</sup></p> <p>27 - Draft EIA Report, p225; OSM report, p20.  In contrast, the June 2018 New Zealand EPA Tamarind Technical Review criticised the setting of a 10 g/m<sup>2</sup> as the minimum concentration of oil on the shoreline for tracking:... the minimum concentration of oil on the shoreline for tracking was set to 10 g/m<sup>2</sup> in the RPS APASA Tamarind Modelling, whereas a minimum concentration of 1 g/m<sup>2</sup> was considered in RPS ASA report (2014a). <b>A minimum concentration of 1 g/m<sup>2</sup> would trigger shoreline clean-up on amenity beaches, however the 10 g/m<sup>2</sup> would be a conservative number for impact on shoreline habitat.</b> In other words, the <b>1 g/m<sup>2</sup> represents a threshold for socioeconomic impact</b>, whereas the <b>10 g/m<sup>2</sup> represents the threshold for ecological impact</b>.<sup>28</sup> (emphasis added).</p> <p>28 - New Zealand EPA Tamarind Technical Review, at p 9-10.</p>	<p>A significant threshold for wildlife injury of 100 g/m<sup>2</sup> is appropriate and is explained in detail in the literature cited, French-McCay (2009).</p> <p>French-McCay (2009) mentions a value of 10 g/m<sup>2</sup> as potentially providing a lethal dose. However, further reading of the entire publication explains the value of 100 g/m<sup>2</sup> is a more reasonable value when considering the necessary exposure index of a given bird or wildlife to the shoreline oiling. As French-McCay describes in an example, “A value of 35% is assumed in the model [sic] and applied when oil on shorelines exceeds 100 g/m<sup>2</sup>. At this oil thickness, a bird would need to move along a path 35 m long and 10 cm wide to obtain a lethal dose of 350 ml. Thus, the assumed threshold thickness is reasonable, as more scattered oil on a shoreline would require proportionately longer distances where birds would be in contact with oil.” She goes on to state, “The probability of exposure is related to behaviour: i.e., the habitats used and percentage of the time spent in those habitats on the surface of the water. For shorebirds and other wildlife on or along the shore, an exposure index is length of shoreline oiled by &gt; 100 g/m<sup>2</sup>. Areas of exposure above these thresholds have been used in environmental risk assessment studies (French McCay et al.,</p>

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				<p>2003a, 2004, 2005a,b,c)."</p> <p>References:</p> <p>French McCay, D., N. Whittier, T. Isaji, and W. Saunders, "Assessment of the Potential Impacts of Oil Spills in the James River, Virginia", in <i>Proceedings of the 26th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar</i>, Environment Canada, Ottawa, ON, Canada, pp. 857-878, 2003a.</p> <p>French McCay, D.P., and J.J. Rowe, "Evaluation of Bird Impacts in Historical Oil Spill Cases Using the SIMAP Oil Spill Model", in <i>Proceedings of the Twenty-Seventh Arctic and Marine Oil Spill Program (AMOP) Technical</i></p> <p>French-McCay, D., J. Rowe, N. Whittier, S. Sankaranarayanan, D.S. Etkin, and L. Pilkey-Jarvis, "Evaluation of the Consequences of Various Response Options Using Modeling of Fate, Effects and NRDA Costs of Oil Spills into Washington Waters", in <i>Proceedings of the 2005 International Oil Spill Conference</i>, American Petroleum Institute, Washington, D.C., pp. 467-473, 2005a.</p> <p>French-McCay, D.P., N. Whittier, C. Dalton, J.J. Rowe, and S. Sankaranarayanan, "Modeling Fates and Impacts of Hypothetical Oil Spills in Delaware, Florida, Texas, California, and Alaska Waters, Varying Response Options Including Use of Dispersants", in <i>Proceedings of the International Oil Spill Conference</i>, American Petroleum Institute, Washington, D.C., Paper 399, 2005b</p> <p>French McCay, D., N. Whittier, J.J. Rowe, S. Sankaranarayanan and H.-S. Kim, "Use of Probabilistic Trajectory and Impact Modeling to Assess Consequences of Oil Spills with Various Response Strategies", in <i>Proceedings of the 28th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar</i>, Environment Canada, Ottawa, ON, pp. 253-271, 2005c.</p>
			<p>The New Zealand EPA Tamarind Technical Review thus indicates that:-</p> <p>A minimum concentration of 1 g/m<sup>2</sup> would trigger shoreline clean-up on amenity beaches, and represents a threshold for socioeconomic impact; and</p> <p>- The 10 g/m<sup>2</sup> threshold would be a conservative number for impact on shoreline habitat, and represents the threshold for ecological impact.</p>	<p>See response above. New Zealand EPA apparently did not correctly understand the recommendation of 100 g/m<sup>2</sup> in French-McCay (2009) as a more realistic application of the 10 g/m<sup>2</sup> given the patchy nature of shoreline oiling. This modelling study estimated ecological impacts.</p>



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			<p>In the circumstances, the use of a threshold of 100 g/m<sup>2</sup> in the ERM OSM report is inappropriate as a threshold for socio-economic impacts (e.g. for triggering clean-up on amenity beaches) and for impacts ecological impacts (shoreline habitat). ERM's modelling report relies upon this inappropriate threshold to claim that '[m]odel results in Scenario 2a indicate that it is unlikely that significant shoreline oiling (&gt;100 g/m<sup>2</sup>) will reach shorelines along the coast'<sup>29</sup> and '[m]odel results in Scenario 2b indicate that it is unlikely that significant shoreline oiling (&gt;100 g/m<sup>2</sup>) will reach shorelines along the coast'.<sup>30</sup></p> <p>29 - OSM report, p53. 30 - OSM report, p67.</p>	<p>A significant threshold for wildlife injury of 100 g/m<sup>2</sup> is appropriate and is explained in detail in the literature cited, French-McCay (2009).</p> <p>French-McCay (2009) mentions a value of 10 g/m<sup>2</sup> as potentially providing a lethal dose. However, further reading of the entire publication explains the value of 100 g/m<sup>2</sup> is a more reasonable value when considering the necessary exposure index of a given bird or wildlife to the shoreline oiling. As French-McCay describes in an example, "A value of 35% is assumed in the model [sic] and applied when oil on shorelines exceeds 100 g/m<sup>2</sup>. At this oil thickness, a bird would need to move along a path 35 m long and 10 cm wide to obtain a lethal dose of 350 ml. Thus, the assumed threshold thickness is reasonable, as more scattered oil on a shoreline would require proportionately longer distances where birds would be in contact with oil." She goes on to state, "The probability of exposure is related to behaviour: i.e., the habitats used and percentage of the time spent in those habitats on the surface of the water. For shorebirds and other wildlife on or along the shore, an exposure index is length of shoreline oiled by &gt; 100 g/m<sup>2</sup>. Areas of exposure above these thresholds have been used in environmental risk assessment studies (French McCay et al., 2003a, 2004, 2005a,b,c)."</p> <p>References:</p> <p>French McCay, D., N. Whittier, T. Isaji, and W. Saunders, "Assessment of the Potential Impacts of Oil Spills in the James River, Virginia", in <i>Proceedings of the 26th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar</i>, Environment Canada, Ottawa, ON, Canada, pp. 857-878, 2003a.</p> <p>French McCay, D.P., and J.J. Rowe, "Evaluation of Bird Impacts in Historical Oil Spill Cases Using the SIMAP Oil Spill Model", in <i>Proceedings of the Twenty-Seventh Arctic and Marine Oil Spill Program (AMOP) Technical</i></p> <p>French-McCay, D., J. Rowe, N. Whittier, S. Sankaranarayanan, D.S. Etkin, and L. Pilkey-Jarvis, "Evaluation of the Consequences of Various Response Options Using Modeling of Fate, Effects and NRDA Costs of Oil Spills into Washington Waters", in <i>Proceedings of the 2005 International Oil Spill Conference</i>, American</p>

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				<p>Petroleum Institute, Washington, D.C., pp. 467-473, 2005a.</p> <p>French-McCay, D.P., N. Whittier, C. Dalton, J.J. Rowe, and S. Sankaranarayanan, "Modeling Fates and Impacts of Hypothetical Oil Spills in Delaware, Florida, Texas, California, and Alaska Waters, Varying Response Options Including Use of Dispersants", in <i>Proceedings of the International Oil Spill Conference</i>, American Petroleum Institute, Washington, D.C., Paper 399, 2005b</p> <p>French McCay, D., N. Whittier, J.J. Rowe, S. Sankaranarayanan and H.-S. Kim, "Use of Probabilistic Trajectory and Impact Modeling to Assess Consequences of Oil Spills with Various Response Strategies", in <i>Proceedings of the 28th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar</i>, Environment Canada, Ottawa, ON, pp. 253-271, 2005c.</p>
			<p>The use of inappropriate critical thresholds in the OSM modelling in turn impacts on reliability and accuracy of the risk significance description set out in ERM's draft EIA Report. This point is again demonstrated in the New Zealand EPA Tamarind Technical Review (which used much stricter thresholds than were used in the ER236 draft EIA Report and OSM report): ...Thresholds. The <b>potential discrepancy of using a higher threshold to assess exposure and produce maps of oil presence can have a significant impact</b>. Other similar studies considered a <b>threshold ten times lower, which could significantly change the amount of oil reported to reach shore, as well as the exposure on the surface and in the water column. The impact on decision- making is high</b> because of the <b>potential for 'hiding' results with thresholds, and the discrepancy with similar studies</b>.<sup>31</sup></p> <p>31 - New Zealand EPA Tamarind Technical Review, at p11.</p>	<p>As stated previously, this New Zealand EPA technical review criticism is an outlier. ERM's experience on numerous similar studies has shown that using 1.0 µm as a minimum threshold is largely accepted by regulatory agencies around the world.</p>
			<p>The ER236 OSM modelling uses a critical threshold for shoreline mass flux that is 10 times higher than was used in the Tamarind Tui Field modelling, and 100 times higher than was used in the Shelburne North Atlantic modelling. This clearly has the effect of 'hiding results', and would significantly impact significantly on the ERM OSM modelling and subsequent significance assessment.</p> <p>This approach is misleading and highly questionable, and shows that the modelling needs to be re-run with appropriate critical threshold assumptions, and must be subject to robust independent validation (by suitably qualified experts not forming part of ERM's EIA team, chosen by the competent authority in consultation with I&amp;APs).</p>	<p>As stated previously, this New Zealand EPA technical review criticism is an outlier. A significant threshold for wildlife injury of 100 g/m<sup>2</sup> is appropriate and is explained in detail in the literature cited, French-McCay (2009).</p>

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			Any decision authorising the proposed project based on the draft EIA Report and OSM modelling report would as a consequence be fatally flawed, and subject to being set aside on appeal or judicial review.	<p>The EIA Report is compliant with the NEMA, as amended (which it is intended to satisfy) and has followed the regulated process and requirements in terms of reporting. The EIA Report is therefore not fatally flawed and this is for the Competent Authority to decide upon. All registered I&amp;APs will be notified when a decision is made and provided with the opportunity to appeal the Environmental Authorisation (if granted). Any appeals submitted against the Environmental Authorisation do not “automatically/ instantly” imply that the Authorisation is set aside- please refer to the National Appeal Regulations for details of how appeals are adjudicated.</p> <p>The Oil Spill Modelling Report (Annex D4) is also not fatally flawed as suggested by this comment. The reason this report is sound is that it was undertaken by suitably qualified and experienced modellers and was externally peer reviewed to ensure the accuracy of the information presented</p>
			<p><b>iii. Dissolved Aromatic Hydrocarbons</b> Despite the draft EIA Report including Dissolved Aromatic Hydrocarbons (DAH) as one of the 3 critical thresholds that relates directly to ecological effects and selecting a level of 5 ppb,<sup>32</sup> the OSM report did not include modelling results for DAH. This was raised in the PRDW report (major comment 3.2), and ERM's response follows <b>Comment #5 – Address impacts associated with dissolved aromatic hydrocarbons</b> in ERM's OSM report A1 Addendum: Response to Technical Review.</p> <p>32 - Draft EIA Report, p224.</p>	ERM provided an assessment of the dissolved aromatics in the addendum.
			<p>(d) <u>Other</u> ERM's OSM report for Scenario 2A and 2B indicate that the model was run 120 times to simulate releases on different starting days from January 2013 through October 2017.<sup>33</sup> The sufficiency of these simulations needs to be subjected to a robust independent validation.</p> <p>33 - OSM report, pages 52 and 67.</p>	<p>ERM's Oil Spill Modelling Report (Annex D4) was subject to an independent review by PRDW (Annex D6).</p> <p>100 iterations and 5 years of currents is common practice for these types of analyses. Again – ERM has been involved in hundreds of these and have had similar studies accepted by regulators around the world. After 5 years with 120 iteration, the modelling here shows similar patterns of the spill trajectories again and again. Adding additional years is very unlikely to add anything to the analysis. The probability diagram shows few outliers. The intent of a study is to be predictive by using the past data in a probabilistic sense. Any outliers in the trajectory a probabilistic analysis will be designated as low likelihood events, while the focus is on where is a possible spill likely to travel.</p>
			Diagrams describing the mass balance representing the phases and forms the oil may become are provided in the OSM report. Mass balances are	ERM's spill modelling study was subject to an independent review by PRDW.

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			important to understand the fate of spilled oil. The sufficiency of the mass balance (including but not limited to the effects of wind and the decay coefficient used, if any) needs to be subjected to a robust independent validation.	The “effects of winds” are evident in the evaporation and entrained oil mass. The biodegradation coefficient used is a modest value from a range available in the literature.
			<p>Any depuration rates used in the modelling and emulsification assumptions made also need to be subjected to a robust independent validation.</p> <p>The magnitude and direction of currents used in the sub-surface spill modelling need to be subjected to a robust independent validation, including a validation of any information provided on how the oil reaches the surface, whether any jet and plume has been simulated accurately (or at all), and whether sufficient information is provided (e.g. the diameter of the pipe from which the oil escapes to enable calculation of oil exit velocity).</p>	<p>The spill modelling was not a biological model, and as such depuration rates are not part of the analysis. Emulsification is automatically computed by the model over time but has a minor effect on the overall trajectory seen in the simulations.</p> <p>Regarding currents, HYCOM is a well-established model and PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>The algorithms for the blowout modelling are derived from published work of a world-renown expert on blowouts, Dr. Pooji Yapa and his team with Li Zheng and Fanghui Chen. See Zheng, Yapa and Chen, 2003, "A model for simulating deepwater oil and gas blowouts - Part I: Theory and model formulation" in the Journal of Hydraulic Research, Vol. 41, Issue 4. Also Yapa et al., 2010, "A model to simulate the transport and fate of gas and hydrates released in deepwater" in the Journal of Hydraulic Research, Vol. 48 Issue 5.</p>
			<p>The draft EIA Report indicates that ‘Eni is anticipating the oil viscosity to be light for this project’,<sup>34</sup> making the point that such oils are ‘less persistent and tend to disappear rapidly from the sea surface’, while in contrast ‘high viscosity oils... are more persistent, usually requiring a clean-up response (e.g. heavy crude oil).’ No underlying data has been provided to substantiate Eni’s claim that the ER236 oil is anticipated to have light viscosity. This claim also needs to be subjected to a robust independent validation.</p> <p>34 - Draft EIA Report, p234.</p>	<p>The site specific chemistry data and properties of the hydrocarbon can be only confirmed after the first explorative well has been drilled. Eni determined that no heavy oil is expected to be discovered in South Africa in reservoir rocks from the Upper Cretaceous age, which are thought to be slope-basin floor fans. The modelled crude oil was based on the results of the Petroleum System Model run in the study area. The defined data has been compared with additional information gathered from ERM’s database of crude oil properties compiled from other assays: such parameters are within the general crude and chemistry data in</p>

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				ERM's database for blowout and riser disconnect simulations and considered valid.
			<p><b>2.2 Failure to include Oil Spill Contingency Plan (OSCP) in draft EIA violates requirement for public participation</b></p> <p>In comments submitted on the draft Scoping report on behalf of SDCEA, which comments are specifically incorporated into this submission, the following was pointed out:</p> <p>Dr Chernaik notes that the Draft Scoping Report alludes to the possibility of there being an Oil Spill Response Plan forming part of the DEIR for the project: "ENI will develop and implement an Oil and Chemical Spill Response Plan in the event of an accidental release of oil offshore."35</p> <p>Dr. Chernaik advises that it must be ensured that an Oil Spill Response Plan is indeed part of the DEIR for the project.</p> <p>Dr. Chernaik goes on to state that the Oil Spill Response Plan also needs to conform to guidelines about what information needs to be in the plan. An example of such guidelines is the Guidelines for Offshore Oil Spill Response Plans - Guidance for Offshore Oil and Gas Exploration, Production and Pipeline Facility Operators (API TECHNICAL REPORT 1145, SEPTEMBER 2013), available online at: <a href="http://www.oilspillprevention.org/~media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/1145-e1-final.pdf">http://www.oilspillprevention.org/~media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/1145-e1-final.pdf</a>. 35 - At page 44.</p>	<p>In South Africa, the OSCP must be submitted to the relevant South African Authority (PASA and SAMSA) for approval before the start of any drilling operation, so not only international but also local requirements will be taken into consideration. The Authorities do not require that the OSCP is submitted with the Draft EIA Report.</p>
			<p>In Dr. Chernaik's view, one of the most important elements of a good Oil Spill Response Plan is the identification of available resources for responding to a major spill. If an Oil Spill Response Plan correctly describes what to do in case of a major spill, but the required equipment or trained personnel are not available to rapidly implement the plan, then correctly describing what to do is of no use. This is why guidelines for Oil Spill Response Plans require such plans to identify response resources, such as section 4.2 of the guidelines cited above, which provides as follows:</p> <p><b>4.2 Resource Inventories and Mobilization Times</b></p> <p>Identify the primary Oil Spill Removal Organizations that are under contract or can provide key response resources (boom, skimmers, barges, dispersants and application platforms, etc.) and how they will likely be utilized in a response. For example, due to varying capabilities between Oil Spill Removal Organizations, some may be more suited or pre-designated</p>	<p>Oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills were undertaken as part of the EIA Report. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. A project specific Oil Spill Contingency Plan (OSCP) will be developed by Eni see Chapter 9 Section 9.8.2. This plan will be developed in terms of the nationally adopted Incident Management System for spills and the National OSCP. This plan would instruct employees as to the correct response procedures for any unlikely oil spill that may occur during the exploration drilling operation. This plan of intervention, providing contacts lists and mobilization procedures will be drafted prior to the commencement of drilling activities. Eni will specifically develop its own Oiled Wildlife Response Plan</p>

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			<p>for offshore containment and recovery whereas others may only provide shoreline cleanup services. If company owned equipment will be utilized, it should be identified in this section as well.</p> <p>Resource inventory lists of the major response equipment and personnel should be included for the company and primary Oil Spill Removal Organizations. The lists should include at least those resources that could be mobilized to the site(s) in the first 24 hours to make the Oil Spill Response Plan as stand-alone as possible for the initial response phase. Alternatively, Oil Spill Removal Organizations websites or those that maintain compilations of resource inventories such as the Response Resource Inventory can be referenced for that information."</p>	<p>(OWRP) according to the National Oiled Wildlife Preparedness &amp; Response Plan (NOWCP) as part of its OSCP.</p> <p>All employees who are affected by the plan would be trained before commencement of drilling and at least one exercise would be held during drilling to confirm preparedness of people and equipment.</p> <p>The oil spill contingency plan should include or address, but not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Alert procedure;</li> <li>• Initial / immediate actions;</li> <li>• Oil Spill Response Options / Strategies;</li> <li>• Oiled Wildlife Response Plan;</li> <li>• Roles and responsibilities (including Emergency Directory);</li> <li>• Response Actions;</li> <li>• Response termination procedure;</li> <li>• Oil Spill Modelling Report;</li> <li>• Oil Spill Risk Assessment (environmental sensitivities and priorities for protection);</li> <li>• Oil Spill Response Equipment Inventory;</li> <li>• Response technical guidelines and limitations;</li> <li>• Response equipment and maintenance / Inspection plan;</li> <li>• Facilities (including specification) and products (including MSDS manual); and</li> <li>• Drills and training.</li> </ul> <p>The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval SAMSA will issue a Pollution Safety Certificate. Eni shall provide copies of the plan and the approved Pollution Safety Certificate from SAMSA to the Petroleum Agency of South Africa, and the Department of Environmental Affairs.</p> <p>In response to your comment, Eni's approach is to join international consortiums for main equipment and to develop in-house technologies to improve the intervention capability. Eni is a member of Oil Spill Response Limited (OSRL) who will be contracted to provide oil spill emergency response equipment. OSRL's Saldanha Bay base houses an integrated subsea well intervention system which includes a capping stack suitable for international use and two hardware kits for debris clearance, BOP intervention and the subsea application of dispersant at a</p>



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				wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which could be mobilised in the case of an emergency. Additional equipment can be brought in as needed.
			<p>Dr. Chernaik goes on to point out that the question of response resources available to be mobilized in the first 24 hours of a spill may be very critical in the context of South Africa given its relative lack of experience in offshore oil and gas projects, and advises that if South Africa lacks local equipment or trained personnel to respond rapidly (within 24 hours) to a major spill from an offshore oil and gas facility, then this is an issue the DEIR for the Exploration Drilling within Block ER236, off the East Coast of South Africa needs to explore.</p> <p>In light of the above, it is submitted that the Draft Scoping Report should require the DEIR includes a description of the available resources to respond to a major oil spill.</p>	<p>Table 8.9 in Chapter 8 of the EIA Report describes the Avoidance/Prevention Actions and Mitigation Measures that will be implemented to prevent and respond to a spill. It covers all the actions that are taken or will be taken to reduce the likelihood of a major spill. Section 9.8.2 describes what the OSCP will include and address. Resources will be fully described in the OSCP.</p> <p>The International consortia, such as Oil Spill Response Limited (OSRL) are able to provide oil spill emergency response equipment worldwide and in addition to local capabilities. For instance OSRL's capabilities in South Africa can be already supported by a local base in Saldanha Bay and from different worldwide bases. Additional personnel and equipment can be brought in country as needed and in suitable timing for a rapid response. All the personnel included in emergency response crew are trained and equipped to respond to the emergency.</p>
			<p>In Annexure B6 – Public Participation Comments and Responses to the draft EIA Report, ERM respond to this comment as follows:</p> <p>Oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills will be undertaken as part of the EIA. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included within the plan.</p> <p>The OSCP must be submitted to the relevant South African Authority (PASA and SAMSA) for approval before the start of any drilling operation, so not only international but also local requirements will be taken into consideration. The Department of Environmental Affairs (DEA) and the Department of Transport (DoT) through the South African Maritime Safety Authority (SAMSA) are two key role players with regards to vessel-source marine pollution, and particularly oil pollution.</p> <p>Eni's approach is to join international consortiums for main equipment and</p>	<p>Table 8.9 in Chapter 8 of the EIA Report describes the Avoidance/Prevention Actions and Mitigation Measures that will be implement to prevent and respond to a spill. It covers all the actions that are taken or will be taken to reduce the likelihood of a major spill. Section 9.8.2 describes what the OSCP will include and address.</p> <p>An Oil Spill Contingency Plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. It is the role the South African Maritime Safety Authority (SAMSA) to review and approve the OSCP prior to the start of drilling. On approval; SAMSA will issue a Pollution Safety Certificate. Eni shall provide copies of the plan and the approved Pollution Safety Certificate from SAMSA to the Petroleum Agency of South Africa and the Department of Environmental Affairs. The Plan and Pollution Safety Certificate are outside of the scope of this EIA process and are not required by PASA for the adjudication of this application for Environmental Authorisation.</p> <p>The reference to capping stacks (plural) in Saldanha Bay was a typo and there is only one capping stack available in Saldanha,</p>

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			<p>to develop in-house technologies to improve the intervention capability. Eni is a member of Oil Spill Response Limited (OSRL) who will be contracted to provide oil spill emergency response equipment. OSRL's Saldanha Bay base houses an integrated subsea well intervention system which includes a capping stacks (sic) suitable for international use and two hardware kits for debris clearance, BOP intervention and the subsea application of dispersant at a wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which could be mobilised in the case of an emergency. Additional equipment can be brought in as needed.</p> <p>The EIR will include details on the required contents of the OSCP and information regarding South African response capacity, however the plan itself will be developed once the details, as outlined above, are known.</p> <p>However, the draft EIA Report submitted by ERM on behalf of Eni fails to include an OSCP, and fails to provide an adequate description of the resources available to respond to a major oil spill.</p> <p>Instead, the draft EIA Report indicates that: Prior to drilling, an Oil Spill Contingency Plan will be required to be submitted to SAMSA for approval and issuance of a certificate. Both PASA and the DEA will be required to comment on the OSCP prior to issuing of the certificate by SAMSA.<sup>36</sup></p> <p>36 - Draft EIA Report, para 2.3.6 p23.</p>	<p>additional from worldwide bases. A capping stack can also be provided in country by Wild Well Control from another worldwide location.</p>
			<p>The failure to include the OSCP in the draft EIA Report denies I&amp;APs the opportunity to review and comment on the adequacy of the plan, and prevents I&amp;APs from seeking independent technical expert advice thereon. This is in violation to the requirements of s2 of NEMA, the EIA Regulations and the principles contained in the Promotion of Administrative Justice Act No, 2000 (PAJA) .</p>	<p>Section 2 of the NEMA (No. 107 of 1998) as amended relates to the principles of environmental management. Neither the NEMA Regulations of 2017 nor the Promotion of Administrative Justice Act No, 2000 (PAJA) states that an OSCP be included in the EIA Report. The specialist studies to be included in the EIA Reporting were presented in the Plan of Study for the EIA Phase in the Final Scoping Report. The Final Scoping Report was approved by PASA (April 2018). The ERM EAP has therefore provided sufficient information in the EIA Reporting for I&amp;APs to understand the potential impacts and risks associated with the Project and for the authorities to make an informed decision.</p>
			<p>The importance of the OSCP to the assessment of risk as well as to proposed mitigation and control measures is evident from the draft EIA Report:</p> <ul style="list-style-type: none"> <li>- All response procedures [including in respect of a well blowout] form part of the OSCP:</li> </ul>	<p>Noted, refer to previous responses above. An oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. It is the role the South African Maritime Safety Authority (SAMSA) to review and approve the OSCP prior to start of drilling. On</p>

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			<p>All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval. SAMSA will issue a Pollution Safety Certificate.<sup>37</sup></p> <p>37 - Draft EIA Report, para 8.3.1 at p221.</p> <p>- The OSCP informs the activation of emergency response in the event of an oil spill (including as a result of a catastrophic oil spill resulting from a major well blowout):</p> <p>In particular, in the case of an accidental incident, an emergency response team (this team will be available at all times during the drilling activities) will be immediately activated, in accordance with the OSCP, to react to the event in order to reduce and contain the scale of the spill and, in the case of blowout, shut-in the well.<sup>38</sup></p> <p>38 - Draft EIA Report, para 8.3.2 at p 223.</p> <p>In the case of a blowout event, the spill migration will be simulated with real time Metocean data, in order to predict the movement and emergency response team will implement the OSCP to contain/reduce/shut in the spill and so limit possible residual risk for shoreline impact. 39</p> <p>39 - Draft EIA Report, para 8.33 at p 227.</p> <p>- The OSCP includes crisis management, spill response and clean-up, as well as well control:</p> <p>Table 8.9 Avoidance/Prevention Actions and Mitigation Measures Response and Recovery (Mitigation Actions)</p> <p>Despite the prevention measures and management procedures built into the design of the project there is always a risk that a spill can occur. Thus, as standard practice, an OSCP is prepared and put in place at all times during the drilling operation. There are three principal components underpinning an OSCP:</p> <p>- Crisis management (Emergency Command and Control Management);</p> <p>- Spill response, containment and clean-up; and</p> <p>- Well control.</p> <p>Further details are provided in Chapter 9.<sup>40</sup></p> <p>40 - Draft EIA Report, Table 8.9 at p232.</p> <p>- The OSCP is cited as supplementing other measures (including well planning, built-in barriers, capping and spill containment measures) to reduce the magnitude of a catastrophic oil spill resulting from a major blowout, and is relied upon to subjectively reduce the residual risk to the</p>	<p>approval SAMSA will issue a Pollution Safety Certificate. Eni shall provide copies of the plan and the approved Pollution Safety Certificate from SAMSA to the Petroleum Agency of South Africa, and the Department of Environmental Affairs. The Plan and Pollution Safety Certificate are outside of the scope of this EIA process and are not required by PASA for the adjudication of this application for Environmental Authorisation. Section 9.8.2 describes the contents of the OSCP.</p>

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			<p>contentious ALARP levels): Taking into consideration the extensive well planning and built-in barriers, capping and containment measures, the magnitude of the spill will be reduced, supplemented with an OSCP, the magnitude of the spill will be reduced, a spill containment will be in place and the <b>residual risk</b> therefore has be (sic) <b>reduced to As Low As Reasonably Practicable (ALARP)</b>..<sup>41</sup> (original emphasis retained) and</p> <p>The risk of an oil spill (including crude oil and diesel) into the marine environment is inherent in all offshore oil exploration and appraisal projects...</p> <p>The industry approach to dealing with potential oil spills is to develop technology and operational procedures to reduce the likelihood of spills occurring, while at the same time planning appropriate responses to oil spills to reduce the severity of impacts in the event of a spill. <b>The response procedures form part of an Oil Spill Contingency Plan (OSCP)</b>.<sup>42</sup></p> <p>41 - Draft EIA Report, para 8.3.8 at p245. Reference is also made to an Emergency Response Plan (ERP) at para 9.8.1 of draft EIA Report and an OSC Plan at para 9.8.2 of draft EIA Report, under 9.8 Specific Management Plans p266. Both indicates as to be done in the future, i.e. not part of the EIA. At p283 immediate activation and mobilisation of OSCP is indicated in the event of an oil spill. The OSCP is also referred to in Table 9.8 EMPr Commitments Register, at p270 of draft EIA Report.</p> <p>42 - Draft EIA Report, para 10.2.2 Unplanned Activities at pp292-293.</p> <p>In addition, the draft EIR report does not include a detailed description of the available resources to respond to a major oil spill (such as resource inventory lists of the major response equipment and personnel available to Eni, OSRL and Wild Well Control).</p> <p>In Table 8.9 of the draft EIA Report, it is indicated that 'in case of a blowout event, Oil Spill Response Limited (OSRL) and Wild Well Control (for source control and well killing) will be immediately mobilised. Both Companies provide a support 24/7. Project vessels will be equipped with appropriate spill containment and clean-up equipment, eg booms, dispersants and absorbent materials'.<sup>43</sup></p> <p>43 - Draft EIA Report, Table 8.9, p232.</p>	
			<p>In addition, the draft EIR report does not include a detailed description of the available resources to respond to a major oil spill (such as resource inventory lists of the major response equipment and personnel available to Eni, OSRL and Wild Well Control).</p>	<p>Noted, refer to previous responses above. An oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. It is the role the South African Maritime Safety Authority (SAMSA)</p>

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			<p>In Table 8.9 of the draft EIA Report, it is indicated that 'in case of a blowout event, Oil Spill Response Limited (OSRL) and Wild Well Control (for source control and well killing) will be immediately mobilised. Both Companies provide a support 24/7. Project vessels will be equipped with appropriate spill containment and clean-up equipment, eg booms, dispersants and absorbent materials'.<sup>43</sup></p> <p>43 - Draft EIA Report, Table 8.9, p232.</p>	<p>to review and approve the OSCP prior to start of drilling. On approval SAMSA will issue a Pollution Safety Certificate. Eni shall provide copies of the plan and the approved Pollution Safety Certificate from SAMSA to the Petroleum Agency of South Africa, and the Department of Environmental Affairs. The Plan and Pollution Safety Certificate are outside of the scope of this EIA process and are not required by PASA for the adjudication of this application for Environmental Authorisation. Section 9.8.2 describes what the contents of the OSCP.</p>
			<p>In Annexure B6, it is indicated that: OSRL's Saldanha Base houses an integrated subsea well intervention system which includes a capping stacks (sic) suitable for international use and two hardware kits for debris clearance, BOP [blow out preventor] intervention and subsea application of dispersant at a wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which can be mobilised in the event of an emergency. Additional equipment can be brought in as needed'.<sup>44</sup></p> <p>44 - Annexure B6, p53 of PDF document.</p> <p>Given that the proposed wells will be drilled off the East Coast of South Africa while Saldanha is on the West Coast, the location of this intervention system is problematic, and its adequacy needs to be independently validated.</p>	<p>The OSCP will take into account the logistics and likely mobilisation times for response. South Africa is fortunate to have the response capability in country and the Saldanha base also services other African countries.</p> <p>Tier 1 Oil spill equipment is already available on the drillship drilling site (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event in short time within 48 hours. For instance part of Equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.</p> <p>As stated before, the reference to capping stacks (plural) in Saldanha Bay was a typo and there is only one capping stack available in Saldanha. Other capping stacks can be provided by different worldwide bases and providers, such as Wild Well Control. The air/land/sea transport capabilities in the Country are adequate for the logistic (receiving, mobilization and transportation) of capping stack systems to and from the offshore location.</p>
			<p>It is unclear from the draft EIA Report where Wild Well Control is located.</p>	<p>The link to Wild Well Control Website is here <a href="https://wildwell.com/about-wild-well/">https://wildwell.com/about-wild-well/</a>. They have global offices and strategic response locations. The response locations include Malaysia, Singapore, Norway, UAE and several places in the United States. These locations are where there is a high presence of oil and gas activity and their services are not limited to exploration drilling.</p> <p>The website states that founded in 1975, Wild Well is the world's leading provider of onshore and offshore well control emergency</p>

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				response, pressure control, relief well planning, engineering, environmental, and training services. Headquartered in Houston, Texas, and with offices in eight other major cities, Wild Well provides its services on a global basis, and responds to an estimated 80% of the global well control response market. Wild Well has successfully capped hundreds of wells worldwide in all kinds of operational environments. Oil and gas operators rely on Wild Well's experienced personnel for advanced engineering solutions, subsea well services, and well control training to prevent and safely resolve well control incidents.
			It is submitted that the failure to include Eni's OSCP or provide an adequate description of the resources available to respond to a major oil spill constitutes a violation of I&APs rights to participate meaningfully in the EIA process, and effectively denies I&APs an opportunity to in turn influence the decision maker. This constitutes a fatal flaw in the draft EIA Report, and any subsequent approval based on this report will stand to be set aside on appeal or subsequent judicial review.	<p>There is no fatal flaw, the NEMA Regulations of 2017 do not state that an OSCP should be included in an EIA Report. The specialist studies to be included in the EIA Reporting were presented in the Plan of Study for the EIA Phase in the Final Scoping Report. The Final Scoping Report was approved by PASA (April 2018). The ERM EAP has therefore provided sufficient information in the EIA Reporting for I&amp;APs to understand the potential impacts and risks associated with the Project and for the authorities to make an informed decision.</p> <p>A summary of resources (e.g. skimmers, capping system etc.) that would be used to respond to a major spill have been included in Chapter 8 and 9 of the EIA Report. This summary does not include quantities because such detailed information will be part of OSCP.</p>
			<p><b>2.3 Failure to include Emergency Response Plan (ERP) in draft EIA violates requirement for public participation</b></p> <p>With regard to the ERP, the draft EIA Report provides as follows:</p> <p>An Emergency Response Plan (ERP) is a requirement of the International Finance Corporation (IPC) Performance Standards and EHS Guidelines. This plan will include each stage of the Project lifecycle (mobilisation, drilling and demobilisation) and commensurate with the potential risks and impacts identified in the EIA Report.</p> <p>The objective of the ERP is to be prepared to respond to accidental and emergency situations in a manner appropriate to the operational risks, and to prevent their negative consequences.<sup>45</sup></p> <p>However, the draft EIA report submitted by ERM on behalf of Eni fails to include an ERP.</p> <p>It is submitted that the failure to include Eni's ERP in the draft EIA report</p>	<p>As stated previously NEMA and the NEMA Regulations do not state that an Emergency Response Plan should be included in an EIA Report. The specialist studies to be included in the EIA Reporting were presented in the Plan of Study for the EIA Phase in the Final Scoping Report. The Final Scoping Report was approved by PASA (April 2018). The ERM EAP has therefore provided sufficient information in the EIA Reporting for I&amp;APs to understand the potential impacts and risks associated with the Project and for the authorities to make an informed decision. Similar to the OSCP, the ERP will be prepared by Eni prior to the drilling operations. The ERM EAP has therefore provided sufficient information in the EIA Reporting for I&amp;APs to understand the potential impacts and risks associated with the Project and for the authorities to make an informed decision. Therefore there is no fatal flaw.</p>



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			constitutes a violation of I&APs rights to participate in the EIA process and effectively denies I&APs an opportunity to in turn influence the decision maker. This constitutes a fatal flaw in the draft EIA report, and any subsequent approval based on this report will stand to be set aside on appeal or subsequent judicial review. 45 Draft EIA Report, para 9.8.1 at p266.	
			<p><b>2.4 Design of Blowout Preventers used to provide well control in the event of an accidental well blowout fails to meet international standards</b> <sup>46</sup></p> <p>A main reason that the Deepwater Horizon oil spill in the Gulf of Mexico (which began in April of 2010) was such an environmental disaster is that the explosion at the platform disabled the ability to communicate with the subsea Blowout Preventer (BOP) that can stop the flow of oil from a damaged well. The inability to activate, or trigger, the BOP to shut the well meant that oil flowed for 87 days (until August 2010) until an emergency "kill well" could be installed.</p> <p>46 - Contribution by Dr Mark Chernaik, E-Law (USA).</p>	<p>The BOP has a redundant activation system, including acoustic and ROV activation that could overpass the unwanted condition of lack of integrity/ communication from control lines installed from the drilling vessel to subsea. The periodical test of BOP activation system is mandatory and will follow API/ISO Standards. As a clarification, in the unlikely case of failure of the BOP, a new technology called capping system can be mobilized and installed on top of it to shut in the well. In addition, the formation can be reached drilling a relief well from a different drilling unit.</p> <p>With regards to the Deepwater Horizon disaster, the BOP design has changed and all the existing BOPs utilised by Eni have been upgraded with the new controls.</p> <p>The well in Gulf of Mexico flowed for a significant time as no capping stack was available; however the case is very different now, where several capping stacks are available and ready to be deployed.</p>
			<p>As a result of the Deepwater Horizon oil spill, in 2016, the U.S. Bureau of Safety and Environmental Enforcement (BSEE) finalized a rule intended to prevent another similar disaster by imposing design requirements for blowout preventers and related equipment for controlling a well in the event of a serious accident:<sup>47</sup></p> <p>47 - For the full text of the rule, see 30 CFR Part 250, Subpart G - Well Operations and Equipment (available online at <a href="https://www.law.cornell.edu/cfr/text/30/part-250/subpart-G">https://www.law.cornell.edu/cfr/text/30/part-250/subpart-G</a>) and in particular 30 CFR 250.734 - What are the requirements for a subsea BOP system? available online at: <a href="https://www.law.cornell.edu/cfr/text/30/250.734">https://www.law.cornell.edu/cfr/text/30/250.734</a></p>	<p>The blow out preventer (BOP) equipment can be used in the case of loss of control during well operations to close the well with or without tubulars inside the hole. BOP's used by Eni are built using stringent specific manufacturing, functioning and testing protocols defined by ISO/API procedures. The BOP's activation and closure time are consistent with API/ISO standards. The function testing and pressure testing are mandatory and regularly performed as per ISO/API standards in order to guarantee the functioning, efficiency and integrity of this important emergency system. The redundancy activation systems (e.g. acoustic) must be periodically tested as per API/ISO. Please note that onboard the drillship there are at least three different and redundant activation and control systems/panels located in three different areas, specifically: driller's panel, koomey/well control manifold, and tool pusher panel. This is necessary to activate the system in the case of unpredicted malfunctioning or inoperability of one specific panel. After the Deepwater Disaster a new rule the API S63 was</p>

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				enforced incorporating the BSEE new specification. Eni's specification for BOPs are based on API S63.
			<p>When operating with a subsea BOP system, you must:</p> <ol style="list-style-type: none"> <li>(1) Have at least five remote-controlled, hydraulically operated BOPs;</li> <li>(2) Have an operable redundant pod control system to ensure proper and independent operation of the BOP system;</li> <li>(3) Have the accumulator capacity located subsea, to provide fast closure of the BOP components and to operate all critical functions in case of a loss of the power fluid connection to the surface;</li> <li>(4) Have a subsea BOP stack equipped with remotely operated vehicle (ROV) intervention capability;</li> <li>(5) Maintain an ROV and have a trained ROV crew on each rig unit on a continuous basis once BOP deployment has been initiated from the rig until recovered to the surface. The ROV crew must examine all ROV-related well-control equipment (both surface and subsea) to ensure that it is properly maintained and capable of carrying out appropriate tasks during emergency operations;</li> <li>(6) Provide autoshear, deadman, and EDS systems for dynamically positioned rigs; provide autoshear and deadman systems for moored rigs;</li> <li>(7) Demonstrate that any acoustic control system will function in the proposed environment and conditions;</li> <li>(8) Have operational or physical barrier(s) on BOP control panels to prevent accidental disconnect functions;</li> <li>(9) Clearly label all control panels for the subsea BOP system;</li> <li>(10) Develop and use a management system for operating the BOP system, including the prevention of accidental or unplanned disconnects of the system;</li> <li>(11) Establish minimum requirements for personnel authorized to operate critical BOP equipment</li> <li>(12) Before removing the marine riser, displace the fluid in the riser with seawater;</li> <li>(13) Install the BOP stack in a well cellar when in an ice-scour area;</li> <li>(14) Install at least two side outlets for a choke line and two side outlets for a kill line;</li> <li>(15) Install a gas bleed line with two valves for the annular preventer no later than April 30, 2018;</li> <li>(16) Use a BOP system that has the following mechanisms and capabilities; (i) A mechanism coupled with each shear ram to position the entire pipe, completely within the area of the shearing blade and ensure shearing will occur any time the shear rams are activated. This mechanism cannot be another ram BOP or annular preventer, but you may use those during a planned shear. You must install this mechanism no later than May</li> </ol>	<p>The list of recommendations provided in your comment are only a partial list of design and industry best practice rules already adopted worldwide by the industry in subsea activity. As BOPs are an important component to guarantee the safety of the people on the drillship and the environment, Eni, as all the major oil &amp; gas companies, have a full ambit of design and control specifications to operate and maintain it.</p> <p>Eni is fully committed to adopt highest industry standards confirmed by its leadership in deep water exploration drilling activity, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater.</p>

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			1, 2023; (ii) The ability to mitigate compression of the pipe stub between the shearing rams when both shear rams are closed; (iii) If your control pods contain a subsea electronic module with batteries, a mechanism for personnel on the rig to monitor the state of charge of the subsea electronic module batteries in the BOP control pods.	
			South Africa does not have comparable standards (see Chapter 2 of the draft EIA Report – Administrative and Legal Framework). The EIA does not refer either to the BSEE standards for well control, or to the American Petroleum Institute standard API 53, on which the BSEE standards for well control are based.	Noted. The EIA Report mentioned applicable national legislation as well as international requirements. The BSEE is an American organisation that aims to enforce environmental protection, conserve offshore resources and promote safety in all operations. The BSEE standards were not included in the EIA Report since they are American based Regulations. They could, however be considered as a comparable standard in the operations for Best practice purposes.
			<p>The only discussion in the draft EIA Report regarding well control and blowout prevention is provided in section 3.6.3 - Well Execution Options:</p> <p>Section 3.6.3 Well Execution Options</p> <p>Well Control and Blowout Prevention Health, safety and environmental protection are prioritised throughout the drilling process. In particular, there is a specific focus and attention during preparation and operations to avoid any potential accidental events, with related hydrocarbon release or uncontrolled flow from downhole to seabed or at surface (rig floor).</p> <p>Well control during well operations is a routine function, with each well designed and executed to minimise risk of developing a well control incident. Down-hole conditions, such as shallow gas and high-pressure zones can cause control problems as a sudden variations in well pressure. A well kick can occur if there is an influx of formation fluids with sufficient pressure to displace the well fluids. The primary well control against a well kick is provided by the maintenance of a sufficient hydrostatic head of weighted drilling mud/completion brine in the well bore to balance the pressures exerted by fluids in the formation being drilled.</p> <p>Secondary well control is provided by the installation of mechanical device, such as the float collar in the drilling string and the blowout preventer (BOP) at seabed, installed on top of the wellhead after the running and setting of the surface casing. The BOP effectively closes and seals the annulus if there is a sudden influx of formation fluids into the well bore, by the use of a series of</p>	Information about well control and blowout prevention is provided in various chapters of the EIA Report. First mention is made in Chapter 3 which is the Project Description. Further information is provided in Chapter 8: Unplanned Events. This chapter makes mention of how the BOP would work in the case of an unplanned event (refer to Section 8.3 of the EIA Report).

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			hydraulically /electrically actuated rams. In addition, this device allows the formation fluids to be safely vented or pumped at the surface with the well closed, thereby enabling other methods to be applied to restore a sufficient hydrostatic head of mud on the well bore, for example pumping a higher density volume of mud, the so called 'kill mud'. The capacity and pressure rating of equipment, safety device and the BOP rating exceed the predicted reservoir pressures. The well control philosophy and procedure, constantly updated by the Eni drilling department, includes the identification and assessment of all well blowout risks.	
			<p>It is woefully inadequate to state merely that "Secondary well control is provided by the installation of mechanical device, such as the float collar in the drilling string and the blowout preventer (BOP) at seabed, installed on top of the wellhead after the running and setting of the surface casing." The Gulf of Mexico deep exploratory well that spilled oil for 87 days following the explosion of the Deepwater Horizon drilling rig also had a blowout preventer, but it did NOT provide secondary well control because it could not be activated following the explosion. That is why the project proposed by Eni South Africa BV (Eni), and Sasol Africa Limited (Sasol), which would entail exploratory wells in deepwater, must adhere to well control requirements enacted in the wake of the Deepwater Horizon oil spill.</p> <p>Prior to an ironclad commitment (vetted during the EIA process) to do so, it would be irresponsible and irrational to approve the EIA submitted by ERM on behalf of Eni.</p>	<p>The mechanical devices are secondary barriers in case of failure of the primary barrier, ie, the drilling mud.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency.</p>
			<p><b>2.5 Marine Ecology</b> <b>ANNEXURE D1</b></p> <p>The terms of reference indicate that the results of the oil spill modelling have been used to assess the impacts of the proposed drilling on marine biota. Due to the flaws in the Accidental Events assessment and OSM Report highlighted above and the reliance by the Marine Ecology assessment on these results, it is submitted that the marine ecology assessment of impacts arising from potential accident events and a</p>	<p>Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation (Chapter 9 of the EIA Report).</p> <p>As stated previously the Oil Spill Modelling Report (Annex D4) was undertaken by suitably qualified and experienced modellers</p>

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			catastrophic oil spill have not been adequately assessed. As a consequence the Marine Ecology assessment cannot serve as a reasonable or rational basis for a decision on authorisation.	using a tried and tested robust model. Therefore it is incorrect to state that the Oil Spill Modelling Report is fatally flawed. The assessment of the impact of an oil spill on marine ecology was based on the results of the modelling report and the marine ecologist assessment of the impact.
			<p>In addition, a number of other shortcomings or flaws in the Marine Ecology assessment have been identified, and are set out below.</p> <p>The draft EIA Report consists of too many unknown factors and bases its significance ratings on subjective assumptions. There is a current lack of knowledge on South Africa's deep ocean ecosystems, and as a result, it is imperative that baseline data is obtained, and until then, a precautionary approach followed.</p> <p>The lack of baseline data for benthic and pelagic communities has resulted in the draft EIA Report rating the impacts on them as 'negligible'. Components of oceanography are not adequately addressed (such as the semi-permanent Durban Eddy<sup>48</sup> which occurs 70km off shore between Durban and Sezela) and there is little or no reference to past studies, including the exclusion of references from the most recent published data for the Natal Bight area<sup>49</sup>.</p> <p>48 - Guastella, L. A. and Roberts, M.J. 2016. Dynamics and role of the Durban cyclonic eddy in the KwaZulu-Natal Bight ecosystem. African Journal of Marine Science, 38, 23-42; Lamont, T., van den Berg, M.A. and Barlow, R. G. 2016. Agulhas Current Influence on the Shelf Dynamics of the KwaZulu-Natal Bight. American Meteorological Society, 46, 1323-1338; Roberts, M.J., Nieuwenhuys, C &amp; Guastella, L. A. 2016. Circulation of shelf waters in the KwaZulu- Natal Bight, South Africa. African Journal of Marine Science, 38, 7-21</p> <p>49 - Pretorius, M., Huggett, J. A., &amp; Gibbons, M. J. (2016). Summer and winter differences in zooplankton biomass, distribution and size composition in the KwaZulu-Natal Bight, South Africa. African Journal of Marine Science, 38(sup1), S155-S168.</p>	<p>The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and information sourced from the Internet. There are sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology.</p> <p>The Marine Ecology Study (Annex D1 of the EIA Report) has been updated to include relevant 2016 publications. These references have added additional data and therefore value in updating the baseline chapter of the EIA Report (Chapter 4) however, these additional data sources have not changed the outcome of the impact assessment.</p>
			<p>Plankton (page 31):</p> <p>"The pelagic environment is characterised by very low productivity, with the low variability in water-column temperature resulting in very low frequency of chlorophyll fronts. Phytoplankton, zooplankton and ichthyoplankton abundances in Block ER236 are thus expected to be extremely low."</p> <p>In comparison to other areas within the South African EEZ, the</p>	Chapter 8 and The Marine Ecology Study (Annex D1) of the EIA Report assessed the impact of a spill on plankton and larval impacts by spills rated as Minor. It must be kept in mind that the probability of surface oiling <60% in the long-shore footprint is highly patchy, as is the distribution of plankton. Concurrence of plankton patches and slicks would thus be highly localised and unlikely to significantly affect recruitment of any particular species.

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			zooplankton concentrations will be relatively low in Block ER236. However, in terms of biomass it remains the greatest faunal group to be impacted. Impacts of hydrocarbons on zooplankton are excluded in both the Marine Ecology specialist report and the OSM report of the draft EIA Report. As mentioned above, the draft EIA Report fails to reference vital information for the Natal Bight area.	The dynamic nature of the currents the area means that plankton populations will continue to be brought into the Project Area and therefore any loss of plankton is unlikely to have ecosystem-wide effects.
			<p><u>Soft Sediment benthic Macro- and Meiofauna (page 33)</u></p> <p>"Due to the lack of information on benthic macrofaunal communities beyond the shelf break, no description can be provided for the deeper portions (Lower Bathyal) of Block ER236."</p> <p>"Due to the lack of information on benthic macrofaunal communities beyond the shelf break, no description can be provided for the deeper portions (Lower Bathyal) of Block ER236. However, with little sea floor topography and hard substrate, such areas are likely to offer minimal habitat diversity or niches for animals to occupy."</p> <p>This is in contrast to some of the literature and observations from the region, such as those described by MacKay et al. (2014). In their research of the KZN bight (a nearby estuarine/oceanographic feature) it was found that Macrofauna were relatively abundant and particularly rich at &gt;1 000 taxa. Unique and distinctive assemblages were found, owing to the uniqueness of the region. A contributing factor to the Macrofauna richness was the presence of medium sand, fine sand, mud and the variance of overall sediment type were the habitat drivers underlying macrofaunal abundance distributions. This sediment type is expected to be replicated near the bight and within the footprint of the drill region based on probability. It is therefore not viable to claim that there is minimal habitat diversity in the same region as the substrate type is conducive to species richness.</p>	<p>The shelf between St Lucia and Durban, known as the KwaZulu-Natal (KZN) Bight, is relatively wide and characterised by several oceanographic features arising from conditions that are Agulhas Current- and wind-driven (Schumann 1988; Meyer et al. 2002; Lutjeharms 2006; Roberts and Nieuwenhuys 2016, Mackay et al, 2014). Midnight the influence is coastal, through outwelling from the Thukela River, one of the largest in the country (Begg 1978). These combined influences make for what are apparently unique benthic habitats (Green and MacKay 2016; Untiedt and MacKay 2016) and key to the ecology of the region (Mackay et al, 2014).</p> <p>The samples that were taken in the Natal bight by Mackay et al, 2014 were taken at between 20m and 200m water depth in the Natal bioregion. The water depths in the project area are between 1,500m to 3000m.</p> <p>Biogeographically Block ER236 and the areas of interest for well drilling fall into the West Indian Offshore bioregion (Lombard et al. 2004). The offshore areas comprise primarily deepwater benthic habitats and the water body. Due to limited opportunities for sampling, information on the pelagic and demersal communities of the shelf edge, continental slope, and upper and lower bathyal are very poorly known. Consequently, much of the information on the baseline environment provided below relates to the inshore (&lt;50 m) and continental shelf (&lt;200 m) regions, which fall within the Natal Bioregion.</p>
			<p>The draft EIA Report has excluded vital information of the proposed project area and accordingly has failed to adequately assess the impact.</p> <p><u>Pelagic and demersal fish (page 41):</u></p> <p>"Information on other neritic and demersal fish and megabenthic invertebrates beyond the shelf break is lacking and no description of these communities can be provided for Block ER236."</p> <p>The draft EIA Report failed to included detail on fish larvae, including reference to larvae's seasonality and certain oceanographic conditions.<sup>50</sup></p>	<p>Chapter 4 of the Draft EIA Report detailed the major spawning areas of both pelagic and demersal fish species present along the KZN coast in relation to Block ER236. Subsequently, the Marine Ecology Study (Annex D1 of the EIA Report) has been updated to include relevant 2016 publications on the natal bight. These references have added additional data and therefore value in updating the baseline chapter of the EIA Report (Chapter 4) however, these additional data sources have not changed the outcome of the impact assessment</p>



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			<p>This includes the importance of fish species which form important components of KwaZulu-Natal fisheries. For example, seasonal abundance of two neritic tuna species (<i>Auxis</i> sp. and <i>Euthynnus affinis</i>), the occurrence of tuna and mackerel (<i>Scombridae</i>), the presence of yolk-sac-stage larvae of the temperate chub mackerel <i>S. japonicus</i> which strongly suggests that this species spawns along the east coast and Shad (<i>Pomatomus saltatrix</i>) larvae, which are only found in the shelf waters off KwaZulu-Natal have been excluded from the draft EIA Report.</p> <p>50 - Beckley, L. E. and Leis, J. M. (2000) Occurrence of tuna and mackerellarvae (family: <i>Scombridae</i>) off the east coast of South Africa. <i>Mar. Freshw. Res.</i>, 51, 777–782.</p>	
			<p><u>Coelacanths (page 46):</u>            Since the current knowledge of coelacanth life-history is lacking, any assumptions made on their distribution and well-being is unsupported and should be regarded as invalid. In addition, there is concern that the statement on their sensitivity to hydrocarbons as 'unknown' is an attempt to down-play the seriousness of any potential impact. It is strongly suggested that further research is done to establish with certainty whether Coelacanths are present in the Area of Study and, if so, the impact of the proposed activity on them would be. This must be part of a public participation process.</p>	<p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons. As discussed in Chapter 8, only the subsurface slicks would not pose</p>

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				an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. That would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.
			<p><u>Seabirds (page 57):</u> David Allen, curator of birds, at the Durban Natural Science Museum<sup>51</sup> (Pers Comms, David Allen) responded to the draft EIA Report by stating that here is an under representation of pelagic seabirds found within Block ER236. Furthermore, the draft EIA Report does not address the threat of pelagic seabirds colliding with the rigs, especially at night and most particularly in strong winds. External infrastructure such as cables and masts would be particularly worrying this regard.</p> <p>51 Per communication with David Allen.</p>	<p>The marine ecology study touched on avifauna very briefly to alert the reader to the occurrence of seabirds in the project area. Table 7 list examples of some of the resident and visiting seabirds and is not intended to be comprehensive.</p> <p>The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling.</p> <p>Chapter 7 of the EIA Report assesses the risk of seabirds colliding with the rig and provides mitigation measures to reduce the risk to seabirds.</p>
			<p><u>Marine Mammals (page 71):</u> Beaked whales are particularly vulnerable to certain types of man-made noise, particularly mid- frequency naval sonar. The exact reason why is not yet fully understood, but necropsy of stranded animals has revealed gas embolisms and haemorrhage in the brain, ears and acoustic fat - injuries consistent with decompression sickness (acoustically mediated bubble formation) may also play a role".</p> <p>With the obvious increase in noise pollution due to seismic activities, drilling and vessel noise, marine mammals, including beaked whales are under threat. A precautionary approach needs to be taken.<sup>52</sup> A baseline study should be a prerequisite prior to any decisions regarding the exploration drilling and it is recommended that the draft EIA Report be updated once this relevant data of vulnerable cetaceans is obtained.</p> <p>52 Fernández A, Arbelo M, Martín V. 2013. Whales: No mass strandings since sonar ban. Nature 497:317–317; Fernández A, Edwards JF, Rodriguez F, De Los Monteros AE, Herraiz P, Castro P, Jaber JR, Martin V, Arbelo M. 2005. "Gas and fat embolic syndrome exposed to anthropogenic sonar signals. Veterinary Pathology Online 42:446–457; Findlay KP, Best PB, Ross GJB, Cockcroft VG. 1992. The distribution of</p>	<p>As stated previously there is sufficient baseline data available to access the impact of noise of marine fauna present in the project area.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, as the source of this noise is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for meters, depending on the season) and will not travel far downwards. Thus, whilst the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. Secondly, underwater noise from the drilling operations would not extend as</p>

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			small odontocete cetaceans off the coasts of South Africa and Namibia. South African Journal of Marine Science 12:237–270	far inshore as the migration routes and dive sites.  Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14).
			<u>Marine Protected Areas</u> “To this end, numerous offshore focus areas were identified for protection between 30°E and 35°E, and these carried forward through Operation Phakisa for the proposed development of offshore MPAs. Those within the project area show in Error! Reference source not found. Although Block ER236 overlaps with the proposed Protea Banks, Aliwal Shoal Expansion and iSimangaliso Wetland Park Extension MPAs, there is no overlap of the areas of interest for well drilling with proposed protection areas.” <sup>53</sup>  53 Page 74 of the draft EIA Report. It is impossible to see which off-shore focus areas were identified within the project area as there is an error message when referencing them. This needs to be rectified and the draft EIA Report must be made available for public comment thereafter.	There was an error in the cross referencing on page 74 of the Marine Ecology Study (Annex D1 to the Draft EIA Report) to Figure 27. However, this Figure was clearly labelled and available on page 75 of the report. This cross-referencing error has been fixed subsequently, Figure 28 of Annex D1 to the Final EIA Report.
			A protected area means any kind of protected area defined in the National Environmental Management: Protected Areas Act, 2003. According to the National Environmental Management Act (NEMA) Listing Notice 3 <sup>54</sup> , most defined protected areas have a buffer that extends 10 kilometres from the proclaimed boundary of a world heritage site or national park and 5 kilometres from the proclaimed boundary of a nature reserve. This has not been taken into account by the draft EIA Report and must be considered in light of recent changes in MPA designation.  54 <a href="http://eolstoragewe.blob.core.windows.net/wm-698609-cmsimages/GNR324ListingNotice37April2017.pdf">http://eolstoragewe.blob.core.windows.net/wm-698609-cmsimages/GNR324ListingNotice37April2017.pdf</a>	Chapter 4 of the Draft EIA Report included a description of the proposed MPAs as well as the existing MPAs and included the consideration of both existing and proposed MPAs in the Draft EIA Report. The Draft EIA Report stated that no MPAs overlapped the Block as they had not been promulgated yet. Chapter 4 of the Final EIA Report has been updated to reflect the approval of the 20 new MPAs on 24 October 2018. Three recently approved MPAs now overlap with the Block, however there is still no overlap of MPAs with the either the northern or southern drilling areas of interest. No buffer is necessary as no activity may occur within a designated MPA.
			<u>Impact of planned impacts of exploration well drilling (page 78):</u>  <u>The magnitude of impact is referenced as follows:</u> “Some impacts will result in changes to the environment that may be immeasurable, undetectable or within the range of normal natural variation. Such changes are regarded as having no impact, and characterised as having a negligible magnitude.” This means that immeasurable or undetectable impacts are not considered	As stated previously, there is sufficient secondary baseline data available to assess the impacts of the project on the environment. The precautionary principle was applied when the presence of sensitivity species could not be confirmed and these impacts assessed. A pre-drilling survey will confirm the baseline environment at the drilling area of interest prior to drilling.  During the Screening and Scoping Phase of the EIA process, the

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			<p>in this report and given negligible status.</p> <p>This is an unacceptable manner in which to conduct an EIA. Given the large number of unknowns, and given consideration of the precautionary principle and risk-adverse approaches of NEMA, it is imperative that baseline data needs to be obtained during the first phases of the EIA process. Without this information it is impossible for a constructive consultative process to take place and the public and the authorities are being misguided and misinformed about the impacts of the proposed activity.</p>	<p>EIA team identified the key environmental and social impacts, between the planned and unplanned project activities and environmental or social resources and receptors, which require further evaluation. During the Scoping Phase stakeholder engagement, these key impacts were discussed and new impacts were raised by stakeholders. These issues were then used to update the summary of the potentially significant impacts from the Scoping Phase and are provided in Table 7.1 of the Final EIA Report. The key impacts associated with unplanned/ accidental events are assessed in Chapter 8 of the Final EIA Report.</p> <p>The impacts considered potentially significant by the project team and stakeholders were evaluated further in the EIA Report. The impacts considered non-significant are discussed briefly and scoped out of the detailed assessment. Non-significant issues are presented in Table 7.2 of the Final EIA Report.</p>
			<p><u>Physical disturbance of the seabed (page 85)</u> The entire section related to disturbance due to drilling needs to be verified.</p> <p>There is both historical and contemporary research showing that the impacts of seabed drilling may cause adverse environmental impacts on the seabed.<sup>55</sup> Furthermore, it has been recently recognized that the deep-sea is home to billions of microbes, which reproduce on a geological timescale. The living microbial biosphere found in ocean sediment is thought to be the largest biosphere in the world<sup>56</sup> (200X the total biomass of all humans).</p> <p>55 - Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. <i>Frontiers in Environmental Science</i>, 4, p.58.</p> <p>56- <a href="https://www.ted.com/talks/karen_lloyd_this_deep_sea_mystery_is_changing_our_understanding_of_life">https://www.ted.com/talks/karen_lloyd_this_deep_sea_mystery_is_changing_our_understanding_of_life</a></p>	<p>Refer to Chapter 7 of the EIA Report and Annex D1 for the assessment of the impacts on the seabed by an experienced and suitably qualified marine ecologist.</p> <p>The impacts to the seabed and its associated fauna are highly localized, and when seen in context of the extent of the Southwest Indian Ocean upper and lower bathyal habitats available, the impacts of the proposed well drilling on the seabed and benthos are Moderate to Negligible.</p>
			<p>The effects of cement dissolving into seawater are not detailed as an impact. There is no mention of the chemical makeup in spite of the fact that the drilling process involves the disposal of waste, including drill cuttings and excess cement, fluids (drilling mud), produced water, and other chemicals that may cause detrimental ecological effects.<sup>57</sup> Impacts have been said to be negligible, but benthic communities are highly sensitive</p>	<p>The assessment of the physical and biochemical effects the disposal of drilling muds and cement on marine biota were updated from the Draft EIA Report and were assessed as Moderate to Minor in Chapter 7 and the Marine Ecology Study (Annex D1) of the Final EIA Report. The assessment of the impact of the disposal of muds and cuttings at the seabed on benthic</p>

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			<p>and slow growing. Especially deep cold-water corals which can be hundreds of years old. The draft EIA Report simply states that “there is a lack of information on benthic fauna.”</p> <p>57 - Gray, J. S., Clarke, A. J., Warwick, R. M., and Hobbs, G. (1990). Detection of initial effects of pollution on marine benthos: an example from the Ekofisk and Eldfisk oilfields, North Sea. Mar. Ecol. Prog. Ser. 66, 285–299. doi: 10.3354/meps066285; Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. Frontiers in Environmental Science, 4, p.58.</p> <p>Many deep-sea species typically have low metabolic rates, slow growth rates, late maturity, low levels of recruitment, and long life spans. Deep-sea habitats have diverse assemblages that are composed of several rare species but at low abundances. In most deep-sea ecosystems, recovery can be very slow, making deep-sea species and assemblages particularly sensitive to anthropogenic impacts, with low resilience to disturbances from human activities.<sup>58</sup></p> <p>58 - Vanreusel, A., Hilario, A., Ribeiro, P.A., Menot, L., and Arbizu, P.M. (2016); Threatened by mining, polymetallic nodules are required to preserve abyssal epifauna. Sci. Rep. 6:26808. doi:10.1038/srep26808; Schlacher, T.A., Baco, A.R., Rowden, A.A., O'Hara, T.D., Clark, M.R., Dower, C., et al. (2014). Seamount benthos in a cobalt-rich crust region of the central Pacific: Conservation challenges for future seabed mining. Divers. Distrib. 20, 491–502. doi:10.1111/ddi.12142; Clark, M.R., Althaus, F., Schlacher, T.A., Williams, A., Bowden, D. A., Rowden, A. A. (2016). The impacts of deep-sea fisheries on benthic communities: a review. ICESJ. Mar. Sci. 73(Suppl.1), i51–i69. doi:10.1093/icesjms/fsv123 Cordes, E. E., et al. (2016). "Environmental Impacts of the Deep-Water Oil and Gas Industry: A Review to Guide Management Strategies. Frontiers in Environmental Science 4(58): 26.</p> <p>The assumption that impacts will persist over the short term are unjustified and considering there is not enough information about the fauna and flora at the depth of the proposed activity, the majority of the ratings in the draft EIA Report are highly speculative.</p> <p><u>Toxicity and Bioaccumulation (page 89)</u> Whilst the cement may contain low amount of toxic material, the amount of</p>	<p>infauna was increased from Minor to Moderate in the Final EIA based on the slower recovery rate of deep water benthos. This assessment was based on scientific literature and the marine ecologist's extensive experience.</p> <p>The list of chemicals that will most likely be utilized by the drilling contractor to make the drilling muds is included in Chapter 3 of the EIA Report. Eni is selecting chemicals, barite and cement providers that offer certified composition of products.</p>

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			<p>cement is cause for concern. Furthermore, references may be outdated and require recent validation.</p> <p>There is toxicity associated with many components of Offshore Oil and Gas Drilling. The chemical fate of the complex mixtures of human-made and natural substances contain high concentrations of certain metals (Ba, Cr, Cu, Ni, Pb, and Zn) and hydrocarbons than are later observed in background sediments<sup>59</sup>. Some Zooplankton specifically bio-accumulate certain toxins such as the polycyclic aromatic hydrocarbons (PAC's), which is deleterious to their own health and the health of those ecosystems they are part of.<sup>60</sup></p> <p>59 - Breuer, E., Stevenson, A.G., Howe, J.A., Carroll, J. and Shimmield, G.B., 2004. Drill cutting accumulations in the Northern and Central North Sea: a review of environmental interactions and chemical fate. Marine Pollution Bulletin, 48(1-2), pp.12-25.</p> <p>60 - Almeda, R., Wambaugh, Z., Wang, Z., Hyatt, C., Liu, Z. and Buskey, E.J., 2013. Interactions between zooplankton and crude oil: toxic effects and bioaccumulation of polycyclic aromatic hydrocarbons. PloS one, 8(6), p.e67212; Marki, H.H., 2015. Effects of Produced Water on the Marine Phytoplankton Phaeodactylum tricornutum-A study of the effects Produced Water, from the Petroleum Industry, can have on Marine Phytoplankton, and the possibilities of a simple yet highly modifiable experimental design (Master's thesis, NTNU); Brussaard, C.P., Peperzak, L., Beggah, S., Wick, L.Y., Wuerz, B., Weber, J., Arey, J.S., Van Der Burg, B., Jonas, A., Huisman, J. and Van Der Meer, J.R., 2016. Immediate ecotoxicological effects of short-lived oil spills on marine biota. Nature communications, 7, p.11206.</p>	
			<p><u>Bio accessibility of metals (page 102)</u></p> <p>Due to the nature of the deep-sea environment, measuring the effect of acute toxicity caused by heavy metals released through the process is poor. Furthermore, the variety of chemical components in drilling muds and their variation in both percentage composition and inherent acute toxicity means that there is the potential for large variations in toxicity between different muds<sup>61</sup>. One can also take each of the elemental / compound constituents of the fluids, muds and cement into account to determine their localised chemical impact. With respect to chronic pollution by these compounds and crude oil spills, there is research stating that their impacts cause a range of adverse impacts such as histopathological lesions and other cellular effects as well as reduced or inhibited enzyme systems and other molecular effects<sup>62</sup>. The bio-accessibility of metals found does not have an impact associated with them, despite warnings given. This needs</p>	<p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided.</p> <p>The specifications included in the EIA Report are the maximum</p>



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			<p>to be accurately assessed.</p> <p>61 - Holdway, D. A. (2002). The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes. Marine Pollution Bulletin, 44(3), 185–203. doi:10.1016/s0025- 326x(01)00197-7</p> <p>62 Holdway, D. A. (2002). The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes. Marine Pollution Bulletin, 44(3), 185–203. doi:10.1016/s0025- 326x(01)00197-7</p>	<p>level of acceptance for discharge overboard; such values are the same or less than international best practice IFC guidelines.</p>
			<p><u>Impacts (page 115)</u></p> <p>“Unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is thus not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range.”</p> <p>This is an inaccurate assumption and has been given a ‘negligible impact’ allocation in the draft EIA Report which must be rectified.</p> <p>Various researchers<sup>63</sup> mention that physiological changes may also occur when behaviour is forced to change. These include animals feeling stressed due to the loud noise (hormonal imbalance), animals having to change their feeding habits (prey impact), animals having to move out of their migratory paths (territorial avoidance), animals having to change how they communicate (vocalisation shift) and animals trying to cancel out (obliterate) the disruptive sound with their own sound (masking).</p> <p>Noise impacts have not be included for crustaceans and zooplankton in the draft EIA Report and this requires rectification and a revised public participation process.</p> <p><u>Cetaceans (page 119-123)</u></p> <p>“The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of small magnitude in the drilling area and for the duration of the drilling campaign. While underwater noise may mask biologically significant sounds and cause behavioural changes, impacts are fully reversible once drilling operations are completed.”</p> <p>Acute acoustic disturbances, such as those caused by seafloor drilling and</p>	<p>This EIA Report has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible. The underwater noise generated by vessels during well-drilling</p>

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			<p>seismic surveys, have been shown to impact cetaceans in both a behavioural and physiological manner explained below. South Africa has a high reliance on the whale industry in terms of international and domestic eco-tourism (tourism contributing 10% to South Africa's GDP).</p> <p>63 - Carroll, A.G., Przeslawski, R., Duncan, A., Gunning, M. and Bruce, B., 2017. A critical review of the potential impacts of marine seismic surveys on fish &amp; invertebrates. Marine pollution bulletin, 114(1), pp.9-24; Weilgart, L., 2013, November. A review of the impacts of seismic airgun surveys on marine life. In CBD Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity. London, United Kingdom (pp. 1-10); Di Iorio, L. and Clark, C.W., 2010. Exposure to seismic survey alters blue whale acoustic communication. Biology letters, 6(1), pp.51-54; Romano, T.A., Keogh, M.J., Kelly, C., Feng, P., Berk, L., Schlundt, C.E., Carder, D.A. and Finneran, J.J., 2004. Anthropogenic sound and marine mammal health: measures of the nervous and immune systems before and after intense sound exposure. Canadian Journal of Fisheries and Aquatic Sciences, 61(7), pp.1124-1134; Gordon, J., Gillespie, D., Potter, J., Frantzis, A., Simmonds, M.P., Swift, R. and Thompson, D., 2003. A review of the effects of seismic surveys on marine mammals. Marine Technology Society Journal, 37(4), pp.16-34; Gausland, I., 2000. Impact of seismic surveys on marine life. The leading edge, 19(8), pp.903-905.</p> <p>As beaked whales are highly sensitive to anthropogenic noise, increased boating traffic, underwater noise from drilling and seismic surveys from deep sea oil development are highly likely to result in avoidance behaviour or cause mass stranding events which could be very detrimental to these species, particularly as nothing is known about their population status. These cryptic, deep-diving species appear to be substantially more vulnerable to the effects of marine noise pollution, compared to other cetacean species, which has resulted in a number of mass stranding events worldwide<sup>64</sup>.</p> <p>64 - Dalebout ML, Robertson KM, Frantzis A, Engelhaupt DAN, Mignucci-Giannoni AA, Rossario-Delestre RJ, Baker CS. 2005. Worldwide structure of mtDNA diversity among Cuvier's beaked whales (<i>Ziphius cavirostris</i>): implications for threatened populations. Molecular Ecology 14:3353–3371.</p>	<p>operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards. Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
			<p>Elevated noise may cause behavioural disturbances, where cetaceans deviate from their normal behaviour. This may include the abandonment of important activities such as feeding or nursing in response to sound. Cetaceans may also move away from feeding and mating grounds, move or alter their migration routes, alter their calls, make navigation errors and</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p>

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			<p>accidentally blunder into fishing nets or ships<sup>65</sup>. Cetaceans have also been reported to panic from loud underwater sounds either immediately fleeing, rapidly diving deeper or rising to the surface quickly which can result in decompression sickness.</p> <p>The following papers express the serious physiological impacts whales experience whilst exposed to seismic activity (including revealed severe diffuse congestion, haemorrhaging and bleeding around acoustic jaw fat, ears, brain and kidneys, gas bubble-associated lesions and embolisms and evidence for decompression sickness). Cetaceans have also been found to show heightened stress responses and a weakened immune system following intense noise exposure.</p> <p>Persistent and/or acoustic noise should be considered to cause population level impacts and has been thought to contribute to several whale species decline or lack of recovery.</p> <p>Therefore the basis on which the draft EIA Report can declare this impact 'negligible' is unknown and must be justified and/or reassessed.</p> <p>65 - Fernandez A, Edwards JF, Rodriguez F, Espinosa de los Monteros A, Herraiz P, Catro P, Jaber JR, Marint V, and Arbelo M. 2005. "Gas and fat embolic syndrome" involving a mass stranding of beaked whales (family Ziphiidae) exposed to anthropogenic sonar signals. Vet.Pathol. 42: 446-457. Doi: 10. 1354/vp.42-4-446.PMID: 16006604; Romano, T.A., M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.E. Schlundt, D.A. Carder, and J.J. Finneran. 2004. Anthropogenic sound and marine mammal health: measures of the nervous and immune systems before and after intense sound exposure. Canadian Journal of Fisheries and Aquatic Sciences 61: 1124-1134; Weilgart L. 2007. The impacts of anthropogenic ocean noise on cetaceans and implications for management. Can. J. Zool. 85: 1091–1116</p>	<p>The underwater noise generated by vessels during well-drilling operations are significantly different to the sound levels generated by offshore drilling and therefore the impacts from the two activities are very different.</p> <p>As stated previously, the impact of underwater noise from offshore drilling potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the offshore location of the areas of interest (Table 7.14)</p>
			<p><u>Discharge of waste (page 123)</u></p> <p>With respect to discharge of waste to sea, the impact should be classified as a major impact and not minor, as stated in the draft EIA Report.</p> <p>Several studies show the impacts of these chemicals on zooplankton and fish physiology (particularly Tuna, which are found in this area). The constituents of the waste such as the production water may also be a cause for concern. Produced water is primarily composed of formation water extracted during oil and gas recovery, but may also contain seawater that has previously been injected into the reservoir along with dissolved</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production, such as produced water, will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p>

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			<p>inorganic salts, dissolved and dispersed hydrocarbons, dissolved minerals, trace metals, naturally occurring radioactive substances, production chemicals, and dissolved gases<sup>66</sup>.</p> <p>66 - Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. <i>Frontiers in Environmental Science</i>, 4, p.58; Hansen, B. R., and Davies, S. H. (1994). Review of potential technologies for the removal of dissolved components from produced water. <i>Chem. Eng. Res. Des.</i> 72, 176–188.; Neff, J. M. (2002). Bioaccumulation in Marine Organisms: Effect of Contaminants from Oil Well Produced Water. Amsterdam: Elsevier; Fakhru'l-Razi, A., Pendashteh, A., Abdullah, L. C., Biak, D. R. A., Madaeni, S. S., and Abidin, Z. Z. (2009). Review of technologies for oil and gas produced water treatment. <i>J. Hazard. Mater.</i> 170, 530–551. doi: 10.1016/j.jhazmat.2009.05.044; Bakke, T., Klungsøyr, J., and Sanni, S. (2013). Environmental impacts of produced water and drilling waste discharges from the Norwegian offshore petroleum industry. <i>Mar. Environ. Res.</i> 92, 154–169. doi: 10.1016/j.marenvres.2013.09.012</p>	
			<p><u>Light sensitivity (page 127)</u> The draft EIA Report states that the impact of light pollution is insignificant, however there is no reference to substantiate that claim.</p> <p>Light is a key determinant of predator and prey accumulations as well as dictating the Diels Vertical Migration (DMS). The Diel Vertical Migration is a type of synchronized behavioural movement of pelagic and planktonic organisms up and down (vertical) regions of the water column. In terms of biomass, it is the greatest migration in the world<sup>67</sup>. When a threat is noted in the water, animals which live in the water column move all at once up or down away from the threat as a form of predator avoidance<sup>68</sup>.</p> <p>The draft EIA Report must reassess the impact of light pollution on the marine environment in relation to the proposed activity.</p> <p>67 - Longcore, T. and Rich, C., 2004. Ecological light pollution. <i>Frontiers in Ecology and the Environment</i>, 2(4), pp.191-198. 68 - Meyer, C.G., Holland, K.N. and Papastamatiou, Y.P., (2007). Seasonal and diel movements of giant trevally <i>Caranx ignobilis</i> at remote Hawaiian atolls: implications for the design of marine protected areas. <i>Marine Ecology Progress Series</i>, 333, pp.13-25.</p>	<p>As discussed in Chapter 7 of the EIA Report, the increase in ambient lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.</p> <p>The impact of the increase in ambient lighting on the DMS, was considered insignificant by the specialist and screened out of the assessment due to the short term that the increased ambient lighting would occur. Due to the offshore location of the areas of interest, the abundance of plankton is also likely to be low and the impact of the prevailing oceanographic conditions such as the Agulhas current would be more significant on plankton populations.</p> <p>In contrast, the amount of light inshore from vessels off Durban and Richards Bay, in shallow waters would be far more likely to effect DMS.</p>

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			<p><u>Well testing (page 128)</u>  Well testing may release oil into the local environment, affecting threatened and endangered species. However, it is considered to have a negligible impact in the draft EIA Report. This needs to be validated and reassessed.</p>	<p>If well testing is conducted, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</p> <p>It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. In addition, all flaring is logged and reported to authorities in the audit report relating to compliance with the EMP. The final well testing report (quantity and type of produced/flared hydrocarbon including oil/gas/water properties rates, volume and quantity, duration of flare, choke dimension etc.). The results of well testing is commercially sensitive information and is provided to the Competent Authority.</p>
			<p><u>Cumulative impacts</u>  The draft EIA Report considers cumulative impacts of low significance. However, ecosystem impacts are not accounted for. This draft EIA Report only refers to specific species and fails to consider an ecosystem approach.</p>	<p>The cumulative impacts of the project are assessed in Chapter 7 of the EIA Report.</p> <p>The potential for cumulative environmental and social interactions caused by the project in combination with other planned activities were identified as:</p> <ul style="list-style-type: none"> <li>• GHG emissions from the project vessels and their contribution towards climate change in combination with other vessels in the region;</li> <li>• Underwater noise generation from the project vessels and their contribution to underwater noise in combination with other vessels in the region and the combined impacts on marine mammals; and</li> <li>• Disturbance to benthos due to oil and gas activities.</li> </ul> <p>ERM's impact assessment methodology (Chapter 6 of the Final EIA) takes ecosystem impacts into account when assessing the impact on the environment and therefore this has been incorporated into the cumulative impact assessment.</p>
			<p><u>Impacts of Benthic fauna:</u>  The report states that there is a lack of information on benthic fauna. Furthermore, there is a lack of accurate information pertaining to rare deep-sea species. On page 138 it states that "[t]hese benthic communities usually comprise fast growing species able to rapidly recruit into areas that have suffered natural environmental disturbance. Epifauna living on the sediment typically comprise taxa which are longer lived and therefore more sensitive to disturbance. No rare or endangered benthic species are known."  Many deep-sea species typically have low metabolic rates, slow growth</p>	<p>Temperature is relatively stable in the deep ocean globally, typically about 5° C at 1,000 meters depth cooling further in deeper depths (0-3°C). Macrobenthos are slower growing in deepwater than in warmer seas due to the temperature. Despite the surface temperatures in the Agulhas current being relatively high, at the depths at which drilling (and associated impacts on deep water macrofauna) will occur, temperatures are likely to be very much lower and therefore recovery slower. Jones et al (2012) studied the recovery of megabenthic (&gt;1mm) assemblages from physical disturbance at the Laggan deep-water hydrocarbon</p>

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			<p>rates, late maturity, low levels of recruitment, and long life spans. Deep-sea habitats have diverse assemblages that are composed of several rare species but at low abundances. In most deep-sea ecosystems, recovery can be very slow, making deep-sea species and assemblages particularly sensitive to anthropogenic impacts, with low resilience to disturbances from human activities.</p> <p>The assumption that impacts will persist over the short term seems unjustified and considering there is not enough knowledge of the fauna and flora at that depth or their actual distribution, the impact ratings are highly speculative.</p>	<p>drilling site in the Faroe–Shetland Channel using remotely operated vehicle quantitative video survey. The study indicated that deep-water megafaunal density and diversity recovers partially from drilling disturbance after 3 yr and increased after 10 years. Megafauna may recover more slowly than the more commonly studied smaller macrobenthic infauna (1mm-500 µm). More rapid recovery will take place in shallower, warmer environments. ERM has reviewed the Specialist study and has determined that the assessment of recovery for deepwater benthic fauna should be changed to long term. Chapter 7 of the Final EIA Report has been changed to reflect this.</p> <p>Wells will be drilled in unconsolidated sediments, in a “least threatened’ benthic habitat (Sink et al., 2011) and away from sensitive hard substrata hosting long-lived sensitive species. Literature suggests that recovery of macrofauna in unconsolidated sediments occurs within 5 years (which by ERM’s definition is short-term). Medium to long-term effects on vulnerable seabed communities were identified in Section 4.3.3 of the Marine Ecology Report (Annex D1).</p> <p>Applying Significance ratings to habitats and species for which very little information exists is by default speculative, however conservative approaches to these assessments have been undertaken in light of the unknowns in this regard. These ratings are based on the experience of the specialist and the precautionary principle is applied.</p>
			<p><u>Conclusion</u></p> <p>The draft EIA Report states that there is a lack of and/or no knowledge of seabed communities at the depth of the proposed wells. There is also little knowledge of the geological and physical components surrounding the well area. In spite of this lack of knowledge the draft EIA Report states that most impacts are of negligible or of minor significance.</p> <p>The marine ecology report needs to be revisited by a local expert and further baseline data needs to be collected. Thereafter the draft EIA Report revised and released for further comment.</p>	<p>The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and reputable information sourced from the Internet. There are sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being ‘present’ (which is essentially the worst</p>

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				<p>case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).</p> <p>The marine ecology study was conducted by a suitably qualified and local specialist with extensive experience of assessing the impact of offshore drilling in South Africa</p>
			<p><b>2.6 Fisheries</b>  <b>ANNEXURE D2</b>  This report also relies upon the oil spill modelling conducted by ERM (see page 59 of Annex D2). Due to the flaws in the Accidental Events assessment and OSM Report highlighted above and the reliance by the Marine Ecology assessment on these results, it is submitted that the Fisheries Study assessment of impacts arising from potential accident events and a catastrophic oil spill have not been adequately assessed. As a consequence the Fisheries Study cannot serve as a reasonable or rational basis for a decision on authorisation.</p>	<p>Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation (Chapter 9 of the EIA Report).</p> <p>As stated previously the Oil Spill Modelling Report was undertaken by suitably qualified and experienced modellers using a tried and tested robust model. Therefore it is incorrect to state that the Oil Spill Modelling Report is fatally flawed. The assessment of the impact of an oil spill on fisheries was based on the results of the modelling report and the marine ecologist assessment of the impact.</p>
			<p>The report refers to the oil spill modelling in the executive summary but (interestingly) does not state the impact (as it does do for other scenarios). This report refers to Annex D1 Marine Ecology as assessing the impacts of the biological effects of oil contamination on fish, spawn products and vulnerable supporting habitats. Annex D2 thus mainly assesses the potential impact of oil spills on fishing operations resulting from an exclusion of vessels from operating in affected areas. As a consequence, this report cannot accurately reflect the significance of marine ecological impacts in a worst case blowout scenario.</p>	<p>The impacts of an oil spill on marine ecology is assessed in Annex D1 the marine ecology study and therefore is not included in the fisheries study. The scope of the fisheries study is to assess the impact on fisheries.</p>
			<p>Throughout the draft EIA Report the wider scale ecological and ecosystem impacts are not considered. Analysis is based mainly on catch data. Deep sea species, non-carnivorous fish species, non-target species and thus biodiversity and tropic levels are not considered. Assessing the ecosystem and/or ecological implications of oil exploration and spills on fish is vital as it serves as a foundation for pattern and model development as well as forecasting. For example, by noting the fish sexual characteristic</p>	<p>Chapter 4 and the marine ecology study (Annex D1) of the Final EIA Report describe the pelagic and demersal fish in the Project Area. The impact of both planned and unplanned activities on fish are assessed in Chapter 7 and 8 and the marine ecology study (Annex D1).</p> <p>ERM's impact assessment methodology (Chapter 6 of the Final</p>



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			<p>influencing nature of alkyl phenols, it can be inferred fish assemblage structure will be impacted. Fish assemblage structures change when "gender- bender" chemicals are released as oil is extracted from the seabed. This has implications on fish-assemblages in general who can carry these chemicals far away from the source as well affects natural predictability of fish spawning<sup>69</sup>.</p> <p>69 - Lofthus, Synnø, Almås, I.K., Evans, P., Pelz, O., Brakstad, O.G., Biodegradation in seawater of PAH and alkyl phenols from produced water of a North Sea platform, Chemosphere (2018), doi: 10.1016/j.chemosphere.2018.05.006.</p>	EIA) takes ecosystem impacts into account when assessing the impact on the environment and therefore this has been incorporated into the assessment of the impacts.
			<p>With respect to physical population being adversely impacted by oil spills, there is a great deal of uncertainty around the ecological and socioeconomic impacts of oil spills, with acute spills often being harmful to fish populations. Most models are vague or subjective as "oil" is not a discrete medium and may have a thousand different types of chemicals present obfuscating which components are damaging. The second limitation is due to a low overall understanding of what biomarkers mean for the health of oil-exposed organisms.</p> <p>70 - Peterson, C.H., Anderson, S.S., Cherr, G.N., Ambrose, R.F., Anghera, S., Bay, S., Blum, M., Condon, R., Dean, T.A., Graham, M. and Guzy, M., 2012. A tale of two spills: novel science and policy implications of an emerging new oil spill model. BioScience, 62(5), pp.461-469.</p>	The marine ecology study (Annex D1) assessed both the sub surface and surface impacts of a blowout on fish and other marine fauna and therefore the impact of a deep water spill has been assessed.
			<p>It can also be noted that the effect of on-shore industrial development on fish population health was not considered in the draft EIA Report. While on-shore industrial development depends on the success of the exploration, a comprehensive analysis would have at the least mentioned these future developments. Structures such as transport systems, helipads, supply bases, and port expansion all have a tangible impact on fisheries and fish species assemblages<sup>71</sup>. This was not considered in the draft EIA Report.</p> <p>71 - Dismukes, D. E. Onshore oil and gas infrastructure to support development in the Mid-Atlantic OCS Region. OCS Study BOEM 2014–657. New Orleans, LA: US Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region (2014).</p>	It is important to not confuse this exploration project and associated EIA with a perception that future, potential exploitation is permitted. This EIA is for the drilling of up to six exploration wells, and the associated on-shore logistics base required. The baseline and impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production phase (including pipelines and production infrastructure) will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.
			<p>There are errors in reference throughout the draft EIA Report which repeatedly read "<b>ERROR: Reference source not found!</b>" These sources need to be provided to allow comment and the statements made that rely on these must be considered unsubstantiated until that time.</p> <p>The draft EIA Report gives no site locality alternative or no-go option as it</p>	Noted. The error references "ERROR: Reference source not found!" were rectified in the Final EIA which was submitted to Petroleum Agency of South Africa (PASA) for adjudication purposes. All comments you may have on the Final EIA Report may be submitted to PASA.

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			is legislated to provide, instead it rehashes the intended location of the drilling, which is inadequate.	Eni already hold an Exploration Right for Block ER 236. Therefore no site locality alternatives could be explored for the proposed Project. The No-go option is detailed in Section 7.4.5 of the EIA Report.
			<p>Page 36 onwards makes mention of the Sardine Run – a pelagic event. However, it is not a minor pelagic event as stated in the draft EIA Report. The sardine run draws vast numbers of terrestrial, avian and marine predators. As such, incurrence with the drill ship and support vessels can be expected. While this was taken into account on page 66 with respect to some whales and dolphins, it does not take an ecosystem approach on the subject of incidence.</p> <p>Furthermore, the draft EIA Report states that the region around the Natal bight and the continental shelf edge constitute part of an Ecologically or Biologically Significant Area (EBSA). The draft EIA Report also recognises that there are currently no management protocols excluding or managing the proposed drilling operations, and therefore this highly biodiverse region has no mandated protection.</p> <p>In spite of identifying the sensitive areas and the pelagic event (albeit referring to it as 'minor'), the draft EIA Report fails to assess the impact of the proposed activity on this area and accordingly is fatally flawed in this respect.</p>	<p>The sardine run occurs along the continental shelf, between May and July, well inshore of Block ER236 and the areas of interest for well drilling. The EIA Report does not state that this is a Minor event, instead the importance of the sardine run is highlighted in Chapter 4 of the EIA Report and throughout the Marine Ecology Study as an important seasonal event.</p> <p>As previously stated the direct area of influence for the Project is limited to drilling areas of interest, which are located over 60 km from the coastline. Therefore there will be no direct impact on the natal bight and continental shelf from the planned activities.</p> <p>ERM's impact assessment methodology (Chapter 6 of the Final EIA) takes ecosystem impacts into account when assessing the impact on the environment and therefore this has been incorporated into the impact assessment.</p>
			<p><u>Exclusion from fishing grounds (page 57 &amp; 58):</u></p> <p>No exclusion zone is mentioned for the passage of each transport ship, and mooring vessel- their exclusion zone totals: 0.785km<sup>2</sup> (this is just for drill site). The draft EIA Report has failed to adequately assess the impact, particularly as it describes impacts to fisheries as "loss of catch as a result of preclusion of fishing grounds." What the draft EIA Report fails to include are the potential long-term impacts as a result of mortality associated with spills, chemical leaks or other toxic affects drilling may cause to fish.</p>	<p>The fisheries impact assessment report does not assess the impact of the transport vessels' exclusion zone as they are constantly moving and therefore the impact on the fishery is very short lived (maximum a day). However, it does include the exclusion zone around the drillship as this will be in place for the duration of the drilling (71 days).</p> <p>The EIA Report includes an assessment of the potential long-term impacts on fisheries associated with spills. This was based on the modelling outputs of the various oil spill scenarios provided.</p>
			Demersal fishing/trawling may be prohibited in future due to the blow out preventers abandoned at the bottom of the ocean. South Africa's Hake offshore trawl (primarily targeting Deep Water Hake) is the country's most valuable fishing sector. Hake is a net export for the country. It is unknown what the effect of offshore drilling, drill vessels, waste discharge and the eventual Blow-Out Protectors will be on the industry. This is must be included in the draft EIA Report in order for there to be a through public participation process on the issue.	<p>The EIA Report included maps of the spatial extent of current and historical fishing activity with respect to the proposed location of the drilling activities. Based on this mapping exercise, there is no evidence that demersal fishing activities take place in the drilling areas of interest. The South African hake offshore trawl grounds are situated at least 490 km from the licence block and at least 560 km from the proposed drilling site.</p> <p>In the case of this project, the BOP will be removed after the</p>

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				completion of drilling activities and the wellhead abandoned. The abandoned wellhead would be located at a depth of between 1,500 m and 2,100 m in the northern area of interest, and between 2,600 m and 3,000 m in the southern area of interest. Considering there are no demersal fishing activities overlapping with Block ER236 and that the water depths of both areas of interest are deeper than 1,500m, there is unlikely to be any interaction with demersal fishing activities if the wellhead is left at seabed.
			<p><u>Unplanned emissions and discharges (page 59):</u> There is little emphasis placed on the detrimental impacts of small/minor leaks in the draft EIA Report.</p> <p>Drill cuttings, drill mud, and wastewater discharge can impact fish ecosystem assemblages. Bunker fuel is also expected to be released periodically around the drill site as the ships maintain proximity to the well-head. Polycyclic aromatic hydrocarbons (PAHs) which are found in crude oil are not well understood in the impact they have on ocean ecosystems. These pollutants individually have some adverse impact on fish or benthic organisms, but collectively and when they occur all at the same time they potentially can impact the essential structure of local fish assemblages<sup>72</sup>.</p> <p>72 - Incardona, J.P., Collier, T.K. and Scholz, N.L., 2011. Oil spills and fish health: exposing the heart of the matter. Journal of Exposure Science and Environmental Epidemiology, 21(1), p.3.</p>	<p>As discussed in Chapter 8 of the Final EIA Report, the Project vessels shall be required to have the Shipboard Oil Pollution Emergency Plan (SOPEP) in place for all vessels. Small chemical and oil spills onboard the Project vessels will be cleaned up immediately and adhere to the SOPEP and EMP and therefore the impact of small oil or chemical spills is unlikely to be significant and was not assessed further</p> <p>The waste water discharges from the proposed drilling activities are described in Chapter 3 of the Final EIA Report. This chapter also describes the inbuilt control measures such as implementation of MARPOL 73/78 to all discharges which represents international best practise standards for the prevention of pollution at sea. The impact of drill cuttings, drill mud and wastewater discharge is assessed in Chapter 7 of the Final EIA Report.</p>
			<p>Crude oil containing polycyclic aromatic hydrocarbons (PAHs), dispersant chemicals and other estrogen- mimicking compounds are suspected to induce vitellogenin production in male and immature female fish, normally only produced by sexually mature females<sup>73</sup>. Furthermore, the behaviour of fish has an impact on human food security as they become harder to catch due to distress. In the North Atlantic, which is prone to seismic surveys, overall catch rates have been reduced by as much as 80%.<sup>74</sup></p> <p>73 - Hickey, R., 2015. Evaluation of Endocrine Disrupting Chemicals in the Florida Coastal Pelagic Fish Complex Following the Deepwater Horizon Oil Spill Event.</p> <p>74 - <a href="http://www.observer.com.na/index.php/business/item/7983-tuna-fishing-industry-under-threat">http://www.observer.com.na/index.php/business/item/7983-tuna-fishing-industry-under-threat</a></p>	<p>Both the physical and biochemical effects of operational discharges from project vessels, drill cuttings and muds have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Negligible.</p> <p>This EIA Report has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the impacts on fish are different.</p>
			<p>Whilst there is no overlap of the area of interest and prawn fishery<sup>75</sup>, there are studies that show that crustaceans are severely impacted by underseas vibrations including seismic surveys and drilling. There is a plethora of literature describing crustaceans internal injuries following seismic surveys.<sup>76</sup></p>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>The Marine Ecology Study identified that the main sources of</p>

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			<p>75 - Page 74</p> <p>76 - R. Williams, A.J. Wright, E. Ashe, L.K. Blight, R. Bruintjes, R. Canessa, C.W. Clark, S. Cullis-Suzuki, D.T. Dakin, C. Erbe, P.S. Hammond, N.D. Merchant, P.D. O'Hara, J. Purser, A.N. Radford, S.D. Simpson, L. Thomas, M.A. WaleImpacts of anthropogenic noise on marine life: publication patterns, new discoveries, and future directions in research and management; Ocean Coast. Manag., 115 (2015), pp. 17-24</p>	<p>noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p>
			<p><u>Potential impact of unplanned emissions and discharges (page 75):</u> The concept of reversible damage to the benthic fauna such as coral which are found at the depth that the drilling will occur at, needs to be dismissed. These deep-sea/ cold-water / "hard" corals can be directly impacted by substrate removal and smothering due to toxic particulate waste material.</p> <p>Habitat destruction as a result of machine injury, drill cuttings, drill mud, and wastewater discharge, can cause reduced polyp activity and growth. Spills and other sources of toxicity are potentially lethal for coral as they may induce partial tissue loss and ultimately death.<sup>77</sup> This section needs to take the self-circulating nature of the Agulhas current into account as it is able to trap pollutants, dispersants and pollution<sup>78</sup>. The Agulhas current flows down the east coast of Africa and is one of the fastest currents in the ocean flowing south. Because of its physical properties, any spill will enter the current and quickly make its way down the coast. "The Agulhas Current also plays a critical role in global ocean circulation which is why it's considered important for climatic conditions across the world."<sup>79</sup> This is due to a process known as the Agulhas Leakage. The current flows along the east coast of South Africa and then turns back on itself flowing into the Indian Ocean. But during this process (known as a retroflexion), large pockets of warm, salty, Indian Ocean water are pinched off from the current. They form ring-like structures called Agulhas Rings or eddies which are massive spinning vortices. These eddies slowly head north-westwards, crossing the South Atlantic Ocean and eventually feed into the Gulf Stream which flows along the east coast of North America."</p> <p>77 - Ragnarsson, S.Á., Burgos, J.M., Kutti, T., van den Beld, I., Egilsdóttir, H., Arnaud-Haond, S. and Grehan, A., 2017. The impact of anthropogenic activity on cold-water corals. Marine Animal Forests: The Ecology of</p>	<p>It is currently unknown whether benthic fauna sensitive receptors (deep water corals) occur in the drilling areas of interest.</p> <p>Based on the precautionary principle if the presence of sensitive species (eg: deep water corals) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on theses receptors were assessed in Chapter 7 of the EIA Report.</p> <p>The influence of waves and currents has been described in the environmental baseline Chapter 4,3,2 Marine Environment (Abiotic components) of the EIA Report.</p> <p>The marine ecologist used the results of the oil spill and cuttings modelling to determine the magnitude/ consequence of the discharge impact to marine ecology. For deep water corals and vulnerable seabed communities reversibility was rated as Medium and sensitivity as High.</p> <p>The Ragnarsson et al, 2017 paper, states that exposure to drill cuttings, and mud and oil contamination, can affect coral behaviour, fitness, and survival. The responses to the Deepwater Horizon event were, however, both species and life history dependent and were highly site specific.</p>

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			<p>Benthic Biodiversity Hotspots, pp.1-35.</p> <p>78 - <a href="http://www.observer.com.na/index.php/business/item/7983-tuna-fishing-industry-under-threat">http://www.observer.com.na/index.php/business/item/7983-tuna-fishing-industry-under-threat</a></p> <p>79 - <a href="https://www.news.uct.ac.za/article/-2017-07-19-why-deeper-insights-into-the-agulhas-current-can-shed-light-on-climate-patterns">https://www.news.uct.ac.za/article/-2017-07-19-why-deeper-insights-into-the-agulhas-current-can-shed-light-on-climate-patterns</a></p>	
			<p>The results of the marine fauna impact assessment undertaken by Pisces Environmental Consulting (Pty) Ltd (2018)<sup>80</sup> in the draft EIA Report suggests that the impact of a large-scale crude oil blowout on benthic invertebrates would be of minor consequence and of overall minor significance. The magnitude of the impact on pelagic fish and larvae would be of moderate consequence and of overall minor significant with effective clean-up operations. The impact was considered to be partially reversible.</p> <p>80 - At page 77.</p> <p>It is disputed that the magnitude of oil spill/blow can be considered of minor significance. Following a blowout, the effects of toxicity may persist. There is research to support this which state that macrobenthic species richness, diversity, and evenness were severely impaired within a radius of approximately 1 km around an oil spill wellhead.<sup>81</sup></p> <p>81 - Washburn, T.W., Reuscher, M.G., Montagna, P.A., Cooksey, C. and Hyland, J.L., 2017. Macrobenthic community structure in the deep Gulf of Mexico one year after the Deepwater Horizon blowout. Deep Sea Research Part I: Oceanographic Research Papers, 127, pp.21-30.</p> <p>Due to the speed of the currents, toxic material will be carried further than 29km, potentially impairing macrobenthic species richness, diversity, and evenness along the entire coast. The comments refuting a minor impact on fish and fish larvae can be found throughout this draft EIA Report as well as the marine ecology report.</p>	<p>Results of the oil spill modelling study indicated that surface oil from the spill would spread in a south-westerly direction, with a very low likelihood of reaching the shoreline thus being of regional extent for all but benthic macrofaunal communities. Oil droplets and DAHs may also persist throughout the water column due to the rising plume from the release, as well as in the top few meters of the water column beneath the slick for a number of days, potentially resulting in acute toxicological effects in marine fauna coming in contact with the entrained slick for extended periods. The modelling results indicated that at the end of the simulation, ~40% of the oil remains in the water column as droplets and ~40% remained as the dissolved component, with only around 10% reaching the surface. For a surface slick, the risk significance is considered to be Minor for benthic invertebrates, plankton, pelagic fish and larvae, for marine mammals and turtles and for MPAs, but of Moderate significance for seabirds. Due to their high sensitivity to oiling and the elevated threat status of many of the coastal avifaunal species, the impacts of an oil spill on seabirds would be of HIGH significance. Although the risk of a surface spill on coelacanths and coelacanth habitat has been assessed below, using modelling results for surface spill trajectories has little meaning for a species found in 90-140 m depth.</p> <p>The Washburn et al, 2017 paper, states that the studies showed that the impact of the Deepwater Horizon event on the seabed around the well site had decreased from 2010 to 2011. Impacts on diversity near the wellhead were still observed; however, the large increase in abundance may indicate the initial stages of recovery, year-to-year variability, or an early stage of succession following a disturbance.</p>
			<p><b>2.7 Marine Heritage Study</b></p> <p><b>ANNEXURE D3</b></p> <p>The draft EIA Report details the rich marine cultural heritage of the South African coastline, specifically the east coast, including the existence of 2400 shipwrecks, thousands of pre-colonial shell middens and large</p>	<p>The South African Heritage Resources Agency (SAHRA) issued an interim comment in February 2018 in response to the Draft Scoping Report that no reference to maritime and underwater cultural heritage was included in the DSR. ERM then commissioned the Marine Heritage Study (Annexure D3), and</p>

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			<p>numbers of tidal fish traps, which reflect prehistoric human exploitation of marine resources since the Middle Stone Age, more than 150,000 years ago as well as pre- colonial terrestrial archaeological sites and palaeolandscapes which are now inundated by the sea.</p> <p>On p144 it states that: “gaps in South Africa’s underwater cultural heritage record mean that the potential does exist for currently unknown or unrecorded wrecks to be present within the study area”.</p> <p>In spite of this, the commissioned Marine Heritage Study is a desktop study undertaken in May 2018 and consists of only three pages. “Seven wrecks, of which five are World War II -Boat Casualties, are recorded as having been lost within the area covered by Block ER 236, however the bulk of the wrecks discussed in this report or modern (i.e. 20th Century) but are all older than 60 years of age and are thus protected by the Natural Heritage Resources Act.”</p>	<p>SAHRA have noted that they are satisfied with the content of the study.</p>
			<p>Given the brief assessment, recommendations were made for the Area of Interest and include using pre-drill remote sensing data and video to establish whether there are any shipwrecks on the seabed in the area of interest.</p> <p>It is highly unlikely that work will be forced to cease if important findings are made after the necessary sensing and video testing have been done. Especially after the expense of getting the drill rigs to the sites. It is also highly unlikely that the public will have the opportunity to see these results and comment thereon after the EA has been issued.</p> <p>It is essential that the recommendations are followed and the results thereof form part of the EIA process for the inclusion of public comment thereon.</p>	<p>There are commitments included in the EMP (Chapter 9 of the EIA Report) to reduce the impact on marine cultural heritage. The following commitment have been made:</p> <ul style="list-style-type: none"> <li>• Use a Remotely Operated Vehicle (ROV) to survey the seafloor prior to drilling in order to confirm the presence or absence of any significant topographic features, vulnerable habitats and / or species (e.g. cold-water corals, sponges) and cultural heritage material (e.g. wrecks) in the area.</li> <li>• Implementation of procedures for ROVs that stipulate that the ROV does not land or rest on the seabed as part of normal ROV operations.</li> <li>• Review ROV footage of pre-drilling surveys to identify potential vulnerable habitats within 500 m of the drill site.</li> <li>• Ensure drill site is located more than 500 m from any identified vulnerable habitats.</li> <li>• A chance find procedure must be developed for the Project and should any shipwreck material that was not identified by the measures set out above be encountered during the exploration drilling process.</li> </ul> <p>Eni will submit the findings of the surveys to PASA and to SAHRA, however, Eni is not obligated to release these findings to the public.</p> <p>As per Section 34 of the Environmental Impact Assessment Regulations (GNR R982/2014), Eni is obligated by law to audit the</p>



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				<p>compliance with the conditions of the environmental authorisation, the EMPr, and the closure plan; and to submit an environmental audit report to the relevant competent authority, i.e. Petroleum Agency of South Africa (PASA).</p> <p>Section 34 of the regulations also stipulates that the environmental audit report must be prepared by an <b>independent person</b> with the relevant environmental auditing expertise and submitted to the relevant competent authority at intervals as indicated in the environmental authorisation.</p>
			<p>2.8 Other Impacts not adequately Addressed 2.8.1 Climate Change The impacts of climate change in the South African scenario are set out on page 68 of the draft EIA Report. However, the impact of the proposed activity on climate change is not addressed.</p> <p>A climate change risk assessment has not been done to assess the risks of further reliance on fossil fuels. In the Thabametsi case (Case number: 65662/16)<sup>82</sup>, the court considered the quality and form of climate change impact assessment required when a competent authority assesses an application for environmental authorisation in South Africa. Notwithstanding the lack of an express legal obligation to conduct a focused climate change impact assessment, the court ruled that climate change is a relevant consideration when granting an environmental authorisation, and a formal expert report on climate change impacts is the best evidentiary means to consider climate change impacts in their multifaceted dimensions.</p> <p>82 - <a href="https://cer.org.za/wp-content/uploads/2017/03/Judgment-Earthlife-Thabametsi-Final-06-03-2017.pdf">https://cer.org.za/wp-content/uploads/2017/03/Judgment-Earthlife-Thabametsi-Final-06-03-2017.pdf</a></p>	<p>The proposed project will have limited impact on climate change, due to the temporary nature of the activities. Climate change impacts from the proposed drilling activities have been assessed in Chapter 7 of the EIA Report as Negligible. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The client has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines;</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> <li>• If well testing is conducted only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
			<p>The cumulative effect on the climate must be considered and not the proposed activity in isolation.</p> <p>Oil facilities generate tons of methane and carbon dioxide. The production process, in addition to the energy consumed during exploration, construction, transportation, and other phases of the industrial project, will burn enormous quantities of fossil fuels. Already we are observing changes such as the spread of kelp eastward in the Cape and Spotted grunter and other fish moving south. Climate change will also exacerbate swells and rogue waves which will pose a threat to ships of all nature. Various</p>	<p>Section 4.3.1 (Chapter 4) of the EIA Report describes climate change in a South African context. In the need and desirability section of the EIA Report (Chapter 3) describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Section 7 of the EIA Report details the cumulative impacts of the project. Any potential changes in the environment that may occur due to climate change during the time period in which Eni may be</p>



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			<p>independent observations have already been made for extreme swells<sup>83</sup> as well as storm wave focusing and steepening in the Agulhas current<sup>84</sup>.</p> <p>The draft EIA Report and the EMPr cannot be considered until such time as the impact and mitigatory measures are included.</p> <p>83 - Mallory, J.K., 2015. Abnormal waves on the south east coast of South Africa. The International Hydrographic Review, 51(2).</p> <p>84- Quilfen, Y., Yurovskaya, M., Chapron, B. and Ardhuin, F., 2018. Storm waves focusing and steepening in the Agulhas current: Satellite observations and modelling. Remote sensing of environment, 216, pp.561-571.</p>	<p>in operation is highly unlikely considering Eni plans operations within the next year. The amount of change to the environment during this time period is unlikely to affect the conclusions of this study. An analysis was performed by Nordam, et al.,(2017) to assess how climate change 40 years in the future might affect a spill model's results. The conclusion showed that while in some ways the spill impacts might be mitigated (greater biodegradation, greater evaporation, less oil on the water surface), the change in water density, temperature, sea level rise, etc. might also increase forces that would increase percentage of submerged oil, and in some cases increasing the amount of oil that could deposit in the sediments. Note, that while this study was performed in the arctic conditions, increases in evaporation and biodegradation are expected elsewhere from higher average temperatures. While global average temperatures may rise, it does not necessarily mean that a given location and time of a spill event would necessarily occur on warmer than average conditions in the future.</p>
			<p><b>2.8.2 Environment</b></p> <p>Damage from oil spills and other industrial activities could be drastic and long-lasting. New and risky industrial activities should not begin until South Africa's marine ecosystems are sufficiently protected, a comprehensive system of marine protected areas established, and careful scientific study and assessment done to produce convincing evidence that any new industrial activities pose little threat to the environment.</p> <p>The draft EIA Report does not adequately detail how the area's unique ocean currents and weather patterns will affect spills and their cleanup operations. Nor does it establish the impact that oil would have on the marine ecosystem, beaches, tourism, and marine protected areas. Potential long-term and massive environmental harm is downplayed in the draft EIA Report. The damage that will be caused by a large spill to the environment, and to the industries that depend on it, was made clear by the Exxon Valdez accident of 1989, which killed an estimated 100,000 to 250,000 seabirds, at least 2,800 sea otters, 300 harbour seals, 247 bald eagles, and 22 orcas, and destroyed billions of salmon and herring eggs. In subsequent years, sea otters and harlequin ducks suffered higher death rates, in part because they ate prey from contaminated soil and ingested oil residues on their bodies while grooming.<sup>85</sup></p> <p>85 - exxon Valdez Oil Spill Trustee Council, "Facts," <a href="http://www.evostc.state.ak.us/facts/qanda.cfm">http://www.evostc.state.ak.us/facts/qanda.cfm</a>.</p>	<p>The impact of an oil spill on both social and environmental receptors was assessed using the results of the Oil Spill Modelling Report (Annex D4). The following scenarios were modelled:</p> <ul style="list-style-type: none"> <li>• Scenario 1 - diesel spill associated with vessel collision happening either during drilling of wells;</li> <li>• Scenario 2 - release of NADF due to the accidental disconnection of the riser occurring during the drilling phase</li> <li>• Scenario 3 – blowout of crude oil at the wellhead on the seabed.</li> </ul> <p>The model that was used to model the dispersion of pollutants was HYCOM. HYCOM is a well-established model which has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>Regarding wind, the wind used by ERM was obtained from the Blended Sea Winds database which is a product of NOAA's National Climatic Data Centre (NCDC). The wind speeds are</p>

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			<p>Under the heading of “Marine Mammals” (on page 92) the report states: “The offshore areas have been particularly poorly studied in which case almost all available information from deeper waters (&gt;200 m) is based on historic whaling records, and information on smaller deep water species is particularly poor”.</p> <p>Phytoplankton, zooplankton, other invertebrates, and their consumers, such as larger zooplankton and fish, can be destroyed immediately on contact by oil and are especially vulnerable during extended periods of exposure. Even when oil does not quickly kill an animal, it can damage its eyes or cause skin irritations. Such problems can compromise the animal's ability to reproduce, avoid predators, and find food and shelter. Survival becomes more of a challenge.<sup>86</sup> The impact of a spill is likely to be magnified by ocean currents which can move oil and chemicals substantial distances.</p> <p>86 - C.H. Peterson et al., “Long Term ecosystem Response to the Exxon Valdez Oil Spill,” Science 302 No. 5653 (2003): 2082-2086.</p> <p>The potential impact on the marine life and ecology, particularly on threatened or endangered species, is not adequately addressed in the draft EIA Report.</p> <p>The occurrence of deep water corals in Block ER 236 and the areas of interest are confirmed in the draft EIA Report as “unknown” and it further admits that “[d]ue to limited opportunities for sampling, information on the pelagic and demersal communities of the shelf edge, continental slope and upper and lower bathyal are largely unknown. Consequently, much of the information on the baseline environment provided relates to the inshore (shallow waters prior to where the shelf of the Thukela Bank starts dropping off, on average less than 50 m water depth) and continental shelf (water depths less than 200 m1) regions, which fall within the Natal Bioregion” [our emphasis].</p>	<p>obtained from multiple satellite observations in order to minimize errors. The wind directions are obtained from the National Centres for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report.</p> <p>ERM and technical specialists have performed an assessment based on available most updated secondary data including papers, research, studies and the IUCN list of endangered and rare species (a fully recognized international tool for assessing the presence of threatened species, which is periodically updated). The subsea environment has been analysed considering the international and local guidelines/standards regarding the Environmental baseline development and based on consolidated experience of ERM on similar projects already performed. Detailed maps of the location of the key environmental sensitivities in relation to the Project Area have also been included in Chapter 4 of the EIA Report (Baseline Conditions).</p> <p>The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and reputable information sourced from the Internet. There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology.</p>
			<p>The ERM Peer review states on pg 4 that: “The ocean currents, water temperature and salinity used in the oil spill modelling were obtained from the HYCOM (HYbrid Coordinate Ocean Model) global circulation model. Although this is a well-established model, <b>no validation of the results in the study area was presented</b>, e.g. a comparison to local current meter measurements would be expected. Further, only a single snapshot in time of the current field was provided. Current roses or time-series would have</p>	<p>Regarding currents, HYCOM is a well-established model and PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and</p>

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			provided evidence that the temporal characteristics of the currents applied in the model were realistic."	<p>synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>Regarding wind, the wind used by ERM was obtained from the Blended Sea Winds database which is a product of NOAA's National Climatic Data Center (NCDC). The wind speeds are obtained from multiple satellite observations in order to minimise errors. The wind directions are obtained from the National Centers for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report.</p> <p>Considering the robustness of the HYCOM reanalysis, which assimilates field measurements into the model from "available satellite altimeter observations, satellite, and in-situ sea surface temperature as well as in-situ vertical temperature and salinity profiles from XBTs, Argo floats and moored buoys" (<a href="https://hycom.org/dataserver/gofs-3pt1/reanalysis">https://hycom.org/dataserver/gofs-3pt1/reanalysis</a>), the absence of plots comparing synoptic measurements relative to HYCOM was not considered a deficiency in the analysis by ERM. Through assimilation, the model incorporates the field measurements. ERM did not address this comment due the robustness of HYCOM.</p> <p>In addition, the majority of direct measures of currents via ADCPs were located close to the shorelines, and therefore would not be considered good candidates for comparisons to HYCOM. HYCOM is primarily relevant for current estimates in the offshore environment. Modelling performed on very large scales such as this for the sake of predicting possible future conditions does not include micro-scale hydrodynamics as the current details very close to the shoreline are not required relative to the general uncertainty of the future predictions.</p> <p>Similarly, NOAA's Blended Seawinds are a well-respected source and used throughout the industry for wind data estimates over large areas of the ocean surface. Available stations with long meteorological records are generally located along the coastline or</p>

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				inland and would be inappropriate to use for comparisons to modelled estimates of winds in the offshore environment.
			In light of the above, the draft EIA Report has failed to show an in-depth study of the area and adequate understanding of the ecosystem. This is not only a legal requirement of the EIA Report but should be a high priority given that the draft EIA Report itself identifies: “[a] large proportion of the Estuaries along the East Coast (particularly those found along the ‘Wild Coast’ (1)) have been identified nationally as being of high biodiversity and ecological importance (i.e. the Mngazana and Mbashe estuaries). This relates to the pristine nature of many of the estuaries found along this coastline. In particular, Mngazama estuary (found along the ‘Wild Coast’) has been rated in the top 20 estuaries in South Africa, while another nine have been rated within the top 50 estuaries in South Africa (Reyers & Ginsburg, 2005)”.	The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA & CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA & CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson & Shipton 2010) and reputable information sourced from the Internet. There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology.
			There is not enough detail given on the nature of the Indian Ocean, its currents, the narrow continental shelf, the 15 metre waves often recorded off the Transkei Coast (aptly termed the “Wild Coast”) to adequately address the risks of drilling off this coast. The draft EIA Report states at p4-142 that: “South Africa’s rugged and dangerous coastline has witnessed more than its fair share of shipwrecks and maritime dramas in the last 500 years. At least 2,400 vessels are known to have sunk, grounded, or been wrecked, abandoned or scuttled in South African waters since the early 1500s.”	The baseline information detailed in the EIA Report was taken from the respective specialist reports, of which the specialists each conducted studies, supported by published literature in the relevant fields. The supporting literature has been referenced at the end of the specialist reports in Annex D of the EIA Report.
			Nowhere on Earth has oil development occurred without spills and other incidents. Even if there were no such calamities, vessel traffic and other commercial activity generated by oil development would take a toll on the environment. For every 1,000 wells in state and federal waters, there’s an average of 20 uncontrolled releases of oil — or blowouts — every year. A fire erupts offshore every three days, on average, and hundreds of workers are injured annually. <sup>87</sup>  87 - <a href="https://www.washingtonpost.com/national/health-science/a-14-year-long-oil-spill-in-the-gulf-of-mexico-verges-on-becoming-one-of-the-worst-in-us-history/2018/10/20/f9a66fd0-9045-11e8-bcd5-9d911c784c38_story.html?utm_term=.4ae8769c12c3">https://www.washingtonpost.com/national/health-science/a-14-year-long-oil-spill-in-the-gulf-of-mexico-verges-on-becoming-one-of-the-worst-in-us-history/2018/10/20/f9a66fd0-9045-11e8-bcd5-9d911c784c38_story.html?utm_term=.4ae8769c12c3</a>	Statistics presented in IOGP 2010 report on blowout frequencies for Offshore Operations of North Sea Standard, the probability of a blowout of oil is very low as the frequency of occurrence is $2.5 \times 10^{-4}$ , 1 case in 4,000 drilled wells (OGP Report, 2010). Eni has implemented the following measures to reduce the risk associated with geological factors, tools reliability and human errors <ul style="list-style-type: none"> <li>• Well design</li> <li>• Adopting mitigation and preventing actions and procedures.</li> <li>• Advanced planning and development of contingency plan</li> <li>• Use of performance tools, real time monitoring technologies.</li> </ul> This is necessary to significantly reduce the risk associated with geological factors, tools reliability and human errors. Eni’s adoption of top industry and development of new technologies, the adherence and respect of international best practice, standard and procedures, reduces the risk of the blowout frequency from $10^{-4}$ down to $10^{-6}$ i.e. 1 case in 400,000 wells drilled.

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			<p>The draft EIA Report fails to adequately address these issues and fails to adequately address the potential environmental impacts of this project.</p> <p>The National Environmental Management Act (NEMA) requires that development be socially, environmentally and economically sustainable<sup>88</sup> and the Brundtland Commission defined sustainable development as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.<sup>89</sup> With the limited knowledge of the impacts of seabed exploration alongside limited knowledge of the ecological importance of the seabed ecosystems, and the social-economic impacts thereof, there is a strong need to establish baseline information prior to environmental authorisation been given.</p> <p>88 - Section 2(3) 89 - <a href="http://www.un-documents.net/our-common-future.pdf">http://www.un-documents.net/our-common-future.pdf</a></p>	<p>ERM and technical specialists have performed an assessment of the impact of the project on both environmental and social receptors. This assessment is based on available most updated secondary data including papers, research, studies and the IUCN list of endangered and rare species (a fully recognized international tool for assessing the presence of threatened species, which is periodically updated). The subsea environment has been analysed considering the international and local guidelines/standards regarding the Environmental baseline development and based on consolidated experience of ERM on similar projects already performed. Detailed maps of the location of the key environmental sensitivities in relation to the Project Area have also been included in Chapter 4 of the EIA Report (Baseline Conditions).</p> <p>The potential effects of the proposed drilling activities associated with exploration were assessed and the impacts are presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate - Negligible residual significance.</p> <p>The need and desirability of the Project is discussed in Chapter 3 of the EIA Report. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>In 2013, the DEA, the DMR, the South African Mining and Biodiversity Forum, The South African Biodiversity Institute and the Chamber of Mines published the South African Mining and Biodiversity Guideline.<sup>90</sup> This offers guidance on how to include biodiversity issues into the operational phases of mining. Page 49 of the document states:</p>	<p>Chapter 4 of the Final EIA Report presents the baseline conditions in the Project Area. This chapter is 85 pages in length and details the most pertinent information related to the environmental and socio- economic baseline of the affected areas. Sufficient information is provided in this Chapter for I&amp;APs and Authorities to</p>

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			<p>The EIA is a fundamental input into the EMP, which becomes the main tool for managing environmental impacts. It is important that the applicant integrates biodiversity information into the three broad requirements for the EIA and development of the EMP<sup>91</sup>:</p> <p>a. <b>Establish baseline information</b> on the affected environment to determine protection, remedial measures and environmental management objectives.</p> <p>b. <b>Investigate, assess and</b> evaluate the impact of mining on the environment, socio-economic conditions and national heritage.</p> <p>c. Describe how actions/activities/ processes which <b>cause pollution</b> or environmental degradation and migration of pollutants are to be <b>mitigated</b> (modified, remedied, controlled or stopped).</p> <p>90 - Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013. Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector. Pretoria. See:  <a href="https://www.environment.gov.za/sites/default/files/legislations/miningbiodiversity_guidelines2013.pdf">https://www.environment.gov.za/sites/default/files/legislations/miningbiodiversity_guidelines2013.pdf</a></p> <p>91 - Section 39(3) Mineral and Petroleum Resources Development Act</p> <p>“Baseline information must be sufficient to enable the reliable identification of biodiversity priority areas, as described above, that might be impacted during the mining life cycle. Baseline information records the ‘pre- mining’ environmental condition. In order to assess and evaluate the potential significance of impacts on biodiversity and ecosystem services, it is also important to consider any background trends that may be affecting their conservation status or integrity. In some areas, <b>such as in marine ecosystems</b>,<sup>92</sup> extensive baseline information is not available. Biodiversity specialists will play an important role in these cases... the cumulative impacts of mining may be highly significant when viewed against these trends.</p> <p>92 - Our emphasis.</p>	<p>understand the baseline in order to conceptualise the context of potential impacts presented in Chapter 7 of the EIA Report.</p> <p>The baseline was determined through a review of existing information, which includes previous projects that have occurred in the surrounding blocks, municipal documents, and social resources as referenced at the end of this document. Further to this, a specialist Marine Ecology Assessment, Fisheries Study and an Underwater Cultural Heritage Assessment (Annex D3) were independently conducted to determine the baseline conditions of the Project Area.</p>
			<p>Outcomes of a baseline survey of the area must form part of the draft EIA Report and EMP to be made available for public comment. This is a vital aspect of the report in order to properly assess the potential impact of the operations on the area. In this instance it is particularly important given that</p>	<p>Chapter 4 of the Final EIA Report presents the baseline conditions in the Project Area. This chapter is substantial and details the most pertinent information related to the environmental and socio-economic baseline of the affected areas. The specialists studies</p>



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			the ecological assessment does not adequately cover the area in question and therefore the impact has not been properly assessed.	<p>that were conducted as part of this EIA Process (Annex D of the Final EIA Report) were undertaken by local experts based on scientifically available information. In ERM'S professional opinion there is sufficient information provided for I&amp;APs and Authorities to understand the baseline and for the Competent Authority to be able to make a decision.</p> <p>Further to this, a specialist Marine Ecology Assessment, Fisheries Study and an Underwater Cultural Heritage Assessment (Annex D) were independently conducted to determine the baseline conditions of the Project Area.</p>
			<p>NEMA requires that a risk-averse and cautious approach is applied, which must consider the limits of current knowledge about the consequences of decisions and actions, as well ensuring that global and international responsibilities relating to the environment are discharged in the national interest. The International Seabed Authority<sup>93</sup> discussion paper on The Implementation of the Precautionary Approach by the International Authority<sup>94</sup> finds that three dimensions should be involved in the implementation of the precautionary approach: the procedural, the institutional and the taking of protective measures. Importantly, procedural dimensions encompass assessments of the environmental risks and impacts, including cumulative and long- term impacts. It also includes assessment of the effectiveness and proportionality of potential protective measures as well as any potential counter-effects of these measures. This international policy has not been adequately considered in the draft EIA Report.</p> <p>93 - national jurisdiction (the Area) established in Part XI and the Agreement, organise and control activities in the Area, particularly with a view to administering the resources of the Area. South Africa is a member state and became a party to the agreement on 23 December 1997. See: <a href="https://www.isa.org.jm/authority">https://www.isa.org.jm/authority</a></p> <p>94 - <a href="https://www.isa.org.jm/files/documents/EN/Pubs/DPs/DP5.pdf">https://www.isa.org.jm/files/documents/EN/Pubs/DPs/DP5.pdf</a></p>	<p>The Guideline of Need and Desirability (2017), states that: "<i>a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and management of risk.</i>" In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the Draft and Final EIA Reports.</p> <p>In addition to embedded controls adopted to maintain a risk-averse approach, various client- specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economical and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk- averse approach. Refer to Chapter 4 of the Scoping Report and Chapter 3 of the EIA for further details.</p> <p>It is also important to note that the aversion of all risks alone is not the only criteria for EAs and the Competent Authority has been mandated to make decisions based on the principles of sustainable development and not isolation of singular potential impacts. As such, the draft EIA Report (and final) have complied with the requirements set forth in the applicable legislation, regulations and guidelines, such that an informed decision can be made. The application of the precautionary principle (in terms of a risk- averse approach) is triggered by two conditions namely:</p> <ul style="list-style-type: none"> <li>• a threat of serious or irreversible environmental damage; and</li> </ul>



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				<ul style="list-style-type: none"> <li>scientific uncertainty as to the nature and scope of the threat of environmental damage.</li> </ul> <p>Since these conditions are both not met, there is no basis upon which the precautionary principle can operate.</p>
			<p>In terms of Section 2(d) of Appendix 3 of the EIA regulations (GN R982, 2017) the objective of the environmental impact assessment process is to, through a consultative process, determine inter alia the:-</p> <ol style="list-style-type: none"> <li>Nature, significance, consequence, extent, duration and probability of the impacts occurring to prefer preferred alternatives; and</li> <li>Degree to which these impacts- <ol style="list-style-type: none"> <li>can be reversed;</li> <li>may cause irreplaceable loss of resources, and</li> <li>can be avoided, managed or mitigated.</li> </ol> </li> </ol> <p>Bizarrely, on pg 64 of the draft EIA Report it is stated that “some impacts will result in changes to the environment, that may be immeasurable, undetectable, or within the range of normal variation. Such changes are regarded as having no impact and characterised as having negligible magnitude”. This means that immeasurable or undetectable impacts are not considered in this report and given negligible status. This is obviously untenable and the makes the whole process fatally flawed.</p>	<p>During the Screening and Scoping Phase of the EIA process, the EIA team identified the key environmental and social impacts, between the planned and unplanned project activities and environmental or social resources and receptors, which require further evaluation. During the Scoping Phase stakeholder engagement, these key impacts were discussed and new impacts were raised by stakeholders. These issues were then used to update the summary of the potentially significant impacts from the Scoping Phase and are provided in Table 7.1 of the Final EIA Report. The key impacts associated with unplanned/ accidental events are assessed in Chapter 8 of the Final EIA Report.</p> <p>The impacts considered potentially significant by the project team and stakeholders were evaluated further in the EIA Report. The impacts considered non-significant are discussed briefly and scoped out of the detailed assessment. Non-significant issues are presented in Table 7.2 of the Final EIA Report.</p> <p>Certain impacts were not screened out due to perceived stakeholder concerns (such as disposal of cement on the seafloor) but were subject to the full impact assessment method. Based on the magnitude and sensitivity of the impact they were assessed as having a Negligible impact on the environmental or social receptor. This means the impact assessment methodology used is sound and not fatally flawed as suggested.</p>
			<p>It is a legal requirement that the EIA process must effectively identify the nature, significance and extent of the impacts, which the current process has failed to do. In terms of Section 2(f) of Appendix 3, it is also an objective of the EIA process to identify the ideal location for the activity as contemplated in the accepted scoping report ‘based on the lowest level of environmental sensitivity identified in the assessment’.</p> <p>Given that no baseline assessment has been done, and that the ecosystem and the marine heritage has not been adequately assessed, this has not been complied with and the EIA process is not complete.</p>	<p>Chapter 4 of the Final EIA Report presents the baseline conditions in the Project Area. This chapter is 85 pages in length and details the most pertinent information related to the environmental and socio- economic baseline of the affected areas. Sufficient information is provided in this Chapter for I&amp;APs and Authorities to understand the baseline in order to conceptualise the context of potential impacts presented in Chapter 7 of the EIA Report.</p> <p>The baseline was determined through a review of existing information, which includes previous projects that have occurred in the surrounding blocks, municipal documents, and social resources as referenced at the end of this document. Further to</p>

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				<p>this, a specialist Marine Ecology Assessment, Fisheries Study and an Underwater Cultural Heritage Assessment (Annex D) were independently conducted to determine the baseline conditions of the Project Area.</p> <p>Refer to Chapter 6 of the Final EIA Report for an explanation of the impact assessment methodology used to assess potential impacts in Chapter 7 of the EIA Report. The nature of each impact assessed together with the extent and impact significance are presented in Chapter 7 of the Final EIA Report.</p>
			<p><b>2.9 Socio-Economic Baseline</b>  <b>ANNEXURE D8</b>  The Constitutional Court, in Fuel Retailers Association of Southern Africa v Director-General; Environmental Management, Mpumalanga Province, and Others 2007 (6) SA 4 (CC) held inter alia that: "One of the purposes of the public participation process provision in NEMA is to afford people the opportunity to express their view on the desirability of a [project] that will impact on socio-economic conditions affecting them...[Socio- economic development must be justifiable in the light of the need to protect the environment... [The applicant] must identify and predict the actual or potential impact on socio-economic conditions and consider ways of minimising negative impact while maximising benefit."<sup>95</sup></p> <p>95 - Para 62 per Ngcobo J for the majority.</p>	<p>Adequate opportunities for public participation and comment were provided to stakeholders in order to enhance their understanding of the impact of the project on the socio-economic conditions affecting them. Refer to Chapter 6 of the Scoping Report and Chapter 5 of the EIA Reports for a detailed description of the context, purpose, objectives and conduct of the Public Participation Process.</p> <p>The adverse socio-economic impacts associated with the project have been considered and are discussed in Chapters 7 and 8 of the Final EIA Report The main project activities will take place over 60 km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism or other recreational activities under normal operating conditions.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the</p>

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				unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.
			<p>The draft EIA Report has focused its socio-economic baseline on the local municipalities in which the logistics base may be located, namely eThekweni Metropolitan Municipality and the City of uMhlathuze Local Municipality.</p> <p>Despite indicating that the it would describe 'key... socio-economic resources... in areas potentially affected by the project' and 'provide data to aid the prediction and evaluation of possible impacts',<sup>96</sup> the draft EIA Report has failed to identify, predict or quantify the actual or potential impact on the socio-economic conditions of these areas nor the entire coastline that may be affected by an environmental disaster associated with the project (nor have the impacts of a catastrophic spill on the broader South African economy been described or quantified). It is dismissed in the following statements:</p> <p>"In the event of an accidental spill, effects may be felt along the East Coast through KZN and the Eastern Cape, which could affect marine and coastal-based livelihoods such as fisheries, (both commercial and subsistence) and the tourism sector"<sup>97</sup></p> <p>And</p> <p>"Block ER236 is located from 20 km offshore and the Area of Interest is over 60 km offshore. The project will have a limited impact of tourism activities during routine operations. There is a possibility that the offshore recreational boat-based fishing activities could be affected if they travel offshore and into Block ER236. Tourism in the Area of Direct Influence".</p> <p>96 - Draft EIA Report para 1.3.4 p6. 97 - Page 108 of the draft EIA Report.</p>	<p>This EIA is for the drilling of up to six exploration wells. The socio-economic baseline and impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production phase (including pipelines and production infrastructure) will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. In light of this, the level of detail contained in the socio-economic baseline is appropriate, and an appropriate amount of information around fisheries and tourism is presented in for the coast of KZN and the Eastern Cape.</p> <p>The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Further to this, the draft EIA Report refers to 14 commercial fisheries and recreational fishing that takes place off the South African coast and simply concludes that:</p> <ul style="list-style-type: none"> <li>"The fishing sectors that overlap with Block ER236 or may potentially be affected by the project</li> </ul>	<p>Eni proposes to drill exploration wells inside Block ER236, within two areas of interest:</p> <ul style="list-style-type: none"> <li>A northern area of interest (approximately 1,717.50 km<sup>2</sup> in area), which is located, at its closest point, approximately 62 km from shore, in water depths ranging between 1,500 m and 2,100 m.</li> </ul>

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			<p>activities are described in this section"<sup>98</sup>;</p> <ul style="list-style-type: none"> <li>• "The fishery operates extensively within the South African EEZ, primarily along the continental shelf break and further offshore;</li> <li>• As indicated in Figure 4.31, the Block ER236 coincides with the spatial distribution of pelagic long- line fishing effort.</li> <li>• The spatial distribution of line-fishing effort coincides with inshore areas of Block ER236.</li> <li>• Figure 4.36 indicates the location of fishing grounds in relation to the Block ER236. There is a potential overlap of the crustacean trawl fishery with the Block ER236.</li> </ul> <p>98 - Page 125 ibid.</p>	<ul style="list-style-type: none"> <li>• A southern area of interest (approximately 2,905 km<sup>2</sup> in area), which is located, at its closet point, approximately 65 km from shore, in water depths ranging between 2,600 m and 3,000 m.</li> </ul> <p>Section 4.4.3 of the Final EIA describes the commercial, subsistence and recreational fisheries that take place off the South African coast (page 4-58 to 4-75), and highlights where fishing sectors potentially overlap with the area of interest for the project. Given the nature and scale of the project, there is limited over lap and interaction between fisheries and the drilling areas of interest.</p> <p>As stated in Section 7.4.2 of the EIA report, the only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery, with relatively little of their recent efforts directed to these areas of interest. The KwaZulu-Natal linefish and prawn trawl fishery overlaps with Block ER236. However, there is no evidence of overlap with the proposed areas of interest for drilling with the areas fished by the linefish and the prawn trawl fishery. The KwaZulu-Natal linefish fishing effort lies at least 10 km and 35 km inshore of the northern and southern areas of interest, respectively, and therefore there is no impact expected on the fishery. The KwaZulu-Natal prawn trawl fishery is situated at least 35 km and 30 km inshore of the northern and southern areas of interest, respectively, and therefore there is no impact expected on the crustacean trawl fishery.</p>
			<p>The socio-economic impact study is not an impact study at all but a baseline assessment of only a few areas that will be impacted by the proposed operations and/or negative effects of the operations. There has been no attempt to quantify the socio-economic impact of the proposed project and thus the public and decision- maker is unable to balance potential benefits against potential costs (economic, social and environmental).</p> <p>The draft EIA Report should assess existing oil and gas social impact assessment approaches and work with local stakeholders to improve their understanding of the vulnerabilities and risks affecting potentially impacted communities. The potential impact of oil exploration on the socio-economic well-being of communities<sup>99</sup> should be addressed as well as the potential effects of an oil spill on tourism, fisheries and government coffers in the event of a huge clean-up. The draft EIA Report fails to provide a meaningful expert report on any of the above and therefore fails to properly identify and assess the impact.</p>	<p>As noted above, this EIA Report is for the drilling of up to six exploration wells. The socio-economic baseline and impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project.</p> <p>The results of the Oil Spill Modelling Report (Annex D4) Report commissioned as part of the EIA Report, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. As such, this EIA Report adequately addresses the potential impacts of the effects of a spill on tourism and fisheries.</p> <p>There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the</p>

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			<p>99 - <a href="http://article.sciencepublishinggroup.com/pdf/10.11648.j.ajere.20170202.13.pdf">http://article.sciencepublishinggroup.com/pdf/10.11648.j.ajere.20170202.13.pdf</a></p>	<p>liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24-48 hours. For instance equipment such as a capping stack and dispersants are already available in Saldanha Bay. A capping stack can also be provided by Wild Well Control from another worldwide location. Further equipment will be available on board of stand-by vessels and in the logistic base close to operations with short lead times to access and execute response strategies (Section 9.9 and Annex F of the EIA Report).</p> <p>Chapter 3 of the Final EIA Report contains the necessary information pertaining to the need and desirability of the proposed project.</p> <p>Impacts related to production phase (including pipelines and production infrastructure) will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p>
			<p>There is no attempt to address the impact of the operations on the fisheries nor any attempt to discuss migratory measures. The draft EIA Report details the economic value of the subsistence fishing industry but there is no attempt to address the potential impact on the commercial, recreational or subsistence fishing industry by the proposed project.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a fisheries specialist study undertaken by Capp Marine. It is not expected that the Project will impact on the commercial, recreational or subsistence fishing industry during routine operations, and potential impact on fisheries during routine operations is presented in <i>Chapter 7</i> of the EIA Report. Management measures are presented in the EMP.</p> <p>The potential impacts on fisheries associated with an unplanned event are explained in <i>Chapter 8</i> of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report, indicate that no significant shoreline oiling would</p>

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				<p>occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>It is estimated that the value contribution of ocean fisheries in 2010 to the South African GDP at R15.412 billion, and for the mariculture sector at R0.217 billion, whilst Operation Phakisa estimated the fisheries and aquaculture sector at R7 billion in 2010<sup>100</sup>. If the oil and gas exploration is founded on the principles of Operation Phakisa and it has undervalued the fishery sector, this should be mentioned in the fisheries report to allow for a thorough public participation process on this vital aspect.</p> <p>100 - Hosking, S., Du Preez, D., Kaczynsky, V., Hosking, J., Du Preez, M. and Haines, R., 2014. The economic contribution of the ocean sector in South Africa. <i>Studies in Economics and Econometrics</i>, 38(2), pp.65-82.</p>	<p>Studies in Economics and Econometrics report refers to the value contribution of ocean fisheries in 2010 to the South African GDP at R15.412 <b>million</b> and mariculture sector at R0.217 <b>million</b> – <b>Table 4</b>, pg 76, while DAFF value the contribution at about R8 billion.</p>
			<p>The draft EIR report must be redone to include a substantial section on these social-economic aspects of the proposed project to allow a proper public participation process to be followed in line with the Constitutional Court decision in Fuel Retailers mentioned above.</p>	<p>This EIA is for the drilling of up to six exploration wells. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Given the nature and scale of the proposed activities, ERM believe that the socio-economic baseline and associated impact assessment is fit for purpose for exploration activities, and that the Final EIA Report contains the necessary information pertaining to the need and desirability of the proposed project (refer to Chapter 3 of the Final EIA).</p> <p>Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project</p>

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				<p>(including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>Should a decision be taken to move into the production phase, a new EIA would be undertaken in accordance with NEMA. It would be at this stage that a more detailed socio-economic baseline study would be undertaken, further investigation into the need and desirability of oil extraction would be included, and assessment of positive and negative impacts associated with the production phase would be assessed.</p>
			<p>2.10 The EMPr The EMPr has failed to fulfil the requirements listed in section 24N of NEMA in, inter alia, the following respects:</p> <ul style="list-style-type: none"> <li>• Lack of identification of the environmental impacts of the proposed project and resulting lack of information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts;</li> <li>• The information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme and for reporting on the compliance are set out in a simple table which states "Monitoring will include, but not limited to the following". This cannot be seen to be adequate for a project of this nature;</li> <li>• Lack of detail on the measures to rehabilitate the environment in the event of a large spill or blowout;</li> <li>• No time periods within which the measures contemplated in the environmental management programme must be implemented. Vital information that should form part the EMPr are not available now. Such as:- <ul style="list-style-type: none"> <li>• the drilling programmes will only be submitted to PASA and SEA 30 days prior to commencement of the operations.</li> <li>• Emergency plans including the Shipboard Oil Pollution Emergency Plan, the Project-specific OSCP approved by SAMSA, ENI's approved plan and Pollution Safety Certificate, the Waste Management Plan, adequate protection and indemnity insurance cover for oil pollution and incidents, record of the drilling units and support vessel's seaworthiness etc. are only required "prior to commencement of operation" and thereby skipping the public participation process.</li> <li>• No measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of polluted or extraneous water or ecological degradation which may occur inside and outside the boundaries of the operations in question are detailed.</li> </ul> </li> </ul>	<p>Section 24 of the National Environmental Management Act (No. 107 of 1998) states that:</p> <p><i>"In order to give effect to the general objectives of integrated environmental management laid down in this Chapter, the potential impact on—</i></p> <p><i>a. the environment;</i></p> <p><i>b. socioeconomic conditions; and</i></p> <p><i>c. the cultural heritage,</i></p> <p><i>of activities that require authorisation or permission by law and which may significantly affect the environment, must be considered, investigated and assessed prior to their implementation and reported to the organ of state charged by law with authorising, permitting, or otherwise allowing the implementation of an activity."</i></p> <p>The EIA Report has fulfilled the requirements of NEMA in as far as the above is concerned. An impact assessment was conducted which included looking at potential impacts on the biophysical environment, socio-economic conditions as well as on marine cultural heritage. This can be found in Chapter 7 and 8 of the EIA Report.</p> <p>The monitoring plan has been developed by the respective specialists based on their expertise considering the potential impacts associated with the proposed activities and their severity.</p> <p>Various preventative as well as mitigation measures have been developed in the event of an accidental oil spill. These have been detailed in Section 8 and 9 of the EIA Report. Eni will also be required to develop an Oil Spill Contingency Plan for the Project</p>



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			Given that the EMPr fails to comply with the requirements of the Act, it must be redone.	<p>which provides information on the management of spills should they occur, thus ensuring that the environment is rehabilitated. This plan will need to be approved by the South African Maritime Safety Authority (SAMSA), Department of Environmental Affairs (DEA) and PASA prior to the commencement of drilling activities.</p> <p>Chapter 9, which is the EMPr Chapter, details the various mitigation measures proposed for the potential impacts (Table 9.8). Each of the mitigation measures proposed have a suggested timing attached to them to give an indication of when or how frequently these measures are to be implemented.</p> <p>Section 2 of the NEMA (No. 107 of 1998) as amended relates to the principles of environmental management. Neither the NEMA Regulations of 2017 nor the PAJA states that an OSCP be included in the EIA Report. The specialist studies to be included in the EIA Reporting were presented in the Plan of Study for the EIA Phase in the Final Scoping Report. The Final Scoping Report was approved by PASA (April 2018). An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. Similarly, the waste management plan and all other plans associated with the drilling activities will be finalised and submitted to the Competent Authority prior to the commencement of the drilling activities as agreed upon with PASA.</p> <p>The ERM EAP has therefore provided sufficient information in the EIA Reporting for I&amp;APs to understand the potential impacts and risks associated with the Project and for the authorities to make an informed decision.</p>
			<p><b>2.11 Determination of Financial Provision related to Plugging and Abandonment Annexure E</b></p> <p>A one-pager is provided budgeting US \$ 8,9 million for plugging and abandonment of the proposed exploration wells.</p> <p>When an application is made for an EA relating to prospecting, explorations, mining or production operations it is compulsory that an applicant provide the necessary 'financial provision for the rehabilitation, closure and ongoing post-decommissioning management of negative</p>	<p>As per Annex E of the Final EIA Report the financial provision calculation has been detailed in terms of decommissioning (plugging and abandoning the well).</p> <p>Section 24P of NEMA requires that the determination of financial provision must be in place by an applicant for EA relating to prospecting, mining, exploration, production or related activities on a prospecting, mining, exploration or production area. In terms of the NEMA: Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations,</p>

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			<p>environmental impacts'. Such financial provision serves as a rehabilitation guarantee and must be provided prior to the granting of the environmental authorisation.<sup>101</sup> In the event that the holder of the a right under the Mineral and Petroleum Resources Development Act 28 of 2002 fails to rehabilitate or satisfactorily manage environmental impacts, the financial provision will enable to the authorities to rehabilitate and manage the environmental impact.<sup>102</sup> Holders are placed under an obligation to annually assess their potential environmental liability and adjust the financial provision to the satisfaction of the minister responsible for mineral resources.</p> <p>101 - Section 24P(1) of NEMA. 102 - Section 24P(2) of NEMA.</p> <p>In the recently gazetted 2018 amendment, the Minister allows the holders of existing offshore exploration and production rights, who applied for such rights prior to 20 November 2015, an extension until February 2024 to comply with the NEMA Financial Provision Regulations. In the meantime, such holders are regarded as 'having complied with the provisions of these Regulations if such holder has complied with the provisions and arrangements regarding financial provisioning, approved as part of the right issued in terms of the [MPRDA]'.</p> <p>No proof of financial provision given for potential environmental damage from a spill or blow-out has been given in the draft EIA Report and considering the estimated \$20 billion potential cost to company (or the authorities) in the event of a catastrophic spill, this is a fatal flaw in the document.</p> <p>The draft EIA Report indicates in Table 9.8 (section 2) in relation to preparation for any emergency that could result in an environmental impact that Eni and the drilling contractor are to ensure that there is 'adequate protection and indemnity insurance cover for oil pollution incidents'.<sup>103</sup> However, not only have the costs (including the socio-economic costs) that could result from a catastrophic oil spill not been quantified, but no detail is provided on the level of insurance cover that Eni will be required to carry. Further to this, the draft EIA Report states<sup>104</sup> that 'Section 52 of the SAMSA Act, however, delegates the responsibility for combatting pollution of the sea and shoreline by oil to the Minister of Environmental Affairs (DEA). <b>The implication of this is that the DEA is responsible for the protection and clean-up measures to be taken once oil has been released into the sea</b>, while SAMSA's responsibilities are limited to those</p>	<p>Operations (amended on 16 April 2018), an applicant or holder of a right must determine financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of exploration operations, as contemplated in the Act and to the satisfaction of the Minister of Mineral Resources. The financial provision determination and a decommissioning plan must be submitted to the Minister as part of the Environmental Authorization application process. The prescribed financial provision for the rehabilitation, management and closure of environmental impacts will be in place before the commencement of the drilling activities.</p> <p>At the end of the operation (ie drilling and well completion) the well will be plugged and abandoned ("decommissioning"). This will involve setting cement plugs inside the wellbore and testing them for integrity. The BOP will be then retrieved at surface. A final seabed and wellhead inspection will be performed with an ROV and finally the drillship and support vessels will depart the area. As such, financial provisions for well plugging and abandonment activities (decommissioning) is required and the calculation thereof was submitted to the Minister as part of the Environmental Authorisation application process. Refer to Annex E of the final EIA report for the determination of financial provision related to the decommissioning plan of one exploratory well.</p> <p>Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 hours. For instance part of the equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with no</p>

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			<p>actions required while the oil is within the confines of the ship.' (emphasis added).</p> <p>103 - Draft EIA Report, Table 9.8, at page 270. 104 - Draft EIA Report 2.3.6 p22</p>	<p>risk and harm to the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and must be followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations.</p> <p>To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of tools that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blowout Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>In the event of an unplanned event, Eni will liaise with the SAMSA, the DEA and all relevant pollution regulatory bodies to address any issues.</p>
			<p>When considering an application for EA, one of the aspects that the authority is legally obliged to take into account is the ability of the applicant to implement mitigation measures to prevent, control, abate or mitigate any pollution, substantially detrimental environmental impacts or environmental degradation.<sup>105</sup> This should be provided for without risking the funds having to come out of the taxpayer's coffers. Based on the content of this draft EIA Report, and without adequate determination of financial provision, the authority would be remiss in authorising this application.</p> <p>105 - See section 24 0(1)-(3) of NEMA.</p>	<p>As per Annex E of the Final EIA Report the financial provision calculation has been detailed in terms of decommissioning (plugging and abandoning the well).</p> <p>Section 24P of NEMA requires that the determination of financial provision must be in place by an applicant for EA relating to prospecting, mining, exploration, production or related activities on a prospecting, mining, exploration or production area. In terms of the NEMA: Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, Operations (amended on 16 April 2018), an applicant or holder of a right must determine financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of exploration</p>

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				<p>operations, as contemplated in the Act and to the satisfaction of the Minister of Mineral Resources. The financial provision determination and a decommissioning plan must be submitted to the Minister as part of the Environmental Authorization application process. The prescribed financial provision for the rehabilitation, management and closure of environmental impacts will be in place before the commencement of the drilling activities.</p> <p>Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 – 48 hours. For instance equipment such as a capping stack and dispersants are already available in Saldanha Bay. A capping stack can also be provided by Wild Well Control from another worldwide location. Further equipment will be available on board of stand-by vessels and in the logistic base close to operations with short lead times to access and execute response strategies (Section 9.9 and Annex F of the EIA Report).</p>
			<p><b>2.12 Public Participation</b>  <b>ANNEXURES B1-B7</b>            Principle 7 established by section 2(4)(f) of NEMA calls for the participation of all interested and affected parties in environmental governance. The draft EIA Report must include “any responses by the EAP to comments made by interested and affected parties.”<sup>106</sup> Section 22(4)(b) of the MPRDA requires an applicant for a mining right to “consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party.”</p> <p>106 - EIA regulations, 2017 GN R982, Appendix 3, 3(1)(s)(iv)</p>	<p>Correct. The Public Participation Process is designed to provide information to and receive feedback from I&amp;APs throughout the EIA process, thus providing organisations and individuals with an opportunity to raise concerns, make comments and suggestions regarding the proposed project.</p>
			<p>The Mining and Biodiversity Guideline<sup>107</sup> published in 2013 states on page 47 that</p> <p>“where mining is likely to affect biodiversity priority areas, there may be a greater number of stakeholders who are concerned with the proposal or activity and its consequences, as well as more local and downstream users of ecosystem goods and services who might be affected. Not only would a</p>	<p>A comprehensive stakeholder engagement process was undertaken for the proposed project.</p> <p>The project was advertised in four newspapers with distribution around Durban, and Richards Bay. The newspapers and dates of distribution were as follows:</p> <ul style="list-style-type: none"> <li>• The Mercury – 18 September 2017</li> </ul>

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			<p>failure to tackle stakeholder engagement properly in such areas pose an almost certain risk to the mining company and its proposal or activity, but thorough stakeholder analysis is also the key to identifying potential conservation partners in addressing biodiversity issues, managing impacts effectively and implementing biodiversity offsets.”</p> <p>While the Guideline refers to terrestrial mining, the stakeholder engagement aspects of the document must be used to guide the current process and a more robust engagement process should be undertaken. Relevant stakeholders include those individuals, groups, communities, organisations, associations or authorities whose interests may be positively or negatively affected by a proposal or activity (e.g. local and downstream users of ecosystem goods and services) and/or who are concerned with a proposal or activity and its consequences.</p> <p>107 - Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013.: Mainstreaming biodiversity into the mining sector. Pretoria</p>	<ul style="list-style-type: none"> <li>• The Zululand Observer – 18 September 2017</li> <li>• Ilanga (advert in isiZulu) – 21 September 2017</li> <li>• Isolezwe (advert in isiZulu) – 21 September 2017</li> </ul> <p>Site notices were placed at the following locations:</p> <ul style="list-style-type: none"> <li>• eThekweni Municipality libraries:</li> <li>• Durban North;</li> <li>• Durban Central Lending;</li> <li>• Amanzimtoti;</li> <li>• Warner Beach;</li> <li>• Isipingo Beach;</li> <li>• Umkomaas; and</li> <li>• Tongaat Beach.</li> <li>• uMhlathuze Local Municipality:</li> <li>• Richards Bay Municipality; and</li> <li>• Richards Bay Library.</li> <li>• Entrance to the Port of Richards Bay.</li> </ul> <p>Comments received from the initial notifications as detailed above were used to draft the stakeholder database over and above the stakeholders which were already identified at the time. Those individuals who expressed their interest in the project, as well as those affected were registered as I&amp;APs and notified of all project proceedings.</p>
			<p>The preparation of Public Participation Guidelines for Stakeholders in the Mining Industry was coordinated by the Consultative Forum on Mining and the Environment (2002)<sup>108</sup> and states:</p> <p>“A public participation process is not only evaluated by minimum legal requirements. As it is, current South African legislation and the NEMA principles leave the door wide open for disagreement on whether a process was adequate or not. Different players evaluate public participation by different sets of requirements, each of which must be satisfied if it is to be deemed adequate by all players. These sets of requirements are:</p> <ul style="list-style-type: none"> <li>• Letter-of-the-law legal requirements.</li> <li>• Stakeholder requirements in terms of the international good-practice guidelines for public participation</li> <li>• Proponent requirements in terms of whether the public participation process resulted in an increase or decrease in the company’s social risk.”</li> </ul> <p>108 - <a href="https://commdev.org/userfiles/files/725_file_CMSA_PPGuide.pdf">https://commdev.org/userfiles/files/725_file_CMSA_PPGuide.pdf</a></p>	<p>Public participation with regards to EIA’s in South Africa is determined by the principles of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and elaborated upon in ‘GN 657: Guideline 4: Public Participation’ (Department of Environmental Affairs, 2017), which states that: <i>“Public participation process” in relation to the assessment of the environmental impact of any application for an environmental authorisation, is defined in terms of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) as a process by which potential interested and affected parties are given opportunity to comment on, or raise issues relevant to, the application.”</i></p> <p>The public participation process was designed based on the nature and scale of the anticipated impacts associated with the Project, taking into consideration the level of interest in the Project.</p>

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				<p>The Scoping Reports and the draft EIA Report has been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 calendar days. It is important to note that the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017). This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process.</p> <p>ERM has complied with the requirements set out for a fair and inclusive process as detailed (and proven) in the EIA Report. Chapter 5.1 of the EIA states that Public consultation is an inclusive and culturally appropriate process, which involves sharing information and knowledge, seeking to understand the concerns of others and building relationships based on collaboration. It allows stakeholders to understand the risks, impacts and opportunities of the project in order to achieve positive outcomes. The public participation process is designed to provide information to and receive feedback from I&amp;APs throughout the EIA process, thus providing organisations and individuals with an opportunity to raise concerns, make comments and suggestions regarding the proposed project. Stakeholders and I&amp;APs were encouraged to register and participate throughout the process, as detailed in Table 5.1 of the EIA Report.</p>
			<p>Of relevance to the proposed project is the guideline on page 15 which states that the level of effort for technical environmental evaluation and public participation will increase with aspects such as the size of footprint of impacts, a new development in a previously undisturbed area, where aggregate and cumulative impacts are anticipated to be significant, and the number of issues expected to be raised by the authorities and other stakeholders that would need to be incorporated into the specialist assessments. By implication, the more specialist studies, the more stakeholder groups will be involved, increasing the time and cost of the public participation process. The sensitivity of public perceptions is often linked to the sensitivity of the receiving environment, also increase the level of effort needed in the public participation process.</p> <p>it strongly recommended that the EAP follows this Guideline to help ensure a fair, productive and thorough public and stakeholder engagement going forward given that the magnitude, novelty and complexity of the proposed</p>	<p>As stated above, ERM has complied with the requirements set out for a fair and inclusive process as detailed (and proven) in the EIA Report. The comments received from you dated 3 November 2018 were responded to and included in the Final EIA which was submitted to PASA and released to the public on 14 December 2018.</p>

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			<p>project suggests that the public participation process should be more vigorous than most.</p> <p>As noted in section 3.2 above, the comments put forward by the South Durban Community Environmental Alliance and Dr Chernaik have not been satisfactorily responded to by the EAP in the draft EIA Report and neither are the submissions and comments made by other I&amp;APs thereby failing to comply with the requirements of the MPRDA and NEMA.</p> <p>As repeatedly mentioned throughout this document, the draft EIA Report is so severely lacking in material information that the public participation process cannot be seen to be complete. Regulation 41(6) of the EIA regulations<sup>109</sup> requires that information containing all relevant facts in respect of the application be made available to I&amp;APs. Further to this, our specific queries sent to ERM in a letter dated 3 November 2018 (Annexure WO1), were never addressed. Accordingly, the draft EIA Report must be redrafted after the missing detail and relevant facts are addressed so that it can be released for further comment with appropriate time frames to allow for meaningful engagement.</p> <p>109 - GN R982 in GG 38282 of 4 December 2014 as amended by GN R326 in GG 40772 of 7 April 2017.</p>	
			<p><b>2.13 Authority Communications</b></p> <p><b>ANNEXURE C</b></p> <p>The authority communications are limited to letters from PASA. It is expected that the Department of Environmental Affairs (DEA) would be communicated with given that the protection of the coast, the ocean and the species within the ocean, is DEA's mandate. It is clear from Annexure B6 that the DEA registered as an Interested and Affected Party however no comments and responses are included in the draft EIA Report. If DEA has been part of the consultation process, the correspondence and any comments received must be included.</p> <p>If DEA has not been part of the participation process, it is submitted that they must immediately be advised to submit their comments and actively take part in the process.</p>	<p>All comments received from stakeholders were responded to and included in the Scoping and EIA Reports. ERM approached the DEA for comment, however the DEA was amongst those stakeholders who reserved the right not to comment.</p>
			<p><b>2.14 Failure to give reasonable opportunity to make representations in respect of resubmission of approved Scoping Report after lapsing of EIA process</b></p> <p>It is submitted that PASA's decision to accept ENI's previously approved scoping report upon resubmission of the EIA application (after it had</p>	<p>As per Table 3 of the final EIA Report, the proposed project was assessed to have three planned socio-economic impacts- two of which relate to maritime heritage and employment/ training and both of which are assessed to have negligible impact significance. This impact is related to "restricted access to fishing grounds" has</p>



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			<p>lapsed) was in breach of the mandatory provisions of s3 of the Promotion of Administrative Justice Act, 2000 (PAJA), which give effect to section 33 of the Constitution.</p> <p>Section 3 of PAJA requires that administrative action which materially and adversely affects the rights or legitimate expectations of any person must be procedurally fair, while subsection 2(b)(ii) stipulates that in order in order to give effect to the right to procedurally fair administrative action, an administrator must give that person:</p> <ul style="list-style-type: none"> <li>(i) adequate notice of the nature and purpose of the proposed administrative action;</li> <li>(ii) <b><u>a reasonable opportunity to make representations;</u></b></li> <li>(iii) a clear statement of the administrative action;</li> <li>(iv) adequate notice of any right of review or internal appeal, where applicable; and</li> <li>(v) adequate notice of the right to request reasons in terms of section 5.</li> </ul>	<p>an impact significance of "Minor", pre-mitigation. It can therefore be concluded that in light of Section 3 of the PAJA that the commenter has highlighted, the three impacts described above (and as assessed throughout the screening, scoping and draft EIA phases as well), are not expected to materially and adversely affect the rights or legitimate expectations of any person.</p> <p>Adequate notice of the nature and purpose of the proposed Project and legislated opportunities to comment were provided to the public. Additionally, reasonable opportunities (as defined in the NEMA, as amended and associated Regulations) were provided for I&amp;APs to comment and make representations as desired.</p> <p>Once the Environmental Authorisation is decided upon by the Competent Authority, the decision should contain the reasons or motivation for the course of adjudication. ERM will at such time disclose the decision to the public and highlight the process to be followed should individuals want to appeal the decision.</p> <p>As such, ERM has not contravened the PAJA (as described above), and has fulfilled the requirements for a fair and inclusive EIA and Public Participation Process to date.</p>
			<p>Regulation 21 of the EIA Regulations provides as follows regarding submission of scoping report to competent authority:</p> <ul style="list-style-type: none"> <li>(1) If S&amp;EIR must be applied to an application, the applicant must, within 44 days of receipt of the application by the competent authority, submit to the competent authority a scoping report which has been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority.</li> <li>(2) Subject to regulation 46, and if the findings of the scoping report is still valid and the environmental context has not changed, <b><u>the submission of a scoping report as contemplated in subregulation (1) need not be complied with:</u></b> <ul style="list-style-type: none"> <li>(a) in cases where a scoping report was accepted as part of a previous application for environmental authorisation and the application has lapsed or was refused because of insufficient information;</li> <li>(b) <b><u>on condition</u></b> that regulation 16 is complied with and <b><u>that such application is accompanied by proof that registered interested and affected parties,</u></b> who participated in the public participation process</li> </ul> </li> </ul>	<p>As stated in Section 1.3.5 of the final EIA Report, the final Scoping Report was submitted to PASA on 8 March and approved on 16 April 2018. Due to unforeseen delays in the finalisation of the specialist studies for the exploration drilling within Block ER236, subsequent delays in the drafting of the EIA Report were experienced. Consequently, the Draft EIA Report could not be disclosed to the public for within the regulated 106 day timeframe (i.e. by the 3 August 2018) as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the EIA Application lapsed on the 3 August 2018.</p> <p>Subsequent to the lapsing of the application, Eni re-applied for environmental authorisation. There had been no changes to the baseline environmental and social conditions described in the Final Scoping Report (which was approved by PASA on 16 April 2018). In accordance with Section 21(2)(a) and (b) of the NEMA EIA Regulations, Eni was authorised to commence with the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment. PASA</p>

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			<p>conducted as part of the previous application, <b><u>have been notified of this intended resubmission of the application prior to submission of such application;</u></b></p> <p>(c) if the application contemplated in paragraph (b) is submitted by the same applicant for the same development, as applied for and lapsed or refused as contemplated in paragraph (a); and</p> <p>(d) if an environmental impact assessment report inclusive of specialist reports and an EMPr, which must have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority, is submitted within a period of two years from the date of the acceptance of the scoping report contemplated in paragraph (a).</p> <p>(3) A scoping report must contain all information set out in Appendix 2 to these Regulations or comply with a protocol or minimum information requirements relevant to the application as identified and gazetted by the Minister in a government notice.</p>	<p>confirmed the acceptability of this approach on 29 August 2018 (refer to Annex C) and authorized the Final EIA Report to be submitted for decision by 14 December 2018.</p> <p>On 13 August 2018 all registered I&amp;APs were sent a notification informing them that the EIA Application had lapsed, and that Eni intend to initiate a new draft EIA process for the project.</p> <p>On 25 September 2018, an English version of the Draft EIA Report and EMPr was released for public comment and was made available online and in the following libraries:</p> <ul style="list-style-type: none"> <li>• Durban Public Library;</li> <li>• Richards Bay Public Library;</li> <li>• Port Shepstone Public Library;</li> <li>• Austerville Public Library;</li> <li>• East London Public Library; and</li> <li>• Linton Grange Library (Port Elizabeth).</li> </ul> <p>English, isiZulu and isiXhosa versions of the Non-Technical Summary were made available at the open house meetings and on the project website. An email notification letter was sent to all registered I&amp;APs on the stakeholder database (refer to Annex B of the Final EIA Report). This letter informed I&amp;APs that a new EIA Application was submitted to PASA and that the draft EIA process had recommenced, and invited I&amp;APs to comment on the Draft EIA Report.</p> <p>Newspaper adverts were placed in several newspapers (notifying stakeholders of the availability of the Draft EIA Report for review and inviting them to open house meetings (refer to Annex B of the Final EIA Report). All comments received, along with responses have been included in the Comments and Responses Report in the Final EIA Report (refer to Annex B of the Final EIA Report). Newspaper adverts were published during the week of 17 September 2018 as follows:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul>

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				<ul style="list-style-type: none"> <li>isiZulu adverts were published in:</li> <li>Ilanga and</li> <li>Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>Pondo News in Eastern Cape</li> </ul> <p>SMS notifications with directions to the project website, where the Draft EIA Report was available and reminders to submit comments on the Draft EIA Report were sent to I&amp;AP's on 09 October 2018 (refer to Annex B of the Final EIA Report for a screenshot of the site website).</p> <p>Upon requests made by participants at the open-house meetings in KZN, the EIA Report was translated into isiZulu and the commenting period was subsequently extended by two weeks to conclude on 8 November 2018. This information was communicated to I&amp;AP's via email on 18 October 2018 and via SMS notifications 19 October 2018 (refer to Annex B of the Final EIA Report).</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held at the following locations:</p> <ul style="list-style-type: none"> <li>The Boardwalk Hotel in Port Elizabeth on 03 October 2018;</li> <li>The Beach Hotel in East London on 04 October 2018;</li> <li>The Premier Inn Hotel in Richards Bay on 08 October 2018;</li> <li>The Gooderson Tropicana Hotel in Durban on 09 October 2018;</li> <li>The Venture Inn Hotel in Port Shepstone on 10 October 2018.</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape. A summary of key concerns, comments and queries and general observations from open house meetings are recorded in Section 5.5. Summary of Comments Raised During the EIA phase and the Comments and Responses Report (refer to Annex B of the Final EIA Report).</p>
			On 13 August 2018, ERM wrote to stakeholders advising as follows:	On 22 January 2018, the draft Scoping Report was released for public comment and was made available online and in the following libraries:

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			<p>From: ERM South Africa Project ENI Offshore Exploration [mailto:eni.exploration.eia@erm.com] Sent: 13 August 2018 12:36 PM Subject: EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa: Notification of Lapse of EIA Application</p> <p>ERM Ref: 0414229 Exploration Right Number: 12/3/236</p> <p>RE: EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa: Notification of Lapse of EIA Application</p> <p>Dear Stakeholder,</p> <p>ERM has experienced unforeseen delays in the finalising of specialist studies for the Exploration Drilling within Block ER236, which have resulted in subsequent delays in the drafting of certain chapters of the EIA Report. Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the Final EIA Report by the 03 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the current EIA Application lapsed on the 03 August 2018.</p> <p>Eni intend to initiate a new EIA process for the Project. The Final Scoping Report was submitted to PASA on the 08 March and approved on the 16 April 2018. ERM are confident that the baseline environmental and social conditions described in the Scoping Report have not changed since the Scoping Report was compiled. <b><u>In line with Section 21(2)(a) and (b) of the NEMA EIA Regulations, ERM are seeking to commence the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment. All I&amp;APs registered on the stakeholder database will receive notification when a new EIA process has been initiated.</u></b></p> <p>Please do not hesitate to contact us should you have any queries or if there are any aspects you would like to discuss.</p> <p>On 29 September 2018, ERM wrote to stakeholders by email advising as follows:</p> <p>ERM Ref: 0414229</p>	<ul style="list-style-type: none"> <li>• Durban Public Library</li> <li>• Richards Bay Public Library</li> <li>• Port Shepstone Public Library</li> </ul> <p>On the same day, an advert was published in four newspapers; The Mercury (in English) and Isolezwe (in Zulu) with distribution around Durban, and The Zululand Observer and Ilanga Newspaper (in Zulu), with distribution around Richards Bay. Notifications were also sent to all stakeholders on the database. The comment period started on 22 January 2017 and ended on 1 March 2018. All comments received by 5 March 2018 were included in the final Scoping Report.</p> <p>Prior to this, an earlier version of the Draft Scoping Report was released for comment on 27 October 2017. Due to a change in project scope, a notification was sent out on 7 November 2017 to notify stakeholders that the report would be re-released for a full 30 calendar day comment period in early 2018.</p> <p>Communication was sent to all stakeholders registered in the stakeholder database regarding all project proceedings (See Annex B of EIA Report).</p> <p>According to Section 22 of the 2017 EIA NEMA Regulations, as amended, <i>"The competent authority must, within 43 days of receipt of a scoping report –</i></p> <p><i>(a) accept the scoping report, with or without conditions, and advise the applicant to proceed or continue with the tasks contemplated in the plan of study for environmental impact assessment; or</i></p> <p><i>(b) refuse environmental authorisation if—</i></p> <p><i>(i) the proposed activity is in conflict with a prohibition contained in legislation; or</i></p> <p><i>(ii) the scoping report does not substantially comply with Appendix 2 to these Regulations or any applicable protocol or minimum information requirements as identified and gazetted by the minister in a government notice and the applicant is unwilling or unable to ensure compliance with these requirements within the prescribed timeframe."</i></p>

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			<p>Exploration Right Number: 12/3/236</p> <p><b>RE: EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa: Commencement of EIA Process and Release of Draft EIA Report for Public Comment</b></p> <p>Dear Stakeholder,</p> <p>Eni South Africa BV (Eni), and Sasol Africa Limited (Sasol) hold an Exploration Right 12/3/236 (ER 236) off the East Coast of South Africa. Eni has the operatorship of Block ER236. Eni and Sasol are considering the possibility of conducting an exploration drilling programme in Block ER 236 to assess the commercial viability of the hydrocarbon reservoir for future development. The project requires Environmental Authorisation (EA) from the National Department of Mineral Resources (DMR) under the National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended, through an Environmental Impact Assessment (EIA) process.</p> <p>An EIA process was commenced in January 2018 with the release of a Draft Scoping Report. The Final Scoping Report was approved by PASA on 16 April 2018. ERM experienced unforeseen delays in the finalising of specialist studies which resulted in subsequent delays in the drafting of the EIA Report. Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the Final EIA Report by the 03 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. <b><u>As such, the EIA Application lapsed on the 03 August 2018. A new EIA process has commenced, which was approved by PASA on 29 August 2018, successive to the approval of the Scoping Report on 16 April 2018.</u></b></p> <p>While I&amp;APs were advised that 'ERM are seeking to commence the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment', I&amp;APs were merely informed that ERM was seeking to commence a new EIA process, were not clearly notified that ERM was seeking approval of the lapsed scoping report, and were not afforded a reasonable (or for that matter any) opportunity to make representations with regard to ERM's intention to seek approval of the lapsed scoping report. PASA approved the new EIA process, without affording I&amp;APs an opportunity to make representations regarding this proposed decision, and without providing reasons for its decision to do so. ERM's failure to give clear notice of its intention to seek approval of the</p>	<p>ERM submitted that Final Scoping report to PASA for decision making purposes. Notification that the final Scoping Report was submitted to PASA was distributed to stakeholders on 9 March 2018. PASA approved the Final Scoping Report on 16 April 2018.</p>

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			lapsed scoping report together with its failure to give I&APs a reasonable opportunity to make representations to the administrator effectively prevented I&APs from making representations to the relevant decision-maker, and constitutes a fatal flaw in the EIA authorisation process. This failure breached I&APs rights to procedurally fair decision-making, as contemplated in the Constitution and PAJA.	
			<p><b>3 CONCLUSION</b></p> <p>The draft EIA Report has failed to comply with the legal requirements of the EIA regulations as promulgated in 2014<sup>110</sup> in that the draft EIA Report has (among other things) failed to:-</p> <ol style="list-style-type: none"> <li>1. Adequately identify the nature, significance, consequence, extent, duration and probability of the impacts particularly with regard to baseline information and a thorough understanding of the area of interest and oil spill modelling;<sup>111</sup></li> <li>2. Identify the manner in which impacts, particularly from a spill or blowout, could be reversed;</li> <li>3. Detail the irreplaceable loss of resources in the event of the impact, particularly a spill or blowout;</li> <li>4. Provide details of financial provisions for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impact and, more importantly, the financial security for clean-up in the event of a large spill or blow-out;</li> <li>5. In addition to point 4 above, adequately determine the policy and legislative context of the financial provisions and particularly the ability of insurance being adequate enough to indemnify the South African taxpayer from having to cover the costs of clean-up;</li> <li>6. Address the concerns raised during the public participation process;</li> <li>7. Provide necessary information to inform the public participation process rather than stating that it will be provided "prior to start of drilling operations";</li> <li>8. Set out adequate spill response methods and technology effective for the correct predicted volumes;</li> <li>9. Show that the necessary infrastructure is in place for timely spill response especially given that the infrastructure is on the opposite coastline;</li> <li>10. Fully explain and substantiate the process of and methodology for assigning significance ratings so as it not to seem arbitrary and subjective;</li> <li>11. Show adequate understanding of the ecosystem and how it may be affected by oil spills;</li> <li>12. Ensure protection of marine and coastal wildlife populations (particularly endangered, threatened, vulnerable and protected species);</li> <li>13. Ensure protection of indigenous subsistence living and in the fishing industry;</li> </ol>	<ol style="list-style-type: none"> <li>1. The EIA Report details the impact assessment where impacts are rated according to their extent, duration, scale. Reversibility, loss of resource, magnitude, sensitivity and significance.</li> <li>2. Various mitigation and preventative measures will be implemented in the event of an oil spill or blowout. These have been detailed in Chapter 8 of the EIA Report.</li> <li>3. All planned and unplanned events have been assessed and detailed in Chapter 7 and 8 of the EIA Report.</li> <li>4. Financial provisioning for decommissioning the well has been calculated and presented in Annex F of the EIA Report.</li> <li>5. Proof of availability of the financial provision will be submitted to PASA prior to the commencement of the drilling activities. Furthermore, there will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation.</li> <li>6. These concerns have been addressed in the responses above. Also see Annex B of the EIA Report.</li> <li>7. It is not clear which information you speak of. However, all proof of notification of stakeholders throughout the EIA process has been included in Annex B of the EIA Report.</li> <li>8. Many barriers are constantly in place to prevent such an event, and redundancy of barriers ensures that the failure of any one of them will not directly lead to a blowout. In case of anomalies or uncontrolled release of hydrocarbon, the BOP (blow out preventer) device is installed on top of wellhead at seabed and could immediately close the well, also having pipes inside. The BOP has redundancy activation system for activation. In any case, should a blowout occur, response actions</li> </ol>

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			<p>14. Prove that oil and gas activities will not result in harm to the marine life and, sensitive and marine protected areas in and around the East Coast of South Africa in the event of a spill or blow-out;</p> <p>15. Analyse how the project may interact with baseline conditions in order to define, predict and evaluate the likely extent and significance of environmental, social and health impacts that may be caused by the project.</p> <p>It is therefore necessary to revise the draft EIA Report and make it available for further comment.</p> <p>110 - GG 40772, 4 December 2014 as amended by GN R326 in GG 40772 of 7 April 2017.</p> <p>111 - GNR 982 of 2014, Appendix 3, Section 3(h)(v); <a href="https://www.researchgate.net/publication/288468395_The_environmental_and_social_impact_of_petroleum_and_natural_gas_exploitation_in_Nigeria">https://www.researchgate.net/publication/288468395_The_environmental_and_social_impact_of_petroleum_and_natural_gas_exploitation_in_Nigeria</a></p>	<p>would start immediately to mitigate its consequences (e.g. preventing damage due to the release of flammable gas, the spreading of oil on water surfaces, the infiltration of oil into the soil) and to stop it. One effective back-up measure to stop the flow and seal the well is called capping stack. A capping stack is a device that, placed on the top of the well, can contain the flow and divert it to flow lines that restore the control of the well and can eventually stop the flow operating its valves. Capping stacks vary in dimensions and weight, approximately from 25 to 40 feet of height (8 to 12 meters) and from 50 to 200 tons of weight. The ultimate measure to stop the flow and prevent it to continue in the future is called relief well. It is a second well (most commonly two are drilled simultaneously) drilled to reach the bottom of the well out of control and stop the flow directly from the reservoir, cementing the rocks that surround the well. After the flow has been stopped, the well originally out of control and the relief well(s) are completely cemented up to the surface to ensure the sealing and prevent any future leakage. Please refer to Chapter 8 of the Final EIA report which clearly sets out the well control technology to prevent spills. Spill response measures specific and tailored to South Africa's offshore environment will be prescribed in the Oil Spill Contingency Plan (OSCP)</p> <p>9. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. Note that timing depends on the type of equipment and not on the location of the spill. In case of loss of control of the well a capping stack can be provided by OSRL or Wild Well Control.</p> <p>10. The impact assessment methodology has been detailed in Chapter 6 of the Please see Chapter 8 of the EIA Report for details on impacts as a result of unplanned events.</p> <p>11. Please see Chapter 7 and 8 of the EIA Report for details on impacts as a result of planned and unplanned events, as well as the proposed mitigation/management measures.</p> <p>12. Please see Chapter 7 and 8 of the EIA Report for details</p>



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				<p>on impacts as a result of planned and unplanned events, as well as the proposed mitigation/management measures.</p> <p>13. Please see Chapter 8 of the EIA Report for details on impacts as a result of unplanned events.</p> <p>14. Please see Chapter 7 and 8 of the EIA Report for details on impacts as a result of planned and unplanned events on the baseline conditions.</p> <p>The Draft EIA Report has therefore fulfilled the requirements of the NEMA (as amended) and associated Regulations and is compliant in terms of both reporting content and fulfilling the process requirements. The draft EIA Report does not require revision and will not be re-disclosed.</p>
			<p>In spite of requests for an extension of time to consider the draft EIA Report and submit comments, WILDOCEANS were not given the requested 30 day extension of time but only a further 14 days. It is hereby placed on record that WILDOCEANS have not been afforded a reasonable timeframe in which to comprehensively comment on the draft EIA Report and that queries addressed to ERM in a letter dated 3 November 2018 (Annexure WO1) have not been answered. WILDOCEANS accordingly reserves its right to supplement these comments as and when the questions have been adequately responded to and WILDOCEANS' experts have had the opportunity to properly assess these with the content of the draft EIA Report and annexures.</p>	<p>Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 calendar days and ERM extended this to 45 calendar days, which is more than the minimum required by law. ERM therefore is of the view that a reasonable and sufficient time period was afforded to interested and affected persons to provide comments. ERM notes further that under the NEMA EIA Regulations (at Regulation 23(1)(a)), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, extending the comment period by longer than two weeks would prevent in responding to all comments appropriately and from finalising in the EIA within the legally prescribed time period.</p> <p>All comments submitted by WILDOCEANS on 03 November 2018 were addressed in the CRR which was submitted to PASA on 14 December 2018. Notice was given to WILDOCEANS of the submission as well the availability of the Report on 14 December 2018.</p>
			<p>3 November 2018</p> <p>Dear Ms Stevens</p> <p>EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa</p> <p>1. We refer to our letter dated 11 October 2018, to your emailed response dated 26 October 2018, and to</p>	<p>This comment has been previously responded to. Refer to responses to 3 November comments.</p>

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			<p>Adrian Pole's telephone conversation with PRDW's Mr S. Luger on 2 November 2018.</p> <p>2. We note that the time period within which to comment on the draft EIA Report was extended by two weeks to 8 November 2018. Having regard to the complexity of the EIA Report and annexures, taken together with the scale of the anticipated impacts of a catastrophic oil spill, the high sensitivity of the potentially affected environment (including but not limited to sensitive open ocean, coastal and estuarine areas), and the high degree of controversy of the project, we persist with our view that the time period afforded to I&amp;APs to review the relevant documentation, obtain necessary technical advice and input, and to draft comments/submissions is unreasonable.</p> <p>3. We also note your offer to facilitate a call between ourselves and the oil spill modellers (and other specialists) to allow us an opportunity to engage with them and ask questions. We have attempted to speak directly with Mr. S. Luger of PRDW to seek clarification on some aspects of his Peer Review of ERM Spill Report, but were advised to submit our queries through ERM by email.</p> <p>4. In the circumstances, we set out below some of our queries in respect of ERM's Oil Spill Modelling (OSM) report and PRDW's Peer Review of ERM Spill Report:</p> <p>4.1. ERM indicates at p116 of its OSM report in response to PRDW Comment #2 that the 'input data for the model run are based on lithology and preliminary reservoir assessment and interpretation starting from seismic data. During the second quarter of 2018, new data interpretation were available from 2D/3D seismic data acquired by some multi-client providers in 2016 and 2018'.</p> <p>(a) Did ERM (or anyone else) run a modelling on the previous data (i.e. before the new data became available during the second quarter of 2018)? If so, please provide us with a copy of these modelling results and any previous versions of the OSM report reflecting these results.</p> <p>(b) If a modelling on the previous data was run, did PRDW review this previous model? If so, please provide us with a copy of the Peer Review report/s of this previous modelling.</p> <p>(c) Did ERM review the new data and independently verify its reliability?</p>	

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			<p>(d) Did PRDW review the new data and independently verify its reliability?</p> <p>(e) Has the previous and new seismic data been included in the EIA Report or annexures? If not, please provide us with same, alternatively with your explanation for not including this data in the EIA Report or annexures.</p> <p>4.2. ERM indicates in response to PRDW Comment #2 that 'based on analysis already finalized, the reservoir and production profiles are expected to be very similar to the same available in other subsea fields developed by Eni in Africa. For this reason the PI (productivity index), porosity, hydrocarbon properties and expected flow rate have been recalculated and optimized using real data from those similar fields'.</p> <p>(a) What does 'analysis already finalised' refer to, and who conducted this analysis? Please provide us with a copy of this analysis.</p> <p>(b) Did ERM have access to the underlying data used for this analysis? If so, what steps did ERM take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?</p> <p>(c) Did PRDW have access to the underlying data used for this analysis? If so, what steps did PRDW take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?</p> <p>(d) Who did the 'recalculation and optimization' of the flow rates? Please provide us with a copy of the documentation relating to the initial calculation of the flow rates (before recalculation and optimisation) and the recalculated and optimised flowrates.</p> <p>(e) Did PRDW have sight of and verify the flow rate calculations before they were recalculated and optimised?</p> <p>(f) Did PRDW have sight of any earlier version of the OSM report based on the data before recalculation and optimisation?</p> <p>(g) Did PRDW have sight of the new underlying data relied upon to recalculate and optimise the flowrates?</p> <p>4.3. ERM indicates in response to PRDW Comment #2 that 'the pore pressure prediction is computed using a sophisticated technology from the velocity analysis coming from the recent (2016) 3D seismic volume'.</p> <p>(a) Who computed the pore pressure predictions? Please provide a copy of this computation.</p>	

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			<p>(b) Why was the pore pressure prediction computed using the 2016 3D seismic volume rather than data from the 2018 multicient seismic survey? Please provide us with a copy of the 2016 and 2018 seismic data referred to.</p> <p>4.4. ERM indicates in response to PRDW Comment #2 that 'for all the wells drilled in similar deepwater environment, an analogue approach was utilised for preparing the casing design and mud density, to keep the well under control while drilling'.</p> <p>(a) Please explain what is meant by an 'analogue approach'.</p> <p>(b) Please advise who conducted this analogue approach. If Eni, please indicate what steps were taken by ERM and PRDW to verify the suitability and reliability of this analogue approach.</p> <p>(c) Please provide us with a copy of any documentation or report in which this analogue approach is recorded.</p> <p>4.5. ERM indicates in response to PRDW Comment #2 that 'in the recent development of some African deepwater field, Eni has confirmed that those estimation has been confirmed during the subsequent drilling of the wells'.</p> <p>(a) Please indicate what steps were taken by ERM to verify the accuracy of these estimations indicated by Eni.</p> <p>(b) Please indicate what steps were taken by PRDW to verify the accuracy of these estimations indicated by Eni.</p> <p>4.6. ERM indicates in response to PRDW Comment #2 that 'during Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to ENI's experience in similar lithology in West Africa, which has allowed for optimizing the flow rate and PI parameters that, in the unrealistic situation that no mitigation (e.g. no BOP closure) will be applied, should provide a better estimation of flow rates'.</p> <p>(a) It is noted that the reservoir rocks at ER236 are 'thought to be' slope-basin floor pans. Please advise whether Eni or ERM is the source of this assumption. If Eni is the source, what steps were taken by ERM to</p>	

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			<p>verify the accuracy of this statement? If ERM is the source, please explain why this level of uncertainty is stated?</p> <p>(b) Did ERM rely on Eni's estimation of flow rates based on Eni's experience in similar lithology in West Africa? If so, did ERM have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?</p> <p>(c) Did PRDW rely on Eni's estimation of flow rates based on Eni's experience? If so, did PRDW have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?</p> <p>(d) It is noted that based on the reservoir rocks being thought to be slop-basin floors and Eni's experience in West Africa, the flow rates and PI parameters were optimised and 'should' provide for a better estimation of flow rates. Please explain the level of uncertainty associated with the use of the word 'should'.</p> <p>4.7. ERM indicates at p117 of its OSM report that PRDW comment # 4 asks for a 'clear explanation of why the blowout scenarios result in a lower impact than the other scenarios, despite involving much larger volumes of more persistent oil, e.g. is there any empirical data to support the model prediction that only 1% of the oil from the blowout will form a surface plume?'. In response, ERM state that 'the model results may be perceived that the impacts from the blowout are worse than from the diesel spill. That is not necessarily the case...'</p> <p>(a) This response by ERM does not make sense, and is inherently contradictory. Is ERM attempting to explain why the blowout scenarios result in a lower impact than the other scenarios, or is it disputing that the OSM modelling results show that the blowout scenarios result in a lower impact than the other scenarios? Please provide a full, clear explanation in unambiguous language.</p> <p>4.8. ERM indicates further in response to PRDW comment #4 that the 'placement of the blowout relative to the Agulhas Currents have provided a rather unique hydrodynamic arrangement protecting the shoreline with the strong southwestern transport parallel to the shores'.</p> <p>(a) Has PRDW had access to the underlying data used in the modelling for predicting current flows?</p> <p>(b) What steps (if any) did PRDW take to verify that the data used for the current flow predictions is representative and accurate?</p> <p>(c) What steps (if any) did PRDW take to verify the statement that the</p>	

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			<p>'Agulhas Currents have provided a rather unique arrangement protecting the shoreline with the strong southwestern transport parallel to the shores'?</p> <p>4.9. In its Peer Review of ERM Spill Report, PRDW points out with regard to ocean currents that 'no validation of the results in the study area was presented, e.g. a comparison to local current meter measurements would be expected. Further, only a single snapshot in time of the current field was provided. Current roses or time-series would have provided evidence that the temporal characteristics of the currents applied in the model were realistic'.<sup>1</sup> PRDW also points out with regard to wind that 'no validation of the results in the study area was presented, e.g. a comparison to local wind measurements would be expected. Further, no wind roses in the study area were presented which would have provided evidence that the statistical characteristics of the winds applied to the model were realistic'.<sup>2</sup> These issues were raised as 'minor comments'. In its conclusion, PRDW state that 'A couple of minor comments are also provided the record, but do not require any actions'.</p> <p>(a) Can PRDW please provide a clear, reasoned justification for concluding that no action was required by ERM to address these deficiencies in the modelling?</p> <p>(b) If these comments were addressed by ERM, please indicate where in the EIA Report or annexures these deficiencies have been addressed?</p> <p>1 Paragraph 4.1, at p4. 2 Paragraph 4.2, at p 4.</p> <p>4.10. It is noted that PRDW state in their letter to ERM dated 18 September 2018 that 'this letter confirms that all four major comments raised by PRDW have been adequately addressed'.</p> <p>(a) Can PRDW please provide a clear, detailed and reasoned explanation setting out the information it relied upon in reaching this conclusion, including how such information was validated. Please also include a description of any assumptions made and any uncertainties or gaps in knowledge.<sup>3</sup></p> <p>5. We remind ERM and PRDW that in terms of the EIA Regulations, an EAP and specialist must (among other things) perform the work relating to the application in an objective manner, even if this results in views and</p>	

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			<p>findings that are not favourable to the application, and must disclose to registered I&amp;APs all material information in the possession of the EAP and the specialist that reasonably has or may have the potential of influencing any decision on authorisation.<sup>4</sup></p> <p>6. In light of the above and given that the time period for submitting comments on the draft EIA Report expires on 8 November 2018, we look forward to receiving ERM's and PRDW's detailed response to our letter by no later than close of business on 6 November 2018.</p> <p>3 - EIA Regulations, Appendix 6, Specialist Reports, paragraph (1)(i). 4 - EIA Regulations, reg 13(1)(d) and (f).</p>	
Judith	Taylor	Earth Life Africa	<p>As has be proven in studies done in the USA, plankton destruction is an immediate result of this type of exploration  <a href="https://www.scientificamerican.com/article/air-guns-used-in-offshore-oil-exploration-can-kill-tiny-marine-life/">https://www.scientificamerican.com/article/air-guns-used-in-offshore-oil-exploration-can-kill-tiny-marine-life/</a> Our whales and dolphins require plankton to feed on. In addition, they are a major tourism attraction.</p> <p>Please note that both oil and gas are fossil fuels, which we should be moving away from and not creating more climate change pollution. The EIA therefore should not be granted in the interests of future generations.</p>	<p>The Marine Ecology Study (Annex D1) described the plankton abundance as seasonally highly variable and patchy in the Project Area. This is due to the fact that phytoplankton are drifting microscopic marine algae that live in the surface layers of the ocean called the epipelagic zone and are not strong enough to swim against ocean currents. Zooplankton comprise small crustaceans and other animals that have a weak ability to swim but generally float with ocean currents. They feed on other phytoplankton and larvae. The dynamic nature of the currents the area means that plankton populations will continue to be brought into the Project Area and therefore any loss of plankton is unlikely to have ecosystem-wide effects.</p> <p>The article you are referring to is describing the impact of seismic surveys on plankton. This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Your objection is acknowledged. However, the magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO<sub>2</sub> emissions generated by the project equate to only 0.0003 percent of the total CO<sub>2</sub> emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p>
Yvette	Retief	Private	<p>Thank you. Please read this article which Prof. mentioned the oil exploration devastation already at the Durban coastal region.  Professor Francois Engelbrecht, among the world's leading specialists on</p>	<p>The article quoted is in relation to climate change due to human activities since the industrial revolution and the subsequent</p>



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			<p>African climate change, takes the largest questions facing humanity to where we rarely see them — back home.</p> <p>I. Hot</p> <p>The question for Professor Francois Engelbrecht, during the lunchtime rush in the most popular canteen at Pretoria's Council for Scientific and Industrial Research, was about the one thing that climate scientists are supposed to avoid — emotion.</p> <p>For the past 45 minutes, Engelbrecht had been charting a course through the safe terrain of his own data. As one of the lead authors on the world-shaking Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C, endorsed by 195 countries and released in South Korea in early October, he knew better than most that the only effective weapons against climate denialists were the facts.</p> <p>How, then, did he reconcile the fact that human beings have at best a dozen years to shift the planet's political and economic trajectory (or face an apocalypse of heat, thirst, famine, floods and runaway ecological collapse) with the fact that he, too, is a human being?</p> <p>In other words, did Professor Engelbrecht ever succumb to anomie and despair?</p> <p>"I can tell you that the official message the IPCC tried to convey was one of hope," he told Daily Maverick, "they really tried not to come in with a negative message. They said, the science tells us that with political will it's still possible to avoid global warming exceeding 1.5°C. Somewhere between 1.5°C and 2°C, the report says, we have a high likelihood of initiating an irreversible melt of the Greenland icecap and triggering the instability of the Antarctic ice-shelf.</p> <p>"So we can still avoid all of this if we mitigate now. Again, the IPCC was trying to frame the message as one of hope. But of course, you know, most media houses and the public weren't fooled by that positive take on the report."</p> <p>Which, aside from being an understandable evasion of the personal aspects of the question, was also a tacit admission that there may be very little reason for hope. Here was a top-tier climate scientist, a man who at the age of 42 had published 40 papers in the world's most esteemed peer-</p>	<p>increase in temperature. ERM assessed the Project's impact on climate change as it is a key concern in South Africa.</p> <p>The drilling of the first exploration well is planned for some time between November 2019 and March 2020, and the drilling of one well is expected to take in the order of two months to complete.</p> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO<sub>2</sub> emissions generated by the project equate to only 0.0003 percent of the total CO<sub>2</sub> emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Additionally, Eni actively participates in the main international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO<sub>2</sub> over the next ten years. Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative.</p> <p>As part of the EIA Report, the effects that drilling activities may</p>

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			<p>reviewed journals, talking about how people could no longer be “fooled” into believing that it was all going to be okay.</p> <p>It was unclear whether Engelbrecht had read William T. Vollmann’s two-volume opus <i>Carbon Ideologies</i>, and it didn’t seem like the time to ask, but the analogy seemed apt. A compendium of our current global energy use back-dropped against natural landscapes ravaged by the extraction of oil, gas and coal, the text is addressed to a future reader whose world is defined by boiling oceans, methane fireballs and radioactive soil.</p> <p>Vollmann, according to almost all of his reviewers, had written the most honest and unflinching book yet on the largest question facing humanity—not because he had offered a path to hope, but because, in an effort to explain to our descendants how we never really stood a chance, he had outlined the problem in its hopeless complexity.</p> <p>And yet Engelbrecht, at his own insistence and per the entries in his impressive CV—with a PhD in meteorology, has led the development of the first African-based Earth system model—made no claim to philosophy or social commentary. It would therefore be unfair, not to mention unethical, to misrepresent the tenor of his work.</p> <p>“The IPCC doesn’t say things that are not defensible,” he informed <i>Daily Maverick</i>, “it has been criticised over the years for being too conservative.”</p> <p>(He must have had in mind, among other items, a 2012 article in <i>Scientific American</i> that showed how the IPCC had consistently underestimated the pace and impacts of global warming.)</p> <p>“But I think rather than be alarmist. As you know, there are always denialists looking for weak points in the reports. So we just don’t say things for which there is no evidence.”</p> <p>Counterintuitively, among the things for which there is not yet hard evidence, according to Engelbrecht, is a rise in the frequency and intensity of tropical cyclones. There is data to support the hypothesis, he noted, but the “statistical rigour” is still lacking. What did he mean by statistical rigour?</p> <p>“In this science,” he explained, “you must always be very, very careful to distinguish between what we call natural variability on the one hand and anthropogenic-induced change on the other.”</p>	<p>have on the marine environment have been considered through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services (Annex D1). The potential impact of both planned and unplanned activities on the marine environment is presented in Chapter 7 and 8 of the EIA Report.</p>

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			<p>Implying that, in tropical cyclone occurrences across the globe, where there is a natural “multi-decadal variability,” one swallow doesn’t a summer make.</p> <p>And neither do we get there with 20 summers, which is the time—give or take a few years—that science has been gathering reliable data on the phenomenon.</p> <p>“We must decide whether what we are seeing right now is a systemic increase in the frequency and intensity of tropical cyclones or whether it is just the upward curve in a cycle.”</p> <p>II. Hotter</p> <p>So here are a few of the things that the IPCC special report does have hard evidence for: the earth is on average between 0.75°C and 0.99°C warmer than it was during pre-industrial times; estimated anthropogenic global warming is currently increasing at 0.2°C per decade “due to past and ongoing emissions”; “warming greater than the global annual average is being experienced in many land regions and seasons, including two to three times higher in the Arctic”.</p> <p>From the local perspective, then, once we get past the unfortunate diversions of our own ersatz science kaffeeklatsch, lies the following (somewhat urgent) question: where does South Africa stand on this last point?</p> <p>Professor Engelbrecht, whose speciality is African climate change, is one of the few scientists on the planet with an answer endorsed by the majority of his PHD’d peers.</p> <p>According to him — and according therefore to the IPCC special report itself, which assessed and collated the data from 6,000 peer-reviewed papers — temperatures in the interior of our country are increasing at twice the global average. A 1.5°C rise in mean global temperatures by 2030, which is the ceiling that the IPCC suggests humanity aims for in order to avert global catastrophe, is thus a 3°C rise for most of us.</p> <p>To help that sink in, consider the impact of the fires that have raged across the statistically cooler southern Cape coast over the last few weeks, destroying 16,000ha of vegetation and 2,500 informal houses in the George area alone. Is it true, as some contest, that South Africa’s recent</p>	

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			<p>spate of wildfires have nothing to do with climate change?</p> <p>“What I can tell you for a fact,” said Engelbrecht, “is that the number of days with a high fire danger — so the number of days that are associated with high temperature, low humidity and high wind speeds — those days have clearly increased, specifically over the last 50 years. And it’s particularly over the last 50 years that we see the accelerated effects of global warming.”</p> <p>According to the professor, the increase in these high fire danger days against the first half of the last century amounts to “almost a doubling”. Where there were once 15 to 20 such days a year in South Africa, now there are 30 to 40. But again holding fast to the scientific method, Engelbrecht was at pains to point out that not all of these days would result in a wildfire outbreak — he was talking, he stressed, about the potential.</p> <p>That said, given that the 1°C rise in average global temperatures has already translated into a 2°C rise for the South African interior, it’s not just in the category of wildfires that this potential has now become a devastatingly apparent reality. The IPCC special report, as Engelbrecht reminded Daily Maverick, predicts with high confidence that even under 1.5°C of global warming we will continue to witness an increase in heatwave events and droughts in our own corner of the world.</p> <p>“This of course is not a comforting message at all,” he said, “because the thing about southern Africa is that we are already a region that is climatologically very hot and dry. And now we’ve become hotter and drier.</p> <p>That leaves very little room for adaptation. Let’s say you are a wet region that becomes hotter and drier, you can still cope. If you’re a cool region that becomes wetter and hotter, you can still do something. But if you are dry and hot and you just get drier and hotter, your options are very limited. For this reason, southern Africa was formally recognised as a climate change hot spot within the IPCC special report.”</p> <p>It bears repeating: climate change hot spot. A unique status that won us a unique set of mentions in the report, particularly in section B5, which looked at climate-related risks to health, livelihoods, food security, water supply, human security and economic growth.</p> <p>“This report makes a very, very important statement,” explained Engelbrecht.</p>	

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			<p>"It says that at 3°C of global warming, there is the potential for the total collapse of the maize crop in southern Africa. Remember, 3°C of global warming is 6°C regionally. At that number, there will also be a total collapse of the livestock industry."</p> <p>III. Hottest</p> <p>Now for some truly sobering news: most climate models show that at current rates we will hit 3°C by 2070. We learned in late October that Mpumalanga has the highest levels of air pollution in the world, a fact attributed by Greenpeace to the province's coal mines, coal transport networks and coal-fired power stations.</p> <p>MEANWHILE, THE OIL AND GAS EXPLORATION THAT'S HAPPENING OFF THE KWAZULU-NATAL COAST, ASIDE FROM PROVOKING THE IRE OF LOCAL COMMUNITIES, HAS BEEN CITED AS A PROBABLE CAUSE FOR THE DECIMATION OF MARINE LIFE, INCLUDING WHALES AND DOLPHINS.</p> <p>AND SO, WHEN IT COMES TO THE MOST IMPORTANT ISSUE FACING LIFE ON EARTH AT THE MOMENT, THE SOUTH AFRICAN GOVERNMENT IS RUNNING BLINDFOLDED AND AT SPEED IN THE WRONG DIRECTION.</p> <p>There is, however, a way through. What we've always had in this country is an appetite for protest. On the back of the IPCC special report, the Co-operative and Policy Alternative Centre and the South African Food Sovereignty Campaign sent an open letter to President Cyril Ramaphosa, demanding an emergency sitting of Parliament to debate the findings. As yet, there has been no response to the demand — what's more, the letter was inexplicably ignored by the vast majority of local media outlets — but it's a start.</p> <p>Time, of course, is not on our side.</p> <p>"The frontal systems have already been displaced pole-ward," said the professor, "and as a consequence of that, the potential for drought over the Cape Town region has already increased. In Gauteng, we already have statistical evidence of an increase in intense thunderstorms."</p> <p>Our farmlands, our coasts, our major cities — barring an act of collective will comparable in scope and power to the fight against apartheid, none will be spared. DM8</p>	

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Frans	Olsen	Private	<p>Ons wou graag insluit by julle vergadering, op die 10 de Oct, in Port Shepstone. Kan julle ons n kart van die plek stuur as die plek is moeilik te vind! Ook is daar werk vir Sheppie mense op die skip?</p> <p>We wanted to be included at your meeting, on Oct. 10, in Port Shepstone. Can you provide a map as the place is not easy to find. Also is their work for Port Shepstone people on the ship</p>	<p>The location of the Port Shepstone meeting was included in the stakeholder notification as well as the South Coast Herald newspapers. The meeting was held at the Venture Inn Hotel in Port Shepstone on 10 October 2018. Refer to Annex B of the Final EIA Report.</p> <p>Given the project's focus on exploration at this stage and the subsequent limited time frame of drilling activities, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Frans	Olsen	Private	Ons antwoord, na die eia wat julle mense het beplan & geskryf het. We responded, about the EIA that ERM comprised.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Frans	Olsen	Private	Ons ook skryf vertaaling vir geld We also provide translation services for a fee	It has been noted that you provide translation services.
Allimuthu	Perumal	Private	Its to short a time to comment	<p>Noted. ERM extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 days and ERM extended this to 45 days, which is more than the minimum required by law. Under the NEMA EIA Regulation 23(1)(a), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, we are not able to extend the comment period by longer than two weeks, as we would then not be able to respond to all comments and finalize in the EIA within the legally prescribed time period allowed for the EIA phase and the application would lapse.</p> <p>In any event, ERM submits that a reasonable time period has been provided for stakeholders to consider the Draft EIA Report and form an informed opinion as to the proposed activities.</p>
Judith	Taylor	Earth Life Africa	As has be proven in studies done in the USA, plankton destruction is an immediate result of this type of exploration	The Marine Ecology Study (Annex D1) described the plankton abundance as seasonally highly variable and patchy in the Project

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			<p><a href="https://www.scientificamerican.com/article/air-guns-used-in-offshore-oil-exploration-can-kill-tiny-marine-life/">https://www.scientificamerican.com/article/air-guns-used-in-offshore-oil-exploration-can-kill-tiny-marine-life/</a> Our whales and dolphins require plankton to feed on. In addition, they are a major tourism attraction.</p> <p>Please note that both oil and gas are fossil fuels, which we should be moving away from and not creating more climate change pollution. The EIA therefore should not be granted in the interests of future generations.</p>	<p>Area. This is due to the fact that phytoplankton are drifting microscopic marine algae that live in the surface layers of the ocean called the epipelagic zone and are not strong enough to swim against ocean currents. Zooplankton comprise small crustaceans and other animals that have a weak ability to swim but generally float with ocean currents. They feed on other phytoplankton and larvae. The dynamic nature of the currents the area means that plankton populations will continue to be brought into the Project Area and therefore any loss of plankton is unlikely to have ecosystem-wide effects.</p> <p>The article you are referring to is describing the impact of seismic surveys on plankton. This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Your objection is acknowledged. However, the magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO<sub>2</sub> emissions generated by the project equate to only 0.0003 percent of the total CO<sub>2</sub> emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p>



Annex A

## Initial Comments and Responses Report

Public Meeting Comments				
Name	Surname	Organisation	Comment	Response
Anon	Anon	Anon	How long will it take to set up after authorisation is granted?	If Authorisation is granted for drilling activities, there are a number of operational, logistic and emergency response planning activities that are required to take place in accordance with local legislation, international best practises and Eni's internal compliance procedures. Vessels and logistic base availability and preparation for operations will also dictate the timing of activities. Taking all such factors into consideration, activity will likely commence in 2020.
Anon	Anon	Anon	When is it feasible for drilling to be undertaken?	If Authorisation is granted for drilling activities, there are a number of operational, logistic and emergency response planning activities that are required to take place in accordance with local legislation, international best practises and Eni's internal compliance procedures. Vessels and logistic base availability and preparation for operations will also dictate the timing of activities. Taking all such factors into consideration, activity will likely commence in 2020.
Anon	Anon	Anon	What do you look for to make a decision that the well is good to be drilled?	Eni detect all possible reservoir targets with possible presence of hydrocarbons in the Block boundaries through internal processing, modelling, analysis and interpretation of seismic data acquired from multi-client providers.
Anon	Anon	Anon	General concern of the timing of the project as well as the location	Your concern has been noted. The timing and location of the drilling have been described in Chapter 3 of the EIA Report.
Anon	Anon	Anon	How will people know not to fish in the 500m exclusion zone?	Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). The safety zone will be described in a Notice to Mariners as a navigational warning. Other mitigations measures that will be implemented are described in Chapter 9 of the EIA Report. The drilling and stand-by vessel can also use radio and standard communication channels to inform other vessels of the safety exclusion zone around the drillship.
Anon	Anon	Anon	Map of the MPAs to refer to national terrestrial boundary	The EEZ was added to the MPA map in Figure 4.22 in Chapter 4 of the EIA Report.
Anon	Anon	Anon	Concern that Durban is a busy marine traffic area due to tourism	Block ER236 is located from 20 km offshore and the drilling areas of interest are located over 60 km offshore (refer to Chapter 3 of the EIA Report). The project will have a limited impact of tourism activities during routine operations. Refer to Chapter 8 for the assessment of unplanned events on tourism. Furthermore, the proposed drilling operations will be temporary as the project is in the exploration phase. Both the Port of Richards Bay and the

				Port of Durban are large, commercial, high traffic ports and, as such, the additional vessel traffic for this project will be non-significant and will not be a major change from the current status quo in terms of impact to fishing, supply and goods shipping activities.
Anon	Anon	Anon	Contacts: management authorities of MPA's. Coastal reserves	Thank you for your contact suggestions. This was taken into consideration.
Anon	Anon	Anon	What monitoring is applied after the well is abandoned	Refer to Chapter 9 of the EIA Report. Once the well has been plugged and abandoned, the drillship and support vessels will leave the well location. However, a final ROV survey of the seabed will be performed at the seabed prior to demobilisation.
Anon	Anon	Anon	Are the proponent planning on avoiding certain seasons during the drilling phase?	Chapter 7 of the EIA Report assesses the impact of drilling of one well within each area of interest at any time of the year and therefore seasonality has been considered.  In the unlikely event of a blow-out, the probability of shoreline oiling is influenced by the season in which drilling is undertaken. In Table 9.8 (Chapter 9), of the EIA Report, it is recommended that the drilling should be preferably undertaken during the summer months.
Anon	Anon	Anon	Where do you operate in other countries? Is this your first application in South Africa?	Eni operates in 73 countries and are world leaders in exploration drilling activities. Eni has drilled over 872 offshore wells in more than 20 countries. Of this, 284 wells are deep water or ultra deep water. Eni also have producing assets in neighbouring countries of Mozambique and Angola. Eni has one Exploration Right in South Africa.
Tinshu	John		Should it be determined that the project impacts on fishing, what would the compensation be? What alternative livelihoods would be proposed to those impacted?	This project is for exploration only. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, for 71 days at a time per well. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).  The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report (Annex D4) commissioned as part of the EIA process, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report.  As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities,

				<p>a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the project activities, and the level of loss or 'disturbance' they will experience.</p>
Anon	Anon	Anon	Will the well be monitored after it has been plugged? Is it legislated?	<p>At the end of drilling and testing operations, prior to leaving the drilling location, the well will be plugged and abandoned (P&amp;A). The scope of the well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented.</p> <p>At the end of well construction, a cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required. As standard practice, prior of demobilization from location, a final ROV survey will be conducted on the sea bed and wellhead location. Results of decommissioning operations and surveying will be provided in a report to the Competent Authority.</p>
Anon	Anon	Anon	Suggestion to share the posters with the public (Online maybe)	Posters were placed on the ERM website: <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a> following the open house meetings and have been appended to the EIA Report (Annex B).
Anon	Anon	Anon	Participants were concerned as to how people will know not to fish within the 500m exclusion zone	The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery (Chapter 4 of the EIA Report). Affected stakeholders to be notified of the location, duration and timing of drilling activities through a Notice to mariners and other measures described in Chapter 9 of the EIA Report.
Anon	Anon	Anon	Concerns about tourism in Durban and whether the project will affect it	Block ER236 is located from 20 km offshore and the drilling areas of interest are over 60 km offshore (refer to Chapter 3 of the EIA Report). The project will have a limited impact of tourism activities during routine operations. Refer to Chapter 8 for the assessment of unplanned events on tourism.
Anon	Anon	Anon	Will the oil and gas, upon production be for the South African market	The current EA application is for exploration drilling to determine the presence of hydrocarbons and oil. Should exploration be successful and Eni

				choose to pursue extraction of hydrocarbons and oil, Eni will submit a new EA application for the development phase in accordance with local legislation and current economical development program to reduce dependence on imported hydrocarbons.
Anon	Anon	Anon	Participants were curious as to where the drilling vessels would be sourced from.	During mobilisation, the drillship will arrive directly on location from previous country of intervention (probably from West Africa or East Africa). Support vessels could sail directly in convoy with the drillship to site or from the Richards Bay or Durban mooring area (refer to Chapter 3 of the EIA Report).
Anon	Anon	Anon	Concerns related to the monitoring applied at the well locations once they have been plugged and abandoned.	<p>At the end of drilling and testing operations, prior to leaving the well location, the well will be plugged and abandoned (P&amp;A). The scope of well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented.</p> <p>A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required.</p> <p>The wellhead and seabed will be surveyed by a ROV after the well(s) have been plugged and abandoned (“decommissioning”).</p> <p>As per International Standards and Best Practice, the cement plugs are suitable and tested to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required. Results of decommissioning operations and survey will be provided in a report to the Competent Authority.</p> <p>Further monitoring after decommissioning is not required, considering that the plug and abandon operations are specifically executed with redundancy barriers to guarantee the well is permanently sealed.</p>
Anon	Anon	Anon	Participants were concerned as to whether marine seasons would be considered during the drilling phase	<p>Chapter 7 of the EIA Report assesses the impact of drilling of one well within each area of interest at any time of the year and therefore seasonality has been considered.</p> <p>In the unlikely event of a blow-out, the probability of shoreline oiling is influenced by the season in which drilling is undertaken. In Table 9.8 (Chapter 9), of the EIA Report, it is recommended that the drilling should be preferably undertaken during the summer months.</p>

Anon	Anon	Anon	Concerns related to the time it will take to set up the operation after authorisation is granted.	If EA is granted for drilling activities, there are a number of operational, logistic and emergency response planning activities that are required to take place in accordance with local legislation, international best practises and Eni's internal compliance procedures. Vessels and logistic base availability and preparation for operations will also dictate the timing of activities. Taking all such factors into consideration, activity will likely commence in 2020.
Anon	Anon	Anon	There were a few questions related to where Eni operates in other countries and whether they have lodged any other applications in South Africa besides this one	Eni operates in 73 countries and are world leaders in exploration drilling activities. Eni has drilled over 872 offshore wells in more than 20 countries. Of this, 284 wells are deep water or ultra deep water. Eni also have producing assets in neighbouring countries of Mozambique and Angola. Eni has one Exploration Right in South Africa.
Anon	Anon	Anon	Participants suggested that the posters are shared with the public.	Posters were placed on the ERM website: <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a> after the open house meetings had been completed. They are also provided in Annex B of the EIA Report.
Anon	Anon	Anon	Clarification on the location, timing, and numbers of wells to be drilled and whether Eni would be authorized to drill anywhere inside Block ER 236.	The proposed drilling operations are proposed in two areas of interest within Block ER 236. The Northern area of interest is approximately 62 km off the coast of Richards bay and the Southern area of interest is approximately 65 km off the coast of Port Shepstone. One well is proposed to be drilled on either the Northern or Southern area of interest, it has not yet been established. The Environmental Application being pursued is to authorise drilling up to 6 wells anywhere within the proposed area of interest in Block ER 236 (Refer to Chapter 3 of the EIA Report).
Anon	Anon	Anon	Questions related to how they will transport and store oil and gas in the production phase	The current project being applied for is for the exploration drilling activities on Block ER 236. Logistical plans related to the production phase have not been confirmed at this stage as Eni is first assessing if there are viable deposits for oil and gas.
Anon	Anon	Anon	Concerns of the impact of an oil spill on the marine environment and MPAs	The impact of an oil spill from a vessel collision; blowout at the wellhead and riser disconnect on the marine environment are assessed in Chapter 8 of the EIA Report
Anon	Anon	Anon	Need to make posters more understandable to the general public. Moonpool?	A glossary of terms has been added to Annex G of the EIA Report The posters have also been appended to the EIA Report (Annex B).
Anon	Anon	Anon	Currents changing - Base on recent data and also consider what could happen in future based on climate change	The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors.
Anon	Anon	Anon	How long does intense drilling last?	Drilling activities last for up to 71 days for the establishment of the well.
Anon	Anon	Anon	Noise impacts to marine ecology? How far out do the sound waves get?	The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft & Li, 2017). The main source of noise is from the thrusters, which are mandatory to guarantee

				<p>rig positioning and stability.</p> <p>The sound speed along the water column, changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off the warm layers. In this case, being the source of this noise on the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. Further details on impacts associated with noise as a result of drilling can be found in Chapter 7 of the EIA Report.</p>
Anon	Anon	Anon	NADF - Impact associated with	<p>If Eni utilize NADF fluids for drilling, lab tests will be conducted to verify oil contamination. The NADF retained on the drill cuttings will be discharged overboard with 5% NADF retained on wet cuttings, which is Eni Best Practice and to a better standard than the requirements as defined by IFC (2015).</p> <p>Although the variations in current direction between the well locations and between the minimum and maximum average monthly current condition scenarios modelled result in different directional spread of the particles, the overall footprint deposition &gt; 1 mm covers a maximum total predicted area that extends approximately 7 km<sup>2</sup> around the well site.</p> <p>It is important to note that Eni will utilize a drier system installed together with a high efficiency solids control equipment system to minimise the amount of residual fluid on drilled cuttings. Further details on impacts associated with NADF discharges from drilling can be found in Chapter 7 of the EIA Report.</p>
Anon	Anon	Anon	Margate town having a meeting? Where is the oil/gas going once found? How will it get there?	<p>The open house meetings held were in the Eastern Cape (Port Elizabeth and East London), Richards Bay, Durban and Port Shepstone (Annex B).</p> <p>Should the exploration activities be successful, South Africa would benefit from new sources of energy.</p> <p>It should be noted that since the project being applied for is solely related to exploration activities, logistical plans concerning the production phase have not been confirmed at this stage.</p>
Anon	Anon	Anon	Deepwater drilling concern - Where else has Eni drilled in the rough water	<p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater.</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign.</p> <p>The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p>



				<p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place.</p> <p>The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guaranteed by redundancy stability and positioning control equipment, including thrusters and GPS sensors.</p> <p>The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this, the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution.</p>
Anon	Anon	Anon	How many people are being employed	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. The employment opportunities associated with the onshore logistics base will be limited, and filled by existing companies. There will also be very minor, benefits associated with the procurement of goods and services for the exploration drilling activities. Please note that this is the outlook for the exploration phase. Should viable deposits of Oil or Gas be discovered and Eni choose to extract, this process will be subject to another EIA Report. The economic benefits would be assessed at that stage for subsea production development.</p>
Anon	Anon	Anon	Will there be helicopters transporting	<p>Transportation of personnel to and from the drillship will most likely be provided by helicopter operations from Richards Bay or Durban, depending on where the logistics base will be.</p>
Anon	Anon	Anon	Concerns about the marine ecology? Disturbance to the ocean life? Terrestrial ecologies that may also be affected by activities and spills (Seismic drilling and spills)?	<p>Impacts as a result both planned and unplanned activities on marine ecology can be found Chapter 7 and 8 of the EIA Report.</p>
Anon	Anon	Anon	Glossary of terms - Uploading of the Non technical summary - Translated documents into isiZulu and isiXhosa	<p>Refer to Annex G of the EIA Report for Glossary of Terms. The English, isiZulu and isiXhosa non-technical summaries are available on the project website <a href="https://www.erm.com/en/public-information-sites/eni-south-africa-offshore-exploration-eia/">https://www.erm.com/en/public-information-sites/eni-south-africa-offshore-exploration-eia/</a></p>
Mirielle	Picard	Beudigo conservancy	I am giving you an outsiders point of view but I have been involved in the protection of the environment for decades and I am very puzzled by a few issues: As far as I know there have been very few if any campaigns to save energy reduce attempts for our rubbish on a national scale, and recycle it effectively - thus creating lots of jobs and building materials etc. I haven't heard much about using the types possibilities fuelled by	<p>Your concern has been noted. The influence of waves and currents has been described in the environmental baseline Chapter 4,3,2 Marine Environment (Abiotic components) of the EIA Report.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and</p>

			biomass especially when using sugar cane by products. In Reunion Island where I live they actually produce electricity with them! Thirdly solar energy has been replaced for so long and could be developed rapidly and on a national scale. Taking all this into account I am not sure we need drilling for gas and oil in the ocean. Why not use first all the possibilities in these possibilities. And what about wave turbulence?	protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.
Jean	Van Zyl	Premier Hotels	Great opportunity for economic growth	Noted
Andre	Smuts	Openserve / Telkom SA	Openserve has an existing submarine cables off Mtunzini Easy and safe. Please could you provide KML files for proposed drilling areas. Concerns: risks associated with: ship anchoring, drilling impact and its effect.	The shape files were provided for Block ER236 and the areas of interest and openserve provided the shapefiles for the subsea cable routes.
Njabulo	Gumede	Trio Trading Services (Pty) Ltd	My concerns as a black youth individual and citizen of South Africa (North Coast) is that we are not given enough time to prepare ourselves for the project for the reasons given below: 1. As black youth we don't have the financial power to participate in the project since we cant even buy support vessels/ supply boat for the project and nowhere in the report where SASOL and Eni is providing strategies to support blacks in the project. 2. The requirement for tenders to be awarded excludes black automatically. 3. Eni/SASOL project is not preparing black business owners to participate or align themselves to be apart of the project. 4. The project is requiring the exploration licences (environment) without a plan on boosting black business to be measure role players in the drilling project.	ERM notes that this question is largely outside the scope of the EIA stakeholder engagement process, which is focused on the environmental impact of the proposed activities. Notwithstanding this:  The government of South Africa has issued Eni with an Exploration Licence to exclusively explore in Block ER236 in accordance with the work programme and budget agreed and approved by the Competent Authority. Eni operates under the procedural framework set out in the Exploration Right contract. The proposed project will occur over a limited time frame, therefore, the socio-economic benefits for the locals such as procurement of goods and services for the exploration drilling activities will be minor and temporary.  Should viable deposits of Oil or Gas be discovered and Eni choose to extract, this process will be subject to another EIA Report. The economic benefits would be assessed at that stage for subsea production development.
Helen	Dodge	Private	The meeting has been a waste of time and has provided no room for dialogue.	Noted. Please note that the open house meetings were intended to create a platform for Interested & Affected Parties to ask questions and raise concerns regarding the project. Posters were placed around the room with the Independent EAP team as well as the client team available to answer questions that stakeholders may have. Refer to Annex B for record of meetings.
Helen	Dodge	Private	I strongly oppose any type or extent of offshore drilling, for whatever purposes, as I do not see any potential benefit of conducting oil and gas mining off our coastline.	Please refer to Chapter 3 of the EIA Report for a description of the motivation behind the proposed project.
Helen	Dodge	Private	I believe the environmental damage caused by offshore mining outweighs the convenience of oil & gas.	Please refer to Chapter 7 and 8 of the EIA Report for more details regarding the impacts and risks associated with the project.
Helen	Dodge	Private	Please invest in sustainable energy and ensure ocean for your grandkids.	Noted
Meg	Joshua	Private	I was unaware of the public meeting in January and when I came to this meeting I was told it was too late for a public	Noted. Please note that the open house meetings were intended to create a platform for Interested & Affected Parties to ask questions and raise

			meeting! I expected experts to address us and take questions; the little one-on-one Q &A's are useless. So much has been left out and no one to ask questions to or to share information.	concerns regarding the project. Posters were placed around the room with the Independent EAP team as well as the client team available to answer questions that stakeholders may have. Refer to Annex B for record of meetings.
Heidi	Cox	Private	I have concerns regarding the safety and effects on marine and terrestrial life and ecosystems if this were able to go ahead in any shape or form. There are other alternatives, use them.	Please refer to Chapter 7 of the EIA Report for information regarding impacts associated with the proposed project.
Geoff	Pulan	Ethekwini Ward Councillor	Am the ward councillor for ward around the airport with beaches Umdloti, La Mercy, Casuarina, and Westbrook beach - blue flag beach. Thanks	Noted
Vusani	Zweni	UBH	1. Translation is very poor in documents. 2. Planning of the meeting is very poor. 3. Relevant officials are not present in all presentation. 4. All stakeholders must be present.	Please note that the isiZulu documents were translated by an accredited isiZulu translating service from the original English version to enable information access to all stakeholders. In case of discrepancy in the translated versions, the original English version should take precedence.  Relevant and mandatory governmental authorities are included in the list of interested and affected parties; as other stakeholders they receive details about the meeting proceeding (Annex B). According to the NEMA EIA framework, for all stakeholders is in their own right to decide to attend or not to public or open house meetings."
Sizwe	Shiba	Mayine	The meeting must be opened in people spaces (accessible places not in town or hotels). All information must be accessible in different languages. All interested departments must be available on next public meetings. The history and disasters of the project from other places must be shared to the people. There must be a clear understanding of safety and environmental protection. We don't want this project to continue	Please note that the isiZulu documents were translated by an accredited isiZulu translating service from the original English version to enable information access to all stakeholders. In case of discrepancy in the translated versions, the original English version should take precedence.  Relevant and mandatory governmental authorities are included in the list of interested and affected parties; as other stakeholders, they receive details about the meeting proceeding (Annex B). According to the NEMA EIA framework, for all stakeholders is in their own right to decide to attend or not to public or open house meetings."
Jean	van Zyl	Employee	Great opportunity for economic growth	Noted
David	Pearton	SAAMBR	Request for data: oil spill number and how flow rate data based on. IRT - peer reviewers comments on scenarios. Dates on which DHA models are based on + underlying ,model	Refer to Annex D4 and Annex D7 of the EIA Report and Annex B for responses to your formally submitted comments
Anon	Anon	Anon	No of political 'illegible' in SA. No of 'illegible' 'illegible' to exploration KZN include Wild Coast. Risk for people disagree to exploration occurring	Your objection is acknowledged. As part of the EIA Report, the effects that drilling activities may have on the marine environment have been considered through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services (Annex D1). The potential impact on the marine environment is presented in Chapter 7 of the EIA Report.
Mel	Fiford	Pennington Conservancy	Impacts of drilling? Oil Spill? Will concrete be removed once well is closed? Agullas current? substances will very quickly spread because of it	Impacts of drilling and risks of oil spills on the marine environment have been covered in Chapters 7 and 8 of the EIA Report.  Once drilling is completed, the well will be plugged and abandoned. This is to

David	Pearton	South African Associated Marine Biological Research	Request for data: On physical oil spill numbers and data that how rates are based on. IRT - The peer reviewers comments on scenarios. Request for dates on which DHA models are based on and underlying model	protect the environment by effectively sealing off all distinct permeable zones. The cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required. Refer to Annex D4 and Annex D7 of the EIA Report and Annex B for responses to your formally submitted comments
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Technical Comments				
Name	Surname	Organisation	Comment	Response
Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	<p><u>COMMENTS on ERM - Exploration Drilling within Offshore Block ER236</u></p> <p>1. Need and Desirability Motivation fails to highlight negative aspects of anticipated oil and/or gas exploration "success". It is noted that in the Policy Framework section of the Need and Desirability motivation contained in the Draft Scoping Report, it is stated that the discovery of a commercially viable oil and/or gas reserve offshore South Africa would assist in meeting the objectives included in the Integrated Energy Plan (IEP, 2016):</p> <p>"The development of a National Integrated Energy Plan (IEP) was envisaged in the White Paper on the Energy Policy of the Republic of South Africa of 1998 and, in terms of the National Energy Act, 2008 (Act No. 34 of 2008), the Minister of Energy is mandated to develop and, on an annual basis, review and publish the IEP in the Government Gazette. The purpose of the IEP is to provide a roadmap of the future energy landscape for South Africa which guides future energy infrastructure investments and policy development. (DoE, 2016). Key objectives of the IEP (2016) include the following:</p> <ul style="list-style-type: none"> <li>• Security of supply;</li> <li>• Minimising the cost of energy; and</li> <li>• Diversification of supply sources and primary sources of energy.</li> </ul> <p>The discovery of a commercially viable reserve of oil and/or gas offshore South Africa would assist in meeting the above objectives."</p> <p>It is pointed out that section 6 of the National Energy Act, 2008</p>	<p>This comment is acknowledged and the needs and desirability section of the EIA Report has been updated (Chapter 3). However, regardless of the status of Section 6 of the National Energy Act, the Integrated Energy Plan (IEP) was published by the South African government indicating the government's intentions with regards to energy in South Africa.</p>

			(NEA) is the relevant section dealing with integrated energy planning, and is also the enabling provision for the development of an IEP. Importantly, section 6 of the NEA has not yet commenced (the date of commencement is to be proclaimed). The legal status of the IEP2 is thus unclear. This has not been pointed out in the Draft Scoping Report (Appendix 2 to the Environmental Impact Assessment Regulations, 2014 stipulates that one of the objectives of scoping process is to identify the relevant policies and legislation relevant to the activity).	
Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	Notwithstanding this, it is relevant to note that the IEP also contains other key objectives that are not referred to in the Draft Scoping Report, including: Objective 4: Minimise negative environmental impacts from the energy sector.  The Need and Desirability portion of the Draft Scoping Report seems to focus almost exclusively on the potentially beneficial aspects of the anticipated 'exploration success', and fails to adequately describe potentially negative aspects. For example, the Draft Scoping Report does not adequately make provision for the assessment of the climate change implications of tapping into new hydrocarbon resources. A balanced assessment of both the positive and negative aspects of the proposed activity is required in order for the EIA phase to adequately assess Need and Desirability.	The need and desirability description has been updated in Chapter 3 of the EIA Report. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.
Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	2. Assessment of socio-economic impacts of a worst-case scenario spill The proposed "Exploration Drilling within Offshore Block ER236" project will take place in deep water, according to the following description on page 1 of the Scoping Report: "ENI is considering drilling up to six deep water wells within Block ER236, four wells within a northern 1,840 km2 area of interest, in water depths ranging between 1,500 m and 2,100 m and two wells within a southern 2905 km2 area of interest (Figure 1.1), in water depth ranging between 2,600 m and 3,000 m."  According to Dr. Chernaik, <sup>3</sup> this puts the project on par with one of the worst environmental catastrophes of the new century: the Deepwater Horizon oil spill of 2010. Dr. Chernaik points out that details of the short and long-term effects of the Deepwater Horizon spill can be found on the U.S. National Oceanic and Atmospheric Administration's (NOAA) website: <a href="https://response.restoration.noaa.gov/oil-and-chemical-">https://response.restoration.noaa.gov/oil-and-chemical-</a>	An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.  The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.

			<p>spills/significant- incidents/Deepwater-horizon-oil-spill.</p> <p>For example, the NOAA reports on its website that on 4 April 2016:</p> <p>“the court approved a settlement with BP for natural resource injuries stemming from the Deepwater Horizon oil spill. This settlement concludes the largest natural resource damage assessment ever undertaken. We will now begin implementing restoration as laid out in the Trustees' comprehensive restoration plan. Under this settlement, BP will pay the Trustees up to \$8.8 billion for restoration to address natural resources injuries and lost recreational uses”.</p>	
Sherelee	Odayar	<p>South Durban Community Environmental Alliance (SDCEA);</p> <p>and</p> <p>Adrian Pole Attorneys</p>	<p>Dr. Chernaik notes that the draft ENI Scoping Report seems to require assessment of a worst-case spill (as it should):</p> <ul style="list-style-type: none"> <li>• Physical and chemical environmental impacts on surface waters from potential hydrocarbon spills will be assessed using a comprehensive modelling approach. In the comprehensive modelling approach, a single model, GEMSS® (Generalized Environmental Modelling System for Surface waters), is used to determine the fate and transport of unplanned hypothetical oil spills.</li> </ul> <p>The following scenarios will be assessed:</p> <ul style="list-style-type: none"> <li>• Scenario 1 - diesel spill associated with vessel collision happening either during drilling of wells;</li> <li>• Scenario 2 - release of NADF due to the accidental disconnection of the riser occurring</li> <li>• Scenario 3 – blowout of crude oil at the wellhead on the seabed.</li> <li>• For each scenario, the “worst cases” will be determined using three different criteria: the conditions that result in the shortest time for oil to contact a shoreline, the case with the most amount of shoreline oiling, and the conditions in which the most amount oil spreads across the water surface.</li> <li>• Impacts will be assessed in terms of the probability of the presence of a visible hydrocarbon slick on the surface, probability of oil contacting shorelines, and dissolved aromatic concentrations in the water column. For the riser disconnect scenario, impacts will also include an evaluation of the suspended solids concentration and untreated NADF contamination on the sea floor using the GIFT module.</li> <li>• Results of the modelling will be provided as a stand-alone report, included as an annex to the main EIA Report.4</li> </ul>	The oil spill modelling report addresses these points and is included in Annex D4.

Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	<p>However, while the Draft Scoping Report makes reference to an assessment of worst-case scenario impacts “in terms of probability”, no mention is made of assessing the nature, significance, consequence, extent and duration of socio-economic impacts that would arise in the event of a worst-case spill scenario materializing, including the degree to which such impacts can be reversed and may cause irreplaceable loss of resources (e.g. clean-up costs; the extent to which the environment could be restored following significant ecological damage; impacts on natural resources such as fishing; impacts on tourism; impacts on recreational users of natural resources etc.)</p> <p>It is submitted that the Draft Scoping Report should make provision for a detailed assessment in the Draft Environmental Impact Report (DEIR) of the nature, significance, consequence, extent and duration of socio-economic impacts that would arise in the event of a worst-case spill scenario materializing.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	<p>3. Failure to require redundancy (e.g. an acoustic control system) for activating the blowout preventer in case of a spill According to Dr. Chernaik, one of the defects identified in the Deepwater Horizon EIA was a failure to require redundancy (e.g. an acoustic control system) for activating the blowout preventer in case of a spill. Dr. Chernaik comments that with respect to the Draft Scoping Report for the Exploration Drilling within Offshore Block ER236, it seems that this defect may be repeated. With respect to blowout prevention, the Draft Scoping Report for the Exploration Drilling within Offshore Block ER236:</p> <p>Secondary well control is provided by the installation of mechanical device, such as the float collar in the drilling string and the blowout preventer (BOP) at seabed, installed on top of the wellhead after the running and setting of the surface casing. The BOP effectively closes and seals the annulus if there is a sudden influx of formation fluids into the well bore, by the use of a series of hydraulically/electrically actuated rams. In addition, this device allows the formation fluids to be safely vented or pumped at the surface with the well closed, thereby enabling other methods to be applied to restore a sufficient hydrostatic head of mud on the well bore, for example pumping a higher density volume of mud, the so called 'kill mud'. The capacity and pressure rating of</p>	<p>The blow out preventer (BOP) equipment can be used in the case of loss of control during well operations. BOP's used by Eni are built using stringent specific manufacturing, functioning and testing protocols defined by ISO/API procedures. The BOP's activation and closure time are consistent with API/ISO standards. The function testing and pressure testing are mandatory and regularly performed as per ISO/API standards in order to guarantee the functioning, efficiency and integrity of this important emergency system. The redundancy activation systems (e.g. acoustic) must be periodically tested as per API/ISO. Please note that on board the rig there are at least three different and redundant activation and control systems/panels located in three different areas, specifically: driller's panel, koomey/well control manifold, and tool pusher panel. This is necessary to activate the system in the case of unpredicted malfunctioning or inoperability of one specific panel.</p>



			<p>equipment, safety device and the BOP rating exceed the predicted reservoir pressures.<sup>6</sup></p> <p>Dr. Chernaik advises further that the existence of a blowout preventer at seabed, while essential, does no good if an explosion or other catastrophic event prevent the ability to activate (switch on) the BOP: the fundamental reason why the Deepwater Horizon oil spill lasted so long and was such a catastrophe.</p> <p>It is submitted that the Draft Scoping Report for the Exploration Drilling within Offshore Block ER236 should require a robust discussion in the DEIR for the project of redundancies that would be employed by the project to activate the BOP under each and every accident scenario.</p>	
Sherelee	Odayar	<p>South Durban Community Environmental Alliance (SDCEA);</p> <p>and</p> <p>Adrian Pole Attorneys</p>	<p>4.Oil Spill Response Plan</p> <p>Dr Chernaik notes that the Draft Scoping Report alludes to the possibility of there being an Oil Spill Response Plan forming part of the DEIR for the project: "ENI will develop and implement an Oil and Chemical Spill Response Plan in the event of an accidental release of oil offshore."<sup>7</sup></p> <p>Dr. Chernaik advises that it must be ensured that an Oil Spill Response Plan is indeed part of the DEIR for the project.</p> <p>Dr. Chernaik goes on to state that the Oil Spill Response Plan also needs to conform to guidelines about what information needs to be in the plan. An example of such guidelines is the Guidelines for Offshore Oil Spill Response Plans - Guidance for Offshore Oil and Gas Exploration, Production and Pipeline Facility Operators (API TECHNICAL REPORT 1145, SEPTEMBER 2013), available online at: <a href="http://www.oilspillprevention.org/~media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/1145-e1-final.pdf">http://www.oilspillprevention.org/~media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/1145-e1-final.pdf</a>.</p> <p>In Dr. Chernaik's view, one of the most important elements of a good Oil Spill Response Plan is the identification of available resources for responding to a major spill. If an Oil Spill Response Plan correctly describes what to do in case of a major spill, but the required equipment or trained personnel are not available to rapidly implement the plan, then correctly describing what to do is of no use. This is why guidelines for Oil Spill Response Plans require such plans to identify response resources, such as section 4.2 of the guidelines cited above, which provides as follows:</p> <p>4.2 Resource Inventories and Mobilization Times</p>	<p>Oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills were undertaken as part of the EIA Report. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included within the plan.</p> <p>The OSCP must be submitted to the relevant South African Authority (PASA and SAMSA) for approval before the start of any drilling operation, so not only international but also local requirements will be taken into consideration. The Department of Environmental Affairs (DEA) and the Department of Transport (DoT) through the South African Maritime Safety Authority (SAMSA) are two key role players with regards to vessel-source marine pollution, and particularly oil pollution.</p> <p>Eni's approach is to join international consortiums for main equipment and to develop in-house technologies to improve the intervention capability. Eni is a member of Oil Spill Response Limited (OSRL) who will be contracted to provide oil spill emergency response equipment. OSRL's Saldanha Bay base houses an integrated subsea well intervention system which includes a capping stacks suitable for international use and two hardware kits for debris clearance, BOP intervention and the subsea application of dispersant at a wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which could be mobilised in the case</p>

			Identify the primary Oil Spill Removal Organizations that are under contract or can provide key response resources (boom, skimmers, barges, dispersants and application platforms, etc.) and how they will likely be utilized in a response. For example, due to varying capabilities between Oil Spill Removal Organizations, some may be more suited or pre-designated for offshore containment and recovery whereas others may only provide shoreline clean-up services. If company owned equipment will be utilized, it should be identified in this section as well.	<p>of an emergency. Additional equipment can be brought in as needed.</p> <p>Chapter 9 of the EIA Report includes details on the required contents of the OSCP and information regarding South African response capacity, however the plan itself will be developed once the details, as outlined above, are known.</p>
		South Durban Community Environmental Alliance (SDCEA);  and  Adrian Pole Attorneys	<p>Resource inventory lists of the major response equipment and personnel should be included for the company and primary Oil Spill Removal Organizations. The lists should include at least those resources that could be mobilized to the site(s) in the first 24 hours to make the Oil Spill Response Plan as stand-alone as possible for the initial response phase. Alternatively, Oil Spill Removal Organizations websites or those that maintain compilations of resource inventories such as the Response Resource Inventory can be referenced for that information."</p> <p>Dr. Chernaik goes on to point out that the question of response resources available to be mobilized in the first 24 hours of a spill may be very critical in the context of South Africa given its relative lack of experience in offshore oil and gas projects, and advises that if South Africa lacks local equipment or trained personnel to respond rapidly (within 24 hours) to a major spill from an offshore oil and gas facility, then this is an issue the DEIR for the Exploration Drilling within Block ER236, off the East Coast of South Africa needs to explore.</p> <p>In light of the above, it is submitted that the Draft Scoping Report should require the DEIR includes a description of the available resources to respond to a major oil spill.</p>	
	Mc Donnell	Democratic Alliance KZN	<p>Please advise the extent of this block – seems you have consulted from Richards Bay to Port Elizabeth. Does it extend to the iSimangaliso Park, a world Heritage site?</p> <p>Also how far into the ocean?</p>	<p>The Block is located offshore and extends from off the coast of Port Shepstone to just south of the border with Mozambique, and is depicted in Figure 3.1 of the EIA Report. However, the drilling areas of interest (the areas where drilling will take place) are located 62 km off the coast of Richards Bay and 65 km off the coast of Port Shepstone. These areas of interest so not overlap with iSimangaliso Wetland Park. We understand the sensitivities associated with the iSimangaliso Wetland Park, and while we have not had meetings in St Lucia, and representatives from the Park are on our stakeholder database and are aware of the project.</p>

Paddy	Norman	WESSA, Southern KZN Branch	<p>Thank you for this information. I have made time to briefly look through the stakeholder database to ensure you captured my comments at the public meeting at Port Shepstone, which I attended with Mr John Irven. I could not find my details there. Obviously I am on the database somewhere since you contacted me regarding the release of the draft EIA. Nor do I see Mr Irven mentioned in the list of stakeholders. Furthermore Dr Olbers appears at least twice, but in one section is listed incorrect details.</p> <p>At the meeting at Port Shepstone which I attended I raised a number of issues. These do not seem to have been captured. Possibly I was looking in the wrong appendix; if so please confirm where my input has been addressed. And if not, please revise your report to include my submissions, and ensure that due process has been followed by circulating the corrected version.</p> <p>I have summarised the questions and comments which I submitted at that meeting, (and amplified them where it appears necessary for clarity) as follows:</p> <ul style="list-style-type: none"> <li>• I asked a question regarding whether PASA are credible as adjudicators, given that their mandate is to promote the oil and gas industry. I would also request the credentials of the individuals within PASA who are delegated to issue an authorisation. Do they have suitable qualifications to understand the details of a highly specialised environmental context?</li> <li>• It was also asked if there would be a follow-up meeting, given that the Port Shepstone meeting was not advertised in the local press. It was agreed that there would be a meeting to review the Draft EIA Report, and that it would be better advertised. However I see you are now proposing only to have an “open evening”.</li> <li>• It was stated that ENI view gas as preferable to oil for environmental reasons, and that the use of fossil fuels is currently a “transition phase” necessary to ensure power delivery until green energy has been rolled out. I therefore asked the question “how long is this transition phase expected/required to be, and do we already have sufficient reserves to meet the demand?” Or is the transition phase</li> </ul>	<p>ERM has confirmed your names, Paddy Norman and John Irven are on the stakeholder database provided as part of the EIA Report, they can be found on page 18 and 35 of 40 in Annex B1 – Stakeholder Database. With regard to your comments, they were captured in the meeting notes for the Port Shepstone meeting, and included in Annex C of the final Scoping Report submitted to PASA. Since the Scoping Report was approved, we have not included this Annex as part of the EIA Report as it is documented in the Scoping Report. We hope that this provides a level of comfort that your issues have been captured and you are recorded as an I&amp;AP.</p>
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			being extended purely for the benefit of the fossil fuel industry?	
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>It was made clear that the application envisions drilling three boreholes to test three specific targets, identified in the previous seismic surveys. If any or all of these primary holes finds significant hydrocarbons then a second hole will be drilled in the same vicinity to permit more detailed evaluation. There is no plan to drill deflections away from the primary boreholes in order to sample several separate localities. This commitment must be captured.</li> </ul>	The distance between reservoir targets doesn't allow the drilling of a single horizontal explorative well to reach all targets in the different areas of interest. As international best practise, the first explorative well will determine presence or not of hydrocarbon, the subsequent appraisal will determine the extension of the reservoir. If the first explorative well is successful, Eni would then make a decision whether or not to drill appraisal wells or another explorative well in the alternative area of interest.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I would also like to ask if a drilling program has ever been undertaken in similar conditions – of weather, depth, and sea-bed morphology; Is the risk quantifiable?</li> </ul>	<p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater.</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place.</p> <p>The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guaranteed by redundancy stability and positioning control equipment, including thrusters and GPS sensors.</p> <p>The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution.</p>
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I requested that the timing of drilling should take into account migration periods for all migratory species (this needs to include various fish species, cetaceans, turtles, sea birds, etc.)</li> </ul>	Seasonality with respect to key annual migratory species events has been described in Chapter 4 and included in the impact assessment in Chapter 7 and 8 of the EIA Report. Based on the assessment, it was found that the migratory corridor identified on the east coast of South Africa, in addition to key species events, such as the sardine run, are located inshore, on the continental shelf, extending to the continental slope for migratory baleen whales. The areas of drilling interest are located further offshore, beyond the continental slope. Given that the activities proposed are for exploratory drilling (of which sound impacts

				<p>are not comparable to seismic activities), it was ascertained that timing restrictions related to migratory species were not required given the offshore location of the drilling areas of interest. Table 9.8 of the EMP Commitments Register states the following as a Mitigation /Management and Enhancement Commitments to reduce light and noise impacts on marine fauna from exploration drilling activities:</p> <ul style="list-style-type: none"> <li>• Adopt use of lights compatible with safe operations whenever and, wherever possible, reduction of the intensity and emissions to the surrounding environment.</li> <li>• Keep disorientated, but otherwise unharmed, seabirds in dark containers for subsequent release during daylight hours. Injured birds should be returned to shore where feasible to allow for treatment. Ringed/banded birds should be reported to the appropriate ringing/banding scheme (details are provided on the ring)</li> <li>• The National Environmental Management: Protected Areas Act (2003) stipulate that the minimum over-flight height over nature reserves, national parks and world heritage sites is 762 m (2,500 ft)</li> <li>• The Marine Living Resources Act (1998) prohibits aircraft to approach within 300 m of a whale. Therefore, except for when the aircraft lands on or takes off from the drillship and logistics base, the flight altitude would be &gt;300 m.</li> <li>• The operation of helicopters and fixed-wing aircraft is governed by the Civil Aviation Act (No. 13 of 2009) and associated regulations</li> <li>• Pre-plan flight paths to ensure that no flying occurs over IBAs;</li> <li>• Avoid extensive low-altitude coastal flights (&lt;914 m and within 2 km of the shore).</li> <li>• Maintain an altitude of at least 914 m within Marine Protected Areas;</li> <li>• Comply fully with aviation and authority guidelines and rules; and</li> <li>• Brief all pilots on the ecological risks associated with flying at a low level along the coast or above marine mammals. It should also be noted that the seasonal timing is an environmental one, based on the avoidance of the main migration and due to the outcomes of the Oil Spill Modelling report.</li> <li>• Vessels shall undergo a regular maintenance regime to reduce noise.</li> <li>• If VSP is required, apply JNCC Guidelines for minimising the risk of injury to marine mammals</li> </ul>
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• I requested that the data on which this application is based, including the seismic data, be made available in the EIA Report. My argument is based on the constitutional requirement for “informed” public participation. ENI indicated that they could not comply because their access to that data was subject to a confidentiality agreement with the seismic</li> </ul>	<p>The acquisition of seismic data licenced through multiclient agreements and its interpretation are of a competitive and commercially sensitive nature, not only between operators but also on a regional and global scale between territories. The interpreted data is the intellectual property of Eni and allows Eni to identify potential leads and prospects. Based on the interpreted results, drilling areas of interest have been identified and</p>

			survey company(s) (intellectual property rights / or company equivalent). However, they did indicate that PASA also had access to that data, and it is my understanding that data held by a government entity cannot be withheld from the public where that knowledge is required to protect a constitutional right. But I am not looking for raw data (which would be meaningless except to a specialist) – only the interpreted data.	have been made available to the public for informed decision making with regards to location in the local and regional context. The provision of interpreted seismic data is beyond the scope of the EIA process. The EIA framework provides the platform for informed public participation, related to the proposed activities and the identification of associated biophysical and socio economic impacts, with mitigation measures provided in the Environmental Management Programme (EMPr), in addition to Eni's internal compliance and control measures.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I requested that all specialist studies be peer-reviewed by a consultant recognised as independent by his/her peers.</li> </ul>	All the specialist studies were conducted by independent consultants (refer to Chapter 1 of EIA Report) who have suitable qualifications and experience to conduct this work. ERM reviewed all these specialist studies. The oil spill modelling report was also independently peer reviewed by PRDW. As documented in Annex D6 of the Draft EIA Report, comments provided by PRDW were included in the Oil Spill Report. The Oil Spill Report (Annex D4) was updated to include Annex D6 in the report, in order to make it easier for stakeholders to see that these had been addressed.
Paddy	Norman	WESSA, Southern KZN Branch	I requested that the Terms of Reference for all specialist studies be include in the EIA Report, so that we could ensure that the results were not pre-ordained. They will also need to evaluate the quality and quantity of the data on which these studies are based	The Terms of Reference for the specialist studies were included in the plan of study in the Final Scoping Report. The Terms of Reference have also been included in the specialist study reports attached in Annex D to the EIA Report.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I requested that the EIA Report includes a list of the drilling chemicals which may be utilised, on the presumption that only these will be authorised. Most of them are probably not contentious, such as montmorillonite and glauconitic (natural clay minerals used to assist removal of chippings). However, there may also be more complex compounds similar to those used in fracking; This information must be made available to for the public to properly understand the potential risks.</li> </ul>	The list of chemicals that will most likely be utilized by the drilling contractor to make the drilling muds is included in Chapter 3 of the EIA Report.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I also endorsed the questions that were asked about the ability of the drilling ship to handle extreme conditions, such as "freak waves" which occur on our coast remarkably frequently. ENI insist that there drilling ship can handle just about anything. However, that may not be comprehensively valid. A freak wave would lift the ship significantly, and this might put excessive strain on the drill string. More importantly, will the possible follow up work be equally robust. There is no justification for prospecting if consequent production activities are subject to unmanageable risk.</li> </ul>	The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guaranteed by redundancy stability and positioning control equipment, including thrusters, GPS sensors, wind sensors, motion sensors and acoustic transponders system. In extreme weather conditions the drillship would make the well safe and then disconnect and move to a place of shelter until conditions improve. Drilling would recommence after it is determined to be safe to do so
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I expressed my concern about the reliability of blow-out-preventers. The use of a BOPs is standard, however these have a history of failing (ever heard of Red Adair?). Whilst it</li> </ul>	After the riserless phases, the BOP installation is mandatory. BOP stacks are used to control the pressure of a well through mechanical devices designed to rapidly seal the well (or "shut in") in an emergency.

			<p>may be true that they are constantly being improved as bad experiences lead us up the learning curve, we do not want to be one of the educational highlights.</p>	<p>BOP has a piece of equipment with blind rams, which allows also to close the well without drillpipes or casing inside the BOP ("empty" BOP). The BOP is configured with redundancy rams, so in case of the failure of the first set, a secondary set of rams are used. The shear rams allow to cut the pipe present inside BOP and close the well, in order to allow, if necessary, the safe evacuation of the drilling ship.</p> <p>To reduce risk of failure, Eni adopts a BOP with redundancy activation point both at surface (panels located in different position of the rig) and from remote (acoustic activation system, ROV).</p> <p>Subsea BOP's have a lot of redundancy and are always checked with planned testing to guarantee functionality and integrity.</p>
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• It also follows that after the drilling the site must be guaranteed safe. Eni stated that the boreholes will be steel cased throughout, and sealed with cement. They will use an RUV to inspect the seal on the borehole. I requested that they include annual inspections ad infinitum – with repairs when necessary. Use of an RUV might be unnecessary if some form of remote monitoring is possible. We also need to be sure that the entire length of the borehole is sealed – so that potential contaminants (which may be under high pressure) cannot migrate through the strata and escape to surface or cause contamination. This is not quite as simple as it sounds, since different materials (concrete outside, the plug inside, the steel casing) have different coefficients of expansion, and are subject to tidal forces within the earth's crust, which tends to crack cement seals in vertical structures. And steel eventually rusts, where conditions permit it</li> </ul>	<p>At the end of drilling and testing operations, prior to leave location, the well will be plugged and abandoned (P&amp;A). The scope of well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented.</p> <p>A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required.</p> <p>The wellhead and seabed will be surveyed by a ROV after well(s) plug and abandonment ("decommissioning").</p> <p>Further monitoring of the wellhead after decommissioning is not required, considering that the plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well.</p>
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• It also needs to be pointed out that the continental shelf off KZN is unusually narrow and steep. The southern drill site is below a significant scarp. There may be a potential to trigger an underwater landslide, which could have disastrous consequences, not only on the natural environment, but also by generating a tsunami very close to our beaches. Although I doubt if anyone could quantify this risk, the potential damage and loss of life needs to be considered, not to mention the multi-national and financial implications.</li> </ul>	<p>Well locations are always planned far from seabed instability zones and in particular far from scarps. No drilling operations will be executed in proximity of Canyons. In any case a pre-drilling ROV survey is performed before well is spudded to confirm the goodness of the location chosen.</p> <p>Drilling operations are performed at sea bed with no risk of landslide and tsunami.</p> <p>Well locations are always planned far from seabed instability zones and in particular far from scarps. No drilling operations will be executed in proximity of Canyons. In any case a pre-drilling ROV survey is performed before well is spudded to confirm the goodness of the location chosen.</p>



				Drilling operations are performed at sea bed with no risk of landslip and tsunami.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I also requested more detailed maps in the EIA Report, showing proximity to MPA's, shipping lanes, etc. We will also need to see currents, migration paths, sea bed morphology (i.e. canyons and other potentially sensitive areas). I also pointed out that the lack of underwater surveys did not preclude the presence of rare and endangered species in the known potentially sensitive areas, and this lack of information requires an extended program of careful and comprehensive research.</li> </ul>	<p>ERM and technical specialists have performed an assessment based on available most updated secondary data including papers, research, studies and the IUCN list of endangered and rare species (a fully recognized international tool for assessing the presence of threatened species, which is periodically updated). The subsea environment has been analysed considering the international and local guidelines/standards regarding the Environmental baseline development and based on consolidated experience of ERM on similar projects already performed. Detailed maps of the location of the key environmental sensitivities in relation to the Project Area have also been included in Chapter 4 of the EIA Report (Baseline Conditions).</p> <p>The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and information sourced from the Internet. There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. In addition to the secondary data, primary data will be collected during the pre-drilling ROV survey, which will be conducted at the well site prior to drilling. If any vulnerable habitats are found during the survey a commitment has been made by Eni to ensure the well site is located, more than 500 m from the identified location (refer to Chapter 9 of the EIA Report). The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species biodiversity in deep sea environments, (Przeslawski et al., 2012).</p>
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>I did emphasize the need for better baseline data; both more comprehensive, more localised, and over a sufficient timespan</li> </ul>	The description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data

			to cater for seasonal and other cyclical changes. When you indicated that specialist studies would be undertaken I responded that this must include all forms of fauna and flora (including crustaceans) and a desk-top study will not be adequate given the lack of relevant data.	from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA & CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA & CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson & Shipton 2010) and information sourced from the Internet. There are sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>One of the other I&amp;APs asked about the exclusion zone, which is 500m around the drilling vessel (for about two months at a time), as charter fishing is an important part of the local marine economy. Although this is temporary and localised it will impact the local economy, especially if it occurs in a peak season.</li> </ul>	The impact of the exclusion zone on fishing activities present in the Project Area have been assessed in Chapter 7 of the EIA Report.
Paddy	Norman	WESSA, Southern KZN Branch	I also requested that the No-Go option be even-handed: not just the negatives but the positive benefits of those risks that are being avoided and their economic potential impacts.	<p>The assessment of potential "No-Go" impacts has been updated and assessed in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul> <p>By implementing the recommended mitigation measure (and inadvertently proceeding with the exploration activities), the residual impact is likely to be a Moderate positive significance (as per Table 7.27 of the EIA Report)- this is due to the benefits associated with obtaining</p>

				knowledge regarding the viability and extent of available reserves that may be exploited at a later stage. Such an understanding is likely to have a national reach and attract investment opportunities leading to further economic development.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• I asked that you provide positive evidence to show that drilling platforms/vessels do not negatively affect migratory species.</li> </ul>	The impact of the drillship and drilling activities on marine fauna have been assessed in in Chapter 7 of the EIA Report.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• Several people asked about ENI's ability to fund remedial action in the event of a "gulf-disaster". ENI assured the meeting that their own assets were more than adequate and that they would also have insurance cover. An "emergency plan" will be included as part of the EIA documentation; this plan must be realistic, which means equipment and personnel must be available locally, close to each drill site, for the duration of the project and subsequently.</li> </ul>	There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 hours. For instance, part of the equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• I requested information on the destination of the product; since one of the justifications for this program is given as South Africa's energy requirements / energy security, then South Africa should be the primary beneficiary from any production. The response was that SA will be able to purchase the product at the market rate. This scenario must be included in the cost/benefit assessment, since the primary local concern is the cost of importing fuel, and the justification for this program is to reduce that cost.</li> </ul>	A detailed description of the project's need and desirability has been provided in Chapter 3 of the EIA Report.
Paddy	Norman	WESSA, Southern KZN Branch	<ul style="list-style-type: none"> <li>• My final issue was that there needs to be local benefit. Although this phase is relatively small scale, it still requires supporting infrastructure/people. I suggested that ENI should employ (and if necessary up-front train) some of the local people in support roles such as helicopter pilots (based at Margate airport) boat captains – to deliver consumable supplies, etc. If the local people do not benefit then why must they live with the risk?</li> </ul>	Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. The opportunities associated with the onshore logistics base will be limited, and filled by existing local companies. At this time, the focus is on the exploration phase but the outlook would be very different if a discovery is made before the development phase.
Marc	Caplan	Private	<p>I've had a brief look at the EIA but would like to know where the Oceanographers report is?</p> <p>It seems important as how can models of the dispersion of pollutants be done without climatic &amp; current sea movements. Can you direct me to such a report in this EIA.</p>	There is no separate Metocean / oceanographers report that was conducted as part of this EIA process. The model that was used to model the dispersion of pollutants was HYCOM. HYCOM is a well-established model which has previously validated HYCOM currents against current meter measurements off the coast of South Africa.

				<p>Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>Regarding wind, the wind used by ERM was obtained from the Blended Sea Winds database, which is a product of NOAA's National Climatic Data Centre (NCDC). The wind speeds are obtained from multiple satellite observations in order to minimise errors. The wind directions are obtained from the National Centres for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report.</p> <p>With regards to the deepwater offshore currents exhibited in Block ER236, Eni has performed a Metocean study for both northern and southern area. The modelling study performed on ER236, allowed Eni to define a 3D circulation model, aimed at describing the hydrodynamic characterization of the block. The study consists of a first phase of acquisition and comparison of two different oceanographic databases, whose data (current velocity and direction, temperature and salinity) are defined along the entire water column. Based on their screening and analysis, a model has been generated with a strongly resampling to obtain an extremely high resolution. This allowed Eni to simulate the distribution of current intensity and direction, temperature and salinity over a time period of 6 years. Additionally, a wave and wind characterization, over a period of 10 years, has been carried out aimed at finalizing the riser analysis</p>
Marc	Caplan	Private	<p>How much insurance has Eni &amp; Sasol taken out for various scenarios &amp; more ?</p> <p>Under these scenarios</p> <ol style="list-style-type: none"> <li>1. WHALES, dolphins, turtles &amp; marlins BEACHING (or being caught), whose bodies were poisoned by chemical agents released during the drilling &amp; operational phase of the derricks? Per animal?</li> <li>2. Disappearance in proportions the whales, dolphins &amp; turtles from the coastal waters of the coastal areas concerned?</li> <li>3. Accidents on the rig that result in oil spills, chemical, plastic, glass and iron wreckage's free floating in the ocean and being washed ashore.</li> </ol>	<p>There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events.</p> <p>Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 hours. For instance part of the equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.</p>

Kirsten	Youens	Youens Attorneys	1. We, Youens Attorneys, together with Adrian Pole Attorneys, address you on behalf of WILDTRUST. WILDTRUST, through its WILDOCEANS Programme, has recently launched a campaign called "Only This Much", which seeks to mobilise a regional movement for increased protection across all African national waters and Africa's Southern Ocean territories. This campaign builds on the marine protected area advocacy work being done by a number of organisations including Ocean Unite, WWF-SA, Centre for Environmental Rights and the South African Association for Marine Biological Research (SAAMBR).	<p>In response to your letter dated 11 October 2018, the below text refers.</p> <p>1. It is noted that you represent WILDTRUST and have been appointed to comment on the draft EIA for Exploration Drilling within Offshore Block ER236.</p>
Kirsten	Youens	Youens Attorneys	2. We have been instructed by WILDTRUST to submit comments on the abovementioned Draft EIA Report (and Annexures) and hereby request an extension of time in which to do so. The comment period ends on 25 October 2018 and, given the complexity and volume of information contained in the document and the need for expert input, the thirty (30) day comment period is insufficient for us to obtain the necessary expert input and draft meaningful comments. We point out that, in terms of regulation 3(8) of the Environmental Impact Assessment Regulations, 2014 (EIA Regulations), a 30 day commenting period is the minimum period for public participation. In terms of regulation 41(6)(b) of the EIA Regulations, the person conducting the public participation process must ensure that participation by potential or registered interested and affected parties (I&APs) is facilitated in such a manner that all such I&APs are provided with a reasonable opportunity to comment on the application.	<p>Noted. ERM extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 days and ERM extended this to 45 days, which is more than the minimum required by law. Under the NEMA EIA Regulation 23(1)(a), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, we are not able to extend the comment period by longer than two weeks, as we would then not be able to respond to all comments and finalize in the EIA within the legally prescribed time period allowed for the EIA phase and the application would lapse.</p> <p>In any event, ERM submits that a reasonable time period has been provided for stakeholders to consider the Draft EIA Report and form an informed opinion as to the proposed activities.</p>
Kirsten	Youens	Youens Attorneys	3. We record that at the public meeting held in Durban on 9 October 2018, the ERM staff members who had undertaken the oil spill modelling were not present, nor were any of the specialists or peer reviewers who provided expert reports. As a consequence, it was not possible to engage with these specialists or peer reviewers on the methodologies, assumptions and results of the modelling and specialist reports.	<p>The ERM team present at the public open house meetings had the necessary experience and represented professionals who were suitable to respond to questions related to the project, specialists studies, EMPr and EIA Report disclosure. Eni and Sasol representatives were also present to reply to further questions related to their activity in particular on the technology, materials and activities related to drilling operations. It should be noted that the ERM project team is adequately skilled, experienced and available to answer all questions by stakeholders, including questions provided in isiXhosa and isiZulu languages with the presence of translators (Annex B). All the received questions have been</p>

				answered; if there was anything they could not answer, that could be notified in a dedicated register (desk for comments) and it was followed up accordingly (Annex B)
Kirsten	Youens	Youens Attorneys	<p>4. In the circumstances, we request a 30 day extension of time within which to submit our client's comments (namely 25 November 2018).</p> <p>We trust that this meets with your approval.</p>	<p>Noted. ERM extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 days and ERM extended this to 45 days, which is more than the minimum required by law. Under the NEMA EIA Regulation 23(1)(a), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, we are not able to extend the comment period by longer than two weeks, as we would then not be able to respond to all comments and finalize in the EIA within the legally prescribed time period allowed for the EIA phase and the application would lapse.</p>
Briege	Williams	SAHRA	I have issued a comment for the above case and uploaded it onto SAHRIS for review. Please contact me should you have any queries.	Noted, this was actioned by ERM
Briege	Williams	SAHRA	<p>The South African Heritage Resources Agency would like to thank you for submitting the "Draft Environmental Impact Assessment Report for Exploration Drilling within Block ER236, off the East Coast of South Africa". SAHRA previously issued an interim comment in February 2018 in response to the Draft Scoping Report. The DSR made no reference to maritime and underwater cultural heritage therefore SAHRA requested that a Heritage Impact Assessment (HIA) is done as per section 38(3) and 38(8) of the National Heritage Resources Act, Act 25 of 1999 (NHRA). The HIA had to include a maritime archaeology component and any other applicable heritage components. SAHRA is pleased to note that an HIA has been included as part of the EIA and that it has addressed concerns raised regarding the potential impact on any underwater cultural heritage. SAHRA has reviewed the recommendations and mitigation measures set out in the HIA. These measures include the recommendation that any remote sensing data collected of the seabed prior to any drilling is provided to an archaeologist for review. Should any material be located prior to the work commencing then an exclusion zone should be set up around the archaeological feature to avoid any disturbance, SAHRA must be informed if any material is identified during data collection. If any archaeological material is identified or disturbed during the drilling process then work should cease until the project</p>	<p>Noted. There are commitments included in the EMP (Chapter 9 of the EIA Report) to reduce the impact on marine cultural heritage. The following commitment have been made:</p> <ul style="list-style-type: none"> <li>• Use a Remotely Operated Vehicle (ROV) to survey the seafloor prior to drilling in order to confirm the presence or absence of any significant topographic features, vulnerable habitats and / or species (e.g. cold-water corals, sponges) and cultural heritage material (e.g. wrecks) in the area.</li> <li>• Implementation of procedures for ROVs that stipulate that the ROV does not land or rest on the seabed as part of normal ROV operations.</li> <li>• Review ROV footage of pre-drilling surveys to identify potential vulnerable habitats within 500 m of the drill site.</li> <li>• Ensure drill site is located more than 500 m from any identified vulnerable habitats.</li> <li>• A chance find procedure must be developed for the Project and should any shipwreck material that was not identified by the measures set out above be encountered during the exploration drilling process.</li> </ul>

			archaeologist and SAHRA has been informed and appropriate advice has been provided regarding how to proceed. These mitigation measures must be adhered to especially in the event that any cultural heritage should come to light. We would like to reiterate that should any shipwrecks be identified as part of this project then SAHRA should be notified to enable us to add the information to our database. Any new discoveries or updated data is a valuable resource in adding to our knowledge of South Africa's maritime history. Should you have any further queries, please contact the designated official using the case number quoted above in the case header.	
David	Pearton	South African Associated Marine Biological Research	<p>Pg151 draft EIA. "It should be noted that sections of the original ER236 which overlapped with the existing iSimangaliso and Aliwal Shoal MPA's were relinquished during the Exploration Right renewal process in 2016." This is a misleading statement – under the National Environment Management: Protected Areas Act, No 57 of 2003 (NEMPAA) confirmed by the Supreme Court of Appeal (SCA) in 2016 there is no right to prospecting or mining activities in protected areas without the prior consent of the Ministers of Mineral Resources and Environmental Affairs. Essentially you have "relinquished" a right that you do not really possess.</p> <p>Pg. 151 draft EIA. "Although Block ER236 overlaps with the proposed Protea Banks MPA and the proposed extension of the iSimangaliso Wetland Park MPA, there is no overlap of the areas of interest for drilling with proposed MPAs."</p> <p>Why were the rights to the proposed MPAs (for e.g. Tugela Banks, Protea Banks, Aliwal Shoal extension, iSimangaliso extension) not relinquished during the Exploration Right renewal process of 2016? The proposed MPAs were gazetted in February 2016 (Government Gazette no. 10553, February 2016) and the public participation was before this, so there was sufficient time to consider the proposed MPAs in the renewal process.</p> <p>Will you commit to no exploration or future drilling in the recently promulgated and extended MPAs, including, but not limited to, the Tugela Banks, Protea Banks and the extensions of the iSimangaliso Wetland Park and Aliwal Shoal MPA?</p> <p>This would help demonstrate that you truly are committed to</p>	<p>On the 09 December 2014, Eni farmed into Block ER236, originally assigned to Sasol. At the very first opportunity that coincided with the 2016 relinquishment (20%) at the end of the First Exploration Period, Eni relinquished the areas covered by the iSimangaliso, Aliwal and Protea MPAs. The promulgation of the 'proposed' MPAs has just concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the iSimangaliso extension and Protea MPAs. Eni confirms that no drilling will be performed in any declared MPAs.</p>



			minimising the environmental impact in a way that “relinquishing” an effectively non-existent right would not.	
David	Pearton	South African Associated Marine Biological Research	<p>Risk assessments</p> <p>Section 7 presents the “environmental and social impact assessment of planned activities”.</p> <p>These risk assessments determine significance based on a matrix of sensitivity vs magnitude. For all the potential impacts (GHG, environmental impact, oil spills, effects on fishing, marine heritage, etc.) described in Table 7.1 the impacts assessed are limited to the duration of the exploratory drilling project as described in the EIA.</p> <p>It can be argued that this is a very short-sighted process and that a real impact study should definitely include the “knock-on” effects of a successful conclusion of the project. This would include the warming effects of the GHG that would result from development of the field (i.e. both in extracting the hydrocarbons and from the subsequent burning of the hydrocarbons extracted). It would also include the increased chance of incidents such as blowouts by increasing the number and duration of wells drilled and the much higher environmental footprint of a full exploitation of the sites. However, these are the parameters that were established for this EIA.</p> <p>Why then, were these same parameters (i.e. limited to the scope of the exploratory drilling programme) not applied to “7.4.5 The No-Go Alternative”? The Significance of Impact for the No-Go Alternative suddenly include the following:</p> <ul style="list-style-type: none"> <li>• Diversification of the South Africa energy mix</li> <li>• Possibility to give access to energy to population (special in rural areas);</li> <li>• Decreased reliability on importation from other countries.</li> <li>• Lost future development of oil and gas resources in the drilling areas of interest.</li> </ul> <p>These “impacts” are used to justify the sensitivity and magnitude of the No-Go scenario as medium!</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>The assessment of potential “No-Go” impacts has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul> <p>By implementing the recommended mitigation measure (and inadvertently proceeding with the exploration activities), the residual impact is likely to be a Moderate positive significance (as per Table 7.27 of the EIA Report)- this is due to the benefits associated with obtaining knowledge regarding the viability and extent of available reserves that may be exploited at a later stage. Such an understanding is likely to have a national reach and attract investment opportunities leading to further economic development.</p>
David	Pearton	South African Associated Marine Biological Research	<p>None of these are direct outcomes of the exploratory project as described in the EIA. The exploratory wells are specifically described to be non-production wells and so WILL NOT add to the “diversification of the South African energy mix”, nor will it result in “decreased reliability (sic) on importation from other countries”. These are all potential impacts that would depend</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p>

			<p>on the commercial development of the field and, as such, are beyond the parameters that were established for this EIA. They would be suitable for an EIA directed at the commercial exploitation of the field, however, all the other impacts (as listed in Table 7.1) would have to be assessed using the same parameters and criteria.</p> <p>The authors of the EIA do not indicate that the parameters used to make the assessment (i.e. the time frame and assumption of commercial development of the field) in the EIA nor do they provide any justification for the different criteria used to assess the environmental and other impacts vs that of the No-Go alternative.</p> <p>Why is there this sudden shift in the assessment criteria? An honest, realistic assessment of the No-Go Alternative would only look at the impacts of the exploratory drilling project which the EIA already describes as having a minimal impact on employment (almost no local jobs will be created during this phase) and no impact on the energy mix or reliance of SA on imported hydrocarbons (these are, by design, not intended to be production wells and, even if they were, the small number of wells and limited duration of would likely have Negligible impact on the energy supply in SA). A realistic assessment of the Significance of Impacts of the No-Go Alternative using the same criteria used for all the other impacts considered would therefore be: Therefore, the sensitivity of the receptor is Negligible and the magnitude of the impact is Negligible.</p> <p>The sudden, unexplained change in the assessment criteria for the impacts of the No-Go vs all the other categories listed in Table 7.1 is concerning. Given that it impinges directly on the decision to either proceed with the project, or not do so it might be construed as a deliberate, mendacious attempt to skew the outcome of the EIA process. As the very least it is thoroughly unprofessional and sloppy work.</p>	<p>The assessment of potential “No-Go” impacts has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul> <p>The sensitivity (Negligible) and magnitude (Negligible) described by the commenter is incorrect and must be assessed based on the criteria and Impact Assessment Methodology presented in Chapter 6 of the EIA Report. For socio-economic impacts, the magnitude considers the perspective of those affected by taking into account the likely perceived importance of the impact, the ability of people to manage and adapt to change and the extent to which a human receptor gains or loses access to, or control over socio-economic resources resulting in a positive or negative effect on their well-being. The quantitative elements are included into the assessment through the designation and consideration of scale and extent of the impact. In addition to characterising the magnitude of impact, the other principal step necessary to assign significance for a given impact is to define the sensitivity of the receptor. There are a range of factors to be taken into account when defining the sensitivity of the receptor, which may be physical, biological, cultural or human. Where the receptor is physical (for example, a water body) its current quality, sensitivity to change, and importance (on a local, national and international scale) are considered. Where the receptor is biological or cultural (i.e. the marine environment or a coral reef), its importance (local, regional, national or international) and sensitivity to the specific type of impact are considered. Where the receptor is human, the vulnerability of the individual, community or wider societal group is considered. As in the case of magnitude, the sensitivity designations themselves are universally consistent, but the definitions for these designations will vary on a resource/receptor basis. The universal sensitivity of receptor is Low, Medium and High.</p>
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				By implementing the recommended mitigation measure (and inadvertently proceeding with the exploration activities), the residual impact is likely to be a Moderate positive significance (as per Table 7.27 of the EIA Report) - this is due to the benefits associated with obtaining knowledge regarding the viability and extent of available reserves that may be exploited at a later stage. Such an understanding is likely to have a national reach and attract investment opportunities leading to further economic development.
David	Pearton	South African Associated Marine Biological Research	<p>Pg. 151 draft EIA. "In the IUCN Red listing, the hawksbill turtle is described as 'Critically Endangered', green turtle is 'Endangered' and leatherback, loggerhead and olive ridley are 'Vulnerable' on a global scale"</p> <p>This is wilfully misleading - the population of leatherback turtles (<i>Dermochelys coriacea</i>) impacted by the proposal (Southwest Indian Ocean subpopulation) is rated as CRITICALLY ENDANGERED. Similarly the SWIO population of the loggerhead turtle (<i>Caretta caretta</i>) is NEAR THREATENED. To state the global scale data when the impact is on a well-defined and rated population is essentially cherry-picking.</p> <p><a href="http://www.iucnredlist.org/details/46967863/0">http://www.iucnredlist.org/details/46967863/0</a></p>	<p>Global ratings as provided in report are correct</p> <p>IUCN SWIO ratings:  Leatherback – critically endangered  Loggerhead – Near Threatened</p> <p>From a report that was done for NMMU:  "Considering the wealth of data on turtles collected along the coasts of KwaZulu-Natal and southern Mozambique over the past 50 years, and the extent of monitoring and research undertaken during that time (Nel 2014), the most recent conservation status (i.e. Hughes &amp; Nel 2014a, 2014b), which assessed the species on a sub-regional scale, appears the most appropriate and will be applied for the purposes of this impact assessment. "George Hughes is the turtle expert in South Africa, with particular focus on the southern stock of loggerhead and leatherback turtles and that the status listing provided in Chapter 4 of the EIA Report is aligned with NMMU's listing on a regional scale, in addition to IUCN red listing.</p> <p>The Global and Regional Conservation Status of the turtles occurring off the South African coastline show variation depending on the listing used. References to be looked at include:</p> <p>Hughes G, Nel R, (2014a) Family Cheloniidae. In: Bates, MF, Branch WR, Bauer AM, Burger M, Marais J, Alexander GJ, De Villiers MS (eds) Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland. Suricata 1, SANBI, Pretoria.</p> <p>Hughes G, Nel R, (2014b) Family Dermochelyidae. In: Bates, MF, Branch WR, Bauer AM, Burger M, Marais J, Alexander GJ, De Villiers MS (eds) Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland. Suricata 1, SANBI, Pretoria.</p> <p>Nel R, (2014) 50 Years of Turtle Conservation, Monitoring and Research: A State-of-Knowledge Report. Contract Report to iSimangaliso Authority and Ezemvelo KZN Wildlife, pp43.</p>

David	Pearton	South African Associated Marine Biological Research	<p>Pg. 150 draft EIA. "The occurrence of deep water corals in Block ER 236 and the areas of interest are unknown."</p> <p>The extent of the ROV study is not stated. Will this cover the full predicted 7 km2 predicted to be impacted by the drill cuttings to &gt; 1mm2 (EIA, pg. 183)? If not, how will you ensure that any potential deep water corals in the impact zone are (a) identified and (b) protected?</p> <p>Will other sessile benthic fauna, for example Pennatulacea also be assessed within the potential drilling sites? These are known to occur in high concentrations in some areas and, as such, provide habitat for a diverse range of other organisms.</p>	<p>It is currently unknown whether benthic fauna sensitive receptors (deep water corals) occur in the two submarine canyons within the boundaries of the Block and in the Tugela and Goodlad canyons, which are located to the immediate south of the northern area of interest and some 30 km northeast of the southern area of interest. For this reason, Eni has implemented a commitment to avoid the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.</p> <p>Additionally, the drilling area of interest will be surveyed prior to start the drilling activities with an ROV. If any sensitive receptors (e.g. deep water corals and other benthic sensitive invertebrates) are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail). The ROV pre-survey and possible change in location due to the presence of sensitive receptors would subsequently be reported to the Authorities. The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species biodiversity in deep sea environments, (Przeslawski et al., 2012). The cuttings discharged at the seabed during the spudding of a well will form a highly localised spoil mound around the wellbore, thinning outwards. The main impacts associated with the disposal of drilling solids would be smothering of sessile benthic fauna (such as corals), physical alteration of the benthic habitat (changes in sediment properties) in the immediate vicinity (&lt;200 m) of the well. This means that the relocation of the well 500 m from these sensitive receptors will prevent this impact.</p> <p>The ROV can cover a wide range depending on its battery power which lasts for 12 hours.</p>
David	Pearton	South African Associated Marine Biological Research	<p>Will the ROV footage be reviewed by independent scientists or institutions (for example SAIAB) before deciding on where to commence drilling? If not, who will make that decision that does not have a vested interest?</p> <p>The stated buffer zone for any deep water corals is to move</p>	<p>As per the requirements of the EMP, Eni will evaluate the footage of the ROV survey to ensure that no drilling will be performed where key sensitivities (e.g. deep water corals) are present in the drilling area. This is a commitment by Eni for impact avoidance and mitigation and is not subject to vested interest. The survey report will be provided to</p>

			<p>the drill site 500m away. This does not remove them from the 7 km2 defined impact area. It is surmised that there are no coelacanths present in the Goodlad Canyon (EIA, pg. 90-91) but “absence of evidence is not evidence of absence”. Given that the company will be conducting ROV surveys in the area, will they commit to an ROV survey of the areas of the canyon potentially impacted by a blowout or spill? Given the critically endangered status of this iconic fish this would go a long way to ameliorating conservationist’s concerns.</p>	<p>Competent Authority. Eni confirms that no drilling will be performed in the canyons. In any case of an unlikely oil spill, if the current transports the spill in proximity of the canyons, there will be no impact in the water column of canyons, except for the superficial layer (few meters below from surface) where isolated oil droplet may be dispersed. It is only the subsurface slicks that would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. It is noted that the suitable habitat for coelacanth presence in canyons has been studied and demonstrated as below 90 m water depth (Venter et al., 2000e, Discovery of a viable population of coelacanths (<i>Latimeria chalumnae</i> Smith, 1939) at Sodwana Bay, South Africa. <i>S. Afr. J. Sci.</i>, 96: 567–568.).</p>
David	Pearton	South African Associated Marine Biological Research	<p>Impact on the Physical Disturbance of the Seabed Sediments and Benthic Fauna from Pre- Drilling and Drilling Operations. Pg. 184. Exposure of deep water corals to drilling solids can result in mortality of the colony due to smothering, alteration of feeding behaviour and consequently growth rate, disruption of polyp expansion and retraction, physiological and morphological changes, and disruption of calcification. Deep water corals are extremely long lived organisms, with colonies 100s to 1000s of years old and extremely low growth rates (0.1-0.6 mm radial growth pa). If colonies of deep water corals are killed or undergo partial mortality (i.e. colony mortality due to smothering) then they cannot recover in an ecologically relevant timeframe. However table 7.10 states that the reversibility of impacts of “Disposal of Muds and Cuttings” on deep water corals (which includes colony mortality according to page 184) is High (fully reversible). It does not make biological or ecological sense. How is this justified?</p> <p>EIA Table 3.8 pg. 49</p> <p>It is stated that Palm Oil ester will be used as a component of the “Water Based Muds” drilling fluid. Palm Oil is a major contributor to deforestation across the world, but especially in SE Asia (Malaysia and Indonesia especially) and is the main reason for the critically endangered status of the Bornean, Sumatran and (recently discovered) Tapanuli orangutan as well as the Sumatran tiger and numerous other species. The company needs to commit to only sourcing Palm Oil from responsible, sustainable Palm Oil producers (Palm Oil Innovation Group (POIG) and the Roundtable on Sustainable</p>	<p>For deep water corals and vulnerable seabed communities reversibility was rated as Medium and sensitivity as High, however there was a typo in Table 7.10 in the reversibility of impacts of “Disposal of Muds and Cuttings” on deep water sessile benthos such as deep water coral. This has been updated to Medium in the Final EIA Report.</p> <p>Your consideration related to the certified source of Palm Oil is noted. To clarify Palm Oil Ester is a component of chemicals can be used to prepare lubricant pills and change viscosity properties of mud. For the drilling in Block ER236 Eni clarified, that they will not adopt Palm Oil for pills preparation; for this reason this element has been eliminated and Table 3.8 in Final EIA Report reflects this modification.</p>

			Palm Oil (RSPO) members). This needs to be audited by an independent auditor.	
David	Pearton	South African Associated Marine Biological Research	<p>Oil Spill Modelling</p> <p>This is the single image of the Agulhas current direction shown in any detail in either the EIA or the Oil Spill Modelling documents. It is not stated how this particular image was chosen. It does not, however, represent a typical picture of the velocity and direction of the Agulhas current. Rather it represents the current during the passage of an infrequent mesoscale eddy and therefore misrepresents the general strength, location and coherence of the current in the area between Richards Bay and the KZN South Coast (refer to map in attached PDF)</p>	<p>This figure was chosen on 1 January of a selected year as an example to enable the reader to visualize what type of data the database holds. This figure is not a representative display of all the current vectors for all seasons over the 5 year modelling period.</p>
David	Pearton	South African Associated Marine Biological Research	<p>I examined HYCOM current velocity data for a site within the northern drilling area over four years (1628 days) and during that time only ten (10) such eddies passed through. For the vast majority of the time (~85%) the current in the northern block was strongly southerly (direction 135°-225°) (Figure 3). The image shown is a highly misleading picture. For example I took a snapshot of the Hycom prediction for today (2018/10/10) as a random sample which gave me the following: (see map in attached PDF). This clearly shows the predominant direction and flow of the current. As can be seen the predominant current direction is south-south west-west (as confirmed by the current roses in the EIA (figure EIA 8.3). In fact westerly (i.e. towards the coast) flows occur ~13.5% of the time, while easterly currents (away from the coast) are seen less than 1% of the time. Northerly currents are seen more frequently than easterlies (1.23% vs 0.98%). This is similar to the figures presented on page 241 of the EIA. It is difficult, therefore, to determine how the results of the Winter/Spring modelling of the DAH plume (EIA Figure 8.4) were obtained. This shows an easterly movement of the DAH. Given that easterly currents occur less than 1% of the time and rarely for more than one day, it does not appear as if this is the most likely scenario. It is also hard to square with the model results presented in figures 5-13 to 5-32 of the Oil Spill Report, none of which show a predominantly easterly movement of any oil components. While DAH was not considered in the original Oil Spill Modelling report (contrary to the requirements set out in the scoping report) it strains credulity to contend that it would follow such a different trajectory to the other components of a blow-out.</p>	<p>As detailed in Section A1 of the modelling report (Annex D4) the DAH modelling figure is a result of three-dimensional modelling of the dispersion in every direction in addition to the slower and differently oriented currents to the surface currents captured. Once the concentrations disperse and dilute, they are no longer visible on the plots and therefore the full extent of the plume is not visible on the figure. However, this is still a valid representation of the conditions during spring/ autumn and winter/ summer conditions due to advection and dispersion.</p> <p>It is important to understand that the movement of dissolved constituents will differ from the movement of an oil slick floating on the surface. When the release of oil is from a blowout from the seafloor, the dissolved components will release starting at the bottom of the sea and upwards as the plume rises until the momentum is lost. There is a range of liquid droplet sizes associated with the blowout. Larger droplets will surface faster while smaller droplets slower, and may become trapped at some vertical layers after the initial momentum is lost. Therefore, one cannot simply predict the movement of the dissolved plumes based solely on the vector analysis of HYCOM's surface currents. Note also that the diagrams provided in the report focused on the maximum dissolved concentrations, regardless of the vertical location.</p> <p>For the dissolved components close to the surface, there exists other factors that make the dissolved plumes' movement different than liquid oil on the water surface. The wind's influence affects the fate and transport of an oil spill in several ways. In addition to being a source of wave energy which can force a slick to submerge as an entrained droplet, and influencing the evaporation rate, the wind affects the hydrodynamics near the water surface.</p>

				<p>These effects of the wind-driven currents on the water's movement are included in the HYCOM model, and attenuate exponentially with depth from the surface. In spill modelling, the wind has an additional effect upon the trajectory of the oil floating on top of the water. This wind shear influences the speed and direction of the liquid-on-liquid layer compounded with the wind's influence on the velocity of the water beneath the oil layer. While submerged, the dissolved components will lack this wind shear effect and, depending on the depth layer, will be less influenced by the wind-driven currents than the slick on the surface. Once on the surface, however, the wind shear has a competing influence on the overall trajectory. At the same time, dispersion can move the spill in any direction radially.</p> <p>While the direction around the northern area may be predominantly south / southwest / west, as the oil spreads via dispersion and winds, it can get pulled into an easterly direction as seen in the figure below in the dark red currents south of N1 and N2. The slick can bifurcate south of the northern wells such that a fraction travels east and another south, as seen in the report diagrams.</p>
			<p>What were the parameters of the modelling runs to determine this? What were the parameters of the modelling runs to determine this? Number of runs, different starting dates, how were the dates chosen, etc. These parameters are provided (in general) for the oil spill modelling, but not for the DAH models presented in the actual EIA. A probability distribution or results of multiple model runs needs to be provided for each of the conditions and sites.</p>	<p>These parameters are provided (in general) for the oil spill modelling, but not for the DAH models presented in the modelling report (Annex D4).</p> <p>The same number of starting dates and iterations were run for the dissolved analysis. The worst case for largest area affected was selected for presentation in the modelling report (Annex D4).</p>
David	Pearton	South African Associated Marine Biological Research	<p>Why was the DAH modelling only carried out for a single site in the north while the blowout scenarios included two sites (N1 &amp; N2).</p>	<p>N1 was closer to the coastline, and therefore the greater risk of the two.</p> <p>Across all five years of model iterations, the majority of cases in which a spill occurs at locations S and N1 include transport towards the southwest direction. Depth-varying currents over five years (2013 to 2017) at N1 and S were examined to derive the frequency of occurrence for flows towards various directions across all depths. As seen in Figure A3 and Figure A4, 83% (from S) to 89% (from N1) of the currents flow towards the west, southwest and south. The worst cases for "largest area" releasing from N1 included some more rare currents towards the east and southeast away from the Agulhas Currents and the coastline. Dissolved plume transport north and northwest towards locations with an elevated risk of encountering coelacanth habitat is very low. Currents traveling towards the north, north-northwest, and northwest comprise 2% of currents from N1 and 3% of currents from S.</p>



David	Pearton	South African Associated Marine Biological Research	While the blowout modelling scenarios (for example Oil Spill Modelling Figures 5-13 & 5-14, etc.) do show a predominantly southerly direction of oil transport and indicate the results of multiple model runs with different starting points, none of these are presented in the EIA. The only figure related to oil dispersal shown in the actual EIA is Figure 8.4 Extent of the Modelled DAH Plume, which does not appear to show the results of multiple model runs and is misleading as to the balance of probabilities of the trajectory of any oil components from a blowout. Indeed, given that northerly currents are 1.3 X more likely to occur than easterly currents, it is statistically more likely that the oil would travel north into the iSimangaliso Wetland Park than following the easterly trajectory illustrated here.	<p>The EIA Report is intended to be a summary of all the details provided in the Technical Report, to provide the reader with a more concise document.</p> <p>See responses above regarding the three-dimensionality of the subsurface plume, wind effects, and the complexity of the motion in all directions such that a plume can get pulled into strong easterly currents.</p>
David	Pearton	South African Associated Marine Biological Research	For Scenario 3 (Figure 5-38 Scenario 3: Accidental NADF Release - Thickness – Criterion 1: Worst Case Surface Oiling for Spill at N1) the “worst case surface oiling” the scenario shown is also the least probable (see Fig-33) and as such presents a misleading picture that in these particular “worst case scenarios” the oil will be moving away from shore (for sites N1 & N2). Surely the “worst case surface oiling” would be those scenarios where the surface oil approaches the coast and impinges on the continental shelf?	<p>The term “worst case” is subjective and therefore has been commonly quantified into the measurable categories provided in this report: shortest time for oil to contact shoreline, largest area of oil on the water surface and most oil on the shoreline. Worst cases are often least probable. The selection of a worst case in terms of “largest area” is commonly made regardless of specific location, as it provides a metric for describing the largest region in which birds and wildlife could be impacted. Deterministic cases could also be shown with oil closer to the continental shelf but the area at risk would be smaller than the one provided.</p>
David	Pearton	South African Associated Marine Biological Research	The oil spill model report makes a single reference to the eddies, clearly visible in Figure 4-1, that periodically travel along the main flow of the Agulhas current in the initial description of the current but these are never mentioned again, not even in the discussion. The potential for oil to be entrained within these eddies that frequently impinge on the continental shelf is not discussed. This is despite publicly available empirical drifter data clearly showing that passively floating particles can be entrained in these eddies, significantly increasing residence time and potentially carrying them onto the continental shelf. The report also does not mention, or appear to take into account, the upwelling's that occur along the KZN coast. These have the potential to bring water (and any suspended oil) up onto the continental shelf where it would be concentrated and entrained in the prevailing longshore drift (i.e. northerly counter current) potentially increasing the chance of oiling large sections of the coast and shallow waters including, from the southern site, Aliwal Shoal and Durban or, from the northern site, Richards Bay, St Lucia	<p>Eddies are included in the HYCOM hydrodynamic model and play an important role in direction in which the spill may travel. The HYCOM model is considered one of the leading global circulation models presently available and is commonly used throughout the industry for such purposes. A detailed discussion of all the hydrodynamic processes inherent within the model is beyond the scope of the impact assessment.</p> <p>As this model covers a very large area of the world, the 1/12° vector resolution is considered adequate for purposes of making predictions of potential future events for which there is naturally a degree of uncertainty. Effects such as upwelling are part of the HYCOM model, but the influence of them are considered unimportant on the macro-scale needed for this modelling exercise. The inclusion of such small factors would add little to the overall net direction of the Lagrangian spill particles and yield little change to the impact assessment conclusions.</p> <p>The uncertainty caused by the absence or limited influence of these microscale or mesoscale features is dominated by the random effects of</p>

			<p>and the iSimangaliso Wetland Park. The report needs to assess the impacts of eddies and upwelling's on the scenarios.</p> <p>This is a well-known drawback of the HYCOM 1/12 degree models. They do not model small and mesoscale features very well. While they capture the broad scale features adequately they cannot, by the nature of their coarse scale (1/12° per cell), capture these finer scale dynamics that depend on the interaction of, for example, currents with complex ocean topographies that fall below the resolution of the model, such as submarine canyons and the narrow continental shelf off the KZN coast.</p> <p>There are, however, empirical datasets available for the region such as satellite derived Sea Surface Heights (SSH) available from a number of free data repositories (e.g. AVISO+) that can be used to derive currents, and these can be supplemented by drifter data. Given that the models presented were based on hind casts of past dates why were the models run on coarse HYCOM model data rather than freely available empirical data sets? Or, at the very least, why were the scenarios and models not “ground trothed” by comparing them to satellite or other available data? While satellite data has its own issues with areas close to the coast it would still serve as a very useful check on the models presented, particularly with respect to features not captured in the HYCOM data such as upwelling's.</p>	<p>dispersion which is computed dynamically by the model as a function of the current velocity and model grid cell sizes (such that more coarse model grids provide a greater degree of dispersion variability).</p> <p>Empirical current data sets, which come with their own degrees of uncertainty, were examined at the start of the analysis as a potential source of model input data but the usefulness of such databases was determined to be very limited due to the very small fraction of representation such data holds compared to the massive amount of current vectors over time and space required and ultimately used in this model. In other words, the available measured data is small fraction of a percent of the 3-dimensional currents used in this model and is insufficient to be useful for attempting any sort of calibration.</p>
David	Pearton	South African Associated Marine Biological Research	As an aside, please correct the GPS coordinates in EIA Table 3.2 so that interested parties can analyse the data presented with a minimum of editing required.	Thank you for bring this to our attention. We have corrected point B in this table.
David	Pearton	South African Associated Marine Biological Research	The peer review of the oil spill modelling included a request for clarification or justification for the very low amounts of oil and rates used in the scenarios (particularly scenarios 2 a & b). The response from Eni is, frankly, inadequate. It is not sufficient to simply state that they have been calculated based on “similar fields” (peer review pg. 2) without revealing what those fields are or how the factors considered differ so substantially from those modelled on the west coast where release rates are two to seventeen fold higher. What are the detailed geological and hydrocarbon characteristics that render these scenarios so different?	The seismic data licensed from multi-client sources has been interpreted to allow reconstructing a strong geological framework that supports the selection of an analogue field with similar geological and reservoir characteristics. The results of the seismic interpretation carried out with the 3D seismic data confirmed Eni's analysis, allowing to ensure a more robust data set and to advocate the use of the West African analogue based on similar field characteristics, thus the computation of the field PI, pore pressure prediction computation and the consequent flowrate to be used in the oil spill modelling. This is a normal industry practice to determine the model input parameters and the drilling of the first well will confirm the geological interpretation.

			<p>It is simply unacceptable to say that the “confirmation of those assumption (sic) will be provided after the drilling of (sic) first explorative (sic) well.” This is far too late!</p> <p>Please point me to where the peer reviewer's suggestions have been addressed, to wit:</p> <p>“Please include this justification for Scenario 2 in the main report” (i.e. EIA). I am unable to find this in Section 8.3.3 (where it would logically be placed. It also needs to be more detailed than the inadequate response provided in the peer review document, i.e. give a detailed explanation of the differences with the west coast and the Gulf of Mexico scenarios mentioned.</p> <p>“It is recommended that the authors increase the confidence in these predictions by including a high-level comparison of these model results to available observations from blowouts under similar conditions.” Please point me to where this comparison has been carried out. If it has not been carried out please provide an adequate justification as to why not?</p>	<p>Different geological and reservoir structures determine different input data for the model. This is the reason of differences in simulations performed in other wells in west coast.</p> <p>Also the oil spill simulation for the well-known Macondo well /Deepwater Horizon accident (USA) is not comparable for Block ER236.</p> <p>In fact during Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to Eni's extensive experience in similar lithology in West Africa.</p> <p>PRDW independently verified that the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011). The justification for the blowout scenario is provided in Section 5.5 of the Oil Spill Modelling Report (Annex D4).</p>
David	Pearton	South African Associated Marine Biological Research	<p>Green House Gas Emissions (the elephant in the room). <a href="https://www.ipcc.ch/report/sr15/">https://www.ipcc.ch/report/sr15/</a></p> <p>The IPCC 1.5 degree special report was released on 2018/10/08. This describes the effects of a 1.5 °C and 2 °C rise in global temperatures on a wide variety of planetary systems including physical systems (rainfall, storms, etc.), human systems (food security, migration, etc.) and ecosystems (terrestrial and marine). The predictions are, quite frankly, dire and significantly worse at 2 °C vs 1.5 °C. One of the ecosystems I work on, coral reefs, will be 99% lost at the higher of the two temperatures, but more than 10% have a chance of surviving if the lower target is reached. In order to achieve the lower, 1.5 °C target carbon pollution would have to be cut by 45% by 2030 – compared with a 20% cut under the 2 °C pathway – and come down to zero by 2050, compared with 2075 for 2 °C.</p> <p>This requirement to significantly reduce GHG emissions to avoid potentially catastrophic warming is an environmental, economic and moral imperative. It is also a governmental requirement given that the South African government is a signatory to the Paris Accords which seek to limit any potential global warming to less than 1.5 °C. It could also be strongly</p>	<p>The need and desirability section of the EIA Report (Chapter 3) describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The impact of greenhouse gas emissions by the project activities on climate change is assessed in Chapter 7 of the EIA Report. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase was assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>Eni actively participates in the main international climate initiatives. One</p>

			<p>argued that it is a constitutional requirement given that the SA constitution guarantees environmental rights to its citizens. Section 24 states as follows: Everyone has the right –</p> <p>(a) To an environment that is not harmful to their health or well-being; and</p> <p>(b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that –</p> <p>(i) prevent pollution and ecological degradation;</p> <p>(ii) promote conservation; and</p> <p>(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.</p> <p>Given the already observed effects of Global Warming and the highly likely consequences of continued GHG emissions, the development of new oil and gas reserves is, arguably, unconstitutional. It is also inconsistent with the binding commitment of the South African government once they became signatories of the Paris Accords.</p> <p>From the summary for policymakers (IPCC SR15):</p>	<p>of these initiatives involved Eni in the development of the “Oil and Gas Climate Initiative” (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI’s investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO2 over the next ten years.</p> <p>Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations’ corporate sustainability initiative.</p>
David	Pearton	South African Associated Marine Biological Research	<p>As you are no doubt now aware, the Cabinet recently released a decision to promulgate 20 new MPAs, including the extension of iSimangaliso, and Aliwal Shoal MPAs and two new MPAs , namely Tugela Banks, and Protea Banks, in KZN. All of these are potentially affected by the proposed exploratory drilling or any incidents that might occur.</p> <p>In the light of this the current EIA and, indeed, scoping report is inadequate and almost certainly irrelevant. Given that the scoping report as originally approved in April 2018 no longer reflects the "current environmental context" it is clear that a new scoping report is required and the EIA process needs to be restarted with this new environmental context in mind.</p>	<p>It is acknowledged that MPAs are important for the protection of marine resources, however, it must be noted that both the existing and the recently approved MPAs were included in Chapter 4 of the Draft EIA Report before they were updated. Chapter 4 of the Final EIA Report has been updated to reflect the approval of the 20 new MPAS on 24 October 2018. However, this does not change the baseline significantly as these MPAs were already included in the assessment. There is still no overlap of MPAs with the drilling areas of interest.</p>
John & Margi	Blewett	WESSA	<p>We are opposed to off-shore drilling. Our detailed objections are attached</p> <p>This tables our objections to issues we feel have not been sufficiently addressed by the draft Environmental Impact Assessment (EIA) report.</p> <p>a) The EIA has not provided a sufficient evidence to answer key questions around contributions to global warming and</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>The assessment of potential “No-Go” impacts has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate</p>

			<p>climate change by the proposed extraction of fossil fuels. An assessment of the potential end output of the project, i.e. the expected barrel delivery must be measured for its increase in carbon emissions to South Africa's peak, plateau and decline commitments to the global economy.</p> <p>b) All environmental impacts that are assessed He limited to the duration of the project. These impacts should either be widened to include the effects of the projects 'success' e.g. greenhouse gas emissions, OR all impacts must be limited to duration, in which case the claims to contributing to RSA's energy mix etc must be withdrawn from 'The Significance of Impact for the No-Go Alternative' .</p>	<p>as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul> <p>The sensitivity (Negligible) and magnitude (Negligible) described by the commenter is incorrect and must be assessed based on the criteria and Impact Assessment Methodology presented in Chapter 6 of the EIA Report. For socio-economic impacts, the magnitude considers the perspective of those affected by taking into account the likely perceived importance of the impact, the ability of people to manage and adapt to change and the extent to which a human receptor gains or loses access to, or control over socio-economic resources resulting in a positive or negative effect on their well-being. The quantitative elements are included into the assessment through the designation and consideration of scale and extent of the impact. In addition to characterising the magnitude of impact, the other principal step necessary to assign significance for a given impact is to define the sensitivity of the receptor. There are a range of factors to be taken into account when defining the sensitivity of the receptor, which may be physical, biological, cultural or human.</p> <p>Where the receptor is physical (for example, a water body) its current quality, sensitivity to change, and importance (on a local, national and international scale) are considered. Where the receptor is biological or cultural (i.e. the marine environment or a coral reef), its importance (local, regional, national or international) and sensitivity to the specific type of impact are considered. Where the receptor is human, the vulnerability of the individual, community or wider societal group is considered. As in the case of magnitude, the sensitivity designations themselves are universally consistent, but the definitions for these designations will vary on a resource/receptor basis. The universal sensitivity of receptor is Low, Medium and High.</p> <p>By implementing the recommended mitigation measure (and inadvertently proceeding with the exploration activities), the residual</p>
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				<p>impact is likely to be a Moderate positive significance (as per Table 7.27 of the EIA Report) - this is due to the benefits associated with obtaining knowledge regarding the viability and extent of available reserves that may be exploited at a later stage. Such an understanding is likely to have a national reach and attract investment opportunities leading to further economic development.</p>
John & Margi	Blewett	WESSA	<p>MANAGEMENT OF INCIDENTS</p> <p>c) Further proof of insurance safeguards against incidence management and a reasonable level of fiscal readiness for long term clean up and reparation process, in the event of a major disaster must be made public.</p>	<p>Section 24P of NEMA requires that the determination of financial provision must be in place by an applicant for EA relating to prospecting, mining, exploration, production or related activities on a prospecting, mining, exploration or production area. In terms of the NEMA: Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, Operations (amended on 16 April 2018), an applicant or holder of a right must determine financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of exploration operations, as contemplated in the Act and to the satisfaction of the Minister of Mineral Resources. The financial provision determination and a decommissioning plan must be submitted to the Minister as part of the Environmental Authorization application process. The prescribed financial provision for the rehabilitation, management and closure of environmental impacts will be in place before the commencement of the drilling activities.</p> <p>Eni will develop an Oil Spill Contingency Plan for this project, this plan will need to be approved by the SAMSA, DEA and PASA prior to drilling activities commencing.</p> <p>An Oil Spill Contingency Plan (OSCP) is a specific Emergency Response Plan for oil spills, i.e. accidental hydrocarbon releases. In an OSCP, all the possible oil spill scenarios are identified and to each of them a level of risk is assigned, as the combination of their size and likelihood. Low risk scenarios may either be small but frequent spills (e.g. minor spills during refuelling) or medium-sized spills occurring with a very low frequency (i.e. collision of two vessels with the release of fuel oil).</p> <p>Spill notification and communication procedures are identified, with specific attention to the communication with national and international authorities, to ensure that any accidental release is promptly and correctly notified and that oil spill response can start as early as possible.</p> <p>The OSCP also details the oil spill response equipment available to face an accidental release, grouped into:</p> <ul style="list-style-type: none"> <li>- Equipment owned by Eni South Africa;</li> </ul>

				<p>- Equipment owned by other companies / national authorities within South Africa;</p> <p>- Equipment available through agreements with international providers. Activation and mobilization procedures for the oil spill response equipment are detailed. The number and type of equipment activated depends on the characteristics of each spill.</p> <p>Eni has contracts in place with international oil spill response equipment and services providers, which ensure a 24/24 365/365 response worldwide within 12/48 (timing depends on the type of equipment and not on the location of the spill) hours from the notification.</p> <p>There will be adequate protection and indemnity insurance cover for oil pollution incidents.</p>
John & Margi	Blewett	WESSA	d) Sasol claims the probability of an oil spill occurring being less than 1% in their Consolidated Response to the Durban Community Questions of May 2018 . 1% is a very high percentage when the risk is our entire coastline. Sasol and ENI must supply the criteria used to make this calculation, stating the exact calculated probability percentage, and the probability of a full-bore rupture in a given year for this assessment.	<p>The probability of a blowout is very low where the frequency of occurrence is <math>2.5 \times 10^{-4}</math>, 1 case in 4,000 drilled wells (OGP Report, 2010).</p> <p>Eni has implemented the following measures to reduce the risk associated with geological factors, tools reliability and human errors</p> <ul style="list-style-type: none"> <li>• Well design</li> <li>• Adopting mitigation and preventing actions and procedures.</li> <li>• Advanced planning and development of contingency plan</li> <li>• Use of performance tools, real time monitoring technologies. This is necessary to significantly reduce the risk associated with geological factors, tools reliability and human errors.</li> </ul> <p>Eni's adoption of top industry and development of new technologies, the adherence and respect of international best practice, standard and procedures, reduces the risk of the blowout frequency from <math>10^{-4}</math> down to <math>10^{-6}</math> i.e. 1 case in 400,000 wells drilled.</p>
John & Margi	Blewett	WESSA	e) Although ENI stated that they have their own emergency team on-board, it is not a sufficient response and the public needs to understand their full contingency plan. Stating that their proposed contingency plans have been made to Government and are not for the public domain is disquieting to say the least. The public requires transparency and adequate disclosure.	<p>The Oil Spill Contingency Plan is not part of the EIA process. A Project specific Oil Spill Contingency Plan (OSCP) will be developed by Eni. This plan will be developed in terms of the Nationally adopted Incident Management System for spills and the National OSCP. This plan would instruct employees as to the correct response procedures for any unlikely oil spill that may occur during the exploration drilling operation. This plan of intervention, providing contacts lists and mobilization procedures will be drafted prior to the commencement of drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate. The OSCP can only be completed once all information regarding the drilling activity is available and this will be after the submission date for the EIA Report.</p>
John & Margi	Blewett	WESSA	f) The EIA's Oil Spill modelling certainly doesn't represent the typical behaviour of the Agulhas current. ENI must show the	<p>The parameters used for the modelling are presented in Annex D4 of the EIA Report.</p>

			criteria of their modelling to justify the picture and what expert opinion formed the basis for figures 5-13 to 5-32 of the Oil Spill Report which show oil spill moving east , away from the coastline.	<p>The HYCOM hydrodynamic model underlying the transport mechanisms of the model certainly do include the Agulhas Current.</p> <p>Across all five years of model iterations, the majority of cases in which a spill occurs at locations S and N1 include transport towards the southwest direction. Depth-varying currents over five years (2013 to 2017) at N1 and S were examined to derive the frequency of occurrence for flows towards various directions across all depths. As seen in Figure A3 and Figure A4, 83% (from S) to 89% (from N1) of the currents flow towards the west, southwest and south. The worst cases for “largest area” releasing from N1 included some more rare currents towards the east and southeast away from the Agulhas Currents and the coastline. Dissolved plume transport north and northwest towards locations with an elevated risk of encountering coelacanth habitat is very low. Currents traveling towards the north, north-northwest, and northwest comprise 2% of currents from N1 and 3% of currents from S.</p>
John & Margi	Blewett	WESSA	g) ERM must clarify why a reduced quantity of spill was used in the modelling compared with reported full well blow out quantities. Both these scenarios need to be factored into the EIA.	The full blowout quantities were considered in the modelling report (refer to Annex D of the EIA Report).
John & Margi	Blewett	WESSA	<p>WASTE GENERATED</p> <p>h) EIA cites "a potential for short-term localized impacts on seafloor" and marine life, however research that shows that chronic intermittent exposure of species (corals, shrimp, scallop, including larval stages of many species) to dilute concentrations of operational drilling wastes (even if characterized by tests as practically non-toxic) can affect growth, reproductive success and survival.</p>	As discussed in Chapter 7 of the EIA Report, the impacts of cuttings to the seabed and its associated fauna are highly localized, and when seen in context of the extent of the Southwest Indian Ocean upper and lower bathyal habitats available. The significance of the impact of drilling cuttings and muds due to smothering on benthic Macrofauna and deep water corals will be Moderate (pre-mitigation).
John & Margi	Blewett	WESSA	i) The EIA shows the sediment layer at the wellhead itself being only 1m thickness getting thinner further away from the wellhead. The modelling also shows distribution effects of a 5 cm smothering layer of drill cutting sediment as close to 7 km <sup>2</sup> in a month. The global literature cites that discharges at similar depths may produce cuttings accumulations of up to 20m thickness within 100-500m of the well site and gradually get thinner away from the wellhead. Once again there is no projection for the full length of the drilling operation, which goes on for an average of 54 days. This model's temporal selection of a month appears designed to mislead.	<p>As shown in Figure 3.4 (Chapter 3 of the EIA Report) the drilling phase is estimated to take 45 days. 71 days is the estimated overall time for a single well campaign without well testing but including drilling phase, casing runs, cement jobs, logs, BOP run and retrieve. The drill cuttings report (Annex D4 of the EIA Report) therefore assess the full length of the drilling phase, modelling discharges of cuttings and muds during portions of this time.</p> <p>The thickness of deposits in other cases seen in literature cannot be directly compared, as they are specific to the depth drilled, the volume of cuttings removed, the depth at which the cuttings and muds are released, and the durations of the releases.</p>



John & Margi	Blewett	WESSA	j) The drill cutting modelling does not take into account further adverse effects on the wider marine environment from decommissioning and removal of the platform.	<p>The effects of the drill cuttings on the marine environment are assessed in the marine ecology report (Annex D1 of the EIA Report).</p> <p>During decommissioning and platform removal, drilling no longer takes place, and therefore drill cuttings modelling is not appropriate.</p>
John & Margi	Blewett	WESSA	k) The EIA claims that the effects of smothering are " Fully Reversible". Given that smothering leads to mortality of deep water corals and that they are extremely slow growing organisms (hundreds of years old in many cases) they must support the claim.	<p>It is currently unknown whether benthic fauna sensitive receptors (deep water corals) occur in the two submarine canyons within the boundaries of the Block and in the Tugela and Goodlad canyons, which are located to the immediate south of the northern area of interest and some 30 km northeast of the southern area of interest. For this reason, Eni has implemented a commitment to avoid the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.</p> <p>Additionally, the drilling area of interest will be surveyed prior to start the drilling activities with an ROV. If any sensitive receptors (e.g. deep water corals and other benthic sensitive invertebrates) are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail). The ROV pre-survey and possible change in location due to the presence of sensitive receptors, would subsequently be reported to the Authorities.</p> <p>The cuttings discharged at the seabed during the spudding of a well will form a highly localized mound around the wellbore, thinning outwards. The main impacts associated with the disposal of drilling solids would be smothering of sessile benthic fauna (such as corals), physical alteration of the benthic habitat (changes in sediment properties) in the immediate vicinity (&lt;200 m) of the well. This means that the relocation of the well 500 m from these sensitive receptors will prevent this impact. The reversibility of the impact was updated to Medium (partially reversible).</p> <p>The ROV can cover a wide range depending on its battery power which lasts for 12 hours.</p>
John & Margi	Blewett	WESSA	<p>AIR POLLUTION</p> <p>l) If gas must be flared, an accurate determination of the volume of gas flared, its emissions quantity and concentration must be made public.</p>	<p>If well testing is conducted, the flow periods and rates will be limited to the minimum necessary to obtain the required reservoir information during the well test. It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. In addition, all flaring is logged and reported to authorities in the audit report relating to compliance with the EMP. This is not a publically available document. The final well testing report (quantity and type of produced/flared hydrocarbon including oil/gas/water properties rates, volume and quantity, duration of flare, choke dimension etc.). The results of well</p>

				testing is commercially sensitive information and is provided to the Competent Authority.
John & Margi	Blewett	WESSA	m) Much baseline information remains unavailable and it is unclear whether conditions in the site remain unchanged or not because context has not been satisfactorily established we object to the EIA and demand a proper Scoping Report be done.	There is sufficient secondary baseline data available assess the impacts of the project on the environment. The pre-cautionary principle was applied when the presence of sensitivity species could not be confirmed and these impacts assessed. A pre-drilling ROV survey will confirm the baseline environment at the drilling area of interest prior to drilling.
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>Two thirds of the earth is covered with water and anyone who does not dive has been short changed by life and has seen only part of what our planet has to offer.' – taken from Len Jones's Guide to Spearfishing.</p> <p>I run a dive centre in Shelly Beach, called Aqua Planet Dive Centre and Charter and am very concerned about the proposed drilling. Protea Banks, which lies 8km off Shelly Beach, is one of the best shark dive sites in the world. Protea Banks attracts many foreigners to the area and South Africa, as well as local divers. I have been personally diving Protea Banks for more than 20 years, and we have a very healthy ecosystem, one of the rare dive sites that can boast such a fact.</p> <p>Shelly Beach and surrounding areas only exist due to tourism, and this is due to the fact that we have a pristine coastline and ocean. Please find below my concerns and objections:</p>	Noted, and some of the reasons why the area has been identified for additional protection both by way of an offshore MPA (recently approved) as well as an EBSA. The proposed drilling sites, however, lie well offshore of the coastal migrations and the dive sites, and these should in no way be affected by the drilling operations.
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>1. NOISE POLLUTION:</p> <p>Firstly, we have an annual Humpback Whale migration that takes place from about May to December along our coastline.</p> <p>Figure 1 and 2 are photo's taken by divers of Humpback Whales on Protea Banks.</p> <p>Secondly, we have an annual Ragged-tooth migration where the Ragged-tooth sharks come to Protea Banks from about May to November to mate. They can be seen in the 100's.</p>	Noted. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft & Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, as the source of this noise is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for meters, depending on the season) and will not travel far downwards. Thus, whilst the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact

				is possible. Secondly, underwater noise from the drilling operations would not extend as far inshore as the migration routes and dive sites.
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>Figure 3 and 4 are photo's of Ragged-tooth sharks taken by divers on Protea Banks</p> <p>Thirdly, we have an annual Hammerhead shark migration, that takes place along our coastline - only a few other places in the world have this. These Hammerhead sharks arrive from about August/September in massive shoals and thin out about January/February. At times 1000's of these sharks are seen on a dive. One cannot actually comprehend the amount that must be passing through and very little research has been done on their annual migration.</p> <p>Figure 5 and 6 show the Scalloped Hammerhead shark migration. Pictures taken by divers on Protea Banks.</p> <p>Fourthly, Protea Banks is very rich in gamefish and a wide variety of shark species, as well as a wide variety of other marine life. The reef is unique worldwide in that it attracts such a wide variety of shark species.</p> <p>Figure 7 to 16 show just some of the incredible marine life found on Protea Banks.</p> <p>Fifthly, the annual Sardine Run is a major tourism attraction to the South Coast.</p>	Your comments have been noted
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>In the EIA, there is no evidence to suggest that anyone actually knows what the effect of this drilling could have on these natural events. I understand that all these events are closer inshore to where the drilling is due to take place, but all these systems are linked and if you degrade one portion of the system it will have a ripple effect to the other systems. There seems to be so many unknowns so surely it is unjustified to be conducting an activity when there is no idea of what the effects could be?</p> <p>The noise pollution from the drilling is definitely going to affect all this marine life and not enough research and studies have been done. This marine life is a huge attraction for divers, fisherman and general beach goers – resulting in tourism in the area. That the duration of the drilling is for 54 days, is no indication that it will not take place during one of the natural</p>	<p>There is sufficient secondary data available to assess the impacts to marine and coastal ecology from the project activities. Based on the precautionary principle if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report).</p> <p>From Marine Ecological Assessment (Annex D4)          "For another deep water well-drilling project off the southern Namibian coast, it was estimated that noise from project activities would decrease to below the estimated median ambient background level (100 dB re 1µPa) within a distance of 14 - 32 km from the drill site, depending on</p>

			events which bring tourists to the south coast!	<p>the specific vessels used, the number of support vessels operating and the scenario. Maintenance activities represented the worst-case scenario for noise, although this would be expected to occur only for relatively short periods of time (Croft &amp; Li 2017). The extent of the noise impacts would, however, also depend on the variation in the background noise level with weather and with the proximity of other vessel traffic (not associated with the project).</p> <p>Closest point to shore of both southern and northern areas of interest is over 60 km, and so well offshore of dive sites. Noise from inshore coastal vessel traffic likely to have far greater impact.</p>
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>2.TOURISM</p> <p>The South Coast of KwaZulu Natal is a big tourist destination. The ocean is why we have such great tourism in the area. Most of the jobs in the area are directly or indirectly related to tourism.</p> <p>I do not see any studies to show the potential loss of livelihood (and the number of people that depend on the ocean for their livelihood) if we lose the marine life and our ocean.</p>	<p>The Draft EIA Report assessed the impact of planned activities on socio-economics in terms of the impacts on fishing. The impacts on tourism were screened out during scoping as the drillship will be located over 60 km offshore of the coastline and will not be visible from shore. However, the impact of an oil spill on coastal based livelihoods such as tourism was assessed in Chapter 8 of the EIA Report.</p>
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>3.OTHER POLLUTION</p> <p>CUTTINGS</p> <p>Cuttings left on the seabed are going to be detrimental to the animals living on the sea bed. Apart from it being a localized area, surely there should be more concern of what the impacts are going to be?</p> <p>I do not feel enough research had been done on how this will affect the sea bed. The EIA clearly says that there are many unknowns. Why are they unknown? Sasol/ENI should spend money to find out what is there before they destroy it. This is our heritage, our future and our subsistence. DRILLING FLUIDS AND OTHER THE OTHER MUD AND ROCK ?</p> <p>These all have harmful chemicals in them! The toxicity of these have been shown to show up in animals long after drilling has been complete. Surely this is not acceptable?</p>	<p>Only after treatment to prescribed standards (defined by World Bank Group in 2015) Eni would consider the overboard discharge of drill cuttings (small rock fragments, sand and silt). The impacts associated with this will be localized. Details can be seen in chapter 7 of the EIA Report. Based on the precautionary principle if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report.</p> <p>The following will occur prior to conducting drilling activities:</p> <ul style="list-style-type: none"> <li>• Use a Remotely Operated Vehicle (ROV) to survey the seafloor prior to drilling in order to confirm the presence or absence of any significant topographic features, vulnerable habitats and / or species (e.g. cold-water corals, sponges) and cultural heritage material (e.g. wrecks) in the area.</li> <li>• Implementation of procedures for ROVs that stipulate that the ROV</li> </ul>

			<p>What are your acceptable criteria? Who makes these standards?</p> <p>The currents can be very strong here in KZN. Anything dumped in the ocean will travel very quickly and affect other areas. This is obviously being touted as a good way of dispersing the harmful toxins and chemicals but this is irresponsible and will affect the plankton in the water. The EIA does not have any science to say how the plankton will be affected.</p>	<p>does not land or rest on the seabed as part of normal ROV operations.</p> <ul style="list-style-type: none"> <li>• Review ROV footage of pre-drilling surveys to identify potential vulnerable habitats within 500 m of the drill site.</li> <li>• Ensure drill site is located more than 500 m from any identified vulnerable habitats.</li> </ul> <p>The drill cuttings will be discharged overboard only following on board treatment in accordance with International recommendations and Eni's Waste Management Guidelines. Base fluid retained on cuttings will not exceed limits defined in Table 1 of IFC World Bank Group guidelines. Prior to overboard discharge, the final processing of the drill cuttings will be the cuttings dryer, that reduced the base fluid retained on the cuttings below the IFC World Bank limit (max 5% of NABF C16-C18 compared to standard of 6.9% on wet cuttings).</p> <p>Due to the offshore location of the areas of interest, the abundance of phytoplankton is likely to be very low. Being dependent on nutrient supply, plankton abundance is typically spatially and temporally highly variable and is thus considered to have a low sensitivity.</p>
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p><b>4. INSURANCE COVER</b></p> <p>What companies does Eni &amp; Sasol ensure with? How much insurance has Eni &amp; Sasol taken out for these scenarios &amp; others that may arise ?</p> <p>Scenarios:</p> <ul style="list-style-type: none"> <li>• WHALES, dolphins, turtles &amp; marlins BEACHING (or being caught), whose bodies were poisoned by chemical agents released during the drilling &amp; operational phase of the derricks? How much to rehabilitate each animal and/ or compensate fishermen who have caught a poisoned fish?</li> <li>• Disappearance in proportions (from various operational phases) of the whales, dolphins &amp; turtles from the coastal waters of the coastal areas concerned? How much would it cost to replace them per animal, considering the sardine &amp; shad stock may also be compromised?</li> </ul> <p>Accidents on the rig that result in oil spills, chemical, plastic, glass and iron wreckage's free floating in the ocean and being washed ashore. How much is medical bills for long term diseases? How much for accidents that result in short &amp; long term loss of human performance &amp; productivity? Can Eni explain and show scientifically with credited scientists "Do whales &amp; dolphins &amp; sharks return to places where drilling is complete?", if wells are running &amp; active?"</p>	<p>ERM notes that Eni is required under South African law to make financial provision for remedying environmental defects which arise in the course of Eni's operations (Annex F).</p> <p>There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 hours. For instance part of the equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.</p>

			<p>Can ERM run food-chain modelling of contaminated sediments, from plankton, fish, marine mammals &amp; birds to determine toxic contamination?</p> <p>How much to protect reefs &amp; the beaches from oil spills?</p>	
Kym	Pollard	Aqua Planet Dive Centre and Charter	<p>Above are just some of my concerns.</p> <p>I am citizen scientist, but have consulted with several scientists; they are all of the same opinion that this drilling is not a good idea or good for the environment because the public must be made aware of what could be potentially destroyed or impacted.</p> <p>One of my other concerns is that the affected parties have not been consulted adequately, very few people are aware that there is planned drilling off our coastline, as the meetings were not properly advertised with the interested/affected parties. The law might say that only a single article in the newspaper is enough but let's face it, not everyone reads the newspaper everyday. It certainly was not advertised on social media – this is the dominant news platform!</p>	<p>Noted. ERM has released various adverts in both local and regional newspapers over the EIA process. Registered I&amp;APs were also sent notifications via emails and bulk SMS's regarding the proposed project. Evidence of this can be found in Annex B of the EIA Report.</p>
Rosanne	Clark	Private	<p>Please note my responses to your BAR Report.</p> <p>You give as "Negligible" the impacts to all the concerns raised about the impact on the sea floor at all levels of your exploration.</p> <p>I question this because this area has never been disturbed since it came into being so how can "scientific" studies claim that disturbance will be Negligible? Reports from around the world show any means of exploring for gas, minerals etc. is extremely harmful to the marine and terrestrial environment.</p> <p>Why put so much energy into expanding fossil fuels extraction and exploration?</p>	<p>Refer to Chapter 7 of the EIA Report and Annex D1 for the assessment of the impacts on the seabed.</p> <p>The impacts to the seabed and its associated fauna are highly localized, and when seen in context of the extent of the Southwest Indian Ocean upper and lower bathyal habitats available, the impacts of the proposed well drilling on the seabed and benthos are Moderate to Negligible.</p>
Sean	O'Donoghue	Private	<p>I am very concerned about the following:</p> <ul style="list-style-type: none"> <li>• The amount of ocean leased by the Petroleum Agency of South Africa, apparently 95%, precludes the government achieving its stated aim of securing 10% of our oceans as Marine Protected Areas, and that operational disturbance would impact upon such MPAs once they are promulgated.</li> <li>• The production and spillage of Polyaromatic Hydrocarbons (PAHs), and probably heavy metals, is all but unavoidable given the intensity of our storms, especially considering</li> </ul>	<p>PASA cannot preclude the government from declaring MPAS Offshore. MPA's are protected under the Protected Areas Act. MPA's conservation and legal instrument moved from the Marine Living Resources Act into the Protected Areas Act (No. 57 of 2003). In accordance with this Act, no exploration, production or related activity may occur within a MPA without permission. Therefore, the leasing of offshore acreage is irrelevant to the promulgation of the MPA's. On 24 October 2018, our Cabinet approved a network of 20 marine protected areas, which will expand protection to at least 5% of South Africa's marine environment.</p>

			<p>increasing intensities due to climate change, making the proposed drilling methods very risky. The highly sensitive oligotrophic coastal waters, with their complicated ecosystems could be easily, and permanently damaged. This contravenes our constitutional right to a clean environment.</p> <ul style="list-style-type: none"> <li>• Given that our world is already 1.1C warmer than pre-industrial levels, I am deeply concerned about the plan to extract more global-warming causing fossil fuels, especially when a massive source of stable renewable energy is present in the form of the Agulhas Current. I am concerned that investment is not being directed towards an environmentally friendlier option than fossil fuels.</li> <li>• I'm concerned about chronic disturbance from operations on marine life, including noise pollution.</li> <li>• I'm concerned that sonic surveying will have a debilitating impact upon marine life, including cetaceans, turtles, fish and invertebrates. Such impacts have been shown to be potentially permanent, causing ecological change. Impacts of such surveying, furthermore, have been shown to occur over thousands of square kilometres, making no part of the continental shelf safe for marine life. Again, our right to a healthy, sustainable environment is being impacted here.</li> <li>• I'm concerned that the area of operation is adjacent to potential habitat of the coelacanth, and that drilling operations could drive existing populations towards extinction. This would be a crime against humanity.</li> </ul>	<p>The activity being proposed in this EIA Report is exploration drilling not production. Should a commercially viable source of hydrocarbons be discovered, Eni would be required to apply to the government for a Production Right and undertake a new separate EIA process. Chapter 8 of the EIA Report and supporting oil spill modelling report (Annex D4) evaluated the risk of an oil spill from a blowout as rare based on the OGP Risk Assessment Data Directory, Report No. 434-2, March 2010.</p> <p>Modelling of Dissolved Aromatic Hydrocarbons (DAH) was conducted for Scenario 2a and the results are presented in Annex D4 of the EIA Report. The risk significance of DAH on marine fauna was assessed as Minor (ALARP).</p> <p>The proposed project will have limited impact on climate change, due to the temporary nature of the activities. Climate change impacts from the proposed drilling activities have been assessed in Chapter 7 of the EIA Report as Negligible.</p> <p>The impact of underwater noise from drilling was Chapter 7 of the EIA Report as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, as the source of this noise is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for meters, depending on the season) and will not travel far downwards. Thus, whilst the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>A seismic survey and exploration drilling are both activities designed to identify potential hydrocarbon resources. A seismic survey involves a seismic vessel, using airguns to produce sound waves to understand the subsea geology. Exploration drilling on the other hand uses a drilling vessel/rig to drill into the seabed in areas identified during the seismic</p>
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				<p>survey as having potential hydrocarbons.</p> <p>As stated above the likelihood of a spill has been assessed by the OGP as rare. As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>
Marc	Caplan	Private	<p>Did any of ERM “specialist” consultants conduct any primary research for the research detailed in Annex 1,2, 5 &amp; 6 reports ? Going Forward they must conduct on site research, as what are engineers basing their, project scheduling &amp; machine specifications on?!</p>	<p>There is sufficient secondary data available to assess the impacts to marine and coastal ecology from the project activities. Based on the precautionary principle if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being ‘present’ and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report). The ROV survey report will be assessed by a qualified marine biologist and sent to the Competent Authority.</p> <p>Eddies are included in the HYCOM hydrodynamic model and play an important role in direction in which the spill may travel. The HYCOM model is considered one of the leading global circulation models presently available and is commonly used throughout the industry for such purposes. A detailed discussion of all the hydrodynamic processes inherent within the model is beyond the scope of the impact assessment.</p> <p>As this model covers a very large area of the world, the 1/12° vector resolution is considered adequate for purposes of making predictions of potential future events for which there is naturally a degree of uncertainty. Effects such as upwelling are part of the HYCOM model, but the influence of them are considered unimportant on the macro-scale needed for this modelling exercise. The inclusion of such small factors would add little to the overall net direction of the Lagrangian spill particles and yield little change to the impact assessment conclusions.</p> <p>The uncertainty caused by the absence or limited influence of these microscale or mesoscale features is dominated by the random effects of dispersion which is computed dynamically by the model as a function of</p>



				<p>the current velocity and model grid cell sizes (such that more coarse model grids provide a greater degree of dispersion variability).</p> <p>Empirical current data sets, which come with their own degrees of uncertainty, were examined at the start of the analysis as a potential source of model input data but the usefulness of such databases was determined to be very limited due to the very small fraction of representation such data holds compared to the massive amount of current vectors over time and space required and ultimately used in this model. In other words, the available measured data is small fraction of a percent of the 3-dimensional currents used in this model and is insufficient to be useful for attempting any sort of calibration.</p>
Marc	Caplan	Private	The public participation process was circumvented at Port Shepstone, so that the public were mis-informed as to the hazards & environmental risks of the project. A trade show format is no substitute for the traditional South African Public Participation process.	Please note that open house meeting are regularly used in SA for the sharing of project information with stakeholders. The open house meetings were intended to create a platform for Interested & Affected Parties to ask questions and raise concerns regarding the project. Posters were placed around the room with the Independent EAP and ERM staff as well as the Eni team available to answer questions that stakeholders may have. The advantage of the open house format is that individuals can read the information provided and ask the team questions one on one.
Marc	Caplan	Private	There is no stand along Oceanographers report. Hence, a) Annex 5 & 4d (cutting dispersion modelling report) are voided as data from Hybrid Coordinate Ocean Model (a generalized ocean model known as HYCOM ), is at a too coarse a scale, to make accurate insurance estimates for the oil spill disasters.	<p>There is no separate Metocean / oceanographers report that was conducted as part of this EIA process. The model that was used to model the dispersion of pollutants was HYCOM. HYCOM is a well-established model which has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>Regarding wind, the wind used by ERM was obtained from the Blended Sea Winds database which is a product of NOAA's National Climatic Data Centre (NCDC). The wind speeds are obtained from multiple satellite observations in order to minimize errors. The wind directions are obtained from the National Centres for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report.</p> <p>With regards to the deepwater offshore currents exhibited in Block</p>

				<p>ER236, Eni has performed a Metocean study for both northern and southern area. The modelling study performed on ER236, allowed Eni to define a 3D circulation model, aimed at describing the hydrodynamic characterization of the block. The study consists of a first phase of acquisition and comparison of two different oceanographic databases, whose data (current velocity and direction, temperature and salinity) are defined along the entire water column. Based on their screening and analysis, a model has been generated with a strongly resampling to obtain an extremely high resolution. This allowed Eni to simulate the distribution of current intensity and direction, temperature and salinity over a time period of 6 years. Additionally, a wave and wind characterization, over a period of 10 years, has been carried out aimed at finalizing the riser analysis.</p>
Marc	Caplan	Private	<p>b) The scoping report did not have a section on ocean chemistry to inform planners what substances such as barite (a lubricants constituent) need nontoxic alternatives. Mercury &amp; Cadmium constituents of barite are toxic elements that do not degrade as quickly as humans and other organism would like! Where do they end up in the food chain was a question that needs an answer ?</p> <p>c) An oil extraction engineer cannot select the materials and appropriate design specifications for undersea equipment, without accurate, current &amp; past measurements of the Agulhas' Current's, waves &amp; winds. That should be available in an accurate &amp; complete Oceanographers report. So the engineers who design the riser pipes (for the, drill ship &amp; the derricks) do not know, the total range of gravitational &amp; oceanic forces (Agulhas currents speed &amp; wind speeds &amp; wave heights) and the depths that they are relevant under the sea, at the specific theoretical drill positions. So how can the project engineers, select material (including the pipes) &amp; draft plans on riser dimensions to withstand, a current moving at over 4 m.sec. from NE, with winds of 30-45 knots from either NE or SW. The SW gales can create 25m plus waves that move counter to the current, that runs at 1 m.sec. at 1000m depth. So an insurance company cannot work out the costs of replacing the equipment, and compensating the world &amp; humans for the hazards, if "reality" is still waiting for the Oceanographer to make accurate readings!!!</p> <p>d) Without multi-billion Euro Insurance to cover the losses of income &amp; amount required to rehabilitate wildlife, the</p>	<p>b) Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practice IFC guidelines.</p> <p>c) Rig and subsea equipment are selected considering both Metocean conditions and drilling target. For instance marine riser components, wellhead and BOP are selected to withstand all the predicted pressures, stresses and loads, including whom generated by wind, temperature, waves, tide. Specifically related to Agulhas and subsea currents, a Metocean study was undertaken by Eni in the northern and southern areas of interest. The report considers the current speed, direction and</p>

			<p>companies are hamstrung. As marine life, the fishing industry &amp; the tourism sector are what people base their professions on, along the South Coast!!</p>	<p>force of them in the whole water column as well as winds and waves intensity. Such parameters are part of the mandatory dataset to perform the design and stress analysis for riser components and wellhead, and it is a common Industry Best Practice. In addition operations are carried out considering the weather forecast that is continuously updated from satellite, local weather-forecast providers and navigation tools installed on board of drillship. In the event that weather conditions, including gales and waves, are predicted to reach the rig's operability limitations, operations are safely suspended and rig stands on wait on weather waiting favourable weather conditions prior to resume. In harsh condition (i.e. hurricanes), the well can be safely temporary abandoned, the BOP closed and the rig can move to a safer location. This is a standard and routine procedure in the oil and gas industry. Eni has wide experience in operating in harsh environments such as USA and Norway.</p> <p>d) There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Tier 1 Oil spill equipment is already available on the drillship (offshore) to respond immediately to unlikely spill events. Furthermore, Eni has service agreements in place for equipment and personnel to be mobilized from onshore to the spill event within 24 hours. For instance part of the equipment and dispersants are held already available in Saldanha Bay. Further equipment will be available in the logistic base close to operations with short lead times to access and execute response strategies.</p>
Marc	Caplan	Private	<p>Annex E: Determination of Financial Provision needs to include provisions for clean up, including emergency teams to limit oil spills, halting negative affects on marine life &amp; loss of future possibilities to people of the coast, including to the fish stocks. Costs to restore a poisoned whale(s) to health in captivity, &amp; release it back into the Indian Ocean, at the correct time?</p>	<p>Section 24P of NEMA requires that the determination of financial provision must be in place by an applicant for EA relating to prospecting, mining, exploration, production or related activities on a prospecting, mining, exploration or production area. In terms of the NEMA: Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, Operations (amended on 16 April 2018), an applicant or holder of a right must determine financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of exploration operations, as contemplated in the Act and to the satisfaction of the Minister of Mineral Resources. The financial provision determination and a decommissioning plan must be submitted to the Minister as part of the Environmental Authorization application process. The prescribed financial provision for the rehabilitation, management and closure of environmental impacts will be in place before the</p>

				<p>commencement of the drilling activities.</p> <p>There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation. Particularly, Eni's entities are insured against liabilities for damage to third parties and environmental claims up to \$1.2 billion in case of offshore incident and \$1.4 billion in case of incident at onshore facilities (refineries). Additionally, the Company may also activate further insurance coverage in case of specific capital projects and other industrial initiatives.</p> <p>Management believes that its insurance coverage is in line with industry practice and is sufficient to cover normal risks in its operations. However, the Company is not insured against all potential risks. In the event of a major environmental disaster, such as the incident which occurred at the Macondo well in the Gulf of Mexico several years ago, for example, Eni's third-party liability insurance would not provide any material coverage and thus the Company's liability would far exceed the maximum coverage provided by its insurance</p>
Marc	Caplan	Private	<p>ERM hired scientists must conduct research only inside their field(s) of, Council for GeoScience, accredited &amp; accepted expertise. Several readers noticed, Andrea P. author of Annex 1, is no ornithologist (&amp; missed 25 bird species, that fish in the region) where did those bird go!! While, M. Fishera (Annex 5 &amp; Annex d4 - cuttings spill modelling), an engineer (accredited in the usa), did not invite an experienced South African trained oceanographer to coauthor the above desktop research. S. Luger who authored the peer review of Annex 5 &amp; d4, (see Annex 6), is not a qualified SAEON Oceanographer or even a senior oceanographic fellow. He accepted a commission out of his field and should be disciplined by the Council for GeoScience for such business dealings, not to mention his neglect of accurate data for oil extraction engineers.</p>	<p>Dr Andrea Pulfrich holds a PhD in the Department of Fisheries Biology of the Institute for Marine Science at the Christian-Albrechts University, Kiel, Germany, 1995. She also holds a MSc in Zoology from the University of Cape Town.</p> <p>Michael Fichera holds an M.E in Environmental Engineering from Manhattan College.</p> <p>All specialist CVs can be found in Annex D of the EIA Report.</p> <p>All specialists who were appointed have acquired their qualifications in accordance to the specifications detailed under the NEMA.</p>
Marc	Caplan	Private	<p>An Environmental resource economic study needs to be commissioned to determine whether the sardine, shad &amp; coastal fishing industry together with water based tourism sector is better suited to the South coast, than offshore Gas drilling &amp; extraction. The findings must be presented prior to the Central Cabinet deliberating on the future of KZN as Coal</p>	<p>Chapter 4, Section 4.4 present the socio-economic baseline that is applicable to an exploration drilling activity 65 km offshore.</p>

			exports should be halted (at Richards Bay Harbour) if there is an hydrocarbon energy crisis in South Africa!	
Marc	Caplan	Private	The draft EIR needs to include a ornithologists report (from a registered Council for GeoScience certified ornithologist), an oceanographers report from (from a registered Council & certified oceanographer), a fisheries report (from a registered Council & certified ichthyologist), a plankton report (from a registered Council & certified sea weed expert), an insurance costs (including future oceanic productivity & tourism venues) report by an actuary registered in South Africa (with the correct accrediting institution).	The specialist studies were conducted by independent consultants who have suitable qualifications and experience to conduct this work. ERM reviewed all these specialist studies with the exception of the oil spill modelling report. These studies are attached as Annex D of the EIA Report.
Margi	Blewett	KZN Wildlife	<p>Please register me as an AI&amp;P.</p> <p>OBJECTION TO THE PROPOSED EXPLORATION DRILLING WITHIN OFFSHORE BLOCK ER236, KZN, SOUTH AFRICA.</p> <p>I am M.E. Blewett from Uvongo who has an interest in this development because I reside on the Coast and am a South African citizen. I live in the area and walk on the beach).</p> <p>I object to this exploration because:</p> <ol style="list-style-type: none"> <li>1. The EIA is clear that there are many unknowns. They don't know what the impacts are going to be on many animals and how this will have a chain reaction and ultimately affect tourism, fisheries or the function of the marine environment as it is.</li> <li>2. What happens after the drilling is complete and the well is plugged – who is responsible to check that it doesn't leak, 10, 20 or 100 years from now?</li> <li>3. The Agulhas current is one of the fastest flowing currents in the world, the oil company has never drilled in this current, how can they be certain they have the ability to undertake this task without causing a disaster?</li> <li>4. In the posters at the open house meetings, it was noticed that the legends on all the maps used terms like 'very unlikely'. That is similar to the definition of an 'accident' and cannot be predicted.</li> <li>5. Also the posters didn't include maps in which the oil actually made contact with the coastline. This is leading the public to believe the oil will stay out at sea and just disappear.</li> <li>6. Why does South Africa not have a national oil spill contingency plan yet?</li> </ol>	<ol style="list-style-type: none"> <li>1. Impacts related to fisheries and marine ecology have been assessed in Chapter 7 of the EIA Report. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions</li> <li>2. At the end of drilling and testing operations, prior to leave location, the well will be plugged and abandoned (P&amp;A).The scope of well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented. A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required. The wellhead and seabed will be surveyed by a ROV after well(s) plug and abandonment ("decommissioning"). Further monitoring of the wellhead after decommissioning is not required, considering that the plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well.</li> <li>3. The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors.</li> </ol> <p>In extreme weather conditions the drillship would make the well safe and then disconnect and move to a place of shelter until conditions improve.</p>

			<p>7. Why are there no oil spill supplies in KZN?</p> <p>8. The EIA makes reference to the high possibility of invasive species through ballast water and on drilling equipment. Invasive Species can have severe, detrimental economic and ecological effects and the extent of these is only beginning to be appreciated by economists and policy makers in South Africa. Invasions have the potential to alter ecosystems which can result in significant negative environmental and socio-economic impacts.</p> <p>9. The risks rated in the EIA are mostly listed as minor and Negligible, this may be true on a species by species basis but there is no consideration to what happens to the entire suit of animals as a whole? In addition, some of the ratings appear to be of opinion and not based on any science because the impacts are listed as unknown in so many cases.</p>	<p>Drilling would recommence after it is determined to be safe to do so.</p> <p>4. Noted.</p> <p>5. Annex D4 of the EIA Report includes simulations and figures in terms of shoreline oiling probability, most amount of shoreline oiling mass and fastest time for shoreline oiling to occur. The posters included the probability maps.</p> <p>6. A draft NOSCP is available and has been subject to a public participation process and review by key institutional and industry parties. South Africa is in the process of finalizing their NOSCP which represents years of work and consultation. Eni will develop their OSCP in accordance with the guidelines set out in the NOSCP .</p>
Margi	Blewett	KZN Wildlife	<p>7. Why are there no oil spill supplies in KZN?</p> <p>8. The EIA makes reference to the high possibility of invasive species through ballast water and on drilling equipment. Invasive Species can have severe, detrimental economic and ecological effects and the extent of these is only beginning to be appreciated by economists and policy makers in South Africa. Invasions have the potential to alter ecosystems which can result in significant negative environmental and socio-economic impacts.</p> <p>9. The risks rated in the EIA are mostly listed as minor and Negligible, this may be true on a species by species basis but there is no consideration to what happens to the entire suit of animals as a whole? In addition, some of the ratings appear to be of opinion and not based on any science because the impacts are listed as unknown in so many cases.</p>	<p>7. Note that the appropriate equipment will be available and accessible. No industry activity yet which is why there is no equipment. Situation will be vastly different when developing the OSCP and ascertaining what equipment is required in-country and through service agreements.</p> <p>8. As reported in the EMPr of the EIA, Eni will assure that all ships carrying ballast water must de- and re-ballast in adherence with the International Maritime Organization (IMO) guidelines and standards governing discharge of ballast waters at sea. In addition, Eni will ensure that all infrastructure (e.g. wellheads, BOPs and guide bases) that has been used in other regions is thoroughly cleaned before use in South Africa and will avoid the presence and spread out of invasive species by the implementation of the ballast water management plan. All related impacts have been assessed in Chapter 7 and 8 of the EIA Report.</p> <p>9. Specialist reports detailing the specialist findings can be found in Annex D of the EIA Report. the Impact Assessment Methodology used can be found in Chapter 6 of the EIA Report.</p>
Margi	Blewett	KZN Wildlife	<p>10. There is no acknowledgement that South Africa has a responsibility to respond to the Paris Agreement on climate change (COP21). South Africa needs to achieve a 42% reduction of its carbon emissions over by 2025, developing the offshore oil and gas sector will undermine this.</p> <p>11. Why did Operation Phakisa not have a renewable energy component? This would be more strategic, globally acceptable and foreign investment opportunities would most likely have been greater.</p> <p>12. There is disregard for the precautionary principle, as</p>	<p>10. The Paris Agreement (United Nations Framework Convention on Climate Change) 2016 has been added to Chapter 2 of the EIA Report. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>11. Noted. Operation Phakisa is an initiative of the South African government. This initiative was designed to fast track the implementation of solutions on critical development issues. This is a unique initiative to</p>

			outlined in the National Environmental Management Act, which is supposed to be applied to developments where there is little known or little understanding about the environmental impacts.	<p>address issues highlighted in the National Development Plan (NDP) 2030 such as poverty, unemployment and inequality. Changes to operation Phakisa are therefore out of the scope of this project and not subject to this application.</p> <p>12. Based on the precautionary principle has been used in the assessment of impacts if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed. These have been assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report).</p>
Margi	Blewett	KZN Wildlife	13. Sound and additional noise in the water has been identified to interrupt the communication, reproduction, navigation and eating habits essential to the survival of marine life. In addition to the operational noise of the drilling, directed seismic surveys are expected to be undertaken and these are extremely detrimental to marine fauna. Additional sound in the water poses an unacceptable risk of harm to marine life at the species and population level, the full extent of which will not be understood until long after the harm has occurred.	<p>13. The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14).</p> <p>The activity that has been included in the EIA Report is exploration drilling and does not include seismic surveys in the scope of the project. A seismic survey involves a seismic vessel, using airguns to produce sound waves to understand the subsea geology. Exploration drilling on the other hand uses a drilling vessel/rig to drill into the seabed in areas identified during the seismic survey as having potential hydrocarbons.</p>
			14. A considerable amount of artificial light (electric lighting, gas flares, and Remotely Operated Vehicle lights) will be	14. The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal

			introduced to the environment around the operation. Artificial light is known to potentially affect ecological processes in the upper ocean, such as diel vertical migration of plankton, disrupt the extremely sensitive visual systems, attracting numerous species, including squid, large predatory fishes, and birds.	receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling. As discussed in Chapter 7 of the EIA Report, the increase in ambient lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.
Margi	Blewett	KZN Wildlife	<p>15. The mitigation measures proposed for the exploration drilling are superficial, such as regular maintenance of machinery to ensure less noise, less leaks etc. This is not mitigation, this is equipment maintenance.</p> <p>I trust ERM and the regulator will consider the above objection / concerns raised above.</p>	15. Mitigation measures also take into account control measures and routine activities, such as maintenance, as well as additional measures such the planning of helicopter flight paths to reduce the effect of the activity. Maintenance is essential to reduce the transmission of noise and the emission to air. The EMPr (Chapter 9 of the EIA Report), details these mitigation measures based on the information from Chapter 3 and Chapter 7.
Barbara Lyn	Fountain	Private	<p>I am no scientist or specialist in any specific field but am a 70 year old citizen of the University of Life and Logic of this country; having spent my entire life on and near to the ocean.</p> <p>I object to this exploration because of concerns and fear of the future for those that still need to survive and have a justified right to enjoy what I shall soon be leaving behind.</p> <p>I feel that insufficient and conclusive evidence is available to convince me that this is the only way of bringing in economy or providing. There is disregard for the precautionary principle, as outlined in the National Environmental Management Act, which is supposed to be applied to developments where there is little known or little understanding about the environmental impacts.</p> <p>1. The EIA is clear that there are many unknowns and seem to lack the required proof of the full impact such drilling will have on not only our marine environment, fisheries, tourism, etc. some of the ratings appear to be of opinion and not based on any science because the impacts are listed as unknown in so many cases.</p>	Your objection is acknowledged. However, there is sufficient secondary data available to assess the impacts to marine and coastal ecology, fisheries, tourism and heritage from the project activities. Based on the precautionary principle if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report). The project is not anticipated to have any impact on the local economy, such as fishing and tourism, under normal operating conditions as the location of the project is over 60 km from the shoreline. The results of the ROV will be communicated to the competent authority.
Barbara Lyn	Fountain	Private	2. Sound and additional noise in the water has been identified to interrupt the communication, reproduction, navigation and eating habits essential to the survival of marine life. In addition to the operational noise of the drilling, directed seismic surveys are expected to be undertaken and these are	The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to



			<p>extremely detrimental to marine fauna. Additional sound in the water poses an unacceptable risk of harm to marine life at the species and population level, the full extent of which will not be understood until long after the harm has occurred.</p>	<p>both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards. Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p>
Barbara Lyn	Fountain	Private	<p>3. A considerable amount of artificial light (electric lighting, gas flares, and Remotely Operated Vehicle lights will be introduced to the environment around the operation. Artificial light is known to potentially affect ecological processes in the upper ocean, such as diel vertical migration of plankton, disrupt the extremely sensitive visual systems, attracting</p>	<p>The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling. As discussed in Chapter 7 of the EIA Report, the increase in ambient</p>

			numerous species, including squid, large predatory fishes, and birds.	lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.
Barbara Lyn	Fountain	Private	4. The Agulhas current is one of the fastest flowing currents in the world, the oil company has never drilled in this current, how can they be certain they have the ability to undertake this task without causing a disaster?	<p>4. Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guaranteed by redundancy stability and positioning control equipment, including thrusters, GPS sensors, wind sensors, motion sensors and acoustic transponder system. In extreme weather conditions the drillship would make the well safe and then disconnect and move to a place of shelter until conditions improve. Drilling would recommence after it is determined to be safe to do so.</p> <p>With regards to the deepwater offshore currents exhibited in Block ER236, Eni has performed a Metocean study for both northern and southern area. The modelling study performed on ER236, allowed Eni to define a 3D circulation model, aimed at describing the hydrodynamic characterization of the block. The study consists of a first phase of acquisition and comparison of two different oceanographic databases, whose data (current velocity and direction, temperature and salinity) are defined along the entire water column. Based on their screening and analysis, a model has been generated with a strongly resampling to obtain an extremely high resolution. This allowed Eni to simulate the distribution of current intensity and direction, temperature and salinity over a time period of 6 years. Additionally, a wave and wind characterization, over a period of 10 years, has been carried out aimed at finalizing the riser analysis.</p>
Barbara Lyn	Fountain	Private	5. What happens after the drilling is complete and the well is plugged – who is responsible to check that doesn't leak, 10, 20 or 100 years from now? The country does not have the money nor the manpower to ensure the policing or any form of any attempted sustainable environmental recovery	<p>5. At the end of drilling and testing operations, prior to leaving location, the well will be plugged and abandoned (P&amp;A). The scope of well plugging and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented.</p> <p>A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are</p>

				<p>configured so that no future intervention is required. The wellhead and seabed will be surveyed by a ROV after well(s) plug and abandonment (“decommissioning”). Further monitoring of the wellhead after decommissioning is not required, considering that the plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well.</p> <p>Long-term (hundreds, thousands years, theoretically more) corrosion and natural erosion of wellheads left at the seabed won’t affect the integrity of the sealing of the well.</p> <p>In fact the presence or the removal of the wellhead at the seabed is immaterial to the integrity and longevity of the seal inside plugged and abandoned wells, i.e. the well head is not part of the abandoned system. Eni follows plugging and abandoning procedures based on the principle of multiple barriers from a possible flow zone and surface. This means that plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well; cement plugs and cemented casing constructed in the hole are extremely effective to guarantee the integrity of the seal and are configured so that no future intervention is required. This is international best practice and is demonstrated around the world in plug and abandon procedures, without the requirement for further monitoring. Eni follows P&amp;A procedures in compliance with Industry Best Practices, which include API-RP-96 (American regulation), OGUK-OP006 (UK regulation) and NORSOK D-010 (Norwegian Regulation), all of which are applied in fields where Eni is operators (e.g. UK, North Sea, GOM, Mediterranean sea, Far and middle East, Australia and West Africa).</p> <p>Cement plugs are tested and the results of such tests will be included in final well report to be submitted to Authority. Prior to leaving the location, a final ROV (a remote operating vehicle equipped with monitoring tools and camera) survey will be conducted at the location to verify the condition of the well site, including detection of absence of leaks. The video and report of final site survey will be included in final well report and provided to the Authority.</p>
Barbara Lyn	Fountain	Private	6. The ‘neat’, yet misleading posters at the open house meetings, were just smoke and mirrors with inconclusive information; using terms like ‘very unlikely’. That is similar to the definition of an ‘accident’ and cannot be predicted.	<p>6. The unplanned and oil spill posters both explained that the probability of a blowout is very low where the frequency of occurrence is <math>2.5 \times 10^{-4}</math>, 1 case in 4,000 drilled wells (OGP Report, 2010). Eni uses new procedures, safeguards and technology that reduces this frequency of occurrence to one in 400,000 wells drilled.</p> <p>It should be noted that the term unlikely has been quantified with</p>

				probability ratings i.e. the use of term 'unlikely' has a quantitative reference
Barbara Lyn	Fountain	Private	7. Why does South Africa not have a national oil spill contingency plan yet?	7. The national oil spill contingency plan is out of the scope of this project and not subject to the proposed application. It should also be noted that South Africa has a draft National Oil Spill Contingency Plan and Eni will develop its own OSCP in line with the nationally adopted IMS structure, which has been adopted in the NOSCP. Refer to <a href="http://www.giwacaf.net/wp-content/uploads/pdf/plan_za_en.pdf">http://www.giwacaf.net/wp-content/uploads/pdf/plan_za_en.pdf</a> for further information.
Barbara Lyn	Fountain	Private	8. The EIA makes reference to the high possibility of invasive species through ballast water and on drilling equipment. Invasive Species can have severe, detrimental economic and ecological effects and the extent of these is only beginning to be appreciated by economists and policy makers in South Africa. Invasions have the potential to alter ecosystems which can result in significant negative environmental and socio-economic impacts.	The major risk of transfer of invasive species is when species are transferred from similar environment such as depth, temperature and other factors that enable one species to potentially compete with the native species present. This has been seen in South Africa where the vectors are identified as marine fouling on ships, ballast water and from aquaculture of non-native species and South African Ports a potential source. The IMO requirements for Ballast Water Management have been established with the objective to minimize risk of transfer. The International Convention for the Control and Management of Ships' Ballast Water and Sediments require all ships to implement a Ballast Water and Sediments Management Plan. All ships will have to carry a Ballast Water Record Book and will be required to carry out ballast water management procedures to a given standard. Measures include: <ul style="list-style-type: none"> <li>• Compile a Ballast Water Management Plan, which aims to ensure that de- and re-ballasting is undertaken in terms of the IMO 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments.</li> <li>• Use adequate filtration procedures during loading in order to avoid the uptake of potentially harmful aquatic organisms, pathogens and sediment that may contain such organisms.</li> <li>• Whenever possible, conduct the exchange of ballast water at least 200 nm (<math>\pm</math> 370 km) from the nearest land and in water of at least 200m depth. Where this is not feasible, the exchange should be as far from the nearest land as possible, and in all cases a minimum of 50nm (<math>\pm</math> 93 km) from the nearest land and preferably in water at least 200 m in depth.</li> </ul> Based on the implementation of these measures the risk was considered low and was screened out.
Barbara Lyn	Fountain	Private	9. There is no acknowledgement that South Africa has a responsibility to respond to the Paris Agreement on climate change (COP21). South Africa needs to achieve a 42% reduction of its carbon emissions over by 2025, developing the offshore oil and gas sector will undermine this.	9. The Paris Agreement (United Nations Framework Convention on Climate Change) 2016 has been added to Chapter 2 of the EIA Report. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.

Barbara Lyn	Fountain	Private	<p>10. Why did Operation Phakisa not have a renewable energy component? This would be more strategic and globally acceptable and foreign investment opportunities would most likely have been greater.</p>	<p>10. Noted. Operation Phakisa is an initiative of the South African government. This initiative was designed to fast track the implementation of solutions on critical development issues. This is a unique initiative to address issues highlighted in the National Development Plan (NDP) 2030 such as poverty, unemployment and inequality. Changes to operation Phakisa are out of the scope of this project and not subject to this application.</p>
Barbara Lyn	Fountain	Private	<p>11 The mitigation measures proposed for the exploration drilling are superficial, such as regular maintenance of machinery to ensure less noise, less leaks etc. This is not mitigation, this is equipment maintenance.</p> <p>There are just so many reasons as to why this proposed drilling is just WRONG.</p> <p>None of the meetings I have attended have given me just one small assurance that we are doing the right thing here.</p> <p>I am not holding my breath that you will even pretend to read and digest these concerns, but one can only help that logical sensibility will prevail over the current inconsideration of the future of my ocean.....your ocean, our children's children?</p>	<p>11. Mitigation measures also take into account control measures and routine activities, such as maintenance, as well as additional measures such the planning of helicopter flight paths to reduce the effect of the activity. Maintenance is essential to reduce the transmission of noise. The EMPr (Chapter 9 of the EIA Report), details these mitigation measures based on the information from Chapter 3 and Chapter 7.</p> <p>In response to your concern after meetings. We appreciate that you have taken the time to attend. As you know, the purpose of these meetings is to enable Interested &amp; Affected Parties to understand the project better. Unfortunately, we did suffer sever disruption at some of the meetings which meant that people who wanted to discuss the project were denied the opportunity.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<p>Referring to ENI's proposal, we want to raise some major environmental concerns, in particular:</p> <p>1. Wildlife:</p> <ul style="list-style-type: none"> <li>Heritage and prehistoric fish species are going be to put at risk. The Coelacanth dates back over 420 million years, grow up to 2 meters in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations and sound waves which have been proven by multiple studies</li> </ul>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>The Marine Ecology Study (Annex D1 of the EIA Report) identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994). Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from</p>

			<p>and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.</p>	<p>drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005). As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly</p>
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				unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>Many species of turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species populating the South African coasts.</li> </ul>	Noted, these species are of high conservation importance
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.</li> </ul>	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere meters from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while Bryde's whales are found slightly further offshore all year round.</li> </ul>	Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Alexia	Abnett	Southern African Fight for Rhinos	<p>2. The Environment</p> <ul style="list-style-type: none"> <li>Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</li> <li>Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</li> <li>Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.</li> <li>We therefore would demand that a full survey of such benthic biota is established prior to the drilling process and that this is monitored as to its state of health.</li> </ul>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p> <p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on theses receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has</p>

				committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).
Alexia	Abnett	Southern African Fight for Rhinos	<p>3. We support the prevention and avoidance of negative impacts</p> <ul style="list-style-type: none"> <li>• We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injury 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which</p>



				<p>noise becomes 'trapped' (sound channels), bouncing off the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management, the impact is assessed as Minor to Negligible.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</li> </ul>	<p>The Marine Ecology Study (Annex D1) described the plankton abundance as seasonally highly variable and patchy in the Project Area. This is due to the fact that phytoplankton are drifting microscopic marine algae that live in the surface layers of the ocean called the epipelagic zone and are not strong enough to swim against ocean currents. Zooplankton comprise small crustaceans and other animals that have a weak ability to swim but generally float with ocean currents. They feed on other phytoplankton and larvae. The dynamic nature of the currents the area means that plankton populations will continue to be brought into the Project Area and therefore any loss of plankton is unlikely to have ecosystem-wide effects.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>Very worryingly, the east current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible. The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range</p>

				<p>of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005). As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <ul style="list-style-type: none"> <li>• Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</li> </ul>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures</p>

				<p>which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</li> </ul>	Noted, desalination does not form part of the scope of this project.
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</li> </ul>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community-based activities will occur. The results of the specialist studies and impact assessment indicates no effect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <ul style="list-style-type: none"> <li>Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to</li> </ul>	The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an

			<p>provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</p> <ul style="list-style-type: none"> <li>• The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</li> <li>• The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</li> <li>• We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</li> </ul>	<p>Incident Management Organization (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardized national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p>
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				<p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rough offshore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, seabed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultra-deep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date</p>
Alexia	Abnett		<p>6. Political consideration</p> <ul style="list-style-type: none"> <li>• The protected areas are only 5% of the oceans around South Africa which is far from the target of 10% to be met by 2020 as South Africa has committed to as a Member of the UN. In 2014 the president of South Africa announced that 5% protection would be achieved by 2016 and 10% by 2020, through the establishment of an expanded network of Marine Protected Areas (MPAs) Accordingly, in February 2016 the Minister of Environmental Affairs published the intention to declare a representative network of 21 new, expanded Marine Protected Areas and invited the public and key stakeholders to comment. These areas were identified as important to support fisheries recovery and productivity, to protect fragile and sensitive habitats and endangered species, to help combat climate change, and to ensure resilient and healthy oceans that can support coastal communities and a sustainable blue economy into the future.</li> <li>• There have also been concerns raised that some delays may be linked to the fact that by 2014 the Petroleum Agency of</li> </ul>	<p>ERM is not in a position to comment on the pace at which Government has rolled out the protection of marine resources or the allocation of concession areas by the Government. It is acknowledged that MPAs are important for the protection of marine resources, however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the drilling areas of interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Therefore, ERM cannot comment on the timeline of the MPA network promulgation. The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at</p>

			South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration.	the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.
Alexia	Abnett		<ul style="list-style-type: none"> <li>• South Africa's Government has not even started investing in green energy yet. On the contrary, it carries on allowing the expansion of coal mining and fossil fuels investments. Many countries of the third world are far more advanced than South Africa in this sense. The Government should finally put green investments in its agenda and stop allowing these sorts of explorations.</li> <li>• Sewerage outfalls of big cities like Cape Town are already pouring an average of 40 million litres of untreated sewage per day, with their chemical content, straight into the ocean from the submerged outfall pipes located normally within 2 km offshore. In this context of marine environmental dis-attention, drilling oil near or upstream protected areas full of genuine and untouched ecosystems should be avoided and unmistakably forbidden.</li> </ul>	<p>The South African Government has invested "green energy" through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), which was established by the Department of Energy (DoE) in conjunction with the National Treasury and the Development Bank of Southern Africa (DBSA) at the end of 2010. Since then, 2,094MW of wind power and 1,450MW of solar power have been developed and now contribute to the Country's energy mix.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>• In addition, and very worryingly, it has been reported that Chinese vessels are allowed to overfish in South African waters and that they regularly abandon industrial fishnets, once damaged, in the water; this has been reported to severely affect marine life as well as single-use plastic still heavily used at any industrial level in South Africa.</li> </ul>	<p>ERM is not in a position to comment on the activity of fishing vessels in South African waters.</p> <p>It must be noted, however, that Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project, as described in the EMPr (Chapter 9) of this EIA Report. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, and dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78 (International Convention for the Prevention of Pollution at Sea)</p>
Alexia	Abnett	Southern African Fight for Rhinos	<p>7. Conclusion</p> <ul style="list-style-type: none"> <li>• A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> </ul>	<p>Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds.</p> <p>Related to the dispersants, their composition and available quantities will be specified in the OSCP in the list of emergency, containment and response equipment and products. All Their chemical products</p>

				composition will be duly specified in the OSCP with the inclusion of the Material Safety Data Sheets that will provide include also information on toxicological properties.
Alexia	Abnett	Southern African Fight for Rhinos	<ul style="list-style-type: none"> <li>• We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich people of society whereby once again the poor gets dealt a raw deal.</li> <li>• Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration. WE STRONGLY OPPOSE THE APPROVAL OF THIS PROJECT</li> </ul>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</p>
Nicky	West	Computacenter	<p>Referring to ENI's proposal, we want to raise our concerns, in particular:</p> <p>1. Wildlife:</p> <ul style="list-style-type: none"> <li>• Heritage and prehistoric fish species are going be to put at risk. The Coelacanth dates back 420 million years, grow up to 2 meters in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The</li> </ul>	<p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 metre water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the</p>

			<p>Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations and sound waves which have been proven by multiple studies and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.</p>	<p>areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as “presence unknown” but assessed as being ‘present’ and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>Many species of Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species populating the South African coasts.</li> </ul>	<p>Noted, these species are of high conservation importance</p>
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.</li> </ul>	<p>Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment</p>
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere meters from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while Bryde's whales are found slightly further offshore all year round.</li> </ul>	<p>Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.</p>
Nicky	West	Computacenter	<p>2. The Environment</p> <ul style="list-style-type: none"> <li>Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</li> <li>Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur</li> </ul>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p>



			<p>during the production and transport of crude oil and pollutes the waters surrounding the rig.</p> <ul style="list-style-type: none"> <li>Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.</li> <li>We therefore would demand that a full survey of such bottom living organism is established prior to the drilling process and that this is monitored as to its state of health.</li> </ul>	<p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p> <p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).</p>
Nicky	West	Computacenter	<p>3. We support the prevention and avoidance of negative impacts</p> <ul style="list-style-type: none"> <li>We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injury 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive</p>

				<p>displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards. Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p>
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship</p>

				<p>and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localized behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is</p>
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				not in the range to cause damage or injury; avoidance and behavioural impact is possible.G221
			<ul style="list-style-type: none"> <li>• Very worryingly, the East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current.</li> </ul>	The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.
Nicky	West	Computacenter	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <ul style="list-style-type: none"> <li>• Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</li> </ul>	<p>The Project activities will take place 60km offshore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event on marine based livelihoods are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>• Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</li> </ul>	Noted, desalination does not form part of the scope of this project.
Nicky	West	Computacenter	<ul style="list-style-type: none"> <li>• With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds,</li> </ul>	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the

			<p>wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p>	<p>exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no effect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Nicky	West	Computacenter	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <ul style="list-style-type: none"> <li>• Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</li> <li>• The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</li> <li>• The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</li> <li>• We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</li> </ul>	<p>The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organization (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardized national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by</p>

				<p>international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date</p>
			<p>6. Political consideration</p> <ul style="list-style-type: none"> <li>• The protected areas are only 0.4% of the oceans around South Africa which is far from the target of 10% to be met by</li> </ul>	<p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>It is acknowledged that MPAs are important for the protection of marine</p>

			<p>2020 as South Africa has committed to as a Member of the UN. In 2014 the president of South Africa announced that 5% protection would be achieved by 2016 and 10% by 2020, through the establishment of an expanded network of Marine Protected Areas (MPAs) Accordingly, in February 2016 the Minister of Environmental Affairs published the intention to declare a representative network of 21 new, expanded Marine Protected Areas and invited the public and key stakeholders to comment. These areas were identified as important to support fisheries recovery and productivity, to protect fragile and sensitive habitats and endangered species, to help combat climate change, and to ensure resilient and healthy oceans that can support coastal communities and a sustainable blue economy into the future. Unfortunately, over four years later stakeholders have had no feedback from the Department of Environment Affairs about when the MPAs will be declared.</p>	<p>resources however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report). The Area of Interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs (24 October 2018, Department of Environmental Affairs, <a href="http://www.sanbi.org">www.sanbi.org</a>). The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
			<ul style="list-style-type: none"> <li>• There have also been concerns raised that the delay may be linked to the fact that by 2014 the Petroleum Agency of South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration.</li> <li>• South Africa's Government has not even started investing in green energy yet. On the contrary, it carries on allowing the expansion of coal mining and fossil fuels investments. Many countries of the third world are far more advanced than South Africa in this sense. The Government should finally put green investments in its agenda and stop allowing these kind of explorations.</li> <li>• In addition and very worryingly, it has been reported that Chinese vessels are allowed to overfish in South African waters and that they regularly abandon industrial fishnets, once damaged, in the water; this has been reported to severely affect marine life as well as single-use plastic still heavily used at any industrial level in South Africa.</li> </ul>	<p>The South African Government has invested "green energy" through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), which was established by the Department of Energy (DoE) in conjunction with the National Treasury and the Development Bank of Southern Africa (DBSA) at the end of 2010. Since then, 2,094MW of wind power and 1,450MW of solar power have been developed and now contribute to the Country's energy mix.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p> <p>ERM is not in a position to comment on the activity of fishing vessels in South African waters.</p>

			<ul style="list-style-type: none"> <li>• Sewerage outfalls of big cities like Cape Town are already pouring an average of 40 million litres of untreated sewage per day, with their chemical content, straight into the ocean from the submerged outfall pipes located normally within 2 km offshore. In this context of marine environmental dis-attention, drilling oil near or upstream protected areas full of genuine and untouched ecosystems should be avoided and unmistakably forbidden.</li> </ul>	<p>It must be noted, however, that Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project, as described in the EMPr (Chapter 9) of this EIA Report. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78 (International Convention for the Prevention of Pollution at Sea).</p>
Nicky	West	Computacenter	<p>7. Conclusion</p> <ul style="list-style-type: none"> <li>• The protection of African communities and people, their health and wellness is for us of crucial importance.</li> <li>• The protection of the pre-historic Coelacanth species and of so many other iconic marine species, are for us of crucial importance.</li> <li>• A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> <li>• We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich people of society whereby once again the poor gets dealt a raw deal.</li> <li>• This project seems to not even offer any employment or benefit opportunity for South Africans.</li> <li>• Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and</li> </ul>	<p>7. The project is located over 60 km offshore. However, this project has taken into consideration the potential impact of an oil spill on coastal communities.</p> <ul style="list-style-type: none"> <li>• Noted, the EIA Report has considered the conservation importance of marine fauna present in the Project Area in Chapter 4 of the EIA Report.</li> <li>• Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst-case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds. The use and type of dispersant is a contingency of boundaries (e.g. booms) and recovery (e.g. skimmers) systems and will be detailed and authorized by competent authority within OSCP.</li> <li>• Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. ERM's role does not include replying to the stated assertions and comments to the Government's activity.</li> <li>• Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</li> <li>• The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</li> </ul>



			<p>tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration. WE STRONGLY OPPOSE THE APPROVAL OF THIS PROJECT</p>	
Jeff	White	Private	<p>I am a retired professional and am living in Scottburgh. My family frequently walk on the beach and enjoy the southern coastal lifestyle. We are very concerned about the proposed work programme and the EIA that has been prepared, for the following reasons:</p> <p>1; The dangers of offshore drilling was highlighted in the events of the BP Deepwater Horizon drilling platform disaster, but there are significant differences. The drill depth of the target area is deeper than that in the Bay of Mexico, there is a significant current and considerable variability in topography of the seabed. The rapid changes in wind and current would make the stability of any drill rig (even a ship based drill rig) very difficult to maintain. Hence the comments about the "probability of a blowout is very low" is not only an unknown factor but also a higher risk element than in many offshore drill areas.</p> <p>2; It is impossible to predict accidents (by definition they cannot be avoided) but the casual way that the EIA explains away that 'international standards' and best practices would suffice to avoid a major environmental disaster is way too flippant to be accepted. Every area you conduct exploration would be unique and consequently have plenty of uncertainties and risks. The EIA needs to allay the concerns of ALL residents of this area that the dangers are seriously being considered. The "spill" in the Gulf of Mexico happened in a first world country with many mitigating services readily available and technical expertise at hand. The circumstances off the South African coast is completely different. What steps do you plan to counteract the considerable higher risk of a disaster happening here?</p>	<p>1. The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this, the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution.</p> <p>Chapter 8 of the EIA Report and supporting Oil Spill Modelling Report (Annex D4) evaluated the risk of an oil spill from a blowout as rare based on the OGP Risk Assessment Data Directory, Report No. 434-2, March 2010.</p> <p>2. The Gulf of Mexico spill was caused by a voluntary deviation from drilling best practices. There are today almost 2 million oil wells only in the United States, and no accidents comparable to Macondo have ever happened. Eni assures that the drilling program and operations follow up is executed with respect to international ISO/API standards and industry best practice. Eni will adopt best in class tools and equipment to prevent accidents and, in case of accident, mitigate the impact and safely shut in the well.</p> <p>Additionally, the drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors. The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this, the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution.</p>
Jeff	White	Private	<p>3; Given that after all the events of the BP disaster, that many safety improvements might have generated subsequently in this industry, what procedures do you have in place to stop individuals (even directors) over-riding safety practices for the sake of greed or time constraints of production. Who polices your "best practices" programmes?</p>	<p>Eni performs safety drilling operations in compliance with ISO/API standards and oil industry best practices. Over-riding safety practices from individuals is definitively not an Eni allowed practice and several control measures are adopted through job preparation (e.g. designing and drilling program preparation) and field operations phases. Eni is commitment to the highest safety standards, which is demonstrated through leading successful case histories for off-shore operations. In any kind of deviation, or any operative necessity to invoke change from the</p>

				drilling program, written procedures must be duly assessed prior to the modification/execution; a job risk safety analysis and assessment must be performed and a management of change procedure is set in place by the Company. Any deviation from the daily program must be approved not only by the company representative but also from rig contractors technical leaders and service contractor's supervisor. If further assistance is needed from on-shore, a technical support team is available for each company. Eni guarantees a 24/7 technical support to offshore team through a drilling superintendent, a recognized competent and expert senior staff able to support and provide assistance for any drilling operations. Eni's contractors must reflect this no-derogation to safety statement and mind-set.
Jeff	White	Private	4; The Oil Industry has a "dirty" reputation, largely due to the failure to consider environmental consequences in the work environment. The marine environment is in very delicate balance; in fact it is already showing the signs of over-fishing and mismanagement of waste disposal. Any further contaminant could have very serious and permanent effect on the whole of this coastline, and all of those that currently 'survive' from the merger 'pickings' of this ocean. The "very unlikely" event of oil spills and effects due to drill cuttings, could have a much larger effect than the EIA would like anyone to believe. Therefore you need urgently to rethink the entire contingency planning for there is a huge socio-economic impact at stake here.	<p>4 Oil spill modelling was conducted to predict the fate and behaviour of the oil in the unlikely event of an oil spill. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures, which will be put into place in the event of an accidental spill. The Oil Spill modelling Report may be found in Annex D 4 and the risk assessment together with the detailed measures that will be undertaken to minimize the likelihood of a spill and what response actions are presented in Chapter 8 Unplanned/Accidental Events and Chapter 9 EMP. The potential effects of the proposed drilling activities associated with exploration, on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The impact of accidental spills on marine fauna has been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance. Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the</p>

				<p>Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project. Eni's waste management principle is to do the following: in the order of priority: reduce, reuse, recycle, recover, treat, and dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p> <p>The OSCP shall be developed in consultation with the South African Maritime Safety Authority (SAMSA). The OSCP prepared by Eni will be submitted to SAMSA for review. SAMSA will review and approve the OSCP. On approval, SAMSA will issue a Pollution Safety Certificate</p>
Jeff	White	Private	<p>5; The exploration survey methods prior to drilling include the use of seismic surveys. In the marine environment seismic surveys can result in differing damage levels to different marine fauna. Large animals can be deafened, disorientated and damaged, smaller creatures can be decimated by the effects of sonic activity. So ahead of any drilling action, and the concomitant contamination issues, the marine environment is already weakened by the exploration programme. Given that this area is host to some of the most diverse species of marine life forms (many of which maybe under threat already) the proposed drilling programme must bear these factors foremost in the EIA studies and proposals. The "mitigating measures" suggested in the EIA do not indicate that any of these factors have been considered.</p>	<p>5. The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report</p>
Jeff	White	Private	<p>6; The trail of the 'communication' and interaction with the "interested and affected parties" is not good. This leads to many opportunities to accuse certain parties of misrepresentation or misleading the facts. This is not right and increases the resistance to proposals and any changes that may affect the lives of those, that live in frequently very difficult</p>	<p>6. You objection has been acknowledged. Refer to Chapter 6 of the Scoping Report and Chapter 5 of the EIA Reports for a detailed description of the context, purpose, objectives and conduct of the Public Participation Process. Public participation, with regards to EIA's in South Africa is determined by the principles of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and elaborated upon in 'GN 657: Guideline 4: Public Participation' (Department of</p>

			<p>circumstances, on the margin of survival. Any adverse change to the marine balance could have a catastrophic effect on the livelihood of many in the coastal regions of Africa, and not simply the immediate coastline of KZN.</p> <p>Please register my objection to the proposed oil and gas exploration programme and the EIA as presented</p>	<p>Environmental Affairs, 2017), which states that: "Public participation process" in relation to the assessment of the environmental impact of any application for an environmental authorization, is defined in terms of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) as a process by which potential interested and affected parties are given opportunity to comment on, or raise issues relevant to, the application." ERM has complied with the requirements set out for a fair and inclusive process as detailed (and proven) in the EIA. Chapter 5.1 of the EIA states that Public consultation is an inclusive and culturally appropriate process, which involves sharing information and knowledge, seeking to understand the concerns of others and building relationships based on collaboration. It allows stakeholders to understand the risks, impacts and opportunities of the project in order to achieve positive outcomes. The public participation process is designed to provide information to and receive feedback from I&amp;APs throughout the EIA process, thus providing organizations and individuals with an opportunity to raise concerns, make comments and suggestions regarding the proposed project. Stakeholders and I&amp;APs were encouraged to register and participate throughout the process, as detailed in Table 5.1 of the EIA Report.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa</p> <p>1. We refer to our letter dated 11 October 2018, to your emailed response dated 26 October 2018, and to Adrian Pole's telephone conversation with PRDW's Mr S. Luger on 2 November 2018.</p>	Noted.
Adrian	Pole	Adrian Pole Attorneys	<p>2. We note that the time period within which to comment on the Draft EIA Report was extended by two weeks to 8 November 2018. Having regard to the complexity of the EIA Report and annexures, taken together with the scale of the anticipated impacts of a catastrophic oil spill, the high sensitivity of the potentially affected environment (including but not limited to sensitive open ocean, coastal and estuarine areas), and the high degree of controversy of the project, we persist with our view that the time period afforded to I&amp;APs to review the relevant documentation, obtain necessary technical advice and input, and to draft comments/submissions is unreasonable.</p>	<p>ERM records that it extended the comment period by 2 weeks, and the comment period closed on 8 November 2018. Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 days and ERM extended this to 45 days, which is more than the minimum required by law. ERM therefore is of the view that a reasonable and sufficient time period was afforded to interested and affected persons to provide comments. ERM notes further that under the NEMA EIA Regulations (at Regulation 23(1)(a)), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, extending the comment period by longer than two weeks would prevent us from responding to all comments appropriately and from finalising in the EIA within the legally prescribed time period.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>3. We also note your offer to facilitate a call between ourselves and the oil spill modellers (and other specialists) to allow us an</p>	<p>ERM and Eni are obliged to receive, record and respond to all comments received from stakeholders during the EIA public participation</p>

			<p>opportunity to engage with them and ask questions. We have attempted to speak directly with Mr. S. Luger of PRDW to seek clarification on some aspects of his Peer Review of ERM Spill Report, but were advised to submit our queries through ERM by email.</p>	<p>process and therefore advised all specialists and the peer reviewer that queries from stakeholders should be referred to ERM (Annex B and C of the Final EIA Report). The offer to facilitate a call with the ERM modellers was an attempt in good faith to ensure that stakeholders had accurate and complete information to on which to base their comments. Stephen Luger, from PRDW, was appointed as an independent peer reviewer and is independent from the ERM modelling team. Stephen advised WILDTRUST to submit their comments/ questions directly to ERM. This was to ensure the comments/ questions could be addressed and recorded as part of the EIA process.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4. In the circumstances, we set out below some of our queries in respect of ERM's Oil Spill Modelling (OSM) report and PRDW's Peer Review of ERM Spill Report:</p> <p>4.1. ERM indicates at p116 of its OSM report in response to PRDW Comment #2 that the 'input data for the model run are based on lithology and preliminary reservoir assessment and interpretation starting from seismic data. During the second quarter of 2018, new data interpretation were available from 2D/3D seismic data acquired by some multi-client providers in 2016 and 2018'.(a) Did ERM (or anyone else) run a modelling on the previous data (i.e. before the new data became available during the second quarter of 2018)? If so, please provide us with a copy of these modelling results and any previous versions of the OSM report reflecting these results. (b) If a modelling on the previous data was run, did PRDW review this previous model? If so, please provide us with a copy of the Peer Review report/s of this previous modelling. (c) Did ERM review the new data and independently verify its reliability? (d) Did PRDW review the new data and independently verify its reliability? (e) Has the previous and new seismic data been included in the EIA Report or annexures? If not, please provide us with same, alternatively with your explanation for not including this data in the EIA Report or annexures</p>	<p>4.1 ERM had initially begun to prepare the model based on pre-defined input parameters without any corroboration to analogue geological field conditions for the area in question. A draft report was prepared on the initial data and preliminary comments were provided by the peer reviewer. Following this, further data become available and a revised report was prepared. The draft report cannot be shared as it was preliminary and the results had not been verified. The Oil Spill Modelling Report reflects the final verified and evaluated results (Annex D4 of the Final EIA Report). Unverified modelling results, outside of the context of an independent peer reviewed report, have not formed the basis of any conclusion drawn in the EIA Report. Review of the draft report would therefore skew the evaluation of results, and may in fact prevent a stakeholder from reaching an accurate conclusion as to the proposed activities.</p> <p>Neither ERM nor PRDW reviewed the analogue or seismic data as they are not petroleum geologists and review of data of this nature is outside of their responsibility. ERM and PRDW relied on the expertise of the Company (Eni) for the geological assessment, which is standard international practice. The seismic data (both previous and latest) is licensed from multi-client sources and is commercially sensitive and confidential information.</p> <p>Eni's licensed seismic data relates to the prospectively of the area in question and is not relevant to evaluating the environmental impact of Eni's proposed activities. Accordingly, Eni is not obliged to disclose this information.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4.2. ERM indicates in response to PRDW Comment #2 that 'based on analysis already finalized, the reservoir and production profiles are expected to be very similar to the same available in other subsea fields developed by Eni in Africa. For this reason the PI (productivity index), porosity, hydrocarbon properties and expected flow rate have been recalculated and optimized using real data from those similar fields'.</p>	<p>4.2 Eni provided the data for geological and geophysical properties, and ERM and PRDW did not have access to the underlying seismic data, for the reasons provided in the response to question 4.1.</p> <p>The recalculation and optimization of PI (productivity index), porosity, hydrocarbon properties and expected flow rates have been undertaken by Eni to ensure a more robust and optimized data set, which is based</p>

			<p>(a) What does 'analysis already finalized' refer to, and who conducted this analysis? Please provide us with a copy of this analysis.</p> <p>(b) Did ERM have access to the underlying data used for this analysis? If so, what steps did ERM take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?</p> <p>(c) Did PRDW have access to the underlying data used for this analysis? If so, what steps did PRDW take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?</p> <p>(d) Who did the 'recalculation and optimization' of the flow rates? Please provide us with a copy of the documentation relating to the initial calculation of the flow rates (before recalculation and optimization) and the recalculated and optimised flowrates.</p> <p>(e) Did PRDW have sight of and verify the flow rate calculations before they were recalculated and optimised?</p> <p>(f) Did PRDW have sight of any earlier version of the OSM report based on the data before recalculation and optimisation?</p> <p>(g) Did PRDW have sight of the new underlying data relied upon to recalculate and optimise the flowrates?</p>	<p>on West African analogues with similar field characteristics. Calculation of such parameters through an analogue field index is an accepted practice in the industry where there are no other reference explorative wells in the area.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4.3. ERM indicates in response to PRDW Comment #2 that 'the pore pressure prediction is computed using a sophisticated technology from the velocity analysis coming from the recent (2016) 3D seismic volume'.</p> <p>(a) Who computed the pore pressure predictions? Please provide a copy of this computation.</p> <p>(b) Why was the pore pressure prediction computed using the 2016 3D seismic volume rather than data from the 2018 multiclient seismic survey? Please provide us with a copy of the 2016 and 2018 seismic data referred to.</p>	<p>4.3 ERM used the results of Eni's pore pressure prediction calculations in terms of the hydrocarbon properties and expected flow rates that were input into the model. Eni provided the pore pressure computations. The pore pressure prediction computation was performed on the 2016 3D seismic data available at the time. The 2018 seismic data was not available at the time the calculation was undertaken, however the latest 3D interpretation confirms the pore pressure computations used. These calculations have not been provided due to their confidential nature.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4.4. ERM indicates in response to PRDW Comment #2 that 'for all the wells drilled in similar deepwater environment, an analogue approach was utilised for preparing the casing design and mud density, to keep the well under control while drilling'.</p> <p>(a) Please explain what is meant by an 'analogue approach'.</p> <p>(b) Please advise who conducted this analogue approach. If Eni, please indicate what steps were taken by ERM and PRDW to verify the suitability and reliability of this analogue approach.</p>	<p>4.4 An analogue approach is an example used for comparison. In oil and gas exploration, geoscientists and engineers compare results of seismic and geological interpretation with other fields demonstrating similar lithological characteristics, water depth and overall sedimentary sequence. This represents accepted practice in the industry for frontier (unexplored) exploration.</p> <p>Eni conducted the comparison and provided ERM and PRDW with the dataset. ERM and PRDW did not have access to the underlying data, for the reasons provided indicated in the response to question 4.1.</p> <p>The seismic data (both previous and latest) is licensed from multi-client</p>

			(c) Please provide us with a copy of any documentation or report in which this analogue approach is recorded.	sources and is commercially sensitive and confidential information. Eni's Multiclient seismic data relates to the viability of the area in question for prospecting and is not relevant to evaluating the environmental impact of Eni's proposed activities. Accordingly, Eni is not obliged to disclose this information.
Adrian	Pole	Adrian Pole Attorneys	<p>4.5. ERM indicates in response to PRDW Comment #2 that 'in the recent development of some African deepwater field, Eni has confirmed that those estimation has been confirmed during the subsequent drilling of the wells'.</p> <p>(a) Please indicate what steps were taken by ERM to verify the accuracy of these estimations indicated by Eni.</p> <p>(b) Please indicate what steps were taken by PRDW to verify the accuracy of these estimations indicated by Eni.</p>	4.5 The flow rates and spill durations were compared by PRDW to historical blowout events and were found to fall in the median range of the events reported in the UK Response to EC Impact Assessment on Offshore Regulation Report (GL Denton Report Number: AA/77-01-01/11959, November 2011) to verify the flow rates.
Adrian	Pole	Adrian Pole Attorneys	<p>4.6. ERM indicates in response to PRDW Comment #2 that 'during Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidity sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to ENI's experience in similar lithology in West Africa, which has allowed for optimizing the flow rate and PI parameters that, in the unrealistic situation that no mitigation (e.g. no BOP closure) will be applied, should provide a better estimation of flow rates'.</p> <p>(a) It is noted that the reservoir rocks at ER236 are 'thought to be' slope-basin floor pans. Please advise whether Eni or ERM is the source of this assumption. If Eni is the source, what steps were taken by ERM to verify the accuracy of this statement? If ERM is the source, please explain why this level of uncertainty is stated?</p> <p>(b) Did ERM rely on Eni's estimation of flow rates based on Eni's experience in similar lithology in West Africa? If so, did ERM have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?</p> <p>(c) Did PRDW rely on Eni's estimation of flow rates based on Eni's experience? If so, did PRDW have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?</p>	<p>4.6 ERM relied on Eni's estimations and this statement was provided by Eni based on their interpretation of the seismic data. It is accepted practice to rely on the geo-scientific expertise of the operator. As stated above, neither ERM nor PRDW reviewed the analogue or seismic data as they are not petroleum geologists and are therefore not responsible for reviewing these data. They relied on the expertise of Eni for the geological assessment and seismic interpretation.</p> <p>Based on Eni's extensive experience and confirmed by the interpretation carried out on the 2016 and 2018 seismic data, Eni's degree of uncertainty in the selection of the analogue field is low. ERM and PRDW are not reservoir specialists and therefore could not be the source of such studies.</p>

			(d) It is noted that based on the reservoir rocks being thought to be slop-basin floors and Eni's experience in West Africa, the flow rates and PI parameters were optimised and 'should' provide for a better estimation of flow rates. Please explain the level of uncertainty associated with the use of the word 'should'.	
Adrian	Pole	Adrian Pole Attorneys	<p>4.7. ERM indicates at p117 of its OSM report that PRDW comment # 4 asks for a 'clear explanation of why the blowout scenarios result in a lower impact than the other scenarios, despite involving much larger volumes of more persistent oil, e.g. is there any empirical data to support the model prediction that only 1% of the oil from the blowout will form a surface plume?'. In response, ERM state that 'the model results may be perceived that the impacts from the blowout are worse than from the diesel spill. That is not necessarily the case...'. (a) This response by ERM does not make sense, and is inherently contradictory. Is ERM attempting to explain why the blowout scenarios result in a lower impact than the other scenarios, or is it disputing that the OSM modelling results show that the blowout scenarios result in a lower impact than the other scenarios? Please provide a full, clear explanation in unambiguous language.</p>	<p>4.7 To clarify: the spill scenarios are different from each other and the simulations will show different effects. The blowout release from the reservoir simulates a large volume released but spread out over a long period of time compared to the diesel spill. The diesel spill is 5000 bbl. (795 m<sup>3</sup>) released in an hour, while the blowout (focusing on the 20-day scenario) releases 1,050 m<sup>3</sup>/day. This release then rises to the surface at different rates depending on the droplet sizes. This distributes the mass over a large volume of the ocean, where the mass with small droplet sizes can be trapped after the momentum of the blowout is lost. While some oil quickly rises directly above the reservoir, other smaller droplets will travel horizontally with the currents as it may take days for them to reach the surface. Once it reaches the surface, it is separate from the other oil that rose more quickly. Once on the surface, it evaporates, degrades, and submerges back into the water column by wind/wave effects. The net result is only a small fraction of the original amount left floating on the surface.</p> <p>Once the oil is on the surface, it will not stay in the same location but be transported by the currents, winds, and dispersion. Therefore, the next batch of oil to arrive at the surface does not necessarily add to the previous patch of oil; that oil has moved away, where it spreads out, weathers, and thins.</p> <p>Although more oil in the blowout cases reach the shorelines compared to the diesel and base oil spills, the threshold value qualifies the level of impact. A slick of minimum smothering thickness (1.0 µm) is unlikely to come ashore before weathering away into a thin sheen and no regions exceeded the 10 µm threshold for risks to birds and wildlife. Significant oiling (&gt;100 g/m<sup>2</sup>) is unlikely (less than 1% probability) to reach the shoreline. In all three scenarios, the Agulhas Currents spreads out the spilled mass to below the applied thresholds of concern. Details can be referenced in the Oil Spill Modelling Report Sections 5.4, 5.5, 5.6 and 5.7 (Annex D4).</p>
Adrian	Pole	Adrian Pole Attorneys	4.8. ERM indicates further in response to PRDW comment #4 that the 'placement of the blowout relative to the Agulhas Currents have provided a rather unique hydrodynamic arrangement protecting the shoreline with the strong	4.8 The currents used in the oil spill model were obtained from the HYCOM (HYbrid Coordinate Ocean Model) global circulation model. These data are freely accessible. PRDW has direct experience using HYCOM for similar studies around the world and has previously



			<p>southwestern transport parallel to the shores’.</p> <p>(a) Has PRDW had access to the underlying data used in the modelling for predicting current flows?</p> <p>(b) What steps (if any) did PRDW take to verify that the data used for the current flow predictions is representative and accurate?</p> <p>(c) What steps (if any) did PRDW take to verify the statement that the ‘Agulhas Currents have provided a rather unique arrangement protecting the shoreline with the strong southwestern transport parallel to the shores’?</p>	<p>validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. The strength and direction of the Agulhas Current in the study area is well established (e.g. Lutjeharms, JRE, (2007), Three decades of research on the greater Agulhas Current. Ocean Sci., 3, 129–147, 2007) and does not need to be further verified.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4.9. In its Peer Review of ERM Spill Report, PRDW points out with regard to ocean currents that ‘no validation of the results in the study area was presented, e.g. a comparison to local current meter measurements would be expected. Further, only a single snapshot in time of the current field was provided. Current roses or time-series would have provided evidence that the temporal characteristics of the currents applied in the model were realistic’.<sup>1</sup> PRDW also points out with regard to wind that ‘no validation of the results in the study area was presented, e.g. a comparison to local wind measurements would be expected. Further, no wind roses in the study area were presented which would have provided evidence that the statistical characteristics of the winds applied to the model were realistic’.<sup>2</sup> These issues were raised as ‘minor comments’. In its conclusion, PRDW state that ‘A couple of minor comments are also provided the record, but do not require any actions’.</p> <p>(a) Can PRDW please provide a clear, reasoned justification for concluding that no action was required by ERM to address these deficiencies in the modelling?</p> <p>(b) If these comments were addressed by ERM, please indicate where in the EIA Report or annexures these deficiencies have been addressed?</p>	<p>4.9 a) Regarding currents, HYCOM is a well-established model and PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p> <p>Regarding wind, the wind used by ERM was obtained from the Blended Sea Winds database, which is a product of NOAA’s National Climatic Data Centre (NCDC). The wind speeds are obtained from multiple satellite observations in order to minimise errors. The wind directions are obtained from the National Centres for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report.</p> <p>b) Considering the robustness of the HYCOM reanalysis, which assimilates field measurements into the model from “available satellite altimeter observations, satellite, and in-situ sea surface temperature as well as in-situ vertical temperature and salinity profiles from XBTs, Argo floats and moored buoys” (<a href="https://hycom.org/dataserver/gofs-3pt1/reanalysis">https://hycom.org/dataserver/gofs-3pt1/reanalysis</a>), the absence of plots comparing synoptic measurements relative to HYCOM was not considered a deficiency in the analysis by ERM. Through assimilation, the model incorporates the field measurements. ERM is satisfied about the robustness of HYCOM.</p> <p>In addition, the majority of direct measures of currents via ADCPs were located close to the shorelines, and therefore would not be considered</p>

				<p>good candidates for comparisons to HYCOM. HYCOM is primarily relevant for current estimates in the offshore environment. Modelling performed on very large scales such as this for the sake of predicting possible future conditions does not include micro-scale hydrodynamics as the current details very close to the shoreline are not required relative to the general uncertainty of the future predictions.</p> <p>Similarly, NOAA's Blended Seawinds are a well-respected source and used throughout the industry for wind data estimates over large areas of the ocean surface. Available stations with long meteorological records are generally located along the coastline or inland and would be inappropriate to use for comparisons to modelled estimates of winds in the offshore environment.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>4.10. It is noted that PRDW state in their letter to ERM dated 18 September 2018 that 'this letter confirms that all four major comments raised by PRDW have been adequately addressed'.</p> <p>(a) Can PRDW please provide a clear, detailed and reasoned explanation setting out the information it relied upon in reaching this conclusion, including how such information was validated. Please also include a description of any assumptions made and any uncertainties or gaps in knowledge.</p>	<p>Below are clarifications related to the four major comments highlighted by the peer reviewer (PRDW) after submittal of the first draft of the oil spill modelling report. The oil spill report was updated after prior to the release of the Draft EIA Report on 25 September 2018.</p> <p>a) PRDW Comment 1: Justify the volumes of oil for the three spill scenarios. The methodology employed by Eni to justify the oil volumes is described in the oil spill modelling report (Annex D4, pg. 43, 56, 72 &amp; 87). Although the underlying data used by Eni was not validated as part of the review, the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011). The peer review should have clarified that PRDW's expertise is in oil spill modelling and does not extend to petroleum geology and that PRDW thus relied on the expertise of Eni and ERM for the geological assessment.</p> <p>b) Comment 2: Address impacts associated with dissolved aromatic Hydrocarbons This is addressed in Section 5.8 of the report (Annex D4), including the use of a conservative threshold for DAH of 5 ppb and the inclusion of worst-case contour plots.</p> <p>c) Comment 3: Explain the relatively low impact of blowouts This is addressed on pages 112 and 113 of the report, i.e. the longer release leading to a persistent subsurface plume rather than a short-term surface plume, the large depth reducing the percentage of oil reaching the surface and the strong shore-parallel currents spreading the oil below the threshold thickness prior to reaching the shoreline.</p>

				<p>d) Comment 4: Modify and update the conclusions section</p> <p>The suggested additions were made in Section 6 of the oil spill modelling report that was attached to the Draft EIA Report. There was a typographical error in the units provided which has been corrected in Section 6 of the Final Oil Spill Modelling Report (Annex D4 of the Final EIA Report).</p>
Adrian	Pole	Adrian Pole Attorneys	<p>5. We remind ERM and PRDW that in terms of the EIA Regulations, an EAP and specialist must (among other things) perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the application, and must disclose to registered I&amp;APs all material information in the possession of the EAP and the specialist that reasonably has or may have the potential of influencing any decision on authorisation.<sup>4</sup></p>	<p>Noted. Both ERM and PRDW are aware of their obligation under EIA Regulations, reg 13(1)(d) and (f).</p>
Adrian	Pole	Adrian Pole Attorneys	<p>6. In light of the above and given that the time period for submitting comments on the Draft EIA Report expires on 8 November 2018, we look forward to receiving ERM's and PRDW's detailed response to our letter by no later than close of business on 6 November 2018.</p>	<p>Based on the volume and detailed nature of the questions, we require coordinated input from the relevant parties (some outside of South Africa) to appropriately address them. We have enlisted the appropriate people to contribute to a response, however, given the short timeframe, we were unable to provide a response to these questions by close of business on 6 November 2018 as requested. As indicated in ERM's letter/email of [insert date], responses to these questions would be provided in the comments and response report in the Final EIA Report. (These are those responses.) We had invited further additional comments on the EIA Report by 8 November 2018 and these comments have also been included in this Final EIA Report.</p>
Adrian	Pole	Adrian Pole Attorneys	<p>Your email is noted</p>	<p>Noted</p>
Adrian	Pole	Adrian Pole Attorneys	<p>Thank you for your email confirming receipt of the WildOceans submission.</p> <p>We look forward to receiving your detailed reply to our queries (and requests for further information) and the revised EIA Report (and OSM modelling) for comment and engagement in due course. We also look forward to engagement over the selection of independent specialists to Peer Review the EIA Report, OSM modelling and technical review, and other specialist studies.</p> <p>Simply including WildOceans' comments and ERM/PRDW/Eni's responses in a Final EIA Report and submitting it to the relevant authority for a decision on authorisation will not meet the legal requirements for a lawful</p>	<p>The NEMA Public Participation Guideline No. 807 of 2012 (page 12, Section 7.4), states "It is best practice that all comments received from I&amp;APs are acknowledged by the EAP, with the EAP indicating how the comments received will be responded to (even if just referring to the fact that a response will be contained in the comments and responses report). Comments and responses must be recorded in the comments and responses report that is submitted with the BAR or S&amp;EIR reports." The NEMA Regulation GNR 326 also does not stipulate the requirement for each comment received to be technically responded to individually (and the responses provided by ERM meet all of the applicable legal requirements).</p>

			EIA public participation process, nor will it meet the requirements for procedurally fair administrative action.	
Paddy	Norman	WESSA	Thank you for sending me the Draft EIA relating to this proposal. Although I have not had sufficient time to go through this extensive document in detail, numerous points give me cause for concern. Several of these would appear to represent fatal flaws for the assessment.	Noted, your letter dated 6 November 2018 was received.
Paddy	Norman	WESSA	<p>The application is not supported for several reasons: Certain fundamental principles have been neglected; It does not address certain key issues adequately; there are numerous omissions which critically undermine the reliability of the assessment; there are numerous statements which appear to be misleading, and therefore undermine the public participation process.</p> <p>Firstly, we believe certain principles need to be recognised as relevant to all EIA's. The most important of these are found in NEMA:</p> <ul style="list-style-type: none"> <li>• The Precautionary Principle means that insufficient knowledge to assess impacts always requires maintaining the status quo.</li> <li>• There is a fundamental Duty of Care for all members of society to avoid causing pollution.</li> <li>• Cumulative impacts for the whole of a project (all phases) must be assessed; Segments of a project cannot be assessed in isolation.</li> <li>• Assessment of the natural environment must include both Ecosystems and Biodiversity</li> </ul> <p>In addition, four principles are directly applicable to this specific application:</p> <ul style="list-style-type: none"> <li>• The assessment itself must be unbiased</li> <li>• The assessing authority must be independent and unbiased.</li> <li>• Hydrocarbons are contributing to Climate Change – therefore green energy is preferable.</li> <li>• Where impacts are unavoidable Offsets are required in mitigation</li> </ul>	<p>Your objection is acknowledged.</p> <ul style="list-style-type: none"> <li>• However, there is sufficient secondary data available to assess the impacts to marine and coastal ecology, fisheries, tourism and heritage from the project activities. Based on the precautionary principle if the presence of sensitive species (eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report). The ROV survey report will be analysed by a qualified marine biologist and submitted to the Competent Authority. The project is not anticipated to have any impact on tourism under normal operating conditions, as the location of the project is over 60 km from the shoreline.</li> <li>• Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, and dispose.</li> </ul> <p>All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control. These describe additional measures on top of the already in-built controls of the well design to prevent a blowout from occurring.</p> <ul style="list-style-type: none"> <li>• The cumulative impacts of the project are assessed in Chapter 7 of the EIA Report. The potential for cumulative environmental and social interactions caused by the project in combination with other planned</li> </ul>

				<p>activities were identified as:</p> <ul style="list-style-type: none"> <li>o GHG emissions from the project vessels and their contribution towards climate change in combination with other vessels in the region;</li> <li>o Underwater noise generation from the project vessels and their contribution to underwater noise in combination with other vessels in the region and the combined impacts on marine mammals; and</li> <li>o Disturbance to benthos due to oil and gas activities.</li> </ul> <ul style="list-style-type: none"> <li>•The assessment is unbiased was undertaken by an independent EAP – ERM and by independent specialists</li> <li>•The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</li> </ul> <p>Additionally, Eni actively participates in the main international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO2 over the next ten years. Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative</p>
Paddy	Norman	WESSA	<p>In regard to these principles:</p> <ul style="list-style-type: none"> <li>• We found no reference to the Precautionary Principle in this report, and no evidence that the concept has been implemented in this report. This omission represents a fatal flaw in the approach of the environmental practitioners.</li> </ul>	<p>The precautionary principle has been applied in multiple was in the EIA Report. Firstly, the impacts of the project activities on unknown sensitive receptors (such as corals and coelacanths) was under taken in Chapter 7 of the EIA Report. Secondly the mitigation measures include a review of the drill site location by ROV prior to drilling and a commitment to ensure the drill site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report)</p>

Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• The concept of Cumulative Impacts is identified in section 6.8 (page 165): Cumulative impacts require assessment of "projects that are a realistic proposition but are not yet built". This obviously applies directly to the anticipated exploitation phase of this project (p.167, etc). However, no consideration has been given to the applicant's intention to develop the resource. In fact, some of the data tabulated (e.g. tables 3.6 and 3.7) refers only to the first exploration drill-hole, so that impacts are not quantified even for the whole of this planned phase. Nor is it clear if the follow-up drilling will have more or less impacts. We consider this failure to be deliberately misleading and a fatal flaw in the assessment of the cumulative impacts.</li> </ul>	<p>As indicated in Chapter 1 of the EIA Report, the time sequence of these possible additional wells will be dependent on the results of the first exploration well, and will not occur immediately after the drilling of the initial well. This means that wells will not be drilled at the same time and therefore the impact is not cumulative</p> <p>Eni would be required to apply to the government for a Production Right and undertake a new separate EIA process. This means that the cumulative impact of production would be covered in the separate process.</p>
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• Similarly, on page 64 the report states that only two of the six proposed wells were assessed. Therefore, we must conclude that the report has failed to assess the whole project. This constitutes another fatal flaw.</li> </ul>	<p>As indicated in Chapter 1 of the EIA Report, subsequent to the first well the time sequence of the possible additional wells will be dependent on the results of the first exploration well, and will not occur immediately after the drilling of the initial well. Wells will not be drilled at the same time. This means that although there is up to 6 wells the impact on the environment is one well at a time.</p>
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• It must also be recognised that Cumulative impacts require assessment of the potential impacts from burning fossil fuels as a result of production from this resource. These failures to consider the whole of the potential impacts means this assessment is incomplete and thereby fatally flawed.</li> </ul>	<p>As stated previously, the cumulative impact reflects the impacts as a result of the drilling activity. Should the drilling programme identify commercial hydrocarbons, there will be an EIA conducted under a Production Right for the production phase.</p>
Paddy	Norman	WESSA	<p>Although there are references to ecosystems in this report there seems to be no comprehensive synthesis of the various ecological niches and the interplay of their component flora, fauna, and marine context. Without this understanding it is doubtful if indirect impacts have been considered adequately</p>	<p>The Marine Ecology baseline is presented in the Marine Ecology Study in Annex D</p>
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• We are very concerned that neither the DMR nor PASA constitute an independent assessor, because there is a fundamental Conflict of Interest in their legislated terms of reference.</li> </ul>	<p>The EIA process is governed through the National Environmental Management Act 107 (1998), including amendments and defines and designates roles and responsibilities to govern the Act. ERM is not in a position to comment on the EIA regulatory framework.</p>
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• Similarly, the Minister / department intervened to restrict the boundaries of new MPAs in favour of oil exploration; this indicates a prima facie bias; therefore, the Minister / department must recuse himself from adjudicating this EIA process.</li> </ul>	<p>The promulgation of the MPA network demonstrates a comprehensive process which has taken place since 2015 under Operation Phakisa. The necessary public participation and intergovernmental consultation has taken place to define and subsequently promulgate these offshore protected areas. It is incorrect and inappropriate to infer otherwise. We recommend that you direct your concerns to PASA.</p>
Paddy	Norman	WESSA	<p>As an example of apparent bias, we noted on page 23 the extraordinary statement that "The Convention on Biological Diversity falls outside the scope of this EIA" We consider that Biological Diversity is a fundamental part of the natural</p>	<p>Section 2.4 2 recognises the Convention on Biological Diversity as an International Convention. We cannot find any reference to your statement The Convention on Biological Diversity falls outside the scope of this EIA"</p>

			environment, and cannot be ignored in an Environmental Impact Assessment.	
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• Another example of bias is clearly seen in section 3.11 where many of the negative implications of onshore disposal should equally have been listed for offshore disposal as environmental issues.</li> </ul>	Table 3.11 describes the advantages and disadvantages of both offshore and onshore disposal.
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• ENI made a statement at the Port Shepstone PPP meeting that they were investing in green energy, and produced documents to support this claim at the follow-up open-house meeting. However, the development of green energy manufacturing in South Africa has not been considered as a potential investment alternative to the current application. This implies deliberate deception in the PPP, as well as a failure to consider reasonable alternatives.</li> </ul>	Eni rejects that any attempt was made to deceive stakeholders. Eni is an integrated energy company that operates across the value chain and aims to provide energy solutions that are increasingly more sustainable through technological development and creating economic, environmental and social value. Since 2015, the New Energy Solutions Department has been created for the development of renewable energy. Eni's business model focusses on supporting Countries' development in order to promote efficient and sustainable access to energy resources for all. South Africa's energy portfolio is dominated by coal with an ever growing need for access to energy. The diversification of South Africa's energy mix is fundamental to creating long-term value.
Paddy	Norman	WESSA	<ul style="list-style-type: none"> <li>• Because of the known environmental impacts of the oil industry, consideration should have been given to proclaim and manage the remainder of ER295 as an MPA.</li> </ul>	Comment is noted. It is not the role of the EIA Report nor the EAP/Eni to proclaim MPAs. The exploration right is for Block ER236 not 295 as stated in the comment.
Paddy	Norman	WESSA	<p>Omissions and Inconsistencies affecting due process and validity of the assessment:</p> <p>On pages 80 and 92 (and on several other pages) it is stated that offshore areas are poorly studied in terms of their natural environment. This lack of reliable and current data represents a fatal flaw in this assessment, because the precautionary approach mandates maintaining the status quo unless there is sufficient information to realistically determine impacts. It does not condone arguments based on a lack of evidence.</p>	There is sufficient secondary data available to assess the impacts to marine and coastal ecology from the project activities. Based on the precautionary principle if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report).
Paddy	Norman	WESSA	<p>We are seriously concerned at the reference to levels of Hg and Cd on page 51. Discharging heavy metals which are known to accumulate through the food chain, especially in an area where there are subsistence fishermen, is simply not acceptable: The figures given indicate that each borehole could contain more than 3000 Tonnes (620+900m3) of finely ground barites, containing 1ppm mercury and 4ppm cadmium. That equates to about 18kg Mercury and 54kg Cadmium. We realise that the applicant will try to minimise his costs, and will thus reduce this figure where possible, but the authorities must also recognise that they are being asked to give approval for this maximum. This risk is unacceptable and its omission from table 7.1 is another Fatal Flaw.</p>	The reference standards and limits for maximum levels of Mercury - Hg (1mg/kg) and Cadmium - Cd (3mg/kg) refer to dry weight in stock barite, have been determined by the International Finance Corporation IFC Environmental, Health and Safety Guidelines for Offshore Oil and Gas Development, June 2015. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged

				fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.
Paddy	Norman	WESSA	We have serious concerns about the avifaunal studies, which appear to be based on antiquated and very limited data. Why is data sourced from CSIR (1998) rather than the internationally recognised and current avifauna database at UCT & Birdlife South Africa? We consider this a serious omission.	The marine ecology study focused on marine fauna and seabirds as this project is located over 60 km from the coastline. Avifauna are only touched on very briefly to alert the reader to the occurrence of seabirds in the project area. Table 7 list examples of some of the resident and visiting seabirds in the Project Area and is not intended to be comprehensive.
Paddy	Norman	WESSA	On page 169 in Table 7.2 it is considered that neither Air Quality nor Noise will have a significant impact, because of the distance offshore of the rig. That may be correct for the local human population, but it ignores potential impacts on avifauna, which does not seem to be assessed elsewhere.	Impacts due to air emissions were scoped out due to the well mixed airshed of the offshore environment and the distance of the project site to shore. Disturbance of Marine and Avian Fauna by Helicopter Noise Associated with Drilling is assessed in Section 7.3.4
Paddy	Norman	WESSA	We believe the public participation process was seriously flawed because there was no effective advertising in the Lower South Coast sub-region. As recorded on page 154 neither site notices nor adverts in the local papers were utilised in the Port Shepstone district.	<p>The Public Participation process was conducted as per the requirements set out in the applicable legislation.</p> <p>Newspaper adverts were placed in several newspapers (notifying stakeholders of the availability of the Draft EIA Report for review and inviting them to open house meetings. The South Coast Herald was amongst these newspapers. Refer to Annex B of the Final EIA Report.</p> <p>Newspaper adverts were published during the week of 17 September 2018 as follows: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>SMS notifications with directions to the project website, where the draft EIA was available and reminders to submit comments on the Draft EIA Report were sent to registered I &amp; AP's on 09 October 2018 (Refer to Annex B of the Final EIA Report for a screenshot of the site website).</p>
Paddy	Norman	WESSA	1.1.8 Similarly, on page 59 reference is made to discharge of cuttings which could contain "<5% oil". However, since the volume of contaminated cuttings is estimated at 220m3 per	The 5% NADF retained on cuttings is lower than international standard of 6.9% (IFC 2015).



			drill-hole this implies a potential to discharge more than 25 tons of oil at each of the six sites. This is not acceptable.	
Paddy	Norman	WESSA	1.1.9 We find it quite extraordinary, and totally unacceptable, that the receiving environment assessed by this report excludes the geological context. Whilst we accept that this is poorly known, the implications of drilling offshore where there may be fractures, aquifers, slope stability issues, and other geological features which could enable pollutants to migrate must be considered. This lack of data, which was specifically requested during the scoping process, and the impact potential it may have, represents another fatal flaw.	Understanding the geological context of the Block ER236 is a critical pre-requisite to exploration drilling activities. Through the interpretation of 2D and 3D seismic data in addition to a number of other geological and geophysical studies performed since 2015, Eni has a sound understanding of the geological framework in which it proposes to operate. The data on which such analysis has been undertaken is of a commercially sensitive and competitive nature, which is beyond the scope of the Environmental Authorisation process. The execution of geophysical and geological studies to understand the geological context of Block ER236 is governed through the Work Programme obligations, which is approved and subsequently shared with the Competent Authority, in line with the Exploration Right contract.
Paddy	Norman	WESSA	Pages 50 and 181 refer to the discharge of NADF. Page 50 says no discharge; page 181 says contaminated cuttings will be discharged. Inconsistent or false information in a report violates the constitutional right to be informed about the environment, therefore this is a fatal flaw.	There will be no discharge of pure NADF overboard, what is referred to is the discharge of NADF retained on cuttings which will be discharged at concentrations under the International Standard as referred to in previous response above.
Paddy	Norman	WESSA	On page 195 it is stated that "The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore". This is not only bad English; it is not true, because the "receptors" in this section are marine fauna, and distance from the shore is irrelevant in the context.	From Marine Ecological Assessment (Annex D4) "For another deep water well-drilling project off the southern Namibian coast, it was estimated that noise from project activities would decrease to below the estimated median ambient background level (100 dB re 1µPa) within a distance of 14 - 32 km from the drill site, depending on the specific vessels used, the number of support vessels operating and the scenario. Maintenance activities represented the worst-case scenario for noise, although this would be expected to occur only for relatively short periods of time (Croft & Li 2017). The extent of the noise impacts would, however, also depend on the variation in the background noise level with weather and with the proximity of other vessel traffic (not associated with the project).  Closest point to shore of both southern and northern areas of interest is over 60 km, and so well offshore of dive sites. Noise from inshore coastal vessel traffic likely to have far greater impact.
Paddy	Norman	WESSA	We note that the heritage studies focussed solely on archaeology. However, South African heritage law also includes palaeontology, and there are several known fossil sites offshore along the coast of Kwazulu-Natal. The potential for damage to or loss of the fossil record should also have been assessed.	Comment is noted. There will be a pre-drilling ROV survey that will be assessed by a marine biologist and an archaeologist if any evidence of fossils/ archaeology is found. Results of the ROV survey will be communicated to the Competent Authority  The archaeologist recommended that any video footage collected by the ROV in the vicinity of proposed well locations should be reviewed for evidence of shipwreck material on the seabed. Should these reviews of

				data identify wreck material at or near the location of a proposed drill site, micro-siting of the well location and the possible implementation of a drilling activity exclusion zone around the archaeological feature should be sufficient to mitigate the risks to the site. He also stipulated that a chance find procedure must be developed for the project and should any shipwreck material that was not identified by the measures set out above be encountered during the exploration drilling process.
Paddy	Norman	WESSA	We note that page 177 refers to the release of up to 1kl/month of hydraulic fluid onto the sea floor; why is no detail of this given in the project description? And why is this listed in section 7.3.2 since it is not obviously a "ship" activity?	<p>This impact has been included in the chapter dedicated to operational discharges related to project vessels, list of ships that include the drilling ship and its equipment. Once installed at seabed, BOP is still connected and controlled from surface through hydraulic lines included in the marine riser and with hydraulic connection to the rig. To be noticed that the venting of small amount (order of litres) of hydraulic fluid BOP stack elements after regularly pressure tests is a standard activity; the water-based hydraulic fluid, basically fresh water with additives (commonly ethylene glycol) is necessary to avoid plugging of lines and guarantee correct activation of devices; the chemical components are specifically selected in order to exclude toxicity hazards to the environment and to be biodegradable. The fluid selection is defined by the BOP manufacturer; at the point of this project the provider of BOP is not yet defined.</p> <p>Your note related to the need to add details inside project description of Final EIA Report has been acknowledge in "Well Control and Blowout Prevention" section of Chapter 3.</p>
Paddy	Norman	WESSA	We were very surprised that in section 2.4.2, "International Legal", there was no reference to the Convention on Migratory Species, CITES, or RAMSAR. They are mentioned elsewhere but not in the list of legal instruments that have to be considered.	Chapter 2 of the EIA Report has been updated to include these conventions. However, it should be noted that these conventions were taken into consideration in Chapter 4 of the EIA Report.
Paddy	Norman	WESSA	SANBI's proposed MPA website indicates there are at least three other canyons, apparently not referred to here. Their potential significance as marine habitat is important, although their biodiversity information may still be very limited.	<p>As reported within Chapter 4 of the EIA Report that Block ER236 overlaps with two canyon systems (Figure 4.3), namely the Tugela and Goodlad Canyons, which lie in close proximity to the southern and northern areas of interest. Nevertheless, it should be noted that no drilling activities will take place in the canyons and neither of them is overlapped by the area of interest.</p> <p>It is currently unknown whether benthic fauna sensitive receptors (deep water corals) occur in the submarine canyons within the boundaries of the Block and especially in the Tugela and Goodlad canyons, which are located to the immediate south of the northern area of interest and some 30 km northeast of the southern area of interest.</p> <p>For this reason, Eni has implemented a commitment to avoid the</p>

				canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.
Paddy	Norman	WESSA	No information is given regarding the two existing southern KZN MPA's, adjacent to ER236. Does this mean that ENI consider them of no value? The recently proclaimed MPA's must also be considered in more detail	It is acknowledged that MPAs are important for the protection of marine resources, however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the drilling areas of interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs. Chapter 4 of the Final EIA Report has been updated to reflect the approval of the 20 new MPAs on 24 October 2018. More detail has been provided on the three recently approved MPAs that overlap with the Block ER236.
Paddy	Norman	WESSA	Why are the KZN estuaries not discussed in the same way as the Pondoland estuaries?	Figure 4.21 (Chapter 4 of the EIA Report) shows the location of estuaries and estuary protected areas (EPAs) located along the 'Wild Coast', within the Eastern Cape coastal region. These are included as they could potentially be impacted in the event of an accidental event. From the oil spill modelling it was shown that the KZN estuaries are not likely to be impacted by a spill.
Paddy	Norman	WESSA	On page 36 the reference to figures appears to be incorrect; possibly some figures are missing. e.g. figure 3.5 does not seem to be related to "drilling profile".	Thank you for pointing this out. This was an error and in the text Fig 3.4 should refer to Fig 3.3 and Figure 3.5 should refer to Fig 3.4. This has been corrected
Paddy	Norman	WESSA	Figure 4.3 is inconsistent with Figure 4.1; the location of the ADIs appear to be further off-shore	The Figures in the Marine Ecology Report are illustrative and not geographically referenced.
Paddy	Norman	WESSA	Pages 72 and 73 Refer to the Agulhas Current; the statement that the Agulhas current extends down to 2300m is inconsistent with the statement that an undercurrent is found at 800m.	This statement is consistent and correct as Chapter 4 of the EIA Report states "The Agulhas Undercurrent, is found on the continental slope of the East Coast at depths of between 800 m and 3,000 m (Beal & Bryden, 1997)."
Paddy	Norman	WESSA	Figures 4.13 and 4.19 seem to be inconsistent with page 72 where it is indicated that the Agulhas current is 100km wide.	Figures 4.13 and 4.19 are not describing the Agulhas Current but the larval and hatchling drift direction resulting from the current.
Paddy	Norman	WESSA	The plan on page 109 is obsolescent: RNM has replaced HCM+ILM	This map has been updated and included in Chapter 4 of the Final EIA Report.
Paddy	Norman	WESSA	We suspect that the statement on page 117 that eThekwinini only contributes 1% to the national GDP (and therefore <2% for KZN) is an underestimate. Especially as Durban is South Africa's third largest city, and has a significantly larger proportion than 1% of the population	The statement referred to in the comment contained a typographical error and should have read: Currently, eThekwinini Metropolitan makes up 57.1 percent of the Provincial Gross Domestic Product (GDP), and 9.1 percent of the national GDP (eThekwinini Municipality IDP, 2016/2017).  The revised statement is in Chapter 4 of the Final EIA Report.
Paddy	Norman	WESSA	Statements which we consider to be misleading:  On page 26 reference is made to "reduced dependence on imports" However because the resource is intrinsically finite this reduction is not sustainable. There may be short term benefits, but at the Port Shepstone Meeting it was expressly stated that ENI would sell to the highest bidder, therefore no	The statement that "Eni would sell to the highest bidder" was not expressed at the Port Shepstone open house and is incorrect. In case of discovery of hydrocarbons, main target market for Eni is the national South African market. Table 3.7 and 7.5 provide the emissions from both the vessel and helicopter operations for one well and therefore present the same information. The emissions from flaring, during well testing have not been quantified in Table 3.7 and 7.5 as the characteristics of

			<p>direct benefit will accrue to the South African public. The statements on page 34 and 47, Table 3.7 regarding emissions are misleading because they relate only to a single drill-hole, and not to the potential for the application which includes six drill-holes. We also noted that the two tables give different figures because one excludes the helicopter, and both tables exclude flaring and other cumulative impacts.</p>	<p>the well in terms of pressure, flow rate and pressure are unknown and will only be determined while the well is being drilled.</p> <p>As indicated in Chapter 1 of the EIA Report, subsequent to the first well the time sequence of the possible additional wells will be dependent on the results of the first exploration well, and will not occur immediately after the drilling of the initial well. Wells will not be drilled at the same time. This means that although there is up to 6 wells the impact on the environment is one well at a time.</p> <p>The cumulative impacts of the project are assessed in Chapter 7 of the EIA Report. The potential for cumulative environmental and social interactions caused by the project in combination with other planned activities were identified as:</p> <ul style="list-style-type: none"> <li>o GHG emissions from the project vessels and their contribution towards climate change in combination with other vessels in the region;</li> <li>o Underwater noise generation from the project vessels and their contribution to underwater noise in combination with other vessels in the region and the combined impacts on marine mammals; and</li> <li>o Disturbance to benthos due to oil and gas activities.</li> </ul>
Paddy	Norman	WESSA	<p>The statement on page 195 regarding noise impacts on marine fauna such as cetaceans being Negligible is dubious and contestable. It is stated that noise levels can be elevated for distances of up to 32km. Plans such as figure 4.13 show migration routes passing between the coast and the ADIs, which distance is approximately 60km. However, it is also stated that migration is related to the Agulhas current, which is 100km wide, so that migration is very likely to also occur well inside the ADI's. We consider that this requires expert review.</p>	<p>Refer to Chapter 7 of the EIA Report and Annex D1 for the assessment of the impacts on marine fauna.</p> <p>From Marine Ecological Assessment (Annex D4)</p> <p>"For another deep water well-drilling project off the southern Namibian coast, it was estimated that noise from project activities would decrease to below the estimated median ambient background level (100 dB re 1µPa) within a distance of 14 - 32 km from the drill site, depending on the specific vessels used, the number of support vessels operating and the scenario. Maintenance activities represented the worst-case scenario for noise, although this would be expected to occur only for relatively short periods of time (Croft &amp; Li 2017). The extent of the noise impacts would, however, also depend on the variation in the background noise level with weather and with the proximity of other vessel traffic (not associated with the project).</p> <p>Closest point to shore of both southern and northern areas of interest is over 60 km, and so well offshore of dive sites. Noise from inshore coastal vessel traffic likely to have far greater impact.</p>
Paddy	Norman	WESSA	<p>The statement on page 149 that no drilling was planned in the canyons is also seriously misleading, because not only does it ignore the spread of impacts away from the drill sites, but it</p>	<p>Eni confirms that no drilling will be performed in the canyons. In any case of an unlikely oil spill, if the current transports the spill in proximity of the canyons, there will be no impact in the water column of canyons, except for the superficial layer (few meters below from surface) where</p>

			ignores other canyons and features which may also constitute ecologically sensitive areas	isolated oil droplet may be dispersed. It is only the subsurface slicks that would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. It is noted that the suitable habitat for coelacanth presence in canyons has been studied and demonstrated as below 90 m water depth (Venter et al., 2000e, Discovery of a viable population of coelacanths (Latimeria chalumnae Smith, 1939) at Sodwana Bay, South Africa. S. Afr. J. Sci., 96: 567–568.).
Paddy	Norman	WESSA	Given the statement that noise impacts can occur up to 32km from a drill-hole we would expect the duty of care to be implemented by imposing a 32km buffer around all known and suspected ecologically sensitive areas, as part of the precautionary principle	<p>From Marine Ecological Assessment (Annex D4)</p> <p>“For another deep water well-drilling project off the southern Namibian coast, it was estimated that noise from project activities would decrease to below the estimated median ambient background level (100 dB re 1µPa) within a distance of 14 - 32 km from the drill site, depending on the specific vessels used, the number of support vessels operating and the scenario. Maintenance activities represented the worst-case scenario for noise, although this would be expected to occur only for relatively short periods of time (Croft &amp; Li 2017). The extent of the noise impacts would, however, also depend on the variation in the background noise level with weather and with the proximity of other vessel traffic (not associated with the project).</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes ‘trapped’ (sound channels), bouncing off of the warm layers. In this case, as the source of this noise is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for meters, depending on the season) and will not travel far downwards. Thus, whilst the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>Therefore a 32 km buffer zone is unnecessary as marine mammals will naturally avoid the area if they are disturbed.</p>
Paddy	Norman	WESSA	We consider Table 6.2 on page 162 to be inappropriately formulated and therefore misleading because it generalises	The baseline chapter (Chapter 4) of the EIA Report includes a summary of the secondary data collected in the Project Area. Based on the

			excessively. We maintain that the precautionary approach must consider the worst-case scenario, and therefore increased sensitivity in specific areas or at certain stages of the lifecycle of organisms represents a minimum. Systemic interruptions have knock-on effects on ecosystems, and therefore level of significance is dependant on the weakest link in the ecological chain. Similarly, downgrading significance because an impact is localised is only valid where detailed knowledge of local population groups is available. Given that the area being assessed is largely data deficient the sensitivity matrix should also cater for a "Data Insufficient" scenario	precautionary principle, if the presence of sensitive species ( e.g.: deep water corals and coelacanths) could not be confirmed, they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. For 'unknown' sensitive species the criteria in Table 6.2 was applied to decide the value or sensitivity of individual species
Paddy	Norman	WESSA	The assessment implies that impacts from cuttings dispersal will be only local and thus Negligible. This is misleading because impacts are dependant on the receiving environment's sensitivity to sediment, and the potential presence of deep-water corals has been highlighted and they were noted as being highly sensitive and vulnerable to sediment impacts (page 184). On page 189 it is indicated that impacts could disperse over a 7km2 area, however this will be affected by currents. Therefore, the potential for impact on corals could occur for several kilometres "downstream" of the drillship. Furthermore, there could be cumulative impacts from other discharges such as mud and waste, so this impact is potentially not Negligible at all. It also follows that an ROV survey covering only 500m from the drill site is not adequate to locate corals within the potential impact zone.	The cuttings discharged at the seabed during the spudding of a well will form a highly localised spoil mound around the wellbore, thinning outwards. The main impacts associated with the disposal of drilling solids would be smothering of sessile benthic fauna (such as corals), physical alteration of the benthic habitat (changes in sediment properties) in the immediate vicinity (<200 m) of the well. This means that the relocation of the well 500 m from these sensitive receptors will prevent this impact. The significance of the impact of drilling cuttings and muds due to smothering on both benthic infauna and sessile benthos, was assessed as Moderate in the Final EIA Report due to the recovery time of deep water benthos being long-term.
Paddy	Norman	WESSA	We are concerned regarding the frequent statements that the applicant will comply with "Industry Standards", as the oil industry has a very tarnished reputation when it comes to environmental protection. Although we accept that those standards may subsequently have been improved, we would strongly recommend that they be independently peer reviewed to ensure that they are equivalent to currently recognised best practise in other fields, and that they prioritise and provide adequate protection for the receiving environment.	O&G industry standards and good practices for managing different aspects of O&G operations along project lifecycle typically reflect the most up-to-date knowledge of the sector and apply the best technology currently available. This because their ultimate goal is to provide guidance and specifications of how to conduct safe O&G activities in an environmentally and socially responsible manner, in compliance with applicable law and ethical business practices. They are based on sound science and on the collective, global experience of professionals who have been exposed first-hand to a wide range of different operational, environmental and social contexts. Industry uses standards and good practices for engineering specifications of structures and equipment, to ensure safe drilling and well control operations, to enhance technical integrity, ensure health & safe operations, enable cost and time optimization, and timely identify, assess and effectively mitigate all potential impacts on the natural and social environment. Most common Industry Standard and good practices includes ISO, API,

				<p>NORSOK, OGUK, IOGP and IPIECA to name most famous and world recognized. Eni drilling procedures are in compliance or over standing API/ISO minimum requirements.</p> <p>It is worthwhile mentioning that IOGP and IPIECA good environmental and social practices most of the time are developed working in partnership with key stakeholders (e.g. UN, UNEP-WCMC, science-based NGOs, Universities and Scientific Institutions) or, on specific topics like "E&amp;P sound and marine life" with other trade associations (e.g. IAGC), internationally acknowledged Universities and Scientific Institutions.</p> <p>Similar to international conventions and treaties, standards are by their very nature independently 'peer reviewed' as they demonstrate the best practises adopted globally, and often exceed the local legislative requirements.</p>
Paddy	Norman	WESSA	<p>Additional Concerns</p> <p>We have noted that much of the information on the process is generic, and described as "typical" or "estimated". Whilst we accept that some information is inevitably provisional, the general impression from this report is that the applicant either does not actually know what he is doing or he does not want the authorities and the public to know what he is planning to do</p>	<p>Eni are experienced in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries and therefore understand .the scope of the project. The project description in Chapter 3 describes the activities that Eni is proposing in Block ER236 in detail. The specialists and the EAP used this information to conduct a detailed assessment of the impacts from both planned and unplanned activities in Chapter 7 and 8 and Annex D. Eni is an experienced</p>
Paddy	Norman	WESSA	<p>We are also deeply concerned about the extensive lack of information in this report. Whilst we accept that the marine environment has not been studied intensively the noticeable inadequacies of the baseline studies call into question the ability of anyone to assess impacts on the marine environment in sufficient detail to override the precautionary approach. For example, how much data is available for deeper offshore current patterns? The report itself mentions on page 28 (section 3.4) that "Geology Data Interpretation is not yet defined", and section 3.6.1 indicates that the information is not even sufficient to approximately determine the drill site. Page 35 states that a seabed survey will only become available when the drillship is on site. It is a totally unacceptable situation that so little information is available that detailed assessment is not possible.</p>	<p>Numerous studies and data interpretation have already been undertaken to identify the target prospect. This has been defined in the EIA Report as the areas of drilling interest, for which the impact assessment has been performed relating thereto. Geological interpretation is an iterative process. Eni acquired additional 3D seismic data in the first half of 2018 to further define the target prospect. This does not infer that geological interpretation has not taken place, or the target play defined. It simply contributes further to the reservoir modelling.</p> <p>The pre-drilling seabed survey is not required to further define the geology at the seabed; it will identify the seabed conditions and verify the presence (or nonpresence) of sensitive benthic habitats or species around the wellhead location prior to start any operations.</p> <p>Standard procedure for deep-water wells is to perform a Shallow-Hazard Study, utilizing the available high quality 3D seismic data over an area of about 50km2 (7x7 km) cantered on the selected well location. The investigation extend in depth to ensure a full assessment of the sedimentary sequence. The assessment aims at identifying, mapping and delineating seafloor and shallow subsurface geological and geophysical hazards that may impact negatively during the drilling</p>

				<p>operations. The structural and stratigraphic interpretation and analysis of the available broad-band 3D seismic data will supply detailed information about geophysical anomalies (amplitude, lack of coherence, etc), geomorphologic and stratigraphic features on and below the sea-floor, with the goal to identify and prevent the geo-hazard risks.</p> <p>With regards to deepwater offshore current, a meteo-ocean study has been performed for both northern and southern area. The modelling study performed on ER236, allowed to define a 3D circulation model aimed at describing the hydrodynamic characterization in the Block. The study consists of a first phase of acquisition and comparison of two different oceanographic databases, whose data (current velocity and direction, temperature and salinity) are defined along the entire water column. Based on their screening and analysis, a model has been generated with a strongly resampling to obtain an extremely high resolution. This allowed to simulate the distribution of current intensity and direction, temperature and salinity over a time period of 6 years. Additionally, a wave and wind characterization, over a period of 10 years, has been carried out aimed at finalizing the riser analysis.</p>
Paddy	Norman	WESSA	<p>We are also concerned about the “minor comments” in the peer review of the oil spill modelling report. The failure to ground truth the fundamental data sets for current and other oceanic parameters casts doubt on the detailed validity of the model. Given the irregular bathymetry, and the consequent possible variation in details of the biodiversity it is critical to understand how the currents may deviate from the general trends. Such scenarios as seasonal upwelling, morphologically controlled counter-currents in canyons, and modifications induced by climate change must be considered, because of the potential to focus impacts into sensitive areas</p>	<p>As per the peer reviewers letter (Annex D6), all four major comments raised by PRDW have been adequately addressed. The currents used in the oil spill model were obtained from the HYCOM (HYbrid Coordinate Ocean Model) global circulation model. These data are freely accessible. PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. The strength and direction of the Agulhas Current in the study area is well established, e.g. Lutjeharms, JRE, (2007). Three decades of research on the greater Agulhas Current. Ocean Sci., 3, 129–147, 2007. A Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report.</p>
Paddy	Norman	WESSA	<p>On page 49, Table 3.8 lists barites as "non-toxic" but below it indicates it contains Cd and Hg. Page 52 refers to "a limited quantity of cement ..... Discharged overboard". This is meaningless: Quantities must be calculated and given.</p>	<p>For deep offshore wells, far away from the coastline, the discharge of cuttings is an acceptable procedure if in compliance with specific limitation thresholds and only after specific treatment has occurred to reduce mud and pollutant content. Eni won't be allowed to discharge fluids or cuttings if it is not in compliance with international best practise limits (e.g. the limits defined by the International Finance Corporation IFC Environmental, Health and Safety Guidelines for Offshore Oil and</p>



				<p>Gas Development, June 2015) defined in Chapter 9 . Prior to the discharge of cuttings, cuttings content must be verified and tested in order to guarantee the respect of such limits. If not in compliance, cuttings must be temporary stored on board and shipped in skips to shore for land waste facilities.</p> <p>As per the above, offshore discharges are limited to what is described and assessed in Chapter 3. For instance, concerning the amount of barite to be used in mud, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for a single well drilled. No dumping of metal scraps and domestic waste is allowed by Eni on its operated vessels, including stand-by and support vessels.</p> <p>The management and monitoring of cuttings is described in Chapter 9</p> <ul style="list-style-type: none"> <li>• Eni's specifications for discharge of WBM includes: <ul style="list-style-type: none"> <li>o Discharge of cuttings via a caisson in &gt;15 m depth.</li> <li>o Discharge of cuttings only in water &gt;30 m depth.</li> <li>o Hg: max 1 mg/kg dry weight in stock barite.</li> <li>o Cd: max 3 mg/kg dry weight in stock barite.</li> <li>o Maximum chloride contraction must be less the four time the ambient concentration of fresh or brackish receiving water.</li> <li>o Ship-to-shore otherwise.</li> </ul> </li> <li>• Eni's specifications for discharge of NADF retained on drill cuttings includes: <ul style="list-style-type: none"> <li>o Discharge of cuttings via a caisson in &gt;15 m depth.</li> <li>o Discharge of cuttings only in water &gt;30 m depth.</li> <li>o Organic Phase Drilling Fluid concentration: maximum residual non aqueous phase drilling fluid (NAF) 5% (C16-C18 internal olefins) or 9.4% (C12-C14 ester or C8 esters) on wet cuttings.</li> <li>o Hg: max 1 mg/kg dry weight in stock barite.</li> <li>o Cd: max 3 mg/kg dry weight in stock barite.</li> <li>o Ship-to-shore otherwise</li> </ul> </li> </ul> <p>Actual volumes of muds, cuttings and cement disposed quantities will be provided during the monitoring phase.</p>
Paddy	Norman	WESSA	<p>Page 56 suggests that there is no noticeable difference between siting the shore base at Durban or at Richard's Bay. We beg to differ; the distance and consequent response time for support vessels in an emergency in the southern area would be significantly increased.</p>	<p>The location of the Port is not only dependent on where drilling activities commence, in either the northern area of interest or the southern area of interest; of-course the favourable option is the closest point to offshore location. Nevertheless, factors such as port capabilities, priority access to dock area, level of commercial activity, response time to mobilise equipment, emergency accessibility, waste management infrastructure and service providers are only some of the considerations that must be</p>

				evaluated. Eni's logistics team have already performed a preliminary logistical survey of the Ports to determine capabilities to support exploration operations. Final evaluation will be conducted based on the first location for drilling commencement. It should also be noted that a stand-by boat will operate 24/7 on well location in order to provide immediate response in case of emergency (e.g. man overboard, spill containment etc.).
Paddy	Norman	WESSA	On page 72 the scale of figure 4.5 is totally inadequate to show ecological threats to species, which by definition tend to have limited distribution.	The Marine Ecology Study in Annex D is the source of the Figure and provides further text detail from which the Figure is derived..
Paddy	Norman	WESSA	Various statements in this report seem to disagree with statements made at the public meeting in Port Shepstone. For example, it was previously stated that the borehole would be cased, but page 38 indicates that only the top half will be cased. Figure 3.4 seems to show that >700m will not be cased. At the meeting assurance was given that no deflecting would take place, but page 40 describes how deflecting will be implemented. The meeting stated that all the holes will be vertical, but page 40 implies that they may be inclined.	The well schematic represented at pg. 38 of the draft EIR is the same showed and discussed in public open house meetings. It is a sketch representing a common Eni well profile for an explorative well: all the drilled holes are vertical; all the sections will be cased (a casing or liner will be run in hole) and cemented except the last 8.5" hole section, for which it is preferable to leave it as an open hole to perform high quality logs at the end of drilling operations. As contingency, and the same is indicated in the figure 3.3, a 7" liner could be run in hole, in particular in case of hole instability. The drilling advancement in the borehole is itself "directional", with the meaning that inclination and direction are controlled through over operations with real time drilling sensors installed at the bottom of the bottomhole assembly in communication with surface sensors. For the explorative and appraisal wells, Eni defined that vertical profile is the preferred solution, so no horizontal (pure "horizontal directional drilling") drain will be drilled. Nevertheless, during well executions it could happen that a sidetrack (contingency operation mentioned at pg. 40 of EIR) is needed. For side track, after the setting of a whipstock, the directional drilling is mandatory in order to mill a portion of previous installed casing, guide back the drill bit into the formation and reach the planned reservoir target.
Paddy	Norman	WESSA	The term "south coast" is understood in KZN to refer to the coast South of Durban. This term must be defined adequately, as it is misleading in the context of proposed drilling off the Kwazulu-Natal coast	In the Marine Ecology Study, where relevant, the KZN South Coast is referred separately from the South Coast
Paddy	Norman	WESSA	On page 92 it is stated that "Seals occur only occasionally". However, a review by the KZN Strandings Network reveals that stranding occurs fairly regularly, and several seal species occur. Thus, it is probable that larger numbers of seals may occur offshore.	The seals that may occur are all vagrants. The nearest seal colonies are in Algoa Bay
Paddy	Norman	WESSA	Whale numbers have improved noticeably in recent years, and although numbers do peak, whale species are present virtually all year round. And juveniles do not mature overnight.	As stated in the marine ecology report (Annex D4), "The marine mammal fauna of the East Coast comprise between 28 and 38 species of cetaceans (whales and dolphins) known (historic sightings or strandings) or likely (habitat projections based on known species

				parameters) to occur here (Table 9) (Findlay 1989; Findlay et al. 1992; Ross 1984; Peddemors 1999; Best 2007), with seals occurring only occasionally in the form of vagrant Cape fur seals ( <i>Arctocephalus pusillus pusillus</i> ) (CSIR 1998). The offshore areas have been particularly poorly studied with almost all available information from deeper waters (>200 m) based on historic whaling records, and information on smaller cetaceans being particularly poor."
Paddy	Norman	WESSA	The plan on page 98 is inadequate and possibly antiquated. Juvenile turtle migration over long distances is well documented.	If you are referring to the turtle tracking maps, these were from a specific study done by the NMMU turtle unit in 2013.
Paddy	Norman	WESSA	On page 101 Figure 4.21 does not show All as stated in first paragraph. It does indicate that ecologically significant areas occur very close to both ADIs.	Figure 4.21 has been changed to reflect the existing and recently approved marine protected areas.
Paddy	Norman	WESSA	<p>Conclusion:</p> <p>We believe that the small selection out of many possible criticisms tabled above highlights that this report is grossly inadequate to justify approval of the proposal. Although it is a very large report, it contains much repetition, much information that is vague or antiquated, and a serious inadequacy of information on the receiving environment. Consequently the assessment of impacts is unreliable. This is not necessarily a criticism of the EAP, or the applicant, but reflects the need for far better baseline studies, more justifiable interpretations, and a far higher level of understanding of the components and systematics of the receiving environment. This is primarily a marketing report, not an EIA. It includes a plethora of information suitable for casual investors, but is adequate neither as an environmental assessment nor as a due diligence report. Its omissions are so many that the quantity and quality of potential impacts are at best an estimate. It offers no guarantee whatsoever of any benefits for South Africans, even if it did locate an economic resource, and it fails dismally to demonstrate that negative impacts will be mitigated adequately. We believe it is a fatally flawed report.</p> <p>Furthermore, we believe that the search for more hydrocarbons is not in the best interests of the peoples of South Africa, because of the severe impacts expected due to climate change, especially on the disadvantaged members of society. We believe it would be more sustainable, better for job creation, and more environmentally responsible to invest in manufacturing capacity for alternative energy systems and equipment.</p>	<p>Your criticism is acknowledged. However, it is of the professional opinion of ERM that there is sufficient secondary data available to assess the impacts to marine and coastal ecology, fisheries, tourism and heritage from the project activities. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report).</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</p>

			As such we believe it would be reckless, or even criminally negligent, to allow this proposal to proceed in its current form.	
Karin	Kilborn	Future 4 Wildlife	<p>Referring to ENI's proposal, we want to raise our concerns, in particular:</p> <p>1. Wildlife: - Heritage and prehistoric fish species are going to be put at risk. The Coelacanth dates back 420 million years, grow up to 2 metres in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations and sound waves which have been proven by multiple studies and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.</p>	<p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in Block ER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Karin	Kilborn	Future 4 Wildlife	Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere metres from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while	Your comment is supported by the Marine Ecology Report in Annex D1 which describes those baleen whales occurring in the offshore waters of the East Coast as including the blue, fin, sei, minke, dwarf minke, inshore Bryde's, Pygmy Right, Humpback and Southern Right. Southern right whales will pass through Block ER236 in July and August and again on their southward migration in October/November. The species is of Least Concern under IUCN as is the Humpback Whale, which can be

			Bryde's whales are found slightly further offshore all year round.	expected in June - July and October - December near Block ER236. The recent South African National Red Data list assessment has also reclassified population of Bryde's whales as 'Vulnerable' (Penry et al. 2016). Its current distribution implies that it is highly likely to be encountered in Block ER236 throughout the year, with peak encounter rates in late summer and autumn (Mar – May) (Penry et al. 2011; Melly et al. in press).
Karin	Kilborn	Future 4 Wildlife	The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment
Karin	Kilborn	Future 4 Wildlife	Many species of Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species populating the South African coasts.	Noted, these species are of high conservation importance
Karin	Kilborn	Future 4 Wildlife	<p>2.The Environment</p> <p>- Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>We therefore would demand that a full survey of such bottom living organism is established prior to the drilling process and that this is monitored as to its state of health</p>	<p>A pre-drilling ROV survey of the seabed will be performed at the drill site prior to drilling and the results sent to the Competent Authority. Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less then 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines.</p>
Karin	Kilborn	Future 4 Wildlife	Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.

			during the production and transport of crude oil and pollutes the waters surrounding the rig.	Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.
Karin	Kilborn	Future 4 Wildlife	Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.	As discussed in Chapter 7 of the EIA Report, the impacts of cuttings to the seabed and its associated fauna are highly localised, and when seen in context of the extent of the Southwest Indian Ocean upper and lower bathyal habitats available. The significance of the impact of drilling cuttings and muds due to smothering on benthic Macrofauna and deep water corals will be Moderate (pre-mitigation).
Karin	Kilborn	Future 4 Wildlife	<p>3. We support the prevention and avoidance of negative impacts</p> <p>- We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injure 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</p>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. G228. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot</p>

				<p>be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Karin	Kilborn	Future 4 Wildlife	<p>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p>

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Karin	Kilborn	Future 4 Wildlife	Very worryingly, the East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move	The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.



			northwards inshore up our coastline with larval formations carried south by the current.	
Karin	Kilborn	Future 4 Wildlife	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <p>- Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Karin	Kilborn	Future 4 Wildlife	Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Karin	Kilborn	Future 4 Wildlife	With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist

			<p>who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p>	<p>studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Karin	Kilborn	Future 4 Wildlife	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <p>- Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</p> <p>The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</p> <p>The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</p> <p>We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</p>	<p>The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organisation (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardised national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an</p>

				<p>unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway). The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date.</p>
Karin	Kilborn	Future 4 Wildlife	<p>6. Political consideration</p> <p>- The protected areas are currently 0.4% of the oceans around South Africa. The South African National Biodiversity Institute (SANBI) has published on 24 October 2018 the Government approval for extending the Marine Protected Areas (MPAs) from 0,4% to 5% in a 5 years project. This is a very good sign but still far from the target of 10% to be met by 2020 as South</p>	<p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>It is acknowledged that MPAs are important for the protection of marine resources however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the Area of Interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs (24 October 2018, Department of</p>

			<p>Africa has committed to as a Member of the UN. There have also been concerns raised that the delay may be linked to the fact that by 2014 the Petroleum Agency of South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration so the goal of 10% of MPAs will not be met.</p>	<p>Environmental Affairs, <a href="http://www.sanbi.org">www.sanbi.org</a>). The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p> <p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.</p>
Karin	Kilborn	Future 4 Wildlife	<p>South Africa's Government has not even started investing in green energy yet. On the contrary, it carries on allowing the expansion of coal mining and fossil fuels investments. Many countries of the third world are far more advanced than South Africa in this sense. The Government should finally put green investments in its agenda and stop allowing these kind of explorations.</p> <p>Sewerage outfalls of big cities like Cape Town are already pouring an average of 40 million litres of untreated sewage per</p>	<p>The South African Government has invested "green energy" through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) which was established by the Department of Energy (DoE) in conjunction with the National Treasury and the Development Bank of Southern Africa (DBSA) at the end of 2010. Since then, 2,094MW of wind power and 1,450MW of solar power have been developed and now contribute to the Country's energy mix.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide</p>

			day, with their chemical content, straight into the ocean from the submerged outfall pipes located normally within 2 km offshore. In this context of marine environmental dis-attention, drilling oil near or upstream protected areas full of genuine and untouched ecosystems should be avoided and unmistakably forbidden.	future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.
Karin	Kilborn	Future 4 Wildlife	In addition and very worryingly, it has been reported that Chinese vessels are allowed to overfish in South African waters and that they regularly abandon industrial fishnets, once damaged, in the water; this has been reported to severely affect marine life as well as single-use plastic still heavily used at any industrial level in South Africa.	<p>With regards to Chinese vessels overfishing in South African water , ERM is not in the position to respond to these as they fall beyond the scope of this project application.</p> <p>It must be noted, however, that Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project, as described in the EMPr (Chapter 9) of this EIA Report. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78 (International Convention for the Prevention of Pollution at Sea</p>
Karin	Kilborn	Future 4 Wildlife	<p>7. Conclusion</p> <ul style="list-style-type: none"> <li>- The protection of African communities and people, their health and wellness is for us of crucial importance.</li> <li>- The protection of the pre-historic Coelacanth species and of so many other iconic marine species, are for us of crucial importance.</li> <li>- A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> <li>- We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich</li> </ul>	<p>7. The project is located over 60 km offshore. However, this project has taken into consideration the potential impact of an oil spill on coastal communities.</p> <ul style="list-style-type: none"> <li>• Noted, the EIA Report has considered the conservation importance of marine fauna present in the Project Area in Chapter 4 of the EIA Report.</li> <li>• Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds. The use and type of dispersant is a contingency of boundaries (e.g. booms) and recovery (e.g. skimmers) systems and will be detailed and authorized by competent authority within OSCP.</li> <li>• Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. ERM's role does not include replying to the stated assertions and comments to the Government's activity.</li> <li>• Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased</li> </ul>

			<p>people of society whereby once again the poor gets dealt a raw deal.</p> <ul style="list-style-type: none"> <li>- This project seems to not even offer any employment or benefit opportunity for South Africans.</li> <li>- Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration.</li> <li>- WE STRONGLY OPPOSE THE APPROVAL OF THIS PROJECT</li> </ul>	<p>government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The updated needs and desirability description of the Project is discussed in Chapter 3 of the Final EIA Report.</p> <ul style="list-style-type: none"> <li>• The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</li> </ul>
Michael	Moss	Private	<p>If offshore drilling does take off, will it lead to our refineries, sapref, engen, etc, expanding to increase capacity?</p> <p>Will the drilling and the bigger refineries lead to more Petro-Chemical waste?</p> <p>With DCLM and Shongweni being the only two Hazardous Waste landfills, and with no suitable alternative site for a new landfill to be built, where will all that increased waste stream go?</p> <p>Is it responsible to be planning this, without first putting in place sound waste disposal measures?</p>	<p>This Project is for exploration, to investigate potential resources and assess their viability for extraction and future development. If exploration is successful Eni would need to determine the most appropriate model for extraction and production. This would involve detailed feasibility studies which would assess the capacity of existing refineries, and methods for hazardous waste disposal.</p> <p>All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines.</p> <p>Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p>
Yvette	Retief	Private	<p>I object to this exploration because:</p> <ol style="list-style-type: none"> <li>1. The EIA is clear that there are many unknowns. They don't know what the impacts are going to be on many animals and how this will have a chain reaction and ultimately affect tourism, fisheries or the function of the marine environment as it is.</li> <li>2. What happens after the drilling is complete and the well is plugged – who is responsible to check that it doesn't leak, 10, 20 or 100 years from now?</li> <li>3. The Agulhas current is one of the fastest flowing currents in the world, the oil company has never drilled in this current, how can they be certain they have the ability to undertake this</li> </ol>	<ol style="list-style-type: none"> <li>1. Your objection is acknowledged. Impacts related to fisheries and marine ecology have been assessed in Chapter 7 of the EIA Report. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions</li> <li>2. At the end of drilling and testing operations, prior to leaving the well location, the well will be plugged and abandoned (P&amp;A). The scope of well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different</li> </ol>

			task without causing a disaster? cy plan yet?	<p>formations and/or up to seabed is prevented. A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are configured so that no future intervention is required. The wellhead and seabed will be surveyed by a ROV after well(s) plug and abandonment ("decommissioning"). Further monitoring of the wellhead after decommissioning is not required, considering that the plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well.</p> <p>3. The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors. In extreme weather conditions the drillship would make the well safe and then disconnect and move to a place of shelter until conditions improve. Drilling would recommence after it is determined to be safe to do so.</p>
Yvette	Retief	Private	<p>4. In the posters at the open house meetings, it was noticed that the legends on all the maps used terms like 'very unlikely'. That is similar to the definition of an 'accident' and cannot be predicted.</p> <p>5. Also the posters didn't include maps in which the oil actually made contact with the coastline. This is leading the public to believe the oil will stay out at sea and just disappear.</p> <p>6. Why does South Africa not have a national oil spill contingency plan yet?</p>	<p>4. The unplanned and oil spill posters both explained that the probability of a blowout is very low where the frequency of occurrence is <math>2.5 \times 10^{-4}</math>, 1 case in 4,000 drilled wells (OGP Report, 2010).</p> <p>5. Annex D4 of the EIA Report includes simulations and figures in terms of shoreline oiling probability, most amount of shoreline oiling mass and fastest time for shoreline oiling to occur</p> <p>6. A draft NOSCP is available and has been subject to a public participation process and review by key instructional and industry parties. South Africa is in the process of finalising their NOSCP which represents years of work and consultation. Eni will develop their OSCP in accordance with the guidelines set out in the NOSCP.</p>
Yvette	Retief	Private	<p>7. Why are there no oil spill supplies in KZN?</p> <p>8. The EIA makes reference to the high possibility of invasive species through ballast water and on drilling equipment. Invasive Species can have severe, detrimental economic and ecological effects and the extent of these is only beginning to be appreciated by economists and policy makers in South Africa. Invasions have the potential to alter ecosystems which can result in significant negative environmental and socio-economic impacts.</p>	<p>7. Note that the appropriate equipment will be available and accessible. No industry activity yet which is why there is no equipment. Situation will be vastly different when developing the OSCP and ascertaining what equipment is required in-country and through service agreements.</p> <p>8. As reported in the EMPr of the EIA, Eni will assure that all ships carrying ballast water must de- and re-ballast in adherence with the International Maritime Organization (IMO) guidelines and standards governing discharge of ballast waters at sea. In addition, Eni will ensure</p>

			<p>9. The risks rated in the EIA are mostly listed as minor and Negligible, this may be true on a species by species basis but there is no consideration to what happens to the entire suit of animals as a whole? In addition, some of the ratings appear to be of opinion and not based on any science because the impacts are listed as unknown in so many cases.</p>	<p>that all infrastructure (e.g. wellheads, BOPs and guide bases) that has been used in other regions is thoroughly cleaned before use in South Africa and will avoid the presence and spread out of invasive species by the implementation of the ballast water management plan. All related impacts have been assessed in Chapter 7 and 8 of the EIA Report.</p> <p>9. Specialist reports detailing the specialist findings can be found in Annex D of the EIA Report. The Impact Assessment Methodology used can be found in Chapter 6 of the EIA Report.</p>
Yvette	Retief	Private	<p>10. There is no acknowledgement that South Africa has a responsibility to respond to the Paris Agreement on climate change (COP21). South Africa needs to achieve a 42% reduction of its carbon emissions over by 2025, developing the offshore oil and gas sector will undermine this.</p> <p>11. Why did Operation Phakisa not have a renewable energy component? This would be more strategic, globally acceptable and foreign investment opportunities would most likely have been greater.</p> <p>12. There is disregard for the precautionary principle, as outlined in the National Environmental Management Act, which is supposed to be applied to developments where there is little known or little understanding about the environmental impacts.</p>	<p>10. The Paris Agreement (United Nations Framework Convention on Climate Change) 2016 has been added to Chapter 2 of the EIA Report. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>11. Noted. Operation Phakisa is an initiative of the South African government. This initiative was designed to fast track the implementation of solutions on critical development issues. This is a unique initiative to address issues highlighted in the National Development Plan (NDP) 2030 such as poverty, unemployment and inequality. Changes to operation Phakisa are therefore out of the scope of this project and not subject to this application.</p> <p>12. There is sufficient secondary data available to assess the impacts to marine and coastal ecology from the project activities. Based on the precautionary principle if the presence of sensitive species (eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report).</p>
Yvette	Retief	Private	<p>13. Sound and additional noise in the water has been identified to interrupt the communication, reproduction, navigation and eating habits essential to the survival of marine life. In addition to the operational noise of the drilling, directed seismic surveys are expected to be undertaken and these are extremely detrimental to marine fauna. Additional sound in the water poses an unacceptable risk of harm to marine life at the</p>	<p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced</p>



			species and population level, the full extent of which will not be understood until long after the harm has occurred.	<p>sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p>
Yvette	Retief	Private	14. A considerable amount of artificial light (electric lighting, gas flares, and Remotely Operated Vehicle lights) will be introduced to the environment around the operation. Artificial light is known to potentially affect ecological processes in the upper ocean, such as diel vertical migration of plankton, disrupt the extremely sensitive visual systems, attracting numerous species, including squid, large predatory fishes, and birds.	14. The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling. As discussed in Chapter 7 of the EIA Report, the increase in ambient lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.
Yvette	Retief	Private	<p>15. The mitigation measures proposed for the exploration drilling are superficial, such as regular maintenance of machinery to ensure less noise, less leaks etc. This is not mitigation, this is equipment maintenance.</p> <p>I trust ERM and the regulator will consider the above objection / concerns raised above.</p>	15. The EMPr (Chapter 9 of the EIA Report), details the mitigation measures proposed for the identified impacts as a result of the project. Maintenance of machinery ensures that the equipment operates efficiently and prevents increased emissions.
Mary	Shabbott	Private	<p>1. Wildlife:</p> <ul style="list-style-type: none"> <li>Heritage and prehistoric fish species are going to be put at risk. The Coelacanth dates back 420 million years, grow up to 2 metres in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of</li> </ul>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. Please note that the subsurface plume moves in the opposite direction to known coelacanth habitat in the spill modelling results</p> <p>Noise concern:</p>

			<p>an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations and sound waves which have been proven by multiple studies and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.</p>	<p>his EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, as the source of this noise is at the top of the surface, it bounces off the bottom of the mixed layer (shallow layer extending below the sea surface for meters, depending on the season) and will not travel far downwards. Thus, whilst the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>• Many species of Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species populating the South African coasts.</li> </ul>	Noted, these species are of high conservation importance
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>• The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.</li> </ul>	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>• Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere metres from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while Bryde's whales are found slightly further offshore all year round.</li> </ul>	Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Mary	Shabbott	Private	<p>2. The Environment</p> <ul style="list-style-type: none"> <li>• Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</li> <li>• Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and</li> </ul>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM,</p>

			<p>feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p> <ul style="list-style-type: none"> <li>• Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.</li> <li>• We therefore would demand that a full survey of such bottom living organism is established prior to the drilling process and that this is monitored as to its state of health.</li> </ul>	<p>barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practice IFC guidelines</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p> <p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).</p>
Mary	Shabbott	Private	<p>3. We support the prevention and avoidance of negative impacts</p> <ul style="list-style-type: none"> <li>• We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p>

			<p>assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injury 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</p>	<p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounces off</p>
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				<p>the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed</p>

				<p>as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>• Very worryingly, the East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current.</li> </ul>	<p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Mary	Shabbott	Private	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <ul style="list-style-type: none"> <li>• Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</li> </ul>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>

				<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</li> </ul>	Noted, desalination does not form part of the scope of this project.
Mary	Shabbott	Private	<ul style="list-style-type: none"> <li>With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</li> </ul>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Mary	Shabbott	Private	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <ul style="list-style-type: none"> <li>Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the</li> </ul>	The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organisation (IMOrg) has been established, which

			<p>weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</p> <ul style="list-style-type: none"> <li>• The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</li> <li>• The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</li> <li>• We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</li> </ul>	<p>consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardised national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p>
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				<p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date</p>
Mary	Shabbott	Private	<p>6. Political consideration</p> <ul style="list-style-type: none"> <li>• The protected areas are only 5% of the oceans around South Africa which is far from the target of 10% to be met by 2020 as South Africa has committed to as a Member of the UN. In 2014 the president of South Africa announced that 5% protection would be achieved by 2016 and 10% by 2020, through the establishment of an expanded network of Marine Protected Areas (MPAs) Accordingly, in February 2016 the Minister of Environmental Affairs published the intention to declare a representative network of 21 new, expanded Marine Protected Areas and invited the public and key stakeholders to comment. These areas were identified as important to support fisheries recovery and productivity, to protect fragile and sensitive habitats and endangered species, to help combat climate change, and to ensure resilient and healthy oceans that can support coastal communities and a sustainable blue economy into the future.</li> <li>• There have also been concerns raised that some delays may be linked to the fact that by 2014 the Petroleum Agency of South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration</li> </ul>	<p>ERM is not in a position to comment on the pace at which Government has rolled out the protection of marine resources, or the allocation of concession areas by the Government. .</p> <p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>It is acknowledged that MPAs are important for the protection of marine resources, however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the drilling areas of interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs. The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration</p>

				is the only means to investigate potential resources and assess their viability for extraction and future development.
Mary	Shabbott	Private	<p>7. Conclusion</p> <ul style="list-style-type: none"> <li>• The protection of African communities and people, their health and wellness is for us of crucial importance.</li> <li>• The protection of the pre-historic Coelacanth species and of so many other iconic marine species, are for us of crucial importance.</li> <li>• A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> <li>• We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich people of society whereby once again the poor gets dealt a raw deal.</li> <li>• This project seems to not even offer any employment or benefit opportunity for South Africans.</li> <li>• Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration.</li> </ul>	<p>7. The project is located over 60 km offshore. However, this project has taken into consideration the potential impact of an oil spill on coastal communities.</p> <ul style="list-style-type: none"> <li>• Noted, the EIA Report has considered the conservation importance of marine fauna present in the Project Area in Chapter 4 of the EIA Report.</li> <li>• Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds. The use and type of dispersant is a contingency of boundaries (e.g. booms) and recovery (e.g. skimmers) systems and will be detailed and authorized by competent authority within OSCP.</li> <li>• Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. ERM's role does not include replying to the stated assertions and comments to the Government's activity.</li> <li>• Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</li> <li>• The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</li> </ul>
Stefan	Falcon	Private	<p>I firmly object to the approval of such exploration in particular for environmental and human issues:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2</p>

			Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).	<p>emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Stefan	Falcon	Private	2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.	As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.
Stefan	Falcon	Private	3. I am very concerned about the migration of about 130.000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, whale migration has been taken into consideration in the IA.
Stefan	Falcon	Private	4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these are species of high conservation importance
Stefan	Falcon	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of</p>

				the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.
Stefan	Falcon	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>

Stefan	Falcon	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Stefan	Falcon	Private	Human Impact 1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Stefan	Falcon	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Stefan	Falcon	Private	3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from

			<p>exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression. Considering all the above I oppose the approval of such project.</p>	<p>air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Cocca	Santanga	Private	<p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Cocca	Santanga	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>
Cocca	Santanga	Private	<p>3. I am very concerned about the migration of about 130.000 whales from East Africa trough the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>
Cocca	Santanga	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>Noted, these species are of high conservation importance.</p>

Cocca	Santanga	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Cocca	Santanga	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the</p>

				<p>drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Cocca	Santanga	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Cocca	Santanga	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG</p>



				<p>Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Cocca	Santanga	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Cocca	Santanga	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Celeste	Watt	Private	<p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration</p>

				is the only means to investigate potential resources and assess their viability for extraction and future development.
Celeste	Watt	Private	2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.	As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.
Celeste	Watt	Private	3. I am very concerned about the migration of about 130.000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Celeste	Watt	Private	4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
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Celeste	Watt	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding,	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling

			<p>disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
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			<p>eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	
Celeste	Watt	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Celeste	Watt	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards. G343</p>
Melany	Porter	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Melany	Porter	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be</p>

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				<p>speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due to the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
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Melany	Porter	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
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Catherine	Rudolf Nnaji	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Catherine	Rudolf Nnaji	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>
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Catherine	Rudolf Nnaji	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>Noted, these species are of high conservation importance.</p>
Catherine	Rudolf Nnaji	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd</p>



				<p>(Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Catherine	Rudolf Nnaji	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor</p>

				significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)
Catherine	Rudolf Nnaji	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Catherine	Rudolf Nnaji	Private	1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Catherine	Rudolf Nnaji	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.

Catherine	Rudolf Nnaji	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Nigel	Goodman	Private	<p>I object to the approval of air blasting and drilling in South African for environmental and human related concerns: Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; how is the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM)?</p> <p>2. This project will threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). They will PERISH in the event of an oil spill. There are just 30 exemplars and is one of the rarest fishes in the world.</p> <p>3. I am very concerned about the migration of about 130.000 whales from East Africa trough the areas, towards the Cape where they breed and nurse their young. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter.</p>	<p>1. Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>2. The EIA Report has considered the conservation importance of coelacanths present in the Project Area in Chapter 4 of the EIA Report. As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p> <p>3. Your concern is acknowledged. The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as</p>

			<p>These air blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p> <p>4. I am very concerned for the interference with many species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report The impact of underwater noise from drilling was Chapter 7 of the EIA Report as Minor to Negligible. This is because emissions of underwater noise from well drilling operations and associated drillship and support vessels is not sufficient to cause direct physical injury or mortality to marine life, even at close range.</p> <p>4. Noted, these species are of high conservation importance</p>
Nigel	Goodman	Private	<p>5. Offshore drilling will cause pollution: look at the Gulf of Mexico. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast.</p> <p>6. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig. Again: look at the Gulf of Mexico</p> <p>7. I fear the decline in sea bird populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. 8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current</p>	<p>5. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene within 24 hours providing part of the oil spill response equipment and oil spill dispersants. Saldanha Bay is the logistic base in country for OSRL. In case of the loss of control of the well, Eni has a service agreement in place with Wild Well Control to mobilise the capping stack within 48 hours. Further equipment will be available in the logistic base close to operations.</p> <p>6. Small spills on the deck of the drillship will be contained with the equipment onboard. Spills at sea will be immediately contained by the supply vessels, which host onboard offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response.</p> <p>7. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA Report.</p> <p>8. The impact of accidental spills on marine fauna has been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>

Nigel	Goodman	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills that are routine will impact local communities and increase poverty and lead to even more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Nigel	Goodman	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Nigel	Goodman	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the</p>

				<p>proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Lynette	Redelinghuys	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Lynette	Redelinghuys	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>
Lynette	Redelinghuys	Private	<p>3. I am very concerned about the migration of about 130.000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>
Lynette	Redelinghuys	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>Noted, these species are of high conservation importance.</p>
Lynette	Redelinghuys	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM,</p>

			linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.	<p>barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Lynette	Redelinghuys	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from</p>

				<p>underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Lynette	Redelinghuys	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Lynette	Redelinghuys	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of</p>



				who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
Lynette	Redelinghuys	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Lynette	Redelinghuys	Private	3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression. Considering all the above I oppose the approval of such project.	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.  Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Jan & Linda	Arkert	Africa Exposed	1. Wildlife: • Heritage and prehistoric fish species are going be to put at risk. The Coelacanth dates back 420 million years, grow up to 2 metres in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations	Coelacanth species have been discovered in Jessor and Wright Canyons. Those Canyons are included in the iSimangaliso MPA more than 80 km away from the northern area of interest and about 200 km from expected location of closest well N1. As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The Marine Ecology Study (Annex D1 of the EIA Report) identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references

			and sound waves which have been proven by multiple studies and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.	in McCauley 1994). The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>Many species of Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species populating the South African coasts.</li> </ul>	Noted, these species are of high conservation importance
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.</li> </ul>	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere metres from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while Bryde's whales are found slightly further offshore all year round.</li> </ul>	Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Jan & Linda	Arkert	Africa Exposed	<p>2. The Environment</p> <ul style="list-style-type: none"> <li>Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</li> <li>Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</li> <li>Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.</li> <li>We therefore would demand that a full survey of such bottom living organism is established prior to the drilling process and that this is monitored as to its state of health.</li> </ul>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less then 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>

				<p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).</p>
Jan & Linda	Arkert	Africa Exposed	<p>3. We support the prevention and avoidance of negative impacts</p> <ul style="list-style-type: none"> <li>• We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injury 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there</p>

				<p>is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references</p>

				<p>in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. G323</p> <p>Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.</p>
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>• Very worryingly, the East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few</p>

			<p>to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current.</p>	<p>kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p>
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				Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible.
Jan & Linda	Arkert	Africa Exposed	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <ul style="list-style-type: none"> <li>• Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</li> </ul>	<p>The Project activities will take place 60km offshore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event on marine based livelihoods are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>• Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</li> </ul>	Noted, desalination does not form part of the scope of this project.
Jan & Linda	Arkert	Africa Exposed	<ul style="list-style-type: none"> <li>• With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</li> </ul>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that</p>

				in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Jan & Linda	Arkert	Africa Exposed	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <ul style="list-style-type: none"> <li>• Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</li> <li>• The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</li> <li>• The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</li> <li>• We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</li> </ul>	<p>The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organisation (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardised national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool</p>



				<p>to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date</p>
Jan & Linda	Arkert	Africa Exposed	<p>6. Political consideration</p> <ul style="list-style-type: none"> <li>• The protected areas are only 0.4% of the oceans around South Africa which is far from the target of 10% to be met by 2020 as South Africa has committed to as a Member of the UN. In 2014 the president of South Africa announced that 5% protection would be achieved by 2016 and 10% by 2020, through the establishment of an expanded network of Marine Protected Areas (MPAs) Accordingly, in February 2016 the Minister of Environmental Affairs published the intention to declare a representative network of 21 new, expanded Marine Protected Areas and invited the public and key stakeholders to comment. These areas were identified as important to support fisheries recovery and productivity, to protect fragile and sensitive habitats and endangered species, to help combat</li> </ul>	<p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>It is acknowledged that MPAs are import for the protection of marine resources, however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the Area of Interest where Eni intend to drill does not overlap with any of the existing and recently approved MPAs. The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimangaliso and Protea Banks MPAs. Eni have</p>

			<p>climate change, and to ensure resilient and healthy oceans that can support coastal communities and a sustainable blue economy into the future. Unfortunately, over four years later stakeholders have had no feedback from the Department of Environment Affairs about when the MPAs will be declared.</p> <ul style="list-style-type: none"> <li>• There have also been concerns raised that the delay may be linked to the fact that by 2014 the Petroleum Agency of South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration.</li> </ul>	<p>confirmed that no drilling will be performed in any declared MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
			<ul style="list-style-type: none"> <li>• South Africa's Government has not even started investing in green energy yet. On the contrary, it carries on allowing the expansion of coal mining and fossil fuels investments. Many countries of the third world are far more advanced than South Africa in this sense. The Government should finally put green investments in its agenda and stop allowing these kind of explorations.</li> <li>• In addition and very worryingly, it has been reported that Chinese vessels are allowed to overfish in South African waters and that they regularly abandon industrial fishnets, once damaged, in the water; this has been reported to severely affect marine life as well as single-use plastic still heavily used at any industrial level in South Africa.</li> <li>• Sewerage outfalls of big cities like Cape Town are already pouring an average of 40 million litres of untreated sewage per day, with their chemical content, straight into the ocean from the submerged outfall pipes located normally within 2 km offshore. In this context of marine environmental dis-attention, drilling oil near or upstream protected areas full of genuine and untouched ecosystems should be avoided and unmistakably forbidden.</li> </ul>	<p>The South African Government has invested "green energy" through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) which was established by the Department of Energy (DoE) in conjunction with the National Treasury and the Development Bank of Southern Africa (DBSA) at the end of 2010. Since then, 2,094MW of wind power and 1,450MW of solar power have been developed and now contribute to the Country's energy mix.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p> <p>With regards to Chinese vessels overfishing in South African water and the sewerage outfalls comments, ERM is not in the position to respond to these as they fall beyond the scope of this project application.</p> <p>It must be noted, however, that Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project, as described in the EMPr (Chapter 9) of this EIA Report. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78 (International Convention for the Prevention of Pollution at Sea)</p>
Jan & Linda	Arkert	Africa Exposed	<p>7. Climate Change</p> <ul style="list-style-type: none"> <li>• Global Climate Change is due to anthropogenic causes,</li> </ul>	<p>Section 4.3.1 (Chapter 4) of the EIA Report describes climate change in a South African context. In the need and desirability section of the EIA</p>

			<p>particularly the use of and burning of hydrocarbon based fuels, in particular coal, oil and gas (methane) over the past 150 years.</p> <ul style="list-style-type: none"> <li>• Climate change is not a future event, the effects are already manifest in extreme weather patterns throughout the world and particularly, the extreme drought conditions experienced in southern Africa.</li> <li>• Record temperatures have been recorded during seven of the past ten years.</li> <li>• The recently released IPCC Assessment report (2018) warns of the consequences of temperature increases of more than 1.5°C by 2040, should decisive action not be implemented within the forthcoming 8 to 10 years.</li> <li>• The continued exploration and use of oil and gas does not take the into account the warnings and plethora of scientific evidence to reduce dependence on the use of fossil fuels.</li> <li>• As a signatory to the COP 21 Paris agreement that has been ratified by the South African parliament, the people of this country have an obligation and duty to reduce our dependence on hydrocarbon based fuels and not to increase our exploitation of these polluting resources.</li> <li>• The continued use of fossil fuels as proposed by the applicants will further delay the implementation of renewable energy generation.</li> </ul>	<p>Report (Chapter 3) describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'. Additionally, Eni actively participates international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO2 over the next ten years.</p> <p>Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative.</p>
Jan & Linda	Arkert	Africa Exposed	<p>8. Conclusion</p> <ul style="list-style-type: none"> <li>• The protection of African communities and people, their health and wellness is for us of crucial importance.</li> <li>• The protection of the pre-historic Coelacanth species and of so many other iconic marine species, are for us of crucial importance.</li> <li>• A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> <li>• We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with</li> </ul>	<p>7. The project is located over 60 km offshore. However, this project has taken into consideration the potential impact of an oil spill on coastal communities.</p> <ul style="list-style-type: none"> <li>• Noted, the EIA Report has considered the conservation importance of marine fauna present in the Project Area in Chapter 4 of the EIA Report.</li> <li>• Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds. The use and type of dispersant is a contingency of boundaries (e.g. booms) and recovery (e.g. skimmers) systems and will be detailed and authorized by competent authority within OSCF.</li> <li>• Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. ERM is not entitled to reply to such assertions and comments to the Government's activity.</li> </ul>

			<p>the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich people of society whereby once again the poor gets dealt a raw deal. • This project seems to not even offer any employment or benefit opportunity for South Africans.</p> <p>• Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration. WE STRONGLY OPPOSE THE APPROVAL OF THIS PROJECT</p>	<ul style="list-style-type: none"> <li>• Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</li> <li>• The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</li> </ul>
Deon	Pretorius	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Deon	Pretorius	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>

			There are just 30 exemplars and is one of the rarest fish in the world.	
Deon	Pretorius	Private	3. I am very concerned about the migration of about 130.000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Deon	Pretorius	Private	4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Deon	Pretorius	Private	5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium. 6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.	Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.
Deon	Pretorius	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The impact of underwater noise from drilling was Chapter 7 of the EIA Report as Minor to Negligible. This is because emissions of underwater noise from well drilling operations and associated drillship and support vessels is not sufficient to cause direct physical injury or mortality to marine life, even at close range
Deon	Pretorius	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Deon	Pretorius	Private	Human related Concerns  1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000	The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that

			<p>subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Deon	Pretorius	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Deon	Pretorius	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>

Lynn	Roebuck	Private	<p>Exploration in these waters will be devastating to wildlife and the environment. I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Lynn	Roebuck	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor.</p>
Lynn	Roebuck	Private	<p>3. I am very concerned about the migration of about 130.000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>
Lynn	Roebuck	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p> <p>-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current</p>	<p>Noted, these species are of high conservation importance.</p>
Lynn	Roebuck	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed</p>

				<p>concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Lynn	Roebuck	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report The impact of underwater noise from drilling was Chapter 7 of the EIA Report as Minor to Negligible. This is because emissions of underwater noise from well drilling operations and associated drillship and support vessels is not sufficient to cause direct physical injury or mortality to marine life, even at close range
Lynn	Roebuck	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Lynn	Roebuck	Private	1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Lynn	Roebuck	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Lynn	Roebuck	Private	3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist



			<p>who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Paul	Gray	Private	<p>The below listed comments are conditional on already existing major concerns having been documented for the EIA, and do not suggest mitigation of the environmental concerns, but to emphasize the compliance of the processes to be followed by the survey, exploration or production requirements that may follow such initial stages of the exploratory programme.</p> <p>A "No" option to the overall programme may therefore be applicable.</p> <p>1 All environmental regulations laws and legislation shall be followed. This shall include SA land based, Offshore, and International requirements where applicable. Drilling platforms, rigs or vessels to conform with such regulations etc.</p> <p>2 Drilling, production or operational equipment and vessels shall have in place, an approved Safety Case study by certified and qualified authorities. No such operation shall commence unless this requirement has been satisfied as stated.</p> <p>3 All seismic type surveys shall not in any way cause harm to marine life. This shall be confirmed and approved by existing Marine and Environmental departments or independent consultants and be based on qualified and experienced professionals.</p> <p>4 No unqualified operators shall be employed where professional and technical requirements demand of it.</p> <p>5 All operations shall be documented and approved by international organization/bodies such as Lloyds, Bureau Veritas etc.</p> <p>6 Explorations, operations and production (where applicable), shall be carried out in accordance with approved documented procedures and processes. This includes the Safety Case Study.</p> <p>7 All preventative measures against spillage, blow outs and potential subsequent environmental damage shall be in place,</p>	<p>The assessment of potential "no-go" impacts has been assessed in Chapter 7 of the Final EIA Report. The No- Go alternative is also in contravention of Operation Phakisa's aim to implement South Africa's policies and programmes better, faster and more effectively, and to unlock the economic potential of South Africa's oceans.</p> <p>1. Eni operates according to internationally recognized best practices in order to protect biodiversity and ecosystem services from the first exploration stages. Eni will conduct operations in adherence to South African laws and regulations, international best practice requirements as well as Eni's own internal compliance standards for all project activities</p> <p>2. Eni's drilling program, procedures and selected equipment for operations are in compliance with International Standards ISO/API and Industry Best Practices. Vessels are built and operative with respect to reference maritime standards (e.g. IMO). All equipment, tools, materials and transportation (including helicopters, vessels) must be certified prior to usage and be in compliance with norms and regulations, both national and international.</p> <p>3. The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report</p> <p>4. The majority of staff employed for this project will be expatriates due to the short-term nature of the work and the necessary expertise and required technical skills. In accordance with Eni's guidelines the vessel will be manned as a minimum in compliance with the requirements of the Flag State and the IMO Reg A 890 (21) – Principle of Safe Manning, dated 25 Nov. 1999. In addition, the crew must also be adequate in terms of number and qualifications to safely operate the vessel and to carry out all operations. Permit to Work and Safe Working systems ensure the crew are appropriately qualified and certifications for training must be continuously renewed for offshore work.</p> <p>5. Eni assures that the drilling program and operations follow up is executed with respect to international ISO/API standards and industry</p>

			<p>verified and approved before any work commencement. This includes full back up services, sea and land.</p> <p>8 The listed marine and environmental concerns that have already been listed by others (extensive), I fully support and would be conditional, notwithstanding the above raised comments.</p> <p>I would request that., acknowledgement and response to the comments is forthcoming and also freely available to other concerned parties, and vice versa.</p>	<p>best practise.</p> <p>6. Eni assures that the drilling program and operations follow up is executed with respect to international ISO/API standards and industry best practise. Eni will adopt best in class tools and equipment to prevent accidents and, in case of accident, mitigate the impact and safely shut in the well.</p> <p>7. Spills at sea will be immediately contained by the supply vessels, which host onboard offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Prior to commencing the project, Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>8. Your concerns as well as other stakeholders' concerns have been recorded and responded to in Annex B of the EIA Report.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Our institutional responses pertain to specific matters presented in the draft EIA individual assessments and also relate to overall due diligence and procedure that may fall outside the realm of the ERM consultants. Being relatively new and accelerated through Operation Phakisa for perceived significant and rapid economic upliftment, oil and gas activities in South Africa are poorly regulated at the reconnaissance, development and processing stages. The Petroleum Agency of South Africa (PASA) is mandated to promote offshore exploration, but also processes applications for permits through the Department of Mineral Resources – a conflicted participation. The strong procedural and balance of power (in favour of the environment) legislation of South Africa's National Environmental Management Act (NEMA) should reveal the spectrum of process in such activities, however on two points we feel that this may not be the case. 1) The final decision is made by the Minister of Mineral Resources and not the Minister of Environmental Affairs i.e. through the Department's mandate there may already exist some partiality towards a favourable outcome for exploration given South Africa's development imperative and 2) Procedurally, protection, monitoring, recovery and management plans for</p>	<p>The roles and responsibilities of PASA and DMR under NEMA are described in Chapter 1 and Chapter 2 of the EIA Report. The project requires Environmental Authorisation (EA) from the National Department of Mineral Resources (DMR), through the Petroleum Agency South Africa (PASA). The authorisation would be under NEMA. Since this is an offshore oil and gas project, the DMR is the competent authority, which means that it has powers to either authorise the development or refuse it.</p>

			these activities are at infant-stage through NEMA; even legislation which would address conflicting environmental use (e.g. the Marine Spatial Planning Bill) is embryonic.	
Sean	Fennessy	South African Associated Marine Biological Research	<p>Prudence dictates that we follow international best practice in this case and also because the activity is directly in the high risk area of the Agulhas Current and immediately adjacent to the recently declared uThukela Banks Marine Protected Area (MPA). In fact, the northern drill site in Block ER236 in the specialist representations show that for three scenarios (vessel collision diesel spill, 20-day crude oil blowout, no aqueous drilling fluid mud release), oil spills will enter the MPA. The consultant has speculated that this is an 'unrealistic condition based on no intervention measures being undertaken'. We ascertain that any risk in this highly uncertain environment is an unaffordable risk without protection, monitoring, recovery and management plans presented.</p> <p>In this regard, no mention has been made of baseline or reference assessments prior to drilling activities. Environmental Best Practice would require such assessments to develop contingency and environmental effects monitoring even at exploration phase as this is not without its own detrimental effects. There are a plethora of international guidelines (OSPAR – Norway, CAPP- Canada etc.) which are well-accepted, researched and offer judicious guidance in similar sensitive environments. Indeed the proponent of this particular activity – Eni according to the company profile is 'an Italian company with a worldwide presence'. As such we assume that international, best practice and conventions required for operations in its own jurisdiction would at a minimum, apply elsewhere (e.g. European Union Water Framework Directive (WFD), European Union Marine Strategy Framework Directive (MSFD).</p>	<p>O&amp;G industry standards and good practices for managing different aspects of O&amp;G operations along project lifecycle typically reflect the most up-to-date knowledge of the sector and apply the best technology currently available. This because their ultimate goal is to provide guidance and specifications of how to conduct safe O&amp;G activities in an environmentally and socially responsible manner, in compliance with applicable law and ethical business practices. They are based on sound science and on the collective, global experience of professionals who have been exposed first-hand to a wide range of different operational, environmental and social contexts.</p> <p>Industry uses standards and good practices for engineering specifications of structures and equipment, to ensure safe drilling and well control operations, to enhance technical integrity, ensure health &amp; safe operations, enable cost and time optimization, and timely identify, assess and effectively mitigate all potential impacts on the natural and social environment.</p> <p>Most common Industry Standard and good practices includes ISO, API, NORSOK, OGUK, IOGP and IPIECA to name most famous and world recognized. Eni drilling procedures are in compliance or over standing API/ISO minimum requirements.</p> <p>It is worthwhile mentioning that IOGP and IPIECA good environmental and social practices most of the time are developed working in partnership with key stakeholders (e.g. UN, UNEP-WCMC, science-based NGOs, Universities and Scientific Institutions) or, on specific topics like "E&amp;P sound and marine life" with other trade associations (e.g. IAGC), internationally acknowledged Universities and Scientific Institutions.</p> <p>Similar to international conventions and treaties, standards are by their very nature independently 'peer reviewed' as they demonstrate the best practises adopted globally, and often exceed the local legislative requirements.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Marine benthic environments are poorly known in South Africa's EEZ. Those receiving attention are limited to coastal waters given the logistics, limited accessibility and costs associated with exploring biodiversity of deeper habitats. Nothing is known of the biotopes (unconsolidated or reef) of Block ER236 - in the direct area of influence, let alone other,</p>	<p>The marine specialist's (Annex D1) description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine</p>

			<p>wider areas of influence should an unplanned event occur. Again, a cautionary approach should be adopted with at the least, some qualitative biodiversity inventory prior to exploration. Allocation has been made, with cursory mention, of ROV assessment for sensitive habitats just prior to drilling (cold water corals), with the response to move 500m further from direct influence. This placatory counter would never address the contingency of protecting deep water communities or habitats, given that benthic habitats are colonised by communities with no or insignificant mobility and the entire community has to respond to an environmental pressure; chronic – well drilling, or acute – a spill incident. Several recent studies (see below for marine ecology report), in shallow waters of the same region, found multiple organisms that require description and that not all soft sediment habitats are equally occupied by the same set of robust, opportunistic species. An additional counter to the marine ecology assessments is that ecological disruption of stable abyssal environments is poorly understood, documented and may extend into decades (e.g. Girard and Fisher 2018, Stratmann et al. 2018).</p>	<p>environment was drawn from various scientific publications, the Generic EMP (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and information sourced from the Internet. The study described that the northern area of interest for well drilling comprises Southwest Indian Upper and Lower Bathyal benthic habitats, whereas Southern Indian Lower Bathyal benthic habitat dominates in the southern area of interest (Figure 4.4). Both have been assigned an ecosystem threat status of 'least threatened' in the SANBI 2011 National Biodiversity Assessment (Sink et al., 2011) reflecting the great extent of these habitats within the South African Exclusive Economic Zone (EEZ) (Figure 4).</p> <p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. In addition to the secondary data, primary data will be collected during the pre-drilling ROV survey refer to Chapter 9 of the EIA Report for this detail), which will be conducted at the well site prior to drilling. If any vulnerable habitats are found during this survey a commitment has been made by Eni to ensure the well site is located more than 500 m from the identified location (refer to Chapter 9 of the EIA Report). The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species biodiversity in deep sea environments, (Przeslawski et al., 2012)</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Comments on the EIA individual assessments follow:</p> <p>The greatest risk of this proposed oil exploration is that it is being carried out in very deep water (1500-3000m), within the Agulhas Current (which is one of the strongest western boundary currents in the world) and in an area of the Indian Ocean that is well known for being notoriously rough and stormy with frequent strong winds and large swells. Under these circumstances the risks of drilling an oil well are significantly increased to the point where the likelihood of an accident taking place are very high (despite the well control and blowout preventer mechanisms that will be put in place). The assessments on the marine and coastal ecology and</p>	<p>The risk of drilling in bad weather is managed by the drillship. The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guaranteed by redundancy stability and positioning control equipment, including thrusters and GPS sensors.</p> <p>Eni has also recently conducted a drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South</p>

			<p>fisheries in the area have underestimated the potential environmental impacts of an oil spill under this higher risk scenario. Therefore the question has to be asked is it really worth taking the risk especially when the chances of finding viable hydrocarbon reserves appear to be fairly marginal? Furthermore, in the face of global climate change and the widely acknowledged impact that burning hydrocarbons has on increasing CO2 levels in the atmosphere, should South Africa really be chasing the last drop of oil under the ocean floor rather than focusing efforts on developing more renewable sources of energy?</p>	<p>Africa. Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place.</p> <p>Chapter 8 of the EIA Report and supporting oil spill modelling report (Annex D4) evaluated the risk of an oil spill from a blowout as rare based on the OGP Risk Assessment Data Directory, Report No. 434-2, March 2010. The marine ecology and fisheries report (Annex D1 &amp; D2) evaluated the risk of a spill on the same basis of the oil spill report. Therefore, the assessment of the risk significance of a spill and marine ecology and fisheries is accurate.</p> <p>The impact of greenhouse gas emissions by the project activities on climate change is assessed in Chapter 7 of the EIA Report. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Oil spill modelling report. Generally there is excessive focus on surface oil slicks and potential oil impact on the coast – predicated on any contamination being transported to the surface/upper water levels. Even scenario 2, a wellhead blowout on the seabed, only presents results of oil dispersion modelling on the water surface and to the coastline – not dispersal close to the seabed, nor in the water column. Use of minimum and maximum monthly average ambient currents ignores other scenarios – which could see dispersal in the opposite direction to the average – with dire consequences for sensitive sessile benthos in the World Heritage site &lt; 100km away from the Areas of Interest (Aoi). See additional comments below regarding uncertainty in the modelling.</p> <p>Oil spill modelling Pg 12 “These small particles get transported and dispersed to a large area settling on the ocean floor at insignificant thicknesses due to the strong currents offshore South Africa.” The scenario assumes the riser disconnect is</p>	<p>The focus of the analysis is primarily at or near the water surface / shorelines as is standard practice for such analyses across the industry since these are the main locations where impacts typically occur. Impacts need to be both in terms of exposure concentration and duration. Within the water column, the oil rises to the surface while afforded a tremendous opportunity for dilution while each droplets surface area is surrounded by the ocean waters. Even in cases like the Deepwater Horizon, the dissolved plume’s impacts at depths was observed only by a very small drop in dissolved oxygen in waters while providing a substrate for bacterial consumption, while most pelagic organisms could avoid the plume through locomotion. If one were to study historical oil spill events, the primary focus of observed impacts are on the shorelines and on the water surface where birds and wildlife may contact the floating oil.</p> <p>DAH modelling dispersion has been conducted as part of the Oil Spill Modelling Report (Annex D4). Please note that both the slick and the plume do not move the direction of the iSimangaliso World Heritage site.</p>

			<p>high up in the water column, which is not necessarily the case. At the depths being drilled the currents near the seabed are NOT very strong, so the thickness deposited will be significant if the disconnect occurs lower in the drill string or close to the sea bed. The consequences to vulnerable sessile organisms on the seabed will be severe. See remarks below regarding statements on smothering in the Draft EIA on pg 291.</p> <p>Pg 15 oil modelling report “At this stage, it is important to note that the scenarios presented and simulated, in particular for Scenario 2 (the blowout event), are the very worst case in line with international requirements.” They are NOT the very worst – as noted in the Oil spill modelling peer review, modelled volumes are extremely low and unrealistic. The response by ENI to the reviewers’ questioning of the very low modelled spill volumes: “The confirmation of these assumption (sic) will be provided after the drilling of the first explorative well” is NOT acceptable – by then the drilling exploration will be committed and will not be able to be stopped. Modelling needs to be re-done with more appropriate (higher) contaminant volumes.</p>	<p>The riser disconnect scenario: if simulated as a break at the seafloor would result in a very localized impact with direct deposition of oil-based muds around the well. The base oil released would then be distributed throughout the water column where it will have a much greater time and opportunity to be assimilated and degrade into the environment compared to a release close to the surface. Rather, ERM considered a release near the surface to be a worse case: the simulated release near the surface allowed the baseoil to spread much further than if it had to rise through the water column, while the oil-based mud particles spread onto a larger area of the sea floor than from a direct release at the bottom.</p> <p>The methodology employed by Eni to justify the oil volumes is described on pages 116 and 117 of the oil spill modelling report (Annex D4). Although the underlying data used by Eni were not validated as part of the review, the flow rates and spill durations were compared to historical blowout events and were found to fall in the median range of these events (UK Response to EC Impact Assessment on Offshore Regulation, GL Denton Report Number: AA/77-01-01/11959, November 2011).</p> <p>Note that the “worst case” is a subjective term. The values for the release volumes and durations used for these “worst cases” are often described as “reasonable worst case” scenarios as current technology and skills would allow for Eni to respond to a spill event with sufficient time to arrest the spill in the scenarios described in the report. Analysis of the reservoir by Eni’s petroleum engineers determined a reasonable worst case release rate to apply to the spill duration. Larger spill events can be imagined, but the likelihood of their occurrence is even lower than the existing very low likelihood already considered in this exercise, when considering the existence of the necessary technology, equipment, and skills by Eni to address and prevent such an event from occurring.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Pg 25 oil modelling report “Vertically, values of current, salinity, and temperature are available every 10 m for depths 0–30 m, 25 m for 50–150 m, 50 m for Pg 25 200–300 m, 100 m for 400–1500 m, and continue with increased spacing to 5500 m (where available).” Were modelled values available for the Areas of Interest, and were these modelled values validated against actual measurements? For example, ship-board ADCP data from the seismic data acquisition phase should have been used to validate the modelled scenarios. Wherever possible, actual measurements must be used for validation of the HYCOM models. There is considerable</p>	<p>HYCOM is a well-established model and the South African Peer reviewer PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). Essentially, the HYCOM team already performed the comparisons to measured values, assimilated measured data into the model where available, and produced a refined product. HYCOM modelled values were available for the Areas of Interest and covers the entire study area. The model contained values assimilated through 2017 and should therefore</p>

			<p>uncertainty in HYCOM models at these depths. This uncertainty is NOT reflected in the modelling. No mention is made of the persistent Agulhas Undercurrent which flows in a north-eastward direction, at a depth of around 800-2800 m, and at speeds of up to 1 m/s (Beal 2009). Yet the cuttings dispersal modelling mentions the Agulhas Undercurrent, and demonstrates in at least one scenario that considerable north-easterly flow at depth and the surface is feasible (Fig. 4.9 + 4.10 pg 20 + 21) – in the opposite direction to the overwhelming prediction of southerly flow in the oil spill modelling. How do you account for this contradiction? The oceanographic literature in the EIA Report and the cuttings dispersal modelling reports require updating to reflect recent thinking and understanding – the most recent reference cited in the reports is from 2010. Considerable work has been done subsequently and needs to be consulted, as the oceanographic context is critical to assessing impact, particularly since the HYCOM outputs are uncertain.</p>	<p>incorporate “recent” oceanographic understanding of the study area. ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. Based on the above, the currents used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional current plots in the report. Details about the HYCOM Consortium’s work performing the reanalysis and assimilation of measured data is available at <a href="http://hycom.org">hycom.org</a>.</p> <p>The wind data (a gridded database of wind speeds and directions above the water surface) used by ERM was obtained from the Blended Sea Winds database which is a product of NOAA’s National Climatic Data Centre (NCDC). The wind speeds are obtained from multiple satellite observations in order to minimise errors. Centres for Environmental Prediction (NCEP) Reanalysis-2 database, which PRDW have used and validated for similar studies around the world. Based on the above, the winds used by ERM are very likely to be reliable even in the absence of a local calibration and the exclusion of additional wind plots in the report. Considering the robustness of the HYCOM reanalysis, which assimilates field measurements into the model from “available satellite altimeter observations, satellite, and in-situ sea surface temperature as well as in-situ vertical temperature and salinity profiles from XBTs, Argo floats and moored buoys” (<a href="https://hycom.org/dataserver/gofs-3pt1/reanalysis">https://hycom.org/dataserver/gofs-3pt1/reanalysis</a>), the absence of plots comparing synoptic measurements relative to HYCOM was not considered a deficiency in the analysis by ERM. Through assimilation, the model incorporates the field measurements. In addition, the majority of direct measures of currents via ADCPs were located close to the shorelines, and therefore would not be considered good candidates for comparisons to HYCOM for purposes of validating the motion of the oil which is mostly offshore. HYCOM is primarily relevant for current estimates in the offshore environment. Modelling performed on very large scales such as this for the sake of predicting possible future conditions does not include micro-scale hydrodynamics as the current details very close to the shoreline are unnecessary relative to the general uncertainty of the future predictions. Similarly, NOAA’s Blended Seawinds are a well-respected source and used throughout the industry for wind data estimates over large areas of the ocean surface. Available stations with long meteorological records are generally located along the coastline or inland and would be inappropriate to use for comparisons to model estimates of winds in the offshore environment where there is the primary interest.</p> <p>Uncertainty is inherent in the modelling by the calculation of randomized dispersion internally computed by the model as a function of the ambient currents. Additionally, running the model repetitively over five years in a</p>
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				<p>probabilistic analysis accounts for the overall uncertainty of not knowing what the actual conditions will be if a spill were to actually occur in the future. These two factors provide model variability which overshadows the uncertainty in the calibrated assimilated HYCOM model or NOAA Seawinds. The Agulhas Undercurrent was mentioned with question about a seeming contradiction. There is no contradiction. The cuttings dispersion modelling, with particles settling down from the surface above the wells to the seafloor, may experience the Agulhas Undercurrent at certain times and locations. The existence and effects of these deep currents do not prevent the overall net transport in the spill modelling across a much larger region primarily at the surface for the floating slick, which in many cases is transported to the southwest by the Agulhas Current.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>pg 101 oil modelling report “Since much of the oil mass is estimated to be assimilated within the water column...” presumably you mean dissolved – this doesn’t mean it has gone away, and there is no quantification of this. No mitigation is possible for seabed or water column contamination.</p> <p>pg 101 oil modelling report “Though not included in the spill model, some oil may become bound with marine snow and fall to the sediment bed especially in the region surrounding the blowout where the dissolved and entrained oil plumes emanate.” Why is the denser component of the oil, which flocculates and reaches the sea bed, not modelled?</p> <p>Pg 102 oil modelling report “The oil could potentially wash up anywhere within a region of shorelines approximately 320 km in length”, and similar shoreline length contamination figures elsewhere in the report – this is extremely concerning, given a) the incorrect threshold value used to assess impacts of oil contamination on organisms (see below) and b) the supposed mitigation: Pg 102 “Eni would implement measures to protect shorelines or prevent the spill trajectory from freely moving” How would you protect shorelines and prevent it freely moving given the extent of the coastal contamination, the high-energy nature of the coast and the strength of the Agulhas? This is extremely misleading.</p>	<p>Assimilation means the residence of oil in various forms within the volume of the ocean between the dissolved phase and liquid droplet phase, which can be both buoyant larger droplets and tiny smaller droplets – which may become trapped at various depth layers. A modest first order decay constant for biodegradation was assumed at 0.007/day. There is quantification of this in the mass balance diagrams.</p> <p>The historical presence or absence of marine snow across this massive model domain is unknown over space, time, and depth, and with respect to seasonal variability. In the absence of any means to accurately quantify the phenomena with any technically defensible rigor to represent the process, a qualitative description is therefore all that is possible. There is simply insufficient data and understanding of this process in order to be modelled.</p> <p>The intention of this study was not to suggest that in an actual emergency, responders would be unable to prepare to protect specific shorelines. Rather, the probabilistic analysis of the shoreline was intended to illustrate the range of potential locations at risk if a spill were to occur in the future based on examination of a range of previous conditions. In an actual emergency, predictive models would be used to estimate the trajectory of a spill using forecasts of the currents and winds, so as to mobilize responders to the correct locations.</p> <p>The Commenter's statement is confusing the prescribed thresholds between shoreline oiling and surface slick thickness. The two are completely different values. As noted from French-McCay (2009) correctly, 100g/m3 has indeed been used as the threshold value for shoreline oiling, but it is not the same value applied for surface slick.</p>



				<p>The values mentioned in French-McCay (2009), Section “3.1.2 Threshold Thickness for Lethal Dose”, are referred to the thickness of an oil film floating on the sea surface (that wildlife could intersect or swim in), and not to a layer of oil on the shoreline. The value used in the reports for the threshold thickness of the oil film on the sea surface is 1 µm (approximately 1 g/m<sup>2</sup>) and is in fact 10 times lower than the one suggested by the Commenter of 10 µm, demonstrating an even more conservative value applied in the oil spill modelling report.</p> <p>The threshold values for shoreline oiling are discussed in French-McCay (2009) in Section “3.4 Intertidal, Wetland, and Terrestrial Plants and Invertebrates”. The value used in the reports for the threshold thickness of the oil layer on the shoreline is 0.1 mm (approximately 100 g/m<sup>2</sup>), which is the lowest between the values identified for vegetation (1 mm) and benthic invertebrates (0.1 mm).</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Marine ecology report</p> <p>One of the greatest weaknesses of this assessment is that it has not taken into account the substantial amount of research that has recently been published on the KwaZulu-Natal Bight (see 2016 supplement of the African Journal of Marine Science, Vol 38 – Ecosystem Processes in the KwaZulu-Natal Bight). Incorporation of this information into the study would have greatly improved its value and relevance. The literature consulted, particularly with respect to impacts of drilling and contamination impacts, is, almost without exception, outdated (&gt; 10 years) – this is not in line with international best practice. A further important weakness of this study is that it has not taken into consideration the close proximity of Critical Biodiversity Areas (CBAs) identified during the SEAPLAN project, nor has it enhanced risk (due to their proximity to the AoI) of existing marine protected areas (MPAs) such as the iSimangaliso Wetland Park and Aliwal Shoal MPAs as well as the recently approved Thukela Banks and Protea Banks MPAs. In a situation where contaminants from an oil spill are retained into the circulation within the KZN Bight, impacts on the marine biodiversity could be significantly greater than are predicted in this assessment.</p>	<p>The Marine Ecology Report (Annex D4 of the EIA Report) has been updated to include relevant 2016 publications on the Natal Bight.</p> <p>The marine specialists (Annex D1) description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and information sourced from the Internet. The most recent references are from 2013 and 2016 are listed in the Reference chapter of Annex D1.</p> <p>Numerous offshore focus areas were identified for protection between 30°E and 35°E, and these carried forward through Operation Phakisa for the proposed development of offshore MPAs. This network of 20 MPAs was approved by Cabinet on 24 October 2018, thereby increasing the ocean protection within the South African Exclusive Economic Zone (EEZ) to 5%. Although Block ER236 overlaps with the Protea Banks, Aliwal Shoal Expansion and iSimangaliso Wetland Park Extension MPAs, there is no overlap of the areas of interest for well drilling with the protection areas. It was understood that the offshore MPAs replaced the CBAs. A map of the CBAs and newly approved MPAs has been included in the updated Marine Ecology Report (Annex D1 of the EIA Report). The baseline chapter (Chapter 4) of the EIA Report has also been updated accordingly.</p>

				<p>Using the risk significance methodology for assessing the impact of a spill, the assessment of the impact of a spill on marine fauna including species inside MPAS, except seabirds, was Minor. Risk significance considers likelihood, the sensitivity of the species and habitats potentially impacted and the potential consequence of the spill (refer to Chapter 8 of the EIA Report). These ratings also take into consideration the in-built prevention/avoidance measures and the mitigation measures to be implemented in the unlikely event of a spill.</p> <p>On the 9th December 2014, Eni farmed into the ER236 block, originally assigned to Sasol. At the very first opportunity, that coincided with the 2016 relinquishment (20%) at the end of the First Exploration Period, Eni relinquished the areas covered by the iSimangaliso, Aliwal and Protea MPAs. The promulgation of the 'proposed' MPAs has just concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the iSimangaliso extension and Protea MPAs. Eni confirms that no drilling will be performed in any declared MPAs.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Pg 31:" The offshore areas comprise primarily deepwater benthic habitats and the water body. Due to limited opportunities for sampling, information on the pelagic and demersal communities of the shelf edge, continental slope, and upper and lower bathyal are very poorly known. Consequently, much of the information on the baseline environment provided below relates to the inshore (&lt;50 m) and continental shelf (&lt;200 m) regions, which fall within the Natal Bioregion (Figure 9)." So, much of the baseline information is irrelevant in terms of assessing impacts on the drill sites themselves.</p> <p>Pg 33 "Following spawning during spring and summer (November to April), the eggs and larvae are subsequently dispersed southwards by the Agulhas Current (Connell 2010)" and : "Ichthyoplankton likewise is confined primarily to inshore waters (&lt;200 m)". and:" The areas of interest for well drilling are thus well offshore of major fish spawning and migration routes". There are major problems and contradictions with these statements. Other parts of the EIA Report (Oil spill modelling, Cuttings modelling) persistently state that the prevailing upper water column current in the Areas of Interest will disperse contaminants southwards – the prevailing upper water column current is the Agulhas Current – so the eggs and larvae, according to the author, will be in the same water as</p>	<p>Benthic habitats according to SANBI are classified as "least threatened". The northern area of interest for well drilling comprises Southwest Indian Upper and Lower Bathyal benthic habitats, whereas Southern Indian Lower Bathyal benthic habitat dominates in the southern area of interest (Figure 4.4). Both have been assigned an ecosystem threat status of 'least threatened' in the SANBI 2011 National Biodiversity Assessment (Sink et al., 2011) reflecting the great extent of these habitats within the South African Exclusive Economic Zone (EEZ) (Figure 4.5).</p> <p>This refers primarily to the migrating linefish species. Chapter 8 and Annex D1 assessed the impact of a spill on plankton and larval impacts by spills rated as Minor not Negligible. It must be kept in mind that the probability of surface oiling &lt;60% in the long-shore footprint is highly patchy, as is the distribution of plankton. Concurrence of plankton patches and slicks would thus be highly localised and unlikely to significantly affect recruitment of any particular species. Using ERMs assessment methodology risks elevating the risk significant above Minor would not be justified. Large migratory pelagic species dealt with in Section 3.2.5 of the marine ecology report (annex D1) but not assessed separately.</p>

			<p>the contaminants – how does she later conclude that impacts are Negligible? Secondly, she has confined her assessment (and elsewhere in the report) to shelf fishes of commercial importance – which do not occur in the Aol - but there are substantial biomasses of mesopelagic fishes which are ignored (see below). Similarly, she ignores migration of large pelagic fishes such as tunas and billfishes which are common in the area, other than to say that they are overfished.</p>	
Sean	Fennessy	South African Associated Marine Biological Research	<p>Pg 41:” Information on other neritic and demersal fish and megabenthic invertebrates beyond the shelf break is lacking” Incorrect – a proper review of literature would have found information on KZN Bight demersal fish and even common invertebrate communities at depths beyond 200m</p> <p>Pg 110-111 “However, due to the rapid dilution and widespread dispersion of settling particles, any adverse effects in the water column would be ephemeral and highly localised” How can adverse effects be widely dispersed and highly localized at the same time – this is nonsense.</p> <p>Pg 111 “Consequently, the major spawning areas are all located on the continental shelf, well inshore of the proposed well sites(s). Any potential effects of turbid water plumes generated during cutting disposal on phytoplankton and ichthyoplankton production, fish migration routes and spawning areas, or on benthic and demersal species in the area would thus be Negligible.” This is incorrect and highly misleading – biomasses of mesopelagic fishes in the open ocean are huge (see for example Irigoien, et al. 2014), and these fishes will occur in the Areas of Interest and will spawn there in the water column.</p> <p>Pg 86, 89, 93: “The benthic fauna inhabiting unconsolidated sediments of the outer shelf and continental slope are very poorly known, but at the depths of the proposed well are expected to be relatively ubiquitous, varying only with sediment grain size, organic carbon content of the sediments and/or near-bottom oxygen concentrations. These benthic communities usually comprise fast growing species able to rapidly recruit into areas that have suffered natural environmental disturbance. Epifauna living on the sediment typically comprise taxa which are longer lived and therefore more sensitive to disturbance. No rare or endangered benthic</p>	<p>Chapter 4 and the Annex D1 (marine ecology report) has been updated with information from the 2016 supplement of the African Journal of Marine Science, Vol 38 – Ecosystem Processes in the KwaZulu-Natal Bight</p> <p>The scale of the impact is localised as per definition in assessment methodology as it is contained within the Block.</p> <p>Again this refers primarily to the migrating linefish species and demersal shelf species. This is because these are targeted fish species of commercial importance to South Africa’s GDP. The impact being assessed in the marine ecology report (Annex D1) is the effect of increased turbidity on phytoplankton and ichthyoplankton production, fish migration routes and spawning areas, or on benthic and demersal species in in the water column would be ephemeral and highly localised. Therefore the Negligible assessment is correct.</p> <p>This statement highlights that there may be sensitive species present in the Project Area. Based on the precautionary principle if the presence of sensitive species (eg: deep water corals and coelacanths) could not be confirmed they were assessed as being ‘present’ and therefore the impacts of the project activities on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Primary data will be collected during the pre-drilling ROV survey refer to Chapter 9 of the EIA Report for this detail), which will be conducted at the well site prior to drilling. If any vulnerable habitats are found during this survey a commitment has been made by Eni to ensure the well site is located more than 500 m from the identified location (refer to Chapter 9 of the EIA Report).</p>

			species are known.” The underlined statements are completely unsupported and are highly contestable, in terms of water depths in the Aol. Stating that no rare/endangered species are known is a tautology given that the deep benthic fauna are unknown, and is misleading – implying that it is ok to proceed. Change this statement to be more objective.	
			<p>Pg 93:” Although the occurrence of such potentially vulnerable marine ecosystems in Block ER236 and the areas of interest for well drilling is unknown, the potential presence of such sensitive deep-water ecosystems in the project area cannot be excluded. Such sensitive communities would be expected to occur in the submarine canyons within ER236, which are located to the immediate south of the northern area of interest and some 30 km northeast of the southern area of interest. As no drilling operations will be performed in canyons, direct and indirect impacts on sensitive receptors associated with such habitats would be avoided.” Underlined statement is unsupported. The author has already stated that knowledge of deep benthic fauna is very poor – how can she conclude sensitive receptors will be avoided when she doesn’t know what is in the Aol?</p> <p>Draft EIA Report pg 224 – Threshold value of 100 g oil/m<sup>2</sup> of shoreline and pg 225 “French-McCay recommended a threshold of 100 g/m<sup>2</sup> as a reasonable value to indicate when a sufficient amount of oil mass per unit area may cause an impact to shorebirds and wildlife on or along the shore.” This is an INCORRECT value used throughout the reports and therefore complete re-assessment of impact scenarios and significance of impact is required, using the correct value. French-McCay (2009) notes on page 11 of her report the following: “3.1.2 Threshold Thickness for Lethal Dose. The threshold thickness of oil that would impart a lethal dose to an intersecting wildlife individual is 10 microns (~10 g/m<sup>2</sup>) based on the following review.”</p>	<p>The canyons and feeder valleys on the shelf edge host a diversity of sponges, black corals, gorgonians, alcyonarian soft corals and stylasterine lace corals, which support a diverse epifauna including basket- and brittlestars, winged oysters and other molluscs (Sink et al. 2006)”. From this it was taken that the submarine canyons within ER236 may host similar sensitive species. The drilling areas of interest have specifically been positioned to avoid canyon systems. The Commentor’s statement is confusing the prescribed thresholds between shoreline oiling and surface slick thickness. The two are completely different values. As noted from French-McCay (2009) correctly, 100g/m<sup>3</sup> has indeed been used as the threshold value for shoreline oiling, but it is not the same value applied for surface slick.</p> <p>The values mentioned in French-McCay (2009), Section “3.1.2 Threshold Thickness for Lethal Dose”, are referred to the thickness of an oil film floating on the sea surface (that wildlife could intersect or swim in), and not to a layer of oil on the shoreline. The value used in the reports for the threshold thickness of the oil film on the sea surface is 1 µm (approximately 1 g/m<sup>2</sup>) and is in fact 10 times lower than the one suggested by the Commenter of 10 µm, demonstrating an even more conservative value applied in the oil spill modelling report.</p> <p>The threshold values for shoreline oiling are discussed in French-McCay (2009) in Section “3.4 Intertidal, Wetland, and Terrestrial Plants and Invertebrates”. The value used in the reports for the threshold thickness of the oil layer on the shoreline is 0.1 mm (approximately 100 g/m<sup>2</sup>), which is the lowest between the values identified for vegetation (1 mm) and benthic invertebrates (0.1 mm).</p> <p>References:  French McCay, D., N. Whittier, T. Isaji, and W. Saunders, “Assessment of the Potential Impacts of Oil Spills in the James River, Virginia”, in Proceedings of the 26th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada, Ottawa, ON, Canada, pp. 857-878, 2003a.  French McCay, D.P., and J.J. Rowe, “Evaluation of Bird Impacts in Historical Oil Spill Cases Using the SIMAP Oil Spill Model”, in</p>

				<p>Proceedings of the Twenty-Seventh Arctic and Marine Oil Spill Program (AMOP) Technical</p> <p>French-McCay, D., J. Rowe, N. Whittier, S. Sankaranarayanan, D.S. Etkin, and L. Pilkey-Jarvis, "Evaluation of the Consequences of Various Response Options Using Modelling of Fate, Effects and NRDA Costs of Oil Spills into Washington Waters", in Proceedings of the 2005 International Oil Spill Conference, American Petroleum Institute, Washington, D.C., pp. 467-473, 2005a.</p> <p>French-McCay, D.P., N. Whittier, C. Dalton, J.J. Rowe, and S. Sankaranarayanan, "Modelling Fates and Impacts of Hypothetical Oil Spills in Delaware, Florida, Texas, California, and Alaska Waters, Varying Response Options Including Use of Dispersants", in Proceedings of the International Oil Spill Conference, American Petroleum Institute, Washington, D.C., Paper 399, 2005b</p> <p>French McCay, D., N. Whittier, J.J. Rowe, S. Sankaranarayanan and H.-S. Kim, "Use of Probabilistic Trajectory and Impact Modelling to Assess Consequences of Oil Spills with Various Response Strategies", in Proceedings of the 28th Arctic and Marine Oil Spill Program (AMOP) Technical Seminar, Environment Canada, Ottawa, ON, pp. 253-271, 2005c.</p>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Draft EIA pg 291 "...smothering effects from discharged drillings have been assessed to have an impact of Small magnitude on the benthic Macrofauna of unconsolidated sediments in the cuttings footprint. This is because the impact is localised and the recovery of benthic communities is expected within a few years (2 to 5 years). However, if deep water corals are found to be present in the Project Area their sensitivity to smothering from drilling solids is High. Their presence is unknown at these depths and would be evaluated in the ROV planning phase of operations..." Presumably you are referring to macrobenthic infauna above, not "benthic Macrofauna". Corals are not the only macrobenthic organisms which are extremely sensitive to smothering – sponges, gorgonians and other sessile benthos are similarly vulnerable. So what would be done if a large area of deep-water corals and other macrobenthic organisms is encountered at the optimum drilling site? Who, independent of ENI, will be informed of the presence of such an area? What remedial steps will be undertaken to avoid this area and who will monitor that this is done appropriately? The cuttings scenarios suggest an impact of ~7 km2 (pg 138 EIA Report), but proposed mitigation in case of sensitive ecosystems being</p>	<p>Yes it is benthic infauna, and the sensitive species are long-lived, sessile epibenthos This has been corrected in Section 7.3.3 of the EIA Report.</p> <p>As stated in Chapter 7 of the EIA Report. The main impacts associated with the disposal of drilling solids would be smothering of sessile benthic fauna (such as deep water corals), physical alteration of the benthic habitat (changes in sediment properties) in the immediate vicinity (&lt;200 m) of the well. Cuttings modelling predicted that Areas of deposition of &lt; 5 mm thickness were mainly isolated to within a 100 m radius of the wellhead. The mitigation to move the drill site post identification of any vulnerable habitats by 500 m is therefore sufficient. The authorities would be informed should any sensitive species be identified around the drill site</p>

			found is to move the drill site by 500m – this is clearly inadequate.	
Sean	Fennessy	South African Associated Marine Biological Research	Draft EIA pg 291. “The No-Go alternative will result in the positive impacts associated with the proposed project not being realised.” This is fallacious – there are no positive (economic) impacts until a viable hydrocarbon source has commenced production – and the production phase is not part of this EIA assessment, so remove any mention of positive impacts. This will form part of the full EIA of the production phase, if required.	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p> <p>The assessment of potential “No-Go” impacts has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul>
Sean	Fennessy	South African Associated Marine Biological Research	<p>Fisheries report</p> <p>Descriptions of the fishery sectors in this report are broadly sound and uncontroversial, relying primarily on publications and reports produced by the Oceanographic Research Institute. The three hypothetical impact scenarios are all based on modelling the fate of contaminant dispersion, which in our opinion are flawed (see above) i.e. they may not only be dispersed to the southwest but may well in fact be entrained into the circulation within the KZN-Natal Bight. While the main fishing grounds for linefishing and crustacean trawling are situated 30-35km inshore of the areas of interest for hydrocarbon exploration, if oil from a blowout was carried into the KZN Bight, this could have a devastating effect on the fisheries in this area. Considering the fact that this area has been identified as both an important spawning area for numerous species of fish, as well as an important nursery area (and hence the establishment of the Thukela Banks MPA), such risks should be avoided at all costs. For these reasons the ‘No Go’ or ‘No Project’ alternatives should be strongly</p>	<p>The Fisheries Study prepared by CapMarine (2018) based on the modelling results identified that In the unlikely event that a crude oil blowout were to occur, the resulting oil slick would not reach the spawning areas for hake, sardine, anchovy and horse mackerel situated on the southern Agulhas Bank nor the additional hake spawning areas thought to exist further eastward off the continental shelf (Annex D2). Spawn products of linefish species would be affected within the important nursery ground offered by the Natal Bight. The affected area would not be expected to coincide with squid spawning grounds situated along the inshore areas of the south coast. The impact of the marine diesel and LTOBM release scenarios would likely only affect spawn product of linefish species advected by the Agulhas Current through the affected area en route to the Agulhas Bank and inshore nursery areas. The results of the marine fauna impact assessment undertaken by Pisces Environmental Consulting (Pty) Ltd (2018) assessed that the magnitude of the impact on pelagic fish and larvae would be of moderate consequence and of overall minor significance with implementation of proposed mitigation measures resulting from the implementation of the OSCP and including:</p>

			<p>considered.</p> <p>In summary, owing to the uncertainties, inadequacies and contradictions in the oceanographic modelling, and the incorrect threshold value of impact to wildlife, it is our opinion that there is greater risk, magnitude and significance of impact of this proposed exploration drilling than expressed in the EIA Report, with limited scope for mitigation to negate such impact.</p>	<p>1. As far as possible, and whenever the sea state permits, attempt to control and contain the spill at sea with suitable recovery techniques to reduce the spatial and temporal impact of the spill</p> <p>2. Dispersants have different levels of toxicity and dilute rapidly to below acute toxicity thresholds. Dispersants should therefore be used cautiously and as far as practicable those with known low toxic levels used so as to minimise potential effects on marine life. Use dispersants only with the permission of DEA and/or DAFF</p> <p>The Commenters' statement is confusing the prescribed thresholds between shoreline oiling and surface slick thickness. The two are completely different values. As noted from French-McCay (2009) correctly, 100g/m<sup>3</sup> has indeed been used as the threshold value for shoreline oiling, but it is not the same value applied for surface slick.</p> <p>The values mentioned in French-McCay (2009), Section "3.1.2 Threshold Thickness for Lethal Dose", are referred to the thickness of an oil film floating on the sea surface (that wildlife could intersect or swim in), and not to a layer of oil on the shoreline. The value used in the reports for the threshold thickness of the oil film on the sea surface is 1 µm (approximately 1 g/m<sup>2</sup>) and is in fact 10 times lower than the one suggested by the Commenter of 10 µm, demonstrating an even more conservative value applied in the oil spill modelling report.</p> <p>The threshold values for shoreline oiling are discussed in French-McCay (2009) in Section "3.4 Intertidal, Wetland, and Terrestrial Plants and Invertebrates". The value used in the reports for the threshold thickness of the oil layer on the shoreline is 0.1 mm (approximately 100 g/m<sup>2</sup>), which is the lowest between the values identified for vegetation (1 mm) and benthic invertebrates (0.1 mm).</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>The comment by SDCEA on the Scoping Report highlighted the fact that the need and desirability portion of the report had focused exclusively on the potentially beneficial aspects of the anticipated "exploration success" and had failed to adequately describe the negative aspects. The negative aspects would include the socio economic impacts of a catastrophic worst case scenario blow out.</p> <p>The response hereto stated that the "EIA would cover the potential negative long term implications of a possible future production." It is submitted that the requirements for a compliant need and desirability report are not met by this undertaking and have not been met in the Draft EIA.</p>	<p>Although not specifically mentioned in the Draft EIA Report as the applicable guideline document, the Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the relevant reporting. Chapter 3 of the Final EIA Report has been updated to include reference to the guideline. The applicable environmental regulations require EAPs to have a knowledge of and take into account relevant guidelines, and ERM meets this criteria. As stated in the guideline, "need and desirability is based on the principle of sustainability", implying that there must be a balanced approach in decision making. The guideline further states that need and desirability must be considered together with the content of the "IDPs, SDFs, EMFs and other relevant plans, frameworks and strategies" when</p>

			<p>The proposal for oil and gas exploration is presented in a positive fashion, and as an important project that fosters certain recent economic policy objectives. This is summarized in the following statement in section dealing with the project need and desirability description: "In light of the above, exploration success would result in long-term benefits for South Africa consisting of improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons"<sup>1</sup></p>	<p>considering each application. Chapter 3 of the Draft EIA Report clearly set out this description. In terms of financial viability, the guideline requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs". Consideration of the needs and interests of the broader community are said to be reflected in the IDP, SDF and EMF of an area that must be considered. As such, Chapter 4 of the draft EIA detailed the socio-economic baseline of the area, in line with findings from the SFD and IDP of the area. The current status of the broader communities are described in terms of contribution to workforce and GDP, access to basic services, access to basic infrastructure, key economic sectors, commercial fisheries and basic livelihood needs. The small scale fishery sector was identified as "small-scale fishers fish to meet food and basic livelihood needs" and these operates in "nearshore" waters unlikely to extend beyond 3 nm from the coast (approximately 5.5 km). Therefore, such activities would not directly coincide with the proposed drilling areas. As the northern area of interest is located a minimum of 62 km offshore and the southern area of interest a minimum of 65 km offshore, it is unlikely that the proposed exploration drilling activity will interfere with onshore recreational users either.</p> <p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>However the need and desirability requirement for environmental impact assessments (EIA's) under NEMA requires rigorous analysis based on a methodology set out in the guidelines for assessments of need and desirability. Such assessment is absent from the Draft EIA. The decision maker is presented with a rehash of policies, and is expected to make a decision on need and desirability where there are insufficient relevant facts.</p>	<p>Although not specifically mentioned in the EIA Report as the applicable guideline document, the Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the relevant reporting. Chapter 3 of the Final EIA Report has been updated to include reference to the guideline. The Guideline of Need and Desirability (2017), states that: "a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and</p>



			<p>In terms of this requirement the potential for a major catastrophic release or worst case scenario spill must be considered. Although this eventuality is presented as a remote prospect such releases have happened in other parts of the world with devastating consequences for the ocean habitat and lives and livelihoods along the coastlines affected.<sup>2</sup> It is submitted that the need and desirability of this project has to be considered in relation not only to economic policy objectives but also in the context of what the worst case scenario presents and whether in the circumstances a no go option is in fact the best practicable environmental option (BPEO). The legal regime for analysing this is set out below and the Draft EIA is evaluated in terms thereof. The EIA which is to form the basis of the decision to authorize the expansion fails to place relevant considerations before the decision maker as contemplated under the Promotion of Administrative Justice Act.<sup>3</sup> It also contains information which promotes the project instead of appraising the full cost of a worst case scenario and evaluating whether there is a need for this project in the context of this potential cost. The authorization if granted stands to be set aside as it stands to be challenged on review in terms of the Promotion of Administrative Justice Act.<sup>4</sup></p>	<p>management of risk." In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the draft and Final EIA Reports. In addition to embedded controls adopted to maintain a risk-averse approach, various client-specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economical and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk-averse approach. ERM directs the stakeholder to refer to Chapter 3 of the EIA Report for further details. In terms of financial viability, the guideline requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs". Consideration of the needs and interests of the broader community are said to be reflected in the IDP, SDF and EMF of an area that must be considered. As such, Chapter 4 of the EIA Report details the socio-economic baseline of the area, in line with findings from the SFD and IDP of the area. The current status of the broader communities are described in terms of contribution to workforce and GDP, access to basic services, access to basic infrastructure, key economic sectors, commercial fisheries and basic livelihood needs.</p> <p>On this basis, ERM is of the view that the decision maker will be provided with sufficient information to make an informed decision, in accordance with the published guidelines, and there are no prospects for a challenge on the basis if the Promotion of Administrative Justice Act to succeed.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Background</b></p> <p>The South Durban Community Environmental Alliance (SDCEA) is a non-governmental organization consisting of 16 community and environmental organisations concerned with environmental justice and sustainable development in South Durban and KwaZulu-Natal. There are numerous concerns that we have risen regarding oil and gas exploration activities already underway on our coast. We are finding important discrepancies in the processes thus far concerning these activities. We strongly object to their continuation and to any positive findings in EIAs.</p> <p>Our organization has participated over the last two decades in forums for the improvement of environmental management in</p>	<p>SDCEA's role as an NGO in KZN has been noted and ERM is aware of your right to participate the public participation process in terms of NEMA. A comprehensive public participation Process was conducted throughout the EIA process by ERM to ensure that the public were notified and provided with an opportunity to participate in the process. SDCEA participated actively in all the phases.</p>

			KZN and in particular in the industrial areas south of Durban. We submit these comments on the Draft EIA in the public interest and in the interest of promoting compliance with section 24 of the Constitution, the National Environmental Management Act (NEMA). We are assisted herein by Dr Mark Chernaik, PhD, Environmental Alliance Worldwide, USA.	
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Introduction</p> <p>KwaZulu-Natal is a hugely popular place and tourist destination because of the cities warm subtropical climate and extensive beautiful beaches. Healthy oceans are critically important to marine life and to coastal communities whose economies rely on tourism, fishing and recreational activities. Opening up new offshore areas to drilling risks permanent damage to our oceans and beaches without reducing our dependence on oil. Our coast could be subject to huge oil spills equivalent to the BP oil spill in the Gulf of Mexico, with calamitous long-term costs for the tourism and fishing industries. Any EIA process with integrity looks further than the immediate environmentally-relevant activity in question. For fossil fuels this is vital, since such great ecological threats are rising rapidly beyond the drilling and extraction stages, in oil and gas refining, transport and combustion. Refining in South Durban has been devastating to the air, land and water quality, as we have conclusively demonstrated. As for transport, the numerous pipeline blow-outs on the Durban-Johannesburg pipeline in recent years have been devastating, and yet instead of following the safest existing path for a new pipeline (doubling the flow of petroleum west), Transnet built a new one through low-income black communities like South Durban and Umbumbulu, adding hundreds of extra kilometres and raising the cost from R6 billion to R27 billion. Minister of Public Enterprises Malusi Gigaba admitted in 2012 that the pipeline construction suffered “systemic failings” since “Transnet Capital Projects lacked sufficient capacity and depth of experience for the client overview of a megaproject of this complexity. There was an inadequate analysis of risks.” Gigaba confessed that the new pipeline carrying oil from Durban refineries is profoundly flawed: “Transnet’s obligations on the project such as securing authorisations – Environmental Impact Assessments (EIAs), land acquisition for right of way, water and wetland permits – were not pursued with sufficient foresight and vigour.”</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D4). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Minor to Negligible residual significance.</p> <p>Your concerns around transportation are noted, however this is part of production and not exploration activities.</p>

Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>The threat of oil and gas combustion is the greatest, due to a climate change crisis now being experienced in KZN through recent droughts, thunderstorms, other extreme weather events and the added costs of adaptation. We note that this factor, so vital to our future generations' and nature's very survival, is not properly factored in by oil and gas companies attempting to drill offshore our coastlines. The largest of these, ExxonMobil, is a notorious climate denialist even though it possessed extensive documentation of climate damage resulting from its core business model. The EIA should put as a top priority the need to leave any potential oil and gas in South Africa underground, so as not to bust the government's own carbon-budget strategy of reducing greenhouse gas emissions by 34% from 2030. These concerns are taken up in more detail in the pages below. Finally, although all the oil and gas exploration activities predict economic benefit for South Africa, this is because they have failed to provide full-cost accounting, especially when it comes to 'natural capital accounting' which the late Environment Minister Edna Molewa committed South Africa to engaging in, at the 2012 Gaborone Declaration. Once fossil fuel reserves are measured as not simply a 'credit' to GDP but also as a 'debit' to the country's natural wealth, it will become evident that the extraction systems proposed are not a positive but instead a negative contributor to South Africa's overall wealth.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA. .</p> <p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities and do not include production activities, such as combustion. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>The client has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines;</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>LEGISLATIVE CONTEXT</p> <p>a) Our legislation, from section 24 of the Constitution, to NEMA emphasizes the duty on the state to protect the environment and to ensure, in its authorization of polluting activities, that pollution is prevented and an environment is not created that is detrimental to health and wellbeing. Based on the submissions contained in the EIA, the public, living in the vicinity of the proposed drilling has an apprehension of being exposed to the consequences of a major oil spill. The question</p>	<p>The EIA Report contains/d all of the relevant information legally required in terms of the NEMA. Section 3 of the Draft EIA Report contained the necessary information pertaining to the need and desirability of the proposed project. It is important to note that the environmental legislation requires an assessment of impacts and not primarily a risk assessment. The impacts have been assessed in Chapter 7 of the EIA, and the unplanned risks considered in Chapter 8 of the EIA report. According to Section 8.3.4 of the EIA report, the risk of a release of crude oil from a well blowout is rare (i.e. 1 in 4000), however a risk</p>

			<p>that a decision maker must decide, is does the stated need and desirability for the activity justify taking such a risk, or should the project not proceed at all, since such a risk can never be completely prevented. It is submitted that insufficient information is placed before the decision maker for it to apply the best practicable environmental option and make this decision, in a manner compliant with the regulatory scheme.</p>	<p>averse approach will be implemented by adopting various industry best practises and additional mitigation/ management strategies; as described in the EIA report. These include: design and engineering best practise standards, multiple barriers (i.e. were Eni will implement the dual barrier principle), BOP stack (i.e. BOP stacks are used to control the pressure of a well through mechanical devices designed to rapidly seal the well in an emergency), competent staff, testing and certification of safety critical equipment, preparation of an Oil Spill Contingency Plan, emergency management, well control in terms of containment and cleanup, capping system installation as back up of BOP failure and availability of containment and cleanup equipment (refer to Table 8.9 in the EIA report for details). It is important to note that although the public may be apprehensive about their exposure to the effects of a spill, the likelihood of significant oil spills (i.e. those that can reach the coastline or other sensitive areas) is very low; with most oil spills being very small and having only limited environmental effects.</p> <p>The Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the EIA Reporting. As stated in the guideline, "need and desirability is based on the principle of sustainability", implying that there must be a balanced approach in decision making. The guideline further states that need and desirability must be considered together with the content of the" IDPs , SDFs, EMFs and other relevant plans, frameworks and strategies" when considering each application. Chapter 3 of the draft EIA clearly set out this description. In terms of financial viability, the guideline requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs". Consideration of the needs and interests of the broader community are said to be reflected in the IDP, SDF and EMF of an area that must be considered. As such, Section 4 of the EIA detailed the socio- economic baseline of the area, in line with findings from the SFD and IDP of the area. The current status of the broader communities are described in terms of contribution to workforce and GDP, access to basic services, access to basic infrastructure, key economic sectors, commercial fisheries and basic livelihood needs. The small scale fishery sector operates in "nearshore" waters unlikely to extend beyond 3 nm from the coast (approximately 5.5 km) and tourist activities are located near the shore as well. Therefore, such activities would not directly coincide with the proposed drilling areas- as the northern area of interest is located a minimum of 62 km offshore and the southern area of interest a minimum of 65 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery and such fishing</p>
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Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	b) The nature of a worst case scenario from the drilling creates a potential threat to health and triggers a regulatory duty on the licensing authority to minimize such emissions. This duty requires an assessment of the likely pollution levels, the impact (including socio economic cost) that a catastrophic incident would have on the immediate environment and whether there are other methods, or activities that achieve what the project hopes to achieve, without these potential	<p>It is important to understand what might happen as a result of an unforeseen event in order to plan, mitigate and manage any event. The worst case scenario a highly unlikely and improbable event for the specific well activity. It is modelled in such a way that does not provide for any mitigation or response strategies, i.e. no intervention for the very reason of understanding the worst case. The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the</p>

			risks. The EIA must consider to what extent other oil and gas fields, already discovered such as in Mozambique or the delivery of gas from further afield is an alternative which presents less risk and is therefore acceptable. The EIA fails to analyse these issues so as to enable the decision maker to make a decision that is compliant.	Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events. Note that importing gas from Mozambique still leaves South Africa reliant on hydrocarbon imports. Importing oil and gas from Mozambique does not mitigate the risk of an unlikely spill affecting South Africa's coastline as oil spills do not stick to territorial boundaries.
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	The basis of this legal argument is as follows: c) NEMA Section 23, which seeks promote the application of appropriate environmental management tools in order to ensure the integrated environmental management of activities, requires that impacts on the environment are identified with a view to minimizing negative impacts, maximizing benefits, and promoting compliance with the principles of environmental management set out in section 2.	The Draft EIA Report meets the obligation under the EIA Report Requirements As Per the EIA Regulations GNR 982/2014
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	d) Relevant the NEMA principles applicable to the granting of the environmental authorization include principle 2(4)(a)(iii) that the consideration of factors including that pollution and degradation of the environment are avoided or where they cannot be avoided altogether, are minimized and remedied. e) Principle 2(4)(b) requires that best practicable environmental option must be applied. f) Principle 2(4) (c) requires that the principle of environmental justice be applied to a decision of this nature.	The EIA Report complies with the principles of the NEMA Environmental Assessment Regulations (GNR R982/2014). See further details below
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	g) It follows that in granting the environmental authorization under NEMA the decision maker must not only ensure that there is compliance with prevailing legislation. It must also seek to understand the level of impact that an activity could have on the coastline, the coastal ecosystems and the socio economic impacts in a worst case scenario, and establish the cost thereof and then determine whether there is sufficient need and desirability to take on such risk using the best practicable environmental option. h) SDCEA is an interested an affected party who represents vulnerable and disadvantaged persons whose lives and	The EIA Report complies with the NEMA Environmental Assessment Regulations (GNR R982/2014).

			livelihoods depend on the protection of the coastal ecosystems of KZN in the vicinity of Durban.	
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>GROUND OF OBJECTION TO THE EIA</b></p> <p>The granting of authorization on the basis of the EIA will be unlawful and unconstitutional because it conflicts with the objects of NEMA, and the imperatives of section 24 of the constitution.</p> <p>1. The oil drilling will create the potential for a catastrophic oil spill. Notwithstanding the claim in EIA that this spill is likely not to reach the coastline, this eventuality cannot be completely excluded.<sup>5</sup> The regulatory duty of the decision maker, where a listed activity could have a significant potential negative impact on the environment, is to evaluate and anticipate such potential consequences and determine their cost, and whether authorizing the activity entails a cost acceptable to the society both in the short and long term. This is in practice what the pursuit of the best practicable environmental option entails for a competent authority.</p>	<p>ERM refutes the contention that the granting of the authorization on the basis of the EIA will be unlawful or unconstitutional, and will not conflict with the objects of NEMA or section 24 of the Constitution. The EIA has been prepared in accordance with the principles, which underpin NEMA, and in accordance with the guidelines published thereunder. The very primes of the EIA is to engage in an investigation of the possible impacts of a proposed activity in order to ensure that the objects of section 24 of the Constitution are met.</p> <p>In particular, ERM notes that Chapter 1 of the NEMA emphasises the principles related to environmental management and governance. Chapter 1, 4 (i) states that "the social, economic and environmental impacts of activities, including disadvantages and benefits must be considered, assessed and evaluated and decisions must be appropriate in the light of such consideration and assessment." As such, the Competent Authority is required to consider this application in light of the sustainable development sphere and make a decision accordingly.</p> <p>The granting of the Environmental Authorisation will not have an impact on the health and well-being of coastal residents as the wells drilled will be plugged and abandoned once the exploration activities are completed, and appropriate remedial measures will be taken in the unlikely event of an unplanned disturbance or event. Eni follows plugging and abandoning procedures based on the principle of multiple barriers from a possible flow zone and surface. This means that plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well; cement plugs and cemented casing constructed in the hole are extremely effective to guarantee the integrity of the seal and are configured so that no future intervention is required. This is international best practise and is demonstrated around the world in plug and abandon procedures, without the requirement for further monitoring. Eni follows P&amp;A procedures in compliance with Industry Best Practices, which include API-RP-96 (American regulation), OGUK-OP006 (UK regulation) and NORSOK D-010 (Norwegian Regulation), all of which are applied in fields where Eni operates (e.g. UK, North Sea, GOM, Mediterranean sea, Far and middle East, Australia and West Africa). Cement plugs are tested and the results of such tests will be included in final well report to be submitted to Authority. Prior to leaving the location, a final ROV (a remote operating vehicle equipped with monitoring tools and camera) survey will be conducted at the location to verify the condition of the well site, including</p>

				<p>detection of absence of leaks. The video and report of final site survey will be included in final well report and provided to the Authority. Given that the water is deep, it is not anticipated that the abandoned wells will have any impact on navigation or deep sea fishing. It is important to not confuse this exploration project with a perception that future, potential exploitation is permitted- such applications will entail a separate permitting process, if considered viable.</p> <p>The Draft EIA Report disclosed for comment contains all of the relevant information legally required in terms of the NEMA for the Competent Authority to make a decision. Chapter 3 of the Final EIA Report contains the necessary information pertaining to the need and desirability of the proposed project. Furthermore, the aversion of all risks alone is not the only criteria for EAs and the Competent Authority has been mandated to make decisions based on the principles of sustainable development and not isolation of singular potential impacts. As such, the Draft EIA Report (and final) have complied with the requirements set forth in the applicable legislation, regulations and guidelines, such that an informed decision can be made.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>2.The granting of this authorization will in effect permit an activity that is potentially detrimental even devastating to the health and wellbeing of coastal residents and persons who are dependent on the ocean ecosystem for a livelihood. By permitting an activity that contains the potential to inflict catastrophic socio economic consequences on such communities without costing such consequences would be administrative action that is in conflict with the objects of NEMA, and the constitutional imperative to protect public health and wellbeing.</p> <p>The Assessment is based on insufficient or incorrect information about the risk and consequences of a catastrophic incident.</p>	<p>ERM refutes the contention that the Assessment is based on insufficient or incorrect information about the risk and consequences of an unlikely incident. Further, it is not the case that any activity which has the possibility of detrimental effects is contrary to the objects of NEMA and the Constitution. Rather, NEMA requires that a decision maker balance the risks associated with a proposed activity against the benefits of such activity.</p> <p>In this regard, the Guideline of Need and Desirability (2017), states that: "a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and management of risk." In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the draft and Final EIA Reports. In addition to embedded controls adopted to maintain a risk- averse approach, various client-specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economic and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk-</p>



				averse approach. Refer to Chapter 4 of the Scoping Report and Chapter 3 of the Final EIA Report or further details.
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>The details about this aspect are set out in the submission on behalf of Wild Oceans and are supported by SDCEA. The assessment fails to properly evaluate need and desirability of the project and therefore fails to put relevant considerations before the decision maker.</p> <p>1. Regulatory requirements</p> <p>a. When considering an application for Environmental Authorisation (EA), the competent authority must comply with section 24O of NEMA, and must have regard to any guideline published in terms of section 24J of the Act and any minimum information requirements for the application. This includes this need and desirability guideline. The DEA (2017), has issued guidelines on need and desirability in the context of environmental authorisations under NEMA, namely the "Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (the Guidelines)"<sup>6</sup> The Draft EIA fails to refer to the guidelines pertaining to need and desirability. The only guidelines referred to in the EIA are those of Eni itself.</p>	Although not specifically mentioned in the Draft EIA Report as the applicable guideline document, the Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the relevant reporting. The applicable environmental regulations require EAPs to have a knowledge of and take into account relevant guidelines, and ERM meets this criteria. As stated in the guideline, "need and desirability is based on the principle of sustainability", implying that there must be a balanced approach in decision making. The guideline further states that need and desirability must be considered together with the content of the "IDPs, SDFs, EMFs and other relevant plans, frameworks and strategies" when considering each application. Chapter 3 of the draft EIA clearly set out this description. In terms of financial viability, the guideline requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs".
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>b. Particular requirements of the guidelines</p> <p>The Guidelines set out QUESTIONS TO BE ENGAGED WITH WHEN CONSIDERING NEED AND DESIRABILITY.<sup>7</sup> They state that the "need for and desirability of a proposed activity should specifically and explicitly be addressed throughout the EIA process when dealing with individual impacts and specifically in the overall impact summary by taking into account the answers to inter alia the following questions." Detailed questions are then set out.</p>	Comment is noted and responses reflected below
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>This submission will focus on some of the key questions posed in the Guidelines that are relevant to this particular application and compliance therewith:</p> <p>(i) Requirement: the environmental impact assessment reports must provide information as to how the development will address the socio-economic impacts of the development, and whether any socio-economic impact resulting from the development impact on people's environmental rights.<sup>8</sup> The Draft EIA failed to do so. There is no assessment which contains a costing of the potential impact, of the impact of a catastrophic impact on the lives and livelihoods of vulnerable and disadvantaged communities in KZN, as envisaged under the NEMA best practicable environmental option.</p>	As described above and repeated here, the Guideline of Need and Desirability (2017), states that: "a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and management of risk." In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the draft and Final EIA Reports. In addition to embedded controls adopted to maintain a risk- averse approach, various client- specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were

				<p>screened in terms of environmental, health &amp; safety, economical and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk- averse approach.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience</p> <p>Note that importing gas from Mozambique still leaves South Africa reliant on hydrocarbon imports. Importing oil and gas from Mozambique does not mitigate the risk of an unlikely spill affecting South Africa's coastline as oil spills do not stick to territorial boundaries.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	(ii) Alternatives must be considered. This would include the No-Go to option. The Guidelines state: "it terms of having to follow the impact mitigation hierarchy, it is not acceptable to not follow the hierarchy in terms of, for instance not investigating alternatives to avoid negative impacts and simply investigation options to mitigate impacts "9 There is no assessment of the no go option in the Draft EIA.	<p>The no-go alternative was assessed in the Draft EIA Report and has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul>
			(iii) The precautionary principle must be applied. It is discussed in detail as follows in the guidelines: "a risk-averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions" Section 2(4)(a)(vii) of	<p>The draft EIA disclosed for comment contained all of the relevant information legally required in terms of the NEMA. Chapter 3 of the Draft EIA Report contained the necessary information pertaining to the need and desirability of the proposed project. Furthermore, the aversion of all risks alone is not the only criteria for EAs and the Competent Authority</p>

			<p>NEMA applies to any organ of state that takes a decision in terms of a statutory provision connected to the protection of the environment. It must apply a risk-averse and cautious approach that takes into account the limits of current knowledge about the consequences of decisions and actions. It appears that international jurisprudence is increasingly being persuaded to accept the precautionary principle as a means of dealing with scientific uncertainty in environmental disputes. The application of the precautionary principle and the associated need to take precautionary measures are triggered by the satisfaction of two conditions precedent or thresholds: • a threat of serious or irreversible environmental damage; and • scientific uncertainty as to the nature and scope of the threat of environmental damage.</p> <p>If either of the conditions is not met, then there will be no basis upon which the precautionary principle can operate.”</p> <p>The EIA is required to show, how a risk averse and cautious approach was applied in terms of the socio economic impacts.<sup>10</sup> This includes setting out the limits of current knowledge, the level of risk, the socio economic cost of a worst case scenario and based on the limits of knowledge and the level of risk, how and to what extent a risk averse and cautious approach was applied to the development.<sup>11</sup></p>	<p>has been mandated to make decisions based on the principles of sustainable development and not isolation of singular potential impacts. As such, the Draft EIA Report (and final) have complied with the requirements set forth in the applicable legislation, regulations and guidelines, such that an informed decision can be made. The needs and desirability description of the Project is updated in Chapter 3 of the Final EIA Report.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>The Draft EIA fails to indicate how it discharged these regulatory duties. The competent authority is therefore unable to assess the proposed development from the perspective of a risk averse and cautious approach notwithstanding the fact that it has to potential to cause catastrophic consequences in a worst case scenario. The EIA is therefore fatally flawed. (iv) The best practicable environmental option must be applied.<sup>12</sup> The Draft EIA fails to shows how it applied this principle as well as the principle of environmental justice. The potential for a catastrophic incident makes the requirement of a BPEO of critical importance. The principle envisages a cost benefit analysis. “best practicable environmental option” means the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term.”<sup>13</sup></p>	<p>As discussed above the Draft EIA Report disclosed for comment contained all of the relevant information legally required in terms of the NEMA. In ERM's view, the Draft EIA Report provides the competent authority with sufficient information for the authority to assess the proposed activity from the perspective of a risk averse and cautious approach.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>The Draft EIA undertook no such analysis. The analysis should have included a socio economic assessment of the impact of a catastrophic incident. (v) The EIA must assess what measures were taken to ensure</p>	<p>The EIA Report, in Chapter 9, assesses the risk of a catastrophic event in the event of a well blowout. The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the</p>

			<p>that the responsibility for the environmental health and safety consequences of the development has been addressed throughout the development's life cycle.<sup>14</sup></p> <p>The Draft EIA fails to describe the consequences of a catastrophic incident, both economically and socio economically or on the ecosystem. As a consequence it is unable to determine who will take responsibility and what resources they will require in the future to address such an eventuality. This is a failure to place relevant considerations before the decision maker in accordance with the EIA scheme.</p>	<p>Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events. As such, the EIA report adequately assesses the appropriateness of mitigation measures proposed in the event of an unplanned event. South African law (through the National Environmental Management Act and the Mineral and Petroleum Resources Development Act) entails numerous protections designed to ensure that those responsible for harming the environment pay for its remediation (see for example the 'polluter pays' principle established in section 28 of NEMA, or the financial provisioning requirements applicable to an exploration right). Eni is bound to comply with all such laws, and is not required to set out details of each and every legal obligation imposed on Eni under South African law. ERM is confident that the applicable governmental authority is aware of these protections and will enforce their compliance.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>(vi) The EIA must also assess, in the case of a catastrophic incident, whether the mitigation measures proposed are realistic and what long-term environmental legacy and managed burden will be left.<sup>15</sup> Also what measures will be taken to ensure that the costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution and environmental damage or adverse health effects will be paid for by those responsible for harming the environment.<sup>16</sup> It fails to do so.</p>	<p>The EIA Report, in Chapter 9, assesses the risk of a catastrophic event in the event of a well blowout. The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events. As such, the EIA report adequately assesses the appropriateness of mitigation measures proposed in the event of an unplanned event. South African law (through the National Environmental Management Act and the Mineral and Petroleum Resources Development Act) entails numerous protections designed to ensure that those responsible for</p>

				<p>harming the environment pay for its remediation (see for example the 'polluter pays' principle established in section 28 of NEMA, or the financial provisioning requirements applicable to an exploration right). Eni is bound to comply with all such laws, and is not required to set out details of each and every legal obligation imposed on Eni under South African law. ERM is confident that the applicable governmental authority is aware of these protections and will enforce their compliance.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>2. Discussion. Given that the socio economic cost of a worst case scenario is not provided the decision maker is not in a position to determine the best practicable environmental option. Without these facts the desirability of the project is not possible to investigate in the context of the risk that it poses. Without this information the decision maker cannot lawfully authorize the project.</p>	<p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>The worst case scenario a highly unlikely and improbable event for the specific well activity The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events.</p> <p>Therefore, the decision maker will be in a position to accurately evaluate the desirability of the project and, should they make such a decision, will be empowered to lawfully authorise such project.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>3. Considering need for the project. Given that the proposed activity could pose a risk of catastrophic worst case scenario oil spill, it is incumbent on the assessment to place facts before the decision maker as to whether the need to provide natural gas, identified in our energy policies, can be met by other gas resources such as</p>	<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development (whether or not such Exploration leads to production). Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government</p>

			the substantial gas fields of Mozambique, where Sasol already has a pipeline, and also by the shipping compressed natural gas to South Africa from abroad. This did not take place, and hence the costs and benefits of these alternatives cannot be considered. The Draft EIA therefore fails to consider all feasible other alternatives as well as the no go option, and is fatally flawed.	<p>revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The updated needs and desirability description of the Project is discussed in Chapter 3 of the EIA Report.</p> <p>Various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economic and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk- averse approach. Refer to Chapter 4 of the Scoping Report and Chapter 3 of the EIA for further details.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Public Participation</b></p> <p>The public participation for this whole process has been completely flawed from the inception of the project. The developers and consultancy only focused on areas of Richards Bay, Durban and Port Shepstone. These 3 areas do not represent the entire coastline of KwaZulu Natal. Many areas have been excluded from the public participation process including Kosi Bay, Sodwana Bay, St Lucia, Hluluwe, Mtubatuba, Mtunzini, Stanger, Tongaat, La Mercy, Umdloti, Verulam, Umhlanga, Central Durban, Bluff, Merebank, Isipingo, Amanzimtoti, surrounding townships like Chatsworth, Inanda, Umlazi, Phoenix, KwaMakhuta, Illovo, Umkomaas, Ifafa Beach Scottsburgh, Margate, Mtwalume and Port Edward. All these areas will be directly and indirectly affected in the case of an oil spill. There was also no advertising or participation in the rural communities of KwaZulu-Natal which is social exclusion and discriminatory.</p>	<p>ERM notes that public participation facilitated by Eni has complied with the legal requirements imposed on Eni and Eni has made a concerted effort to include all affected areas and individuals. As stated previously there was extensive information made available to I&amp;APs of the open house meetings.</p> <p>It is inaccurate to say people were excluded from any of the meetings.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>ERM states that the main objectives of Public Participation are</p> <ul style="list-style-type: none"> <li>· To ensure that adequate and timely information is provided to those potentially affected by the project;</li> <li>· To ensure that comments are received in a timely manner so that they can be taken into account in project decisions. This is an absolute contradiction because the period of time to comment on the draft EIA was insufficient considering that the IsiZulu EIA's were only made available at a later stage and it was only due to public pressure that IsiZulu EIA's were available. This indicates from the consultant that IsiZulu speaking people do not have the necessary technical skills. However IsiZulu EIA's are still not entirely accessible to the public because people will have to go to the ERM website and download a copy. Many community members do not have access to the internet therefore they cannot download the</li> </ul>	<p>As stated previously, an extensive public participation process was conducted, which complies substantially with the legal requirement to provide a sufficient period for stakeholders to consider the DEIR so as to form an informed opinion as to the proposed activity. The Non-technical summary of the Draft EIA Report was also presented in isiZulu and isiXhosa to enable stakeholders to gain an overall understanding of the project together with the project area sensitivities and outcome of the impact assessment and the management and mitigation that will be in place. The Draft EIA Report was translated into isiZulu on request from SDCEA at the open house held in October 2018. This is over and beyond the EIA process and demonstrates Eni's commitment facilitate access to information. The commenting period was extended by 2 weeks (8 Nov 2018) to allow stakeholders to review the translated EIA Report. ERM provided SDCEA with hardcopies of the English and isiZulu translated report. Further to this, the isiZulu translated report was placed</p>

			<p>EIA's. It is the responsibility of the consultants to ensure that all communities have access to the EIA's. The first document released in January 2018 which was the scoping report was only in English, despite the requests for IsiZulu copies to be made available at the report back meeting on 28 February 2018.</p> <p>The role of facilitator is questionable as he is biased towards the consultants. We requested that the Interested and Affected parties have a say in whom the facilitator should be however that was not granted.</p>	<p>at the Austerville community hall</p> <p>The facilitator was a very experience independent facilitator and played a strong role in managing the meeting to enable all opinions to be heard.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Public Participation meetings/Open house meetings</p> <p>The first round of public participation meetings which took place on the 5th, 6th and 7th of February 2018 in Richards Bay, Port Shepstone and Durban was an absolute display of how minimal the advertising was by the consultants. In the Richards Bay and Port Shepstone Meeting only 8 People showed up and it was only through SDCEA that the meeting in Durban had more people.</p> <p>The public participation meetings which took place on the 8th, 9th and 10th of October 2018 in Richards Bay, Durban and Port Shepstone was a mockery of our constitution because the consultants were choosing to exclude people out of the meeting claiming the venue was too full. This was a deliberate action on the part of the consultants because they knew that the first public participation meeting which was held in Durban on the 7th of February 2018 at the Tropicana hotel was full to capacity. Despite knowing this they acquired a smaller venue with no chairs for the public. People had to sit on the floor in a heated venue. At these meetings there were no specialists who conducted the independent studies present. Also the decision makers of this project Department of Mineral Resources, Petroleum Agency of SA and Department of Environmental Affairs were not present as well. The developers said that they will provide the information from these meetings to these government departments which is debateable because the consultants can be biased. From both these meetings we never receive any responses or minutes of the meetings from the consultants. There has been letters written for extensions and more information but none has been given.</p>	<p>The Public Participation process was conducted as per the requirements set out in the applicable legislation.</p> <p>Newspaper adverts were placed in several newspapers notifying stakeholders of the availability of the Draft EIA Report for review and inviting them to open house meetings. The South Coast Herald was amongst these newspapers. Refer to Annex B of the Final EIA Report.</p> <p>Newspaper adverts were published during the week of 17 September 2018 as follows:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>SMS notifications with directions to the project website, where the Draft EIA Report was available and reminders to submit comments on the Draft EIA Report were sent to registered I &amp; AP's on 09 October 2018 (Refer to Annex B of the Final EIA Report for a screenshot of the site website).</p> <p>The open house forum was designed as a way of enabling stakeholders to have a face to face conversation about aspects of the project of specific interest with the EIA team. Therefore, only a few chairs were initially made available. When additional chairs were requested, they were provided where practicable. As such, all the conversations were captured as comments to be responded to and therefore no Minute of</p>

				<p>Meetings were necessary as the responses will be available in Annex B of the Final EIA Report.</p> <p>The minutes of meetings from the February 2018 meetings were included in Annex C of the Final Scoping Report submitted to PASA. The observations from the open house are included in Annex B of the Final EIA Report.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Advertising</b></p> <p>The advertising of public participation meetings and comments for the EIA was inadequate as many community members cannot afford to buy the paper or cannot afford transport to travel to the mentioned libraries to look at the notices. There was also no advertising in the local community tabloids which is distributed freely in communities of KwaZulu Natal. There were no other mediums of advertising like radio advertisements or the distribution of knock and drop pamphlets. The tourism industry, recreational industry, boat fishing and subsistence fishers, communities who use the ocean for spiritual significance and the general public were not informed of this development, it was only through SDCEA that some of these industries and communities were informed. This alone shows that the consultants and developers are inconsiderate of the need to involve as many communities as possible; they just want to tick the box to move the process along which is unacceptable. According to Department of Environmental Affairs (2017), All potential and I&amp;APs have a right to be informed early and in an informative and proactive way regarding proposals that may affect their lives or livelihoods. Early communication can aim to build trust among participants, allow more time for public participation, and improve community analysis and increases opportunities to modify the proposal in regards to the comments and information gathered during the Public Participation Process.</p>	<p>As stated previously there was extensive information made available to I&amp;APs of the open house meetings including press advertising, notices were placed in local libraries for the open house meetings and SMSs were sent to all previously registered I&amp;AP's who did not have email addresses. Initial information on the project was circulated in September 2017 and the I&amp;AP database continued to be expanded through public participation for the scoping process and then the EIA process. Therefore this met the requirement to inform early in the process. Table 5.1 in Chapter 5 of the EIA Report summarises the substantial Public Participation Process that was conducted for this EIA. Refer to Annex B for evidence of substantial advertisement and notification of stakeholders</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Community Comments and Petitions</b></p> <p>Community Organisations and community members from North to the South of KwaZulu-Natal have posted or emailed comments about the EIA. It was very important that the whole of KwaZulu-Natal is represented and involved in this process. ERM can expect over 200 comments from these communities. There is also a running online and written petition against the offshore oil and gas exploration. The online petition so far has</p>	<p>The importance of communication is noted and on close of the comment period ERM received over 200 comments including some in isiZulu</p>



			over 1700 signatures and the written petition has over 500 signatures.	
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	International Conventions and Treaty Commitments on Climate Change The International Conventions and Treaty Commitments of South Africa must be included as part of the investigation by the appointed consultants. South Africa has signed the Paris Climate Agreement in December 2015, which requires government, business and society to reduce greenhouse gas emissions. According to the Department of Environmental Affairs, "The Agreement is a comprehensive framework which will guide international efforts to limit greenhouse gas emissions and to meet all the associated challenges posed by climate change. It signals the change in pace towards the low carbon development from 2020 onwards through commitments of countries in ambitious national plans called Nationally Determined Contributions."	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. This initiative was designed to fast track the implementation of solutions on critical development issues. This is a unique initiative to address issues highlighted in the National Development Plan (NDP) 2030 such as poverty, unemployment and inequality. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. The Integrated Resource Plan issued in 2018 is a draft plan, subject to public comment, and has not been formally adopted.</p> <p>Eni actively participates in the main international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO2 over the next ten years.</p> <p>Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	South Africa's early-stage commitment in 2009 – to peak emissions during the 2020s and reduce them dramatically during the 2030s – must be adhered to. If oil and gas are drilled, refined, transported and combusted as a result of the offshore discoveries, this would require an even more dramatic decline in other emissions. Yet the Integrated Resource Plan issued in August 2018 calls for a massive increase in fossil fuel, from current levels around 28 000 MW on a typical daily peak, to 46 000 in 2030 as a result of new	Eni actively participates in the main international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions.

			coal-fired power plants and fracking. Therefore there is no carbon budget allocation in government's energy mix, much less in transport, urban development, agriculture, waste disposal, wetlands and forest management and other crucial sites of greenhouse gas emissions or sequestration. Under circumstances in which oil companies are confronted with the scenario of 'unburnable carbon,' it is apparent that they choose to either completely ignore the worst threat that humanity has ever faced, climate change, or like ExxonMobil, they engage in active denial and scientific sophistry. The ENI/Sasol strategy is the former, and yet any EIA worth its salt must consider the implications of climate change.	<p>Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO<sub>2</sub> over the next ten years.</p> <p>Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	Failing to consider emissions associated with extraction of fossil fuels or the impact of climate change on a project already adversely affected two major projects in recent years, in Thabametsi and Durban. The Thabametsi 557 MW coal-fired powerplant was proposed by Japan's Marubeni and South Korea's KEPCO firms, but like many multinational corporations they refused to consider climate change, and in 2017 the North Gauteng High Court forced them to go back to the drawing board. Once their contributions to climate change became known, in September 2018 they were refused funding by South African banks which now adhere to the OECD recommendations on financing of fossil fuel projects. In an earlier case, in 2012, SDCEA and Durban allies objected to Transnet's expansion of the Durban port in part because the EIA had not taken seriously the impact of rising sea levels and adaptation costs, much less the additional emissions from expanded shipping. In 2013 Transnet's EIA was rejected, forcing a long delay in the project as new plans were adopted.	The previous projects you refer to have no relevance to this EIA Report and this statement is not applicable because the project did consider the impact of climate change in Chapter 7 of the EIA Report
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>IMPACTS OF OFFSHORE OIL AND GAS DRILLING Impact on the communities, people and environment</p> <p>When oil spills occur they can bring catastrophic harm to marine life and devastating losses for local businesses. Even routine exploration and drilling activities bring harm to many marine species. Expanded offshore drilling poses the risk of oil spills ruining our beaches, bringing harm to those who live, work and vacation along the coasts, as well as harming habitats critical to plants and animal species. Oil spills can quickly traverse vast distances. Exploration of oil and gas presents multiple forms of environmental degradation. Oil pollution also damages fishing equipment and pollutes drinking water in wells. Oil spills and waste dumping have also</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Minor to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the</p>

			<p>seriously damaged agricultural land. Long term effects include damage to soil fertility and agricultural productivity, which in some cases can last for decades. Economically, the costs of those products become exorbitant given the law of supply and demand. The negative impact of environmental consequences of the oil industry activities are mainly localized within the host communities. However, some of the effects have trans-boundary implications. Gas flaring is a contributing factor to global warming and these are risks no community is willing to take especially South Durban and the communities all along the KZN coastline from the north to the South given the fact that this area is already a marginalized and affected group of communities that experience these kind of environmental disasters more often than a residential area should or ever at all.</p>	<p>Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>If well testing is conducted, it may be necessary to flare or vent off some of the oil and gas brought to the surface. Flaring and venting is also an important safety measure used to ensure gas and other hydrocarbons are safely disposed of in the event of an emergency, power or equipment failure or other plant upset conditions. The flow periods and rates will be limited to the minimum necessary to obtain the required reservoir information during the well test. It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. The potential effects from air emissions is minor and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Impact on fisherfolk</p> <p>These developments and projects will not only cause catastrophic destruction with the above-mentioned impacts but will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. When seismic tests are conducted, they clearly have an impact on marine life. The fish are either killed or forced to leave the area. There will be no fish for the subsistence fishermen, who fish areas all along the coast. This impact will increase poverty and lead to more people joining unemployment line. Thereby increasing to the millions of people who are unemployed and this development will require specific skills which the majority of the population do not possess therefore there is no job creation in these projects. In the public participation process, this group of marginalised fisherfolk must be given notice and opportunity to comment and voice their concerns.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p>

				<p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Impacts of Drilling</b></p> <p>Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. In addition brought to the surface is "produced water" that will contain trace elements of oil assuming oily condensate is discovered. This requires evaluation. With regard to the drill cuttings it is not known what alternatives are proposed or whether the cheapest option of discharge into the nearby ocean is the only option being considered. For example is it not possible to injecting everything back into suitable geological formations or take it to shore for further treatment. More drilling muds and fluids are discharged into the ocean during exploratory drilling than in developmental drilling because exploratory wells are generally deeper consequently this is a very real threat to the environment. Literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point. We therefore would demand that a full survey of such benthic biota is established prior to the drilling process and that this be monitored as to its state of health. It is also known that offshore rigs can dump tons of drilling fluid, metal cuttings, including toxic metals, such as lead chromium and mercury, as well as carcinogens, such as benzene, into the ocean all of which must be assessed. The prospect of a catastrophic spills and blowouts is a documented threat from offshore drilling operations and the near impossibility of introducing a successful capping of the blowout at the depths cited are of deep concern to us. We require significant detail to be presented on this aspect given the learnings of Deep Water Horizon disaster.</p>	<p>For deep offshore wells, far away from the coastline, the discharge of cuttings is an acceptable procedure if in compliance with specific limitation thresholds and only after specific treatment has occurred to reduce mud and pollutant content. Eni won't be allowed to discharge fluids or cuttings if it is not in compliance with international best practise limits (e.g. the limits defined by the International Finance Corporation IFC Environmental, Health and Safety Guidelines for Offshore Oil and Gas Development, June 2015) defined in Chapter 9 . Prior to the discharge of cuttings, cuttings content must be verified and tested in order to guarantee the respect of such limits. If not in compliance, cuttings must be temporarily stored on board and shipped in skips to shore for land waste facilities. Supply vessels make round-trips to and from the wellsite and onshore base, so the economic benefit of avoiding transportation to shore is very marginal. From a safety prospective, limiting the movement of skips to and from the vessel and logistic base will reduce a number of heavy lifting operations. Additional onshore treatment is not necessary if the offshore drilling cuttings treatment present onboard the drillship is effective and efficient. It is the rig contractor's responsibility to guarantee that the offshore typology of equipment that is used for mud and cuttings treatment is properly selected, efficient and well maintained. In this way the mud treatment system will be guaranteed to never exceed the above mentioned limits. In any case prior of discharge, proper testing shall be performed and reported. The injection of cuttings in a geological formations could be a possible alternative and could be evaluated in the development phase but it is not feasible for the exploration phase because it requires the presence of a specific disposal well.</p> <p>The length of wells are not determined by the development or explorative phase, but from the well design and the reservoir target to be reached.</p> <p>The impact of the drilling cutting dispersion and accumulation at seabed, including assessment for biotic components (including benthos), has been addressed in Chapter 7 of the EIA Report. The pre-drilling survey with ROV will provide a reference of the presence or non-presence of benthic biota prior to the start of any operations. Results of the ROV pre-survey, including camera footage, will be delivered to competent authority and available for review.</p>

				<p>As per the above, offshore discharges are limited to what is described and assessed in Chapter 7 of the EIA Report. For instance, concerning the amount of barite to be used in mud, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for a single well drilled. No dumping of metal scraps and domestic waste is allowed by Eni on its operated vessels, including stand-by and support vessels.</p>
			<p><b>Social enhancement studies</b>  The public participation meeting is a clear indication that fisher folk rights, the interests of people and their livelihoods have been ignored and therefore we work in the wellbeing of protecting and defending these rights. We need independent research done on the impacts of this project in regard to people's livelihoods, quality of life and a cost base analysis done on the health the residents will endure from the chemicals emanating from the development (see appendix 6-Health Study).It Must include the loss of crops, food security, employment, and local businesses and how this will impact on them-agriculture- markets. Fishermen have been in the struggle on the south and north pier for many years and they recently got it back and once again this proposed development and its interests are going to replace the interests of the people in particular the fisher folk's livelihood. The constant increase of vessels in out of the harbor will have significant impacts and chase fish away from that vicinity: ultimately infringing on the poor fishermen rights to a livelihood. If oil and gas is actually found in the proposed site it will attract heavy guarded and military presence. This is another means and way to lock out fisher folk from your site and stops them from accessing the deep water fish.</p>	<p>The potential effects from air emissions has been assessed as minor and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore. CO2 emissions generated by the project have been calculated based on fuel usage. Approximately 3,599 tonnes of fuel will be burnt by the Project vessels and helicopters resulting in approximately 13,076.92 tonnes of GHG (CO2, CH4, N2O) emissions, of which CO2, is the largest component at 13,035.61 tonnes (See Table 7.5 in Chapter 7 of the Draft EIA Report), being emitted to the atmosphere during the drilling operations (up to 71 days). There will be no flaring.</p> <p>This equates to only 0.0003 percent of the total CO2 emissions for South Africa The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO2), methane (CH4), oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Both the Port of Richards Bay and the Port of Durban are large, commercial, high traffic ports and, as such, the additional vessel traffic for this project will be non-significant and will not be a major change from the current status quo in terms of impact to fishing, supply and goods shipping activities.</p>
			<p><b>The Marine Ecosystem</b>  Exploratory drilling may impact marine mammals based on disturbance by sound emitted during drilling, during seismic profiling of the well, and from support vessels or aircraft. Drilling can also result in oil spills, which can affect marine mammals directly by contact, inhalation, or ingestion, or indirectly by affecting marine mammal prey or habitat.</p>	<p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence,</p>

				<p>feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Seismic Survey Impacts</b></p> <p>Seismic testing is still taking place and proved to be very negative toward marine life. 17The Oceana website reports that blasts from seismic air-guns, towed behind ships, are repeated every ten seconds, 24 hours a day, for days and weeks at a time. Sound travels more easily under water than through the air and the noise from a single seismic survey can travel tens of thousands of square kilometres. 18An article in the Canadian Journal of Zoology reports that seismic surveys increase noise levels to twice the normal level, and impact marine life. Such surveys disturb the communication, navigation and eating habits essential to the survival of marine wildlife. These sonic waves can also damage fish with air bladders, destroy marine wildlife eggs and larvae, and cause fish and other marine species to temporarily migrate away from the affected area. The effect of these blasts of sound on marine life is disturbing and can have catastrophic results: Seals have been found to display dramatic avoidance behaviour, a slower heart rate, ceasing feeding and hauling out of the ocean. Turtles have shown reduced hearing</p>	<p>The activity that has been included in the EIA Report is exploration drilling and does not include seismic surveys in the scope of the project. A seismic survey involves a seismic vessel, using airguns to produce sound waves to understand the subsea geology. Exploration drilling on the other hand uses a drilling vessel/rig to drill into the seabed in areas identified during the seismic survey as having potential hydrocarbons.</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p>

			<p>sensitivity at a distance of 1km from the blasts. There has been damage to fish ears at distances of 500m to several kilometres, a reduction of 40 – 80% of catch rates in the North Atlantic and increased embryonic mortality. Zooplankton, which are essential for the health and productivity of global marine ecosystems have suffered significant mortality and the impact has been observed at a range of 1,2km from the blasting sites. Impacts include temporary and permanent hearing loss, abandonment of habitat, disruption of mating and feeding, and even beach strandings and death. For whales and dolphins, which rely on their hearing to find food, communicate, and reproduce, being able to hear is a life or death matter. Whales simply stop “talking” to each other.</p>	
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Impacts of Oil and Gas Drilling on Marine life</p> <p>Sea birds are attracted to offshore drilling platforms by lights, burning flares and human food that can be scavenged. Birds are killed or injured after colliding with the structures, becoming contaminated with oil and related chemicals, and even being burned by flares. Birds' feathers can get coated with oil, preventing them from being able to keep warm and reducing their ability to float. Roughly 200,000 migratory birds are killed each year near offshore drilling rigs in the Gulf of Mexico. They often fly circles around platforms for hours at a time, exhausting themselves or colliding with platforms or other birds.</p> <p>Deep-divers, like the endangered sperm whale, spend large amounts of time resting at the surface of the ocean, increasing the risk of collision with vessels. Oil can affect survival or the reproductive success of marine mammals through exposure to hydrocarbons and by affecting distribution, abundance, or availability of prey. Increased vessel traffic around platforms may increase collisions with sea turtles. Sea turtles are difficult to sight from moving vessels and often rest on or just below the surface of the ocean.</p>	<p>The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling. As discussed in Chapter 7 of the EIA Report, the increase in ambient lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.</p> <p>The risk of a vessel collision with marine fauna due to the project vessel activities is low as anti collision monitoring equipment and procedures will be implemented on the drillship and supply vessels.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Emissions to air</p> <p>The oil and gas industry is a significant source of greenhouse gas emissions as well as toxic volatile organic compounds (VOCs). VOC in combination with NOx contribute to the formation of ground-level ozone and is a known causal agent of acid rain.</p> <p>The atmospheric pollution will have measurable impacts on the surrounding ocean but also become potentially entrapped in air masses moving towards the coastline where it will be</p>	<p>The potential effects from air emissions has been assessed as minor and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore. CO2 emissions generated by the project have been calculated based on fuel usage. Approximately 3,599 tonnes of fuel will be burnt by the Project vessels and helicopters resulting in approximately 13,076.92 tonnes of GHG (CO2, CH4, N2O) emissions, of which CO2, is the largest component at 13,035.61 tonnes (refer to Table 7.5 in Chapter 7 of the Draft EIA Report), being emitted to the atmosphere during the</p>

			<p>deposited as acid rain. The drilling of wells and production process require vast amounts of energy usually provided by the burning of gas and diesel. The impact of this activity needs to accurately assessed in terms of tons of fuel burnt and hydrocarbons released. Assuming that oil or gas is discovered then this would no doubt need to be flared off until such time as it can be capped and processed. During this time vast quantities of particulate matter and volatile organic compounds will be released into the atmosphere, indeed continuing throughout the production process. In addition the associated fugitive emissions from retrieved product is an additional source of toxic pollutants as the venting from either onsite (barge/tanker) or onshore (storage tanks and pipeline valves) must be evaluated. The carbon generated from flaring will also add to the existing problem and create added negative consequences in terms of climate change.</p>	<p>drilling operations (up to 71 days). This equates to only 0.0003 percent of the total CO2 emissions for South Africa. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO2), methane (CH4), oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>As stated in Chapter 9, Eni will ensure compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</p> <p>If well testing is conducted, it may be necessary to flare or vent off some of the oil and gas brought to the surface. Flaring and venting is also an important safety measure used to ensure gas and other hydrocarbons are safely disposed of in the event of an emergency, power or equipment failure or other plant upset conditions. The flow periods and rates will be limited to the minimum necessary to obtain the required reservoir information during the well test. It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. The potential effects from air emissions is minor and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Physical Effects of Offshore Oil Rigs</b></p> <p>Any floating platform will attract pelagic fish and seabirds as well as certain marine mammal species. A consequence of this for seabirds is that bird mortality has been associated with physical collisions with the rigs especially at night, as well as incineration by the flare. Birds settling on the water surrounding the rig may come in contact with oil residues and leaks leading to their death following contact with such pollutants. Fish aggregating around the drilling rig may be exposed to high levels of pollutants which are then biomagnified up the food chain ending up in apex predators such as sharks and marine mammals such as dolphins and toothed whales. It has long been suspected that drilling activity</p>	<p>The drilling activities would be located in the offshore marine environment, 62 km offshore, far removed from any sensitive coastal receptors (e.g. bird colonies), but could still directly affect migratory pelagic species transiting through both the areas of interest for drilling. As discussed in Chapter 7 of the EIA Report, the increase in ambient lighting in the offshore environment would be of Negligible magnitude and limited to the drilling location over the short-term.</p> <p>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.</p>



			around oil rigs in the Gulf of Mexico is associated with elevated levels of mercury in fish.	<p>A National Oiled Wildlife Preparedness &amp; Response Plan (NOWCP) is currently being developed and includes all South African Territorial Seas including offshore islands and territories, South Africa's Exclusive Economic Zone (EEZ), and the High Seas, where an oil spill has the potential to impact on South African interests. The NOWCP aims to promote the planned and nationally coordinated response to any marine oil spill affecting wildlife, to:</p> <ul style="list-style-type: none"> <li>• Protect the welfare of wildlife threatened or impacted by oil</li> <li>• Assist with co-ordination of field assessments of threatened or impacted wildlife, if necessary</li> <li>• Assist, if necessary, to prevent or minimize exposure of wildlife to oil by undertaking: <ul style="list-style-type: none"> <li>• Activities to deter wildlife from oiled habitats;</li> <li>• Pre-emptive capture of wildlife as appropriate.</li> <li>• Establish a system for stabilization, cleaning and rehabilitation of impacted wildlife.</li> <li>• Release back into their native habitats, animals who will be healthy and contributing members of their wild populations</li> <li>• Remove dead oiled wildlife from the food chain</li> <li>• Dispose of dead oiled wildlife appropriately.</li> </ul> </li> </ul> <p>The NOWCP will mainly cover species most at risk from oil spills, such as seabirds, pinnipeds and sea turtles, amongst others. The Department of Environmental Affairs (DEA) will be the responsible department to coordinate response actions concerning the protection and rehabilitation of oiled marine wildlife. The NOWCP will describe the responsibilities and capabilities of the Oiled Wildlife Response Working Group during an oil spill where each organisation's roles &amp; responsibilities to protect, rescue and rehabilitate marine wildlife will be outlined.</p> <p>Further to this, Eni will specifically develop its own Oiled Wildlife Response Plan as part of its OSCP. Eni intend to work closely with organisations such as SANCCOB in the development, planning of response strategies and through service agreements during operations to ensure adequate resources and appropriate response and rehabilitation strategies are place for wildlife. SANCCOB is an internationally recognised leader in oiled wildlife response and rehabilitation. In the past 4 years, SANCCOB has rehabilitated approximately 10,000 seabirds, with annual figures ranging from 2,100 to 2,500 individuals.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	The South African Coastline Our coastline is recognised as being one of the most hostile and formidable to shipping. Large freak waves, storms and the presence of a year round strong (4 knot) north-south current	The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including

			<p>all spell trouble for any stationery vessel anchored in place. The impact of the dynamic Agulhas current and its vital role in important biological processes must be evaluated. The positioning of the rig is fairly and squarely within this current that is in effect the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient rich and breeding grounds of the Agulhas bank. Anything that occurs off KZN coastline will end up being swept to the Agulhas such is the inevitable nature of the current. It will not simply disperse over the vastness of the ocean as you are effectively discharging hazardous waste into a fast flowing offshore river. In addition it is suspected that the south flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current. Allowing the presence of ecologically destructive drilling and oil/gas extraction is foolhardy and flies in the face of the precautionary principle.</p>	<p>thrusters and GPS sensors. The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution. Chapter 8 of the EIA Report and supporting Oil Spill Modelling Report (Annex D4) evaluated the risk of an oil spill from a blowout as rare based on the OGP Risk Assessment Data Directory, Report No. 434-2, March 2010.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Agulhas Current</b> The Agulhas current has many unique features. There are little understood but regular upwelling events are associated with either (a) the strength/velocity of the current (b) its unexplained meanderings (c) its collision with undersea topographic features - all of which lead to the potential that constituents of the offshore water column are pushed inshore to the beaches. Consequently, in the event of an offshore rig disaster there is a distinct possibility that the southward bound current will provide a mechanism to drive the toxic consequences of the oil and gas industry into our nearshore waters and indeed even onto our beaches. This is an invariable fact of the Agulhas Current that sweeps along our coast with regular gyres (reverse currents) spinning off inshore meaning toxic by-products can be expected to be deposited along our sensitive shoreline including Marine protected Areas, sensitive breeding colonies (penguins/seals) and primary fish recruitment areas (Agulhas banks). No area of our Eastern coastline would be spared</p>	<p>The currents used in the oil spill model were obtained from the HYCOM (HYbrid Coordinate Ocean Model) global circulation model. These data are freely accessible. PRDW has direct experience using HYCOM for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa. Fundamental to the accuracy of HYCOM is the assimilation of measured data from satellites, floats and buoys (<a href="http://www.hycom.org">www.hycom.org</a>). ERM used five years of HYCOM current data for the oil spill modelling, which is sufficient to represent the seasonal and synoptic variability in the current. The strength and direction of the Agulhas Current in the study area is well established, e.g. Lutjeharms, JRE, (2007). Three decades of research on the greater Agulhas Current. Ocean Sci., 3, 129–147, 2007. HYCOM is a well-established model and ERM has direct experience using HYCOM for similar studies around the world. The extent and probability of an oil spill reaching the shore has been mapped in the Oil Spill Modelling Report (Annex D4 of the EIA Report).</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p><b>Cyclones and intense Cold Fronts</b> Due to global warming the likelihood of tropical cyclone formations drifting further southwards has vastly increased. Tropical cyclones feed off warm water masses and statistically will be enhanced by the presence of elevated and sustained water temperatures. Contemplated now is that oil and gas drilling rigs will be sited</p>	<p>The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors.</p>

			<p>along a potential cyclone track. But this is not the Bay of Mexico which has relatively benign water mass. We are talking about an area of the earth's ocean that is well known amongst shipping for being both violent and unpredictable. In addition, during winter ferocious cold front polar systems sweep up our coastline generating long deep period swell systems. These systems encounter the south flowing Agulhas current with consequences usually expressed in the appearance of enormous open ocean swells. Ships have simply disappeared (Waratah) and in some cases had their bows sheared off by the force of these waves. How then will these rigs survive significant storms events without environmental mishap?</p>	<p>The weather will be constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Health, safety and rescue considerations In this context consider that the drilling operation lies beyond the rescue envelope of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example we have no exiting offshore rescue craft capable of providing a rapid response. The NSRI is strictly inshore and the Naval capability virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions. In addition aerial support also requires specialist aircraft that South Africa simply does not possess. The key limitations are restrictions placed on aviation flying over water meaning that specialist aircraft would be required. Where and what are these and who will fund them? Where will they be based? Would they really be able to respond in time in order to assist in event of ecological or human calamity? Consider what occurred on Piper Alpha...and there you had state of the art first world facilities whereas in South Africa things are significantly more third world. The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are therefore significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry despite the proximity of state of the art rescue and repair facilities.</p>	<p>Health and Safety is of the highest importance to Eni. The EIA Report provides details on the requirements for the design, engineering and execution of the well, explains the multiple barriers in place to prevent a spill including the Blow Out Preventer and the level of competency of the staff that is required to design and conduct the drilling operations including certification and testing of all critical equipment. Furthermore, the EIA Report describes the response and recovery actions the event of a spill that will be included in the Oil Spill Contingency Plan and the capping system installation as the backup of BOP failure, which is state of the art technology following lessons learned from Deepwater Horizon in the Gulf of Mexico. Over the last several years, further advancements have been made in the industry, with the development of new tools and technologies and updated Standards and Best Practices to significantly reduce the risk of unwanted oil spills and probability of blowout events.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Emergency Plan Companies are required by law to have comprehensive emergency response plans and procedures in place before any offshore activity can take place. Emergency response plans are designed to first protect people and the environment</p>	<p>There is no Oil Spill Contingency Plan in the Draft EIA. Prior to drilling a detailed Oil Spill Contingency Plan will be prepared and spills at sea will be immediately contained by the supply vessels, which host onboard offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill</p>

			<p>therefore it is imperative that a thorough emergency plan be brought forward with regards to the oil and gas exploration. The emergency plan must cover fatalities, serious injuries and medical emergencies, oil or hazardous material spills, fires and explosions, vessel collisions, extreme weather, including icing, presence of heavy sea ice or icebergs, missing persons, diving emergencies, loss of control of a well, damage to offshore infrastructure, support vessels and aircraft and helicopter incidents. Emergency response plans must be revised regularly as technology advances and new research becomes available. The oil spill contingency plan is very inadequate as mentioned above.</p>	<p>response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Historical Context of Eni in Nigeria</p> <p>The Niger Delta is one of the most polluted regions in the world. In the 1950s, oil was discovered and production began, but since then, oil spills have caused extensive environmental damage. 19 Rights group Amnesty International said there were “reasonable doubts” about how the spills happened; suggesting corrosion rather than oil theft were behind the pollution. A total of 43 spills came from pipelines operated by Eni’s Nigerian Agip Oil Company. ENI had 820 spills — the equivalent of 26,286 barrels or 4.1 million litres of oil — since it made its reports public in 2014.</p> <p>Amnesty’s business and human rights researcher Mark Dummett said the companies’ claims to be doing all they can to prevent spills were at odds with the analysis. Researchers found that the companies often ignore reports of oil spills for months on end — on one occasion Eni took more than a year to respond,” he said in a statement. It is said that “Eni seems to be publishing unreliable information about the cause of extent of spills,” he added, accusing the firms of “recklessness”. Allegations about misreporting, including under-estimating the amount of oil spilled, are significant as they could affect claims for compensation for local communities.</p>	<p>Your response has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA R eport. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni’s official website at url: eni.com</p>
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Impact on South Africa’s natural capital accounts</p> <p>South Africa’s late Environment Minister Edna Molewa signed the 2012 Gaborone Declaration, which was developed by ten African countries so as “To ensure that the contributions of natural capital to sustainable economic growth, maintenance and improvement of social capital and human well-being are quantified and integrated into development and business practice.” This commitment – supported by Conservation</p>	<p>This EIA has been prepared in accordance with the National Environmental Management Act (No.107 of 1998) (NEMA), and the Environmental Impact Assessment Regulations (GNR R982/2014). Chapter 3 of the EIA Report speaks to the need and desirability of the Project as required under NEMA. The impact on natural capital has been considered throughout the impact assessment chapter of this EIA as it considers the impact on marine ecology, fisheries and marine and coastal based livelihoods (refer to Chapters 7 and 8 of the EIA). It is</p>

			International and the World Bank – entails having not only the South African state but business recalculate major projects, such as oil and gas exploration and drilling. Specifically, any EIA accounting of impacts on the environment should entail “incorporating the value of natural capital in public and private policies and decision-making,” as the Gaborone Declaration makes clear. Any statement by ENI and Sasol that purports to measure positive economic benefits from oil and gas drilling, that does not simultaneously provide natural capital full-cost accounting to also consider the impacts of depleted non-renewable resources, must not be considered sufficiently rigorous to pass muster.	further noted that the EIA clearly states that there are Negligible social benefits associated with the project due to the limited duration of exploration drilling activities.
Desmond	D'Sa	South Durban Community Environmental Alliance (SDCEA)	<p>Conclusion</p> <p>In regard to the issue of need and desirability the assessment is confined to stating that it is compliant with policies that promote the development of the oceans, and overall energy policies. The assessment does not consider and apply the guidelines applicable to need and desirability, nor does it consider the socio economic impact of a worst case scenario spill. Climate change is not taken seriously. And the Draft EIA does not consider the full-cost accounting that will increasingly be required once the Gaborone Declaration is adhered to, specifically the negative impact of oil and gas drilling on South Africa's natural capital accounts. Should an authorization based on this Draft EIA be granted it stands to be set aside on review.</p>	<p>As clearly described in the previous responses this Draft EIA Report fully complies with the NEMA Environmental Assessment Regulations (GNR R982/2014). The Guideline of Need and Desirability (2017), states that: "a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and management of risk." In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the draft and Final EIA Reports. In addition to embedded controls adopted to maintain a risk- averse approach, various client- specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economic and engineering risks. The selection of the more feasible alternatives was conducted through this process and based on a risk-averse approach.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>The potential effects from air emissions has been assessed as minor</p>

				<p>and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore. CO2 emissions generated by the project have been calculated based on fuel usage. Approximately 3,599 tonnes of fuel will be burnt by the Project vessels and helicopters resulting in approximately 13,076.92 tonnes of GHG (CO2, CH4, N2O) emissions, of which CO2, is the largest component at 13,035.61 tonnes (See Table 7.5 in Chapter 7 of the Draft EIA Report), being emitted to the atmosphere during the drilling operations (up to 71 days). There will be no flaring. This equates to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>If well testing is conducted, it may be necessary to flare or vent off some of the oil and gas brought to the surface. Flaring and venting is also an important safety measure used to ensure gas and other hydrocarbons are safely disposed of in the event of an emergency, power or equipment failure or other plant upset conditions. The flow periods and rates will be limited to the minimum necessary to obtain the required reservoir information during the well test. It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. The emissions from flaring, during well testing have not been quantified in Table 7.5 as the characteristics of the well in terms of pressure, flow rate and pressure are unknown and will only be determined while the well is being drilled.</p>
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>SDCEA APPENDIX 1 That the oil industry is fraught with several negative and destructive incidents which affect the environment, health, livelihood and lives of the people cannot be over emphasized; especially as is the case in Nigeria's Niger Delta Region. While the issues relating to gas flaring, oil spills, blowouts and fire might not be coming as a strange phenomenon to most Nigerians; the fact that lives are often lost during operations in the oil industry might be relatively strange to some. However, the Environmental Rights Action [ERA] has been documenting these incidents over the years. What happened on Thursday, 9th July, 2015 along Agip's Tebidabe-Clough Creek pipeline when repairs on an alleged damaged section of the pipeline/JIV was on-going; the explosion/fire which led to the death of 14 persons didn't come entirely as a surprise to ERA looking at the antecedents of the Nigerian Agip Oil Company [NAOC]. The people of Etieama community [in Nembe local government area, Bayelsa State] are still mourning the death of about 18 vibrant youths who were invited to assisted during clamping of a ruptured spot along the company's Brass-Ogoda pipeline in the year 2000.</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			<p>According to community folks at Etiema, that ugly incident was caused by spark from a machine used during the clamping. On Sunday, 29th July, 2012 a similar incident happened along Agip pipeline within Ayamabele/Kalaba community environment, in Okordia clan, Yenagoa local government area of Bayelsa State. As captured in another ERA field report, while trying to clamp a spill point, there was a sudden fire outbreak and the 16 persons who made up the Agip team [including military men] and 4 community youths escaped death. However, a machine brought for the repair job and the bush bore the testimony as they were seriously damaged. Community folks at Ayamabele/Kalaba informed ERA that they were VERY lucky to have escaped unharmed; even though some of them missed their way home as they had to make way where there were no footpaths in the bush as the run away from the site of the fire.</p> <p>The above are just two examples of similar incidents relating to Agip and how lives have either been lost or so endangered and recorded by ERA before the very recent incident at Azuzuama. ERA has since visited the site of incident in Azuzuama and has heard from some members of the bereaved families and Officials of the State Ministry of Environment and, hence this special report.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>TESTIMONIES FROM BEREAVED FEAMILY MEMBERS:</b></p> <p>According to Mr. Italia Clinton, I am a native of Azuzuama community, in Bassan Clan, Southern Ijaw local government area of Bayelsa State. One of the young men who died as a result of that unfortunate fire incident was my Nephew. And, he was named Epunumokumo Lynus Sampson Nume. He had two wives and children; one of the wives was pregnant too when he met his sad end on that Thursday. The night of the incident [Thursday before last], I received a call from one of the wives of the deceased. The deceased was my elder sister's son. The wife called me around 12 mid-night and, she told me that her husband went to work on the pipeline with some persons and has not returned and, she heard there was an explosion and fire at the site; in the bush. I tried to calm her by saying may be the husband has ran for his life and may be safe somewhere in the bush. Around 2:00AM that same night, my elder sister called me again on phone. She told me that they have managed to visit the area but could do much because of the night and so; they will return to the bush in the morning to search. To my greatest surprise, I received a call</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			<p>from my elder sister early in the morning and, she told me the sad news; that her son has been burnt to ashes from the explosion/fire which occurred as a contracting firm to Agip, Vowgas Limited was repairing a ruptured spot on the pipeline. According to her, 19 of them went into the bush and 14 of them died and, my nephew was one of the victims because he was working directly with them before the incident happened. So, on Friday morning I had to go and meet my uncle, a retired police Officer and we arranged for a speedboat to rush down to the community [from Yenagoa]. And when we got to Azuzuama, we witnessed nothing but grieving relations; some of them weeping uncontrollably too. The wife of my nephew and my elder sister [the mother of the deceased], were crying and, I was unable to console them. I also joined in the weeping; it was a great loss to the family. It was later we held ourselves; because the incident cannot be reversed. We saw the remains of the dead victims before the company had to take them to Port Harcourt to put them in the morgue. They were burnt beyond recognition.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>When asked as to whether the government or Agip has approached the bereaved family or done anything in connection with the incident, Clinton said: Two days after we returned to Yenagoa [from the community], I heard over the State Radio where the State Governor was saying that Agip has to do everything possible to ensure that those victims don't die in vain because they lost their lives while working on the company's facility. Yesterday being 20th July, 2015 a representative of Vowgas called me and said that we should go to Port Harcourt today, for a discussion with the family. They want to tell the family what they can do in respect of the deceased in terms of burial and compensation. So, we are going to Port Harcourt today any moment from now. On the part of Agip, although the company has not reached out directly to the bereaved family, the surveillance contractor in the area has been called by Agip and, even yesterday we were in a meeting with the Contractor [Surveillance]. He informed us that the Security Manager in Agip called him with a view to getting the names of the two wives and children of the deceased. The second wife is pregnant right now. So, the Surveillance contractor has sent the names to Agip. We are of the view that Agip is also trying to do something about it but they are yet to invite the family.</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>



Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>On what the family expects from Agip, Clinton said: Well, since the incident has occurred and it cannot be reversed and, knowing that the fault came from the company; we are waiting on Agip to come up with what they think is the right and normal thing to do. It is from what the company says that we shall know the next line of reasoning or action to take. Once Agip does the right and normal thing, we shall have no option than accepting what has happened in good faith. To conclude, I appeal to the Human/Environmental Rights NGOs to also come in to assist us because these oil companies are very funny corporate bodies. They know the right thing to be done, but they may like to dodge. This is where we need the support of NGOs to prevail on them to do the right thing.....</p> <p>Also speaking on the same victim, a family member said: I am known as Eperenwei Paris. In fact, the victim we are talking about was my cousin. His father is my uncle. Actually in Ijaw tradition, when such a thing happen we don't use the corpse to trade with any company. But then, what is supposed to be done is that, the company has to come to the aid of the family. I say so because the deceased was a promising young man that was fending for his family. He had children and two wives; as Ijaw culture permits polygamy. Even though our late brother was engaged by a local firm contracted by Agip; the Azuzuama man does not know any other person or company to hold responsible on this matter than Agip. Agip and the contractor it hired should come to the aid of the bereaved family and the community at large. I say so because even the environment and economic trees have been affected. Up till this moment, Agip is yet to reach out to the community officially in relation to the incident. In terms of what we expect from Agip in connection with the deceased, the company should make adequate arrangement to compensate the family, to take care of his wives and children. We are talking of the future. We don't know the plans of the deceased for his children, how he would have trained his children, talking about formal education. We knew him as a very hardworking young man in the family and, he was the first son of his father too. So, as we speak now, the family is in complete grief, very sorrowful moment. What I am saying in essence is that, Agip should try and make sure that these children left behind are adequately taken care of because, for now they are all in primary school and, one of the wives is pregnant. We in Azuzuama, we haven't encountered this kind of incident from</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
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			any oil company within our territory before. But now that it has happened, Agip should try and do something positive to show that they are a truly responsible company.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>When asked as to what the deceased was doing for a living, Paris replied...The young man was a photographer. He was a professional photographer and, he had a studio. He was always contacted by people even from outside our community and clan, for his services: Ukubia, Korokorosei, Ondewari, Ogboinbiri, Lobia, Foropa, Koluama, etc, etc...he was known to many people as a photographer and, that was what does for a living. He was within his later thirties before he met his death.</p> <p>Mr. Iboro Johnson Biekiri spoke to ERA in respect of another victim. According to him,...I am from Olugboboro community in Olodiana clan, Southern Ijaw local government area, Bayelsa State. One of the victims of the explosion which happened at Azuzuama recently was my immediate younger brother's son. He also died in that incident and his name is Ndukeduomene John Biekiri. I cannot say exactly how old he was when he died, but he should in his early twenties. And, the deceased had a wife and one child. I was at Amassoma on that day of the incident when my son called me from Yenagoa and informed me he heard such an incident occurred at Azuzuama. He promptly informed me that same evening that my younger brother's son was also at the site when the explosion happened and that, he has died too. That was how the news got to me. The family has been invited to come to Agip at Port Harcourt. I confirmed that last night and I am certain some members of the family are going today. Our expectation is that, although it has happened and there is nothing we can do to return the life, Agip should compensate the immediate family for the loss.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	From other Sources: Although ERA do not intend to mention names of these others who spoke on the matter, a Source from Twon-Brass told ERA that:...What I heard from an Agip Official here at Brass was that at the time of the repair work which led to the explosion/fire, the Flow line was not shut down. That must have led to the unfortunate incident.	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS	Another person from the Ministry of Environment said: It appears they didn't neutralize the immediate environment with the necessary chemicals/forms before carrying out the job.	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni

		OF THE EARTH NIGERIA (FoEN)	And, from what I heard, as they were working fire came up. And, although the fire was not a big fire then; instruction was given to the operator of the Swamp Buggy to scoop mud and stamp at the point where the fire was raging around the oil bearing pipe. So, when the Swamp Buggy Operator brought the mud [which had crude oil too] and dropped at the very spot where he was directed] with a view to quench the fire]; the next thing was EXPLOSION/Huge fire.	representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	Also from the Ministry of Environment: A Staff of the Ministry of Environment who often go to site for such JIV trips, informally told ERA that: I learnt the line was not shut down when the repairs was going on. Besides, I also heard the very first day they went to the site too there was a fire incident [on Wednesday]. But, the fireman was able to fight the fire and put it out. Due to the impacts of that on the eyes of the fireman, he refused to accompany them the second day [being Thursday]. And, that was the day of the explosion.	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	While the above may or may not be true representation of what actually happened at the site, ERA got the official reaction of the Hon. Commissioner for Environment on the matter. Barr. Iniruo Wills said [in parts]: It is time to declare a State of Emergency on the Environment in the Bayelsa State in particular and the Niger Delta in general, in order to save the lives of our people and the future of our communities. For the people of Bayelsa State and especially the families of the victims and staff of the Bayelsa State Ministry of Environment, July 2015 will go down as the July of death, on account of the needless deaths inflicted upon our beloved ones and colleagues by the Nigeria's environmentally irresponsible oil and gas industry. In the course of a joint investigation/instant repairs visit to an oil spill site in the Azuzuama community area in Southern Ijaw local government area of Bayelsa State, a fire disaster occurred that claimed all of fourteen [14] lives, including an Officer each of the National Oil Spill Detection and Response Agency [NOSDRA] AND THE Bayelsa State Ministry of Environment. We are grieving, but we must now also insist yet again that it is time to take decisive action to stop this perilous hazard that has become a routine threat to life and ecology in Bayelsa State and the Niger Delta. It is time for ALL that are truly concerned to move from lip service to real action NOW.....In the meantime, the Bayelsa State Ministry of Environment will continue to engage with all concerned parties, including investigatory authorities, the	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			industry operators involved [Nigerian Agip Oil Company Ltd and its contractor, Vowgas Limited] and the affected families to ensure that there is comprehensive and speedy investigation, full accountability by all those responsible for the disaster, adequate compensations and a radical change in the environmental standards comparable to international oilfield best practice. Our thoughts are with the families of all the fourteen souls lost in the Azuzuama oil pipeline fire disaster of 9th July, 2015.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>Observation/Conclusion:</p> <p>The main issue here is security of lives and property and, as far as oil industry records are concerned, this Azuzuama incident stands out as the major such incident in recent times; in terms of loss of lives. It is regrettable that Agip is causing ERA to take a retrospective view at the company's operations in the field. Not only has the company been implicated in the burning of oil spill sites in the past, fire outbreaks during repair works has been associated with the Nigerian Agip Oil Company [NAOC]. The records are well known to Agip and the regulators. While it is not known whether the deceased families of a similar incident at Etieama community in Nembe local government area in 2000 were adequately compensated or not; it won't be out of place to advocate for something worthwhile for the present victim's families.</p> <p>During a recent visit to the site, ERA observed that the terrain of the site of incident was really, not the type that can allow anyone to escape such an inferno even if the person had an opportunity. This is made worse by the rainy season; the swampy nature of the landscape. This must have resulted into the large number of deaths. Photos of some of the victims before their corpses were removed showed that they were stuck in the mud; made so immobile by the difficult terrain. Besides, the site was relatively far from the community; making help to be far off from victims. It was sad to hear that the line was not shut down while repair effort was on-going. This smacks of placing production as more important than the safety of those working at the repair site.</p> <p>ERA also observed that clamped spot was yet to be covered with mud and, the Swamp Buggy badly burnt was stationary and, will probably remain there forever to tell the sad Tale. The vegetation/trees on both sides of the pipeline around the environment of the explosion were all burnt. Due to the difficult terrain, it was a swamp Buggy which was used to convey</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			<p>ERA and others [Agip, NOSDRA, Ministry of Environment and soldier] to and fro the site of interest.</p> <p>Although fourteen persons lost their lives; including a soldier, only five of them is identified by ERA here and they include:</p> <p>1 Engr. Duabo Theopilus [Ministry of Environment staff]</p> <p>2 Ositadima Ogwu [NOSDRA]</p> <p>3 Mupe Avoh [Agip]</p> <p>4 Ndukeduomene John Biekiri [from Olugboboro community]</p> <p>5 Epunumokumo Lynus Sampson Nume [FROM Azuzuama community].</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>ERA DEMAND:</p> <p>1 Though an unfortunate incident, efforts should be made by Agip to take all necessary precautionary steps in future repairs; putting safety above every other thing; including production.</p> <p>2 ...The government; State and Federal should ensure that the right/normal things are done in addressing the concerns of the bereaved families.</p> <p>3...The Oil industry needs to be made safer for all stakeholders; including oil industry workers, regulators, communities and the Civil Society.</p> <p>4...Agip should compensate bereaved families adequately.</p> <p>5... Agip should engage only competent firms as contractors to carry out such jobs requiring high levels of professionalism/skills.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>SDCEA APPENDIX 2 Ikebiri is part of Olodiana clan in Southern Ijaw local government area of Bayelsa State. The Ikebiri kingdom is host to oil facilities belonging to the Nigerian Agip Oil Company [NAOC] and Shell Petroleum Development Company [SPDC]; Oil Wellheads, pipelines and manifolds. NAOC alone has seven of the oil wells, with connecting pipelines and manifolds. This environment has experienced several oil spills and, the Environmental Rights Action [ERA] has continued to monitor and document some of the incidents [in field reports] in the past. A good number of the spills known to ERA were officially attributed to equipment failure [going by JIV reports]. And, while a few are also attributed to third party interference; what is becoming a recurring decimal, particularly with the company's Tebidaba Well 9 is that when spills occur on the Wellhead; the Joint Investigation Visit ends up with the term "Inconclusive", leaving community representatives confused, frustrated and dissatisfied.</p> <p>ERA was notified by community leaders at Ikebiri on the 26th</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIR. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			<p>of December, 2015 that a fresh spill was discovered on Christmas Day [25th December, 2015] at Tebidaba Well 9 and, that it was a major spill. The information also indicated that, while Officials of NAOC were calling community leaders to allow them access the Wellhead and shut down to prevent further spewing of crude oil into the environment; the community leaders were expressing lack of trust on Agip and preferred a scenario whereby regulators and or some other neutral bodies be present before Agip does anything. This, they said was due to past experiences whereby denial as per cause of spill ensued after they had allowed for such shut downs. The community was very much interested in the cause of spill and, hence that disposition. In other to fasten up meeting the required condition for shut down, ERA promptly reached out to the Hon. Commissioner for Environment, Bayelsa State via phone and briefed him on the incident and community concerns. That was on 26th December, 2015 [Saturday]. And, the next day, being Sunday, 27th December, 2015 a Joint Investigation Team [JIT] visited the spill site; at the Tebidaba Well 9. The team comprised NOSDRA and State Ministry of Environment. Officials, Agip, Security and community representatives. At the end of the day, the JIV was INCONCLUSIVE, even after a second attempt two days later.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>TESTIMONIES:</b> According to Godgift Diepreye Lambert, the CDC Chairman of Ikebiri 1,..."I am saddened by the turn out of events; I'm really disappointed. And this is why the community has continued to withdraw confidence in Agip and the regulators. Due to the communications between us, [with ERA] and the way Agip was putting pressure with repeated calls and to save the environment; I allowed them to effect shut down and now; they are saying they don't know the cause of the spill. For this unfortunate reason; even my own fellow community leaders are shifting the blame on me; for allowing Agip to shut down the Well. In fact, I am even being accused of having received money on this from Agip; to allow the shut down. It is very sad that distrust is creeping in among us, community leaders. They came with four gunboats, loaded with armed military personnel. After taking a critical look at the spill point; they said we should go to their Station at Tebidaba Flowstation where we shall be informed of the cause. Very strange; though this is not the first time they are [regulators and Agip] doing this. This happened in November, last year too. We agreed</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			and went with them to the flowstation but unfortunately, we left the station very late; without being told any meaningful thing about what caused the spill. My greatest surprise is the attitude of the regulators; how do they expect us to have confidence in them if they cannot say the simple truth of what they saw? They are all bad and criminal minded folks; who ought to be neutral but fail to be so. I will never trust the regulators again; whether from NOSDRA, DPR or Ministry of Environment....”	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>Also commenting on the matter, the CDC Chairman of Ikebiri 3, Wisdom Taylor said.... ‘First of all, let me confirm that there is a current oil spill in Ikebiri environment and, precisely from Tebidaba Well 9 belonging to NAOC. I have never seen this kind of oil spill since I was born, in terms of the volume of crude oil spewed into the environment. At the end of the day, JIV exercise took place and there was no result. It was tagged as inconclusive and; they told us that the team that came for the JIV was not experienced enough and so they sent another team two days later. The JIV took place first on 27th December, 2015 and, we went back for another one on 29th December, 2015. All this while, the crude oil was still pouring from the Wellhead, polluting the whole terrain: water in Creeks and Rivers [from when it was first discovered on 25th]. Even though we were told that the first set of Officials from Agip were not experienced enough or qualified to pronounce the cause of spill, it was sad that those who came for the second day were also unable to tell us what caused the spill. As I talk with you now [31st December, 2015], crude oil is still dropping from the wellhead into the water even though it has been shut down. The residual pressure is still sending crude oil out. Our environment is seriously impacted, as we speak.</p> <p>So, we need the government, Agip and the involvement of Environmental groups like ERA to come in and find solution to our current problem; as the crude oil has seriously affected our source of drinking and fishing. Although I have seen other spills in the past, none is like this one; this is a very serious spillage. And, the people [Agip and regulators] are just trebling us as if we are so naïve and don’t know anything. I don’t have much to say; but let me conclude by saying the regulators who went for the JIV [NOSDRA and State Ministry of Environment], they are in full support of Nigerian Agip Oil Company. That was why they were unable to pronounce what they saw [as cause of spill]. Agip brought their experts with tools/equipment,</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			<p>carried out tests on the spot of leakage. I was with them and I heard when some of them said "you cannot tell the community that this place was sabotaged, it is equipment failure". But when we came down to the boat from the Wellhead, they could not pronounce it again. This happened twice. This means they are bias. They are biased and can't be of help to our community. That is my take on the current spill in our environment..."</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>OBSERVATION/CONCLUSION:</b>  No doubt the current spill is relatively huge and has impacted the Creeks and Rivers; the slick spreading towards Koluama too; the Ocean due to the action of the tide. Vegetations along the banks of the Creeks and Mangrove swamp are affected too; displaying oily trunks and leaves.  About a week before the current spill, there was another spillage from Tebidaba Well 11 within the same Ikebiri environment, a minor spill. And, the JIV for that incident indicated the cause of spill as "equipment failure; though the quantity of crude oil spilled was recorded as six barrels. The scenario which played out during the JIV that became inconclusive is exactly what happened when there was a spill at this same Tebidaba Well 9 in November, 2014. Up till this moment; nothing has been heard about that one of 2014 and; it seems this current one would go the same way. Definitely, if community representative cannot be told the cause of an oil spill when government regulatory agencies are also part of the JIV process leading to such; it takes away whatever confidence reposed in the regulatory agencies. And, that is what the Ikebiri people are saying; that the confidence they had on NOSDRA, DPR and Ministry of Environment has eroded significantly.  Incidentally, ERA has also witnessed these incidents; the visits to the spill site and during the JIV process.</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>ERA DEMAND:</b>  1 Agip and the regulators should come up with tools/equipment which could be applied convincingly to give whatever test result during JIV processes. If community representatives are not convinced through any scientific mean, telling them nothing or anything won't be good enough.  2 Not only oil companies, regulators should also be equipped enough to provide some testing tools/equipment to save them from embarrassment and losing the confidence of the people and communities. When the communities completely loses</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>



			<p>confident in regulators of the oil industry; it would result in serious conflict.</p> <p>3 Agip should ensure the impacted Swamps, Creeks and Rivers are properly cleaned up as soon as possible and; the Regulators [NOSDRA and State Ministry of Environment] should prevail on Agip to do the needful.</p> <p>4 The regulators and Agip should call for stakeholders meeting to resolve such JIVs declared inconclusive. Inconclusive doesn't mean it MUST always be in favour of the oil company. There should be a middle ground in settling this. It would be wrong, if all JIVs declared inconclusive are in the interest of the oil company alone; as a clever means of escaping from liability. Efforts should be made to ensure that the confidence of communities be regained in the interest of all.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>SDCEA APPENDIX 3 Agip's Tebidaba- Ogboinbiri 14" flowline The Ondewari and Okpotuwari environment, is one of the environments in Olodiana clan of Southern Ijaw local government area where the Environmental Rights Action/Friends of the Earth Nigeria [ERA/FoEN] has done so much monitoring and documentation of oil industry induced pollution. ERA/FoEN has documented and reported several oil spill incidents within this environment and; almost all recent cases are officially recorded [in the JIV reports] as caused by equipment failure. However, we have a current incident which may rightly be described as caused by operational failure/negligence or error.</p> <p>ERA/FoEN had earlier reported a spill incident in December, 2015 and; which was regarded as a minor spill from a previously clamped spot along Agip's Tebidaba- Ogboinbiri 14" flowline. That spill of December, 2015 was as a result of equipment failure and; occurred at a 6'O clock position on the pipeline, as indicated on the JIV report and photo evidence. The volume of spilt crude was put at 3 barrels. However, recently community folks reached out to ERA/FoEN and complained that, after that JIV was concluded and stakeholders had dispersed; the Nigeria Agip Oil Company [NAOC] re-opened the flowline with pressure from the Ogboinbiri Flowstation which caused another major spill from the same spot. This is a FIRST PARTY spill; caused by the owner of the facility. Community folks alleged that this happened while repairs was on-going. However, it could also have resulted when the pipe was cut open during repairs and some of the volume of crude oil on the pipeline rushed out.</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			<p>And, after Agip noticed the error committed, the company quickly dug some big pits in the environment to contain the spilt crude oil. When the community knew about the development and confronted Agip, the company Official first tried to deny until some officials of the Regulatory agencies waded in. Present the spilt crude oil in the environment is being transferred into big GP Tanks and pumped into a barge stationed in the environment; on the Ossiam Creek. An estimated volume of five hundred barrels was so spilt due to an act of negligence.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>Testimonies:</p> <p>According to the present CDC Chairman of Ondewari community, Goddey Nanabo, "last December [2015] when a spill occurred at the spot we went there and the JIV process concluded that the spill happened as a result of a failed clamping; of a previous spill point. It was also agreed that the quantity of crude which spilled was just 3 barrels. Incidentally, during repairs when they cut the pipe, maybe as a result of failing to put off the pumping machine from the Ogboinbiri Flowstation; heavy volume of Crude oil gushed out which overwhelmed them [Agip Staff/Contractors]. As a result of that and considering the volume, they decided to use their Swamp buggie to dig some pond-like pits in the environment and dumped the crude oil into the pits. The pits are about six in number. Agip contractors and Agip Officials did this secretly and left the bush [in December, 2015]. When the community later discovered these heavy volumes of crude oil in the pits within the environment; we decided to reach out to Agip, by calling their numbers. At first Agip denied that they knew nothing of such and so, we called the attention of the State Ministry of Environment. At the end Officials from the State Ministry of Environment, National Oil Spill Detection and Response Agency [NOSDRA], Agip and Surviyor visited the site with community representatives. The joint team confirmed what the community earlier observed and it was then Agip admitted. Recovery of the spilt crude oil and transferring it away from the environment was immediately recommended by the regulator. That was on the 5th of March, 2016. So, as I am talking to you right now the recovery and transfer exercise is on-going. Over 300 barrels of spilled crude oil has been recovered and more is still left.</p> <p>Unfortunately, even though all who went into the bush confirmed that a fresh spill occurred after we had signed the</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			JIV report of the one of 3 barrels [of December,2015] and, that relief materials needs to be given in addition to a fresh JIV;up till this moment Agip is dribbling us. We tried to remind Agip in a letter dated 30th March, 2016, but no reaction from Agip yet”.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>While confirming the above, the Acting Paramount Ruler of Okpotuwari community, Chief Moses Tiger said: ” The recovery of crude oil is still going on. Already over 300 barrels have been removed from the pits and what is left will still be up to 200 barrels or more. The spill was caused by Agip and yet; they almost escaped by denying the fact when their attention was first drawn to the incident. This attitude of Agip is not only disturbing; it is bad.”.</p> <p>Also reacting to the incident, an environmentalist in the area and former Secretary General of Ondewari community, Tontiemote Yeiyei condemned the attempt to evade responsibility by the NAOC; stressing that he also witnessed the December 2015 JIV process and knew very well that they JIV team left the environment without such heavy volume of crude oil in December. He wondered how 3 barrels spill could now become over 300 barrels, because the JIV report of the December, 2015 spill recorded just 3 barrels.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>OBSERVATION/CONCLUSION:</b></p> <p>From the testimonies above, it is obvious that Agip Officials would always want to dodge responsibility even when they knew that they were culpable and ought to humanely accept responsibility, do the needful and gain the goodwill of host communities. This tendency or corporate attitude is responsible for the serious mistrust existing between oil companies and their host communities. No doubts; accidents are bound to occur once in a while and; when such happens the oil companies shouldn't behave as if there is no phenomenon like industrila accident. Deliberate denial with a view to dodge responsibility by oil companies is a great disservice to the oil industry operators and, it creates unnecessary hostility with communities. And, it is most unfortunate to know that it is Blacks, Nigerians doing this great evil to their fellow citizens; in an attempt to save money for shareholders of the companies while short-changing the communities back home.</p> <p>When ERA's field monitors visited the spill site, not only was the recovery of crude oil observed to be on-going, several GP tanks were filled with Crude oil. Recovered crude oil would</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			then be pumped through a long connection of hoses to a barge at the bank of Ossiam Creek, stationed there just for that purpose.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>ERA DEMAND:</p> <p>1 Agip should quicken the recovery and transfer of spilt crude from the environment in view of the gradual transition from dry season to rainy season so as to prevent rain induced spreading of crude oil in the environment.</p> <p>2 The Regulatory agencies should do more; by ensuring that they remain impartial in excuting their mandate in the field as a lot depends on them in terms of confidence and prevention of violent conflict between host communities and oil companies. Therefore, they should insist on the needful whenever neccessary; like the issue of recovery, cleanup, relief materials to impacted communities, etc,etc.</p> <p>3 There is every need for a fresh JIV;to properly document the cause of spill, volume of crude oil so spilled, spread, impact on the environment and more.</p> <p>4 The Government should rise up to the occasion in the protection of the environment and by extension; the livelihood, health and lives of victims of oil industry induced pollution and more.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>SDCEA APPENDIX 4In line with the field monitoring tradition of Environmental Rights Action/Friends of the Earth Nigeria [ERA/FoEN], another visit to Ologboboro community environment where a third party related spill incident and repair works led to an explosion/fire and death of three staff of Agip's local contractor on 26th March, 2016 was embarked upon on Friday, 20th May, 2016. As a follow up, this visit was intended as a continuous effort to messure how oil companies concerned [in this case, the Nigeria Agip Oil Company[NAOC]] respond to spill incidents; especially in terms of clean-ups and the environmental concerns. The re-visit also considered complaints from some community members that a previous spill impacted site was yet to be cleaned up by NAOC; as ERA/FoEN believes in physically observing such environments before making any comments thereto.</p> <p>Olugboboro community is one of the Ijaw communities in Olodiana clan of Southern Ijaw local government area, Bayelsa State. Agip's Tebidaba-Ogboinbiri pipeline runs across the community environment. And, apart from hunting and harvesting fruits [like palm fruits] and leaves for [ for medicine]from shrubs/ trees and vegetables like the bush</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com

			mango [Irvingia spp], Kola nut, etc, etc.the main occupation of the people are Fishing and farming. There is great concern wherever the environment is polluted by crude oil spill because, not only are farmlands and farms endangered; swamps, ponds and even lakes, rivulets and Creeks are often impacted; especially if the spilt crude oil is left unattended to promptly. It is pertinent to cite the oil industry policy which says; no matter the cause of spill, the owner of the facility has the responsibility to contain and take care of the situation; which includes: preventing the spill from spreading, recover spilt crude, clean-up and even remediation and; as the case may be, compensation of victims.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>As a grassroots organisation working with communities, ERA/FoEN is determined to ensure the right things are always done and; in line with international best practices which the oil companies operating in the Niger Delta knew too well but would prefer not to act appropriately. Incidentally, this visit revealed that NAOC is operating below expected standards in terms of prompt response to oil spill incidents [recovery/clean-ups] even access was not denied and no apparent danger to cleanup contractor; as there were no signs at the March, 2016 spill impacted sites suggested that Agip has take any positive steps to cleanup the site since after ERA/FoEN visited and also, after Agip hurriedly effected clamping and left the site in March, 2016.</p> <p>Few Testimonies were obtained from community folks both at the community and while ERA/FoEN field monitors were being led through the impacted environment. At the site of the 26th March, 2016 incident [which led to fire and deaths], a large cylinder of Fire extinguisher was found and when asked as to how it was brought there, one of ERA/FoEN's guides, Bidien Johnson said: " Like we told you before, those who came for the repairs on 26th March, 2016 actually came with three such cylinders of fire extinguishers. Unfortunately, it seems they were unable to use the fire extinguishers when the fire occurred at that particular moment and they left them and ran for their lives. It seems they were overwhelmed by the fire or the fire extinguishers failed to work and hence they left them and fled. They were three here before, but we could see only one now".</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS	Since ERA/FoEN was also interested in the previous spill and for which complain was made that clean-up was not done; even though that spill was attributed to equipment failure,	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to

		<p>OF THE EARTH NIGERIA (FoEN)</p>	<p>effort was made to trace the site with a view to seeing the environment. However, though it was a long walk into the forest and the spill site [previous one] was located, there was no convincing evidence of crude oil in the area anymore. But the Spokes man of the Olugboboro Community Development Committee [CDC], Ebidimie Ugbe said " Actually that spill was discovered in July, 2015 and clamping was done on Saturday, 25th July, 2015 but the clamping job was not concluded that same day. It was the next day,being Sunday, 26th July, 2015 when they returned and completed the job. That spill of July, 2015 was recorded on the JIV Report as equipment failure incident, although they didn't give us copy of the report. They [Agip] later came for clean-up but, because of the nature of the environment; much of the crude oil spread further into the swamp/land through the furrow/rivulets around. So, they did the cleanup just around the spill environment; while much of the crude oil slick had spread to impact the interior of our bush. And that was all, they didn't come back to cleanup the other areas the crude oil spread to up till today, 20th May, 2016. Our people couldn't make effective use of the 2015 spill impacted environment since then. Fish ponds, farmlands and swamps were seriously polluted which caused a lot of losses in terms of livelihood".</p> <p>While responding to further questions posed by ERA/FoEN, the CDC Spokes man said "To the best of our knowledge, the Sum of N1,750,000 [One million seven hundred and fifty naira] was paid for relief materials. When we sat with the Chairman of the Olugbobiri kingdom, that was what he told us. But individual victims of that spill are yet to be compensated, up till today as I am speaking to you. This is unfair, Agip shouldn't treat our people like that..." As if confirming the statements of the CDC Spokes man, an elderly man in the community, James Berepiki said: " The spill of last year [2015] had a devastating impact on our livelihood. Some of us, including myself who had logs of wood in the bush/swamp couldn't make use of the woods again as the crude oil impacted and rendered them useless. Many fish ponds were also affected and; up till this moment this community [Olugboboro] has not received any form of relief materials or compensation for victims whose property and means of livelihood were negatively affected. We suffered a lot of denial; as the impacted environment was no longer useful for our various daily economic/livelihood activities. And the area seriously</p>	<p>the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
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			impacted belongs to the Akpokowari family which is also the family I belong to in Olugboboro community...”	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>Observation/Conclusion:</p> <p>Although Olugboboro community in Olugbobiri kingdom can boast of concrete roads/walk ways [with drainages] within the community itself; courtesy of NAOC's community development efforts, one thing is very obvious; the nature of the houses in the community tells a sad tale of poverty as majority of the main structure of dwellings are either made of mud or wood sourced from the locality. This is typical of many communities in Ijawland; deep in the Creeks where crude oil facilities are either located or just traversing[pipelines] the community environment.</p> <p>From the testimonies captured in this report and even from others in the community; there are reasons to believe that Agip didn't carry out effective clean-up as regards the July, 2015 oil spill in the community environment. And that led to loss of livelihood and property damage. According to some community folks; besides the spread of crude oil, much has now seeped into the ground which only a scientific test could reasonably prove. This is another pointer to the fact that, besides Ogoni land, there is need to cleanup other impacted sites in the Niger Delta. It is believed that any properly conducted scientific test would prove the presence of dangerous metals/elements in these environment; deposited by crude oil pollution.</p> <p>It is important to note that, having visited this environment first on the 2nd of April, 2016; ERA/FoEN could observe that nothing practically has been done on the spill/fire impacted environment; of 26th March, 2016. Pools or ponds of crude oil were all over the spill/fire environment; no form of clean-up whatsoever has been done; not even recovery of spilt crude oil from the environment. Not only was crude oil found within the spill/fire environment; there were pools of crude oil at another site a little further from this site. And, this is unhealthy to the soil, plants, animals and by extension, the PEOPLE in that environment and beyond considering the food chain and economic activities/commerce. A cylinder of fire extinguisher was also noticed at the March, 2016 spill/fire environment with MV Sparrow 1 written boldly on the body..</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS	<p>Understandably; because Olugboboro is a small community highly influenced by Olugbobiri and; with some people from Olugbobiri being Agip contractors, unless Human/</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to</p>

		OF THE EARTH NIGERIA (FoEN)	<p>Environmental Rights groups step in to bridge the gap; Agip may not see any need to return to the impacted site and effect cleanup of the environment. This is so because; as the community folks testified; even the money released by Agip for relief materials was not seen by the main victims in Olugboboro; it went into the hands of the Kingdom leaders or leadership at Olugbobiri. This is not a positive development and needs to be corrected by Agip in the future. Unless corrected, such injustices could lead youths to carry out actions even inimical to environment. ERA DEMANDS THAT:</p> <p>1 The Nigerian Agip Oil Company/Eni should take immediate steps and mobilise to the sites described/ mentioned above and carry out recovery and cleanup without further delays. With the coming rains; daleys would be viewed as gross negligence, but being intentional act to allow the rain/flood to take the crude oil away from that environment and further spread it to other places. Already, by allowing the crude oil so open, it is evaporating and affecting the air people breathe and even the water around; besides sipping into the ground with negative consequences.</p> <p>2 Community leaders/folks, whether of the Olugbobiri kingdom or Olugboboro should take the issue of crude oil in the environment as seriously as it should; considering the negative effects on the health, livelihood and environment of the people. In this regard, all forms of third part interference on oil facilities should be avoided, for the common good. They should report all negative acts of commission or omission by whomever to the authorities and credible NGOs for necessary action instead of resorting to self-help which may result to self-inflicted injury at the end.</p> <p>3 The regulatory agencies: NOSDRA, DPR, State Ministry of Environment, etc should step into this matter and ensure Agip does the right thing by mobilising to the sites of interest as soon as possible.</p>	the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	SDCEA APPENDIX 5 Agip's Ossiama-Ogboinbiri and Ogboinbiri-Tebidaba pipelines traverses Keme-ebiam, Okpotuwari and Ondewari community environment, in Southern Ijaw local government area of Bayelsa State. These three communities know their boundaries; which section of the pipeline falls within each of their community environment. However, the crux of the matter here is the increasing number of oil spills along this pipeline; even though the pipeline Right	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com



			<p>Of Way contains three different oil bearing pipelines. And, while some of the spills were officially attributed to equipment failure incidents; others were reported as third party interference cases. The Environmental Rights Action have investigated and reported quite a good number of spills along this pipeline. On 23rd of April, 2015 an equipment failure related spill point was clamped along the pipeline.</p> <p>When information about the current oil spill reached ERA again, it came as a surprise as the frequency was increasing. However, before ERA field monitors were led to the spill site by community representatives from Ondewari, ERA already heard the information that Agip has visited the site earlier to confirm the spill. ERA received information about the spill on the 14th of July, 2015. In connection with the above, ERA visited the site and followed up twists relating to the spill. ERA's first visit [Friday] was to ascertain the spill point and condition of the environment. The second visit was to confirm that heavy volume of crude oil was bubbling and streaming from another spot where ERA didn't notice during the first visit same day the news prompting the second visit was received. In fact, ERA visited in the morning and walked past the very spot dry; only to hear in the evening that the area that was dry when ERA visited in the morning was spewing heavy volume of crude oil into the environment, prompting a visit early on Saturday morning.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>While the spill was confirmed as an equipment failure incident and, ERA received calls from communities far away from the spill environment; the action of setting fire on the impacted site and, the fact that due process was not followed in determining the cause of spill and relative JIV issues became a source of concern and bone of contention between Agip and communities in the immediate environment.</p> <p>THE SPILL:</p> <p>Responses received from community folks at Onedwari and Okpotuwari before ERA actually visited the site indicated that the actual spill point was not known, even though some volume of crude oil was around a block fence constructed in the ground containing some connecting Valves; with GPS Coordinate: Elev: 19m, N 04°47.160', E 005°58.568'. After trying to investigate to see if traces of the real source of the spill could be identified, ERA left the site; with some photos of the impacted environment; a little bit disappointed [for not being able to see the source]. However, ERA's guides from</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			<p>Ondewari and Okpotuwari also suspected that spill point to be from within the fenced area. Later that evening, while ERA field monitors were still at Ondewari, a community folk returned from the bush that evening at reported that a very fresh spill point was raging seriously along the same pipeline and, just few meters away from the originally suspected spot. Due to the fact that it was late, ERA decided to revisit the spill site very early the next day, being 18th July, 2015 [Saturday]. On getting to the same environment on Saturday morning, it was surprising to see the spot the crude oil finally came out with fury; bubbling and with the characteristic rising and falling movement of a boiling pot, accompanied by a familiar sound. Some quick photographs and short video clips were taken and, the spreading Crude oil was traced to an extent before ERA left the environment.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>Agip RETURNED TO THE SPILL SITE: Following reports received about the seriously spewing crude oil, Agip returned to the site on Tuesday, 21st July, 2015. This was confirmed by Tontiemote Yeiyei, a native of Ondewari and, Project Officer, Ondewari Health, Education and Environmental Project [OHEEP]. In his words, When Agip came on the 21st July, 2015 representatives of the three communities: Ondewari, Okpotuwari and Keme-Ebiama went with them to the spill site. I was also with them. The pressure on the pipeline seemed to had been lowered before Agip came to site that day. They excavated the spot where crude oil was still coming out from the ground. Incidentally; that spot was only the soft spot where the crude oil found its way to the surface; the main ruptured spot on the body of the oil bearing pipe was a little bit away from where the crude oil was gushing out on the ground. We all that were present saw that, even though the Aqua-rap was still on the body of the pipe, the crude oil was escaping from the pipe. The Agip technicians tore open the Aqua-rap before the main ruptured spot was properly identified. If I am not mistaken, it happened around a 5 O'clock position on the pipe. The Agip Staff took some photographs, though they tried to prevent every other person from taking any photograph with Camera or phone. This, according to them, was a precautionary measure to prevent what happened at Azuzuama recently.</p> <p>When asked as to whether the regulatory agencies were represented during this visit, Tontiemote Yeiyei replied thus: They showed us only one man, saying he represented</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>

			<p>NOSDRA; but since we don't know all the NOSDRA staff; we cannot say whether what they told us about the man's identity was a fact or not. The Ministry of Environment was not present. The other group that came around was the representatives of the Ijaw Youths Council [IYC], Olodiana clan Executive members. As per the cause of spill and other necessary details about the spill, Tontiemote said: Even though it was obvious that the cause of spill was equipment failure; we demanded to hear from the Agip representatives. Unfortunately they failed to be categorical about that information; they only told us that they will go and examine the photos they took of the ruptured spot and it is the outcome of that laboratory analysis which would say whether the spill was as a result of equipment failure or third party interference. They then promised returning to the site the next day, being Wednesday, 22nd July, 2015. And, although no documents were signed and we were not comfortable with their statement of going to do laboratory analysis before telling us cause of spill; because we were confident of what we saw; we took it as they said; with a view to carrying out a proper JIV and repairs on Wednesday.</p>	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>FIRE OUTBREAK AT SPILL IMPACTED SITE:</b> In the early hours of Wednesday, 22nd July, 2015 ERA received a call from Keme-Ebiana, Ondewari and Okpotuwari communities, informing ERA that a familiar thick column of dark smoke was rising from the current spill impacted environment. The identities of those who set the site ablaze was unknown. However, it was later confirmed by those who rushed to the bush that; actually it was the spill point and other impacted areas within the environment that was burning. While some youths of the three communities tried to do what they could to put out the fire, two persons [one each from Ondewari and Okpotuwari] were arrested by the Oil and Gas Task Force operating in the local government area and, they were taken to Yenagoa, the State capital for further investigation/interrogation. The fire incident caused the planned return visit for repairs to be suspended.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p><b>SPREADING CRUDE OIL SLICK IN SWAMPS, LAKES, PONDS AND CREEKS:</b> A Day before the above spill/fire, ERA received a call at about 9:30AM from a contact in Gbaruan community; a community downstream the meandering Ogboinbiri Creek/River. The caller identified himself as Boro Jonah and, he turned out to</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the

			<p>be a known person to ERA. He complained to ERA that the Gbaruan community woke up that Tuesday morning and were surprised to find Crude oil covering the entire surface of their river; making them uncomfortable. In Boro Jonah's own words: As I speak with you now our river is covered with crude oil and we are really surprised; as we don't know where this oil slick is coming from. I am calling you for two reasons because ERA is known to be monitoring the environment. One of my reasons is to inform you, in case you do not know about this spill. The second reason is to know from you whether there is any spill not far from our community environment.</p> <p>ERA told Boro Jonah to wait for some minutes; to enable ERA make other enquiries first since the environment was a familiar one. ERA then reached out to community contacts at Keme-Ebiama community, because Keme-Ebiama is on the same River with Gbaruan and, Keme-Ebiama was nearer the source of spill. The Chairman of the Community Development Committee of Keme-Ebiama, Columbus John-Bull reacted to ERA's question about the spreading crude oil: The River right in front of our community has been covered with crude oil. We have no doubt that it is spreading from that spill point in our community environment; already it has impacted our swamp, ponds and lake in the bush and now; it has spread to the river. As bad as the scenario is, we are trying to see how we also capture the incident by taking photos and video shots. Confirming to Boro Jonah the incident; ERA informed him that since Gbaruan shares the same one-way flowing river with Keme-Ebiama community, it is certain that the two communities are experiencing the crude oil slick from the same source. This is because Keme-Ebiama is an upstream community, compared to the location of Gbaruan on the same River and so; once the upstream community has confirmed, the downstream community would align with that confirmation.</p>	Interested Party for further information to the reference contact available at Eni's official website at url: <a href="http://eni.com">eni.com</a>
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>ANOTHER VISIT TO THE SITE BY NAOB AND COMMUNITY REPRESENTATIVES 25th July, 2015: Representatives of the Nigerian Agip Oil Company returned to the spill point for repairs on 25th July, 2015 [Saturday], escorted by the four armed military men. Representatives of Keme-Ebiama, Okpotuwari and Ondewari also went to the site. But while the community representatives were expecting to see the JIV process sailing along with the repairs on the ruptured spot, there was no sign of any JIV team and no JIV forms for related incident documentation [JIV report]. This became an issue;</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: <a href="http://eni.com">eni.com</a>

			<p>even as efforts to repair were on at the site. The CDC Chairman of Ondewari community, Charles Igoniwari reached out to ERA on the matter [from the site]. In his words: We are at the spill site right now and Agip is trying to intimidate us through the Government even when we thought Agip was at fault by not doing the right thing. What we are demanding is that, before going ahead with the repairs we need to experience the normal JIV process. Incidentally Agip is not here with the JIV forms and, how do they expect us to conclude and leave this site without filling and signing the JIV form which we ought to sign here at the site? We want to ensure the essential details about spill incident are documented before anything else. That is the demand and stance of the three communities. And, rather than complying with the just demand, Agip is now adopting the method of passing through the State Government to intimidate us. Somebody just called me/us from the Government House and was ordering us to allow Agip complete the repair work, even without JIV. They thought we are ignorant of what the procedures are that is why they want to intimidate us but we won't succumb to the pressure; they should rather do the right thing. ERA immediately demanded for the number of the person who called from the State Government House. And, the number was promptly text to ERA: 08061398047. They could not identify the designation of the caller from Government House, though they suspected the person to be the Special Adviser to the Governor on Oil/Gas matters. But, to follow-up with a view to solving the impasse, ERA quickly called the number [above] and after self introduction and purpose of the call; the receiver responded thus: ...So, are you also in support of the demand of N400, 000.00 for each of the communities before the repair job goes on? That is what the three communities are demanding; the JIV is a nonissue because it is a normal thing to do and should be done. But, it is not normal to demand for money at the site of repairs....ERA was surprised to hear about demand for N400, 000.00 for each community by the communities. And so, ERA told the government official that such financial demands at site are not normal, neither is such part of the JIV process. If that is the main issue government is frowning at, then ERA promised getting back to the community representatives and get that wrong impression corrected without delays.</p>	
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Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>With that above, ERA immediately called the community representatives through the CDC Chairman of Ondewari. Through feedback from the background, ERA's representative knew the phone was placed on Speaker at the site [to enable other community folks be part of the communication]. When ERA confronted the communities with the N400, 000.00 demand allegations; they didn't deny. Replying to the question, Charles Igoniwari said: Yes, we were demanding for that money as part of the bushing entry/site fee that even Agip cannot say our demand is out of place. Although the amounts may vary, Agip normally pay in other places too; when community persons assist them during such visits to site when spills occur. That demand has nothing to do with our main demand. Our main demand is that Agip should follow 'Due Process'; we want the JIV carried out before the going ahead with repairs. They are not here with the JIV forms for us to fill. The regulators are not even here. Ours shouldn't be different, we want to see the JIV form filled and signed here at the spill site. That is our MAIN DEMAND. Right now as we are communicating, the Agip technicians are working on the ruptured spot, cutting and trying to fix the pipe. But, our demand for the JIV stands. ERA admonished the community folks to downplay any such monetary demands as it could jeopardize whatever good case they might have; urging them to remain peaceful and supporting their demand for the JIV process to be initiated and carried to expected logical conclusion. ERA made it clear that such financial demands are not part of a JIV process. Any other issues they have with the company could be tackled later.</p> <p>Also speaking on the matter, the Acting Chief of Okpotuwari community, Moses Tiger said:...What our community representatives are demanding [the money] is not out of place. In fact, Agip normally pay some amount of money to those who assist them during such incidents. They have been doing it in other places and why is ours different? We hear this fact from some persons working with Agip. Apart from that issue, we want to see the JIV report signed and community copies released to us. We it not on the 23rd of April, 2015 we signed one JIV report within our environment? Why is this one different? The JIV report is important to us because, not only would it reflect the details of the spill, such documents becomes part of our community records especially as it relates to the oil/gas industry operations around us. Yes, this current</p>	<p>Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
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			spill is confirmed as equipment failure incident again [like the one we signed for in April, 2015]; let us also have the report in paper, black and white. The Acting Chief of Okpotuwari community made the above statement on 25th July, 2015 while his community representatives and others were still with Agip at the spill site; as Agip seemed more interested in getting the ruptured spot repaired as soon as possible so as to restart the flow of crude oil on the pipeline, currently being shut down.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>YET ANOTHER VISIT TO THE SITE BY ALL STAKEHOLDERS ON SUNDAY, 26th July, 2015:</p> <p>As at the time of concluding this report, ERA confirmed from Ondewari, Okpotuwari and Keme-Ebiama [via phone calls] that due to the disagreement between the communities and Agip on the need for JIV report to be signed before concluding with repairs; the repair work was later suspended. Agip, according to those who spoke to ERA, has agreed to come to site today [Sunday, 26th July, 2015] for us to sign the JIV report and for Agip to continue with the repair job. Those who made the confirmation include: Charles Igoniwari and Tontiemote Yeiyei [Ondewari community], Moses Tiger [Okpotuwari community] and Maurice Ofolo [Keme-Ebiama community]. According to the Acting Paramount Ruler of Okpotuwari community: What actually is making our people and Agip return to the spill site today Sunday is that, Agip put forward the argument that the JIV report would be signed at the Deputy Governor's Office at Government House, Yenagoa. The communities rejected that argument presented by Agip because signing of JIV reports are done at the site of incident and not at Government House. They want to cheat and intimidate us for even our rights. We refused to accept that and, we won't allow such a precedent to be cited from our community. We insisted on the right procedure and demanded that all those who should sign the JIV report should come to the site and sign. Whatever differences that still exists aside the JIV matter could be handled later. It was based on that premise that Agip and our people agreed yesterday to return to the site and sign the JIV report today. I hope they will comply and return this time with the JIV forms and for all stakeholders to sign....</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS	<p>OBSERVATION/CONCLUSION:</p> <p>One of the main and, very first observations is the fact that when ERA visited the spill site on Saturday, 18th July, 2015</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to

		<p>OF THE EARTH NIGERIA (FoEN)</p>	<p>the volume of crude oil being spewed into the environment was very high. From Friday evening when ERA got this high volume [serious] spill and when ERA went back to the site on Saturday morning, it was about 14 hours [fourteen] of continuous raging. It took many more hours before pressure reduced, after Agip was informed and took action from the Ogboinbiri Flowstation or so. The combined initial pressure, volume and time before the pressure was reduced was responsible for the heavy volume of crude oil spewed into the environment and, it's eventual spread; aided by the terrain and already rising flood levels in the environment. The connecting swamps and rivulets facilitated the spread of the crude oil into the One-Way flowing Ogboinbiri River from Keme-Ebiama axis and downstream it continued. This should explain the experience of the Gbaruan people; about their river being flooded by crude oil from unknown source.</p> <p>The burning of spill site is regrettable and, this has been part of the reason why community leaders have often urged their youths to mount security at spill impacted sites until JIVs are concluded. ERA was reliably informed too that, suggestion was made by community representatives that the spill site be guarded. This was made during Agip's visit to the site on 21st July, 2015. But, the idea was discouraged by Agip representatives, may be due to financial implications such security services may attract. And, although ponds, lakes, swamps, rivulets and the Ogboinbiri River and beyond were said to have been impacted by crude oil spreading from the current spill point; ERA could only speak now on the immediate environment as photos/video clips captured during ERA's visit and at the time of the report presents; including part of the burnt areas. ERA may embark on another verification field trip in the near future; as ERA does not rely on just what people say about the environmental impacts suffered.</p> <p>However, the alleged attempt by the State Government to encourage the distortion of the JIV process is unacceptable. Such efforts, if true; is against the government's public pronouncements; of protecting the communities. Government cannot be absolved from the sailing mutual distrust between oil companies and communities. The State Government should rather initiate positive steps to gain the confidence of our communities negatively impacted by the oil industry activities around them. While no spill is a good spill, it is more</p>	<p>the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com</p>
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			in the interest of government to support the communities where such equipment failure spills occur. The people of Keme-Ebiama, Okpotuwari and Ondewari [in this instance] deserves sympathy and encouragement; not intimidation through the paraphernalia of public office.	
Nimiemi & Alagoa	Morris	ENVIRONMENTAL RIGHTS ACTION (ERA) / FRIENDS OF THE EARTH NIGERIA (FoEN)	<p>ERA DEMAND:</p> <p>1 Agip should respect the Due-Process expected of a JIV process and, this current incident shouldn't be an exception. Agip and the government shouldn't criminalise the communities even when spills are traced to equipment failure.</p> <p>2 The communities should sign the JIV report and demand for their copied; it is their right to have copies of what they signed for. They should insist for the right thing in a non-violent manner and ensure the right thing is done.</p> <p>3 Community leaders/representatives need to be properly informed about what is obtainable from any process or activities between their community and oil companies so that they won't be making unrealistic demands. ERA is aware of the fact that oil companies [not specific to Agip alone] do engage the services of community youths during repairs at spill sites. How much exchanges hands for such transactions is what ERA cannot say because the facts are not readily available.</p> <p>4 Agip should promptly follow-up repairs with clean-up, relief materials and compensation; with the same interest the company has shown in getting the spill point repaired with a view to put on the line for production purposes. Anything short from the above would be interpreted as shirking of responsibility; a negative act which encourages and sustains mutual distrust between host communities and oil companies.</p> <p>5 The Bayelsa State Government, through the State Ministry of Environment should take positive steps to protect the interest of "ALL" impacted communities.</p> <p>6 The State Government and Agip should engage competent Civil Society Organisations to carry out well-designed community enlightenment program on related issues to bridge the information lacuna.; while Agip should also insist only on the right things to be done. Double standards operation in communities should be discouraged by all stakeholders in the interest of enduring peace, harmony and sustainable development.</p>	Your comment has been received but it is beyond the scope of this project and it isn't referring to the project area in Block ER236 or other areas assessed in the EIA Report. The document has been delivered to the Eni representative in South Africa for acknowledgement; Eni replied that any specific information related to the presence or activity of Eni in a different country from South Africa should be addressed by the Interested Party for further information to the reference contact available at Eni's official website at url: eni.com
Janet	Solomon	Vanishing Present Productions	This letter serves to lodge an objection to the proposed exploration for the reasons listed below. It also serves to highlight numerous contentious issues with this DEIAR	The EIA Report has sufficient detail for an informed decision to be made as it is based on detailed secondary data from multiple specialist studies and scientific research by the EIA team. The following specialist studies

		<p>process. Our primary concern is that there is clear systemic injustice and fundamental flaws in the DEIAR process for this application, and as such ERM have failed to comply with the DEIAR requirements as set out in NEMA and the EIA Regulations and this is evident for the following reasons:</p> <p>1) CONTEXTUAL CERTAINTIES NOT ESTABLISHED FOR EITHER THE SCOPING REPORT OR THE DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT It can reasonably be argued that much contemporary baseline information against which the impact of the project can be weighed remains unavailable and accordingly it cannot be said that context has been properly established within the Draft Environmental Impact Assessment Report (DEIAR). Support for this submission is as follows.</p> <p>i. The DEIAR reports that baseline data of flora and fauna in “pelagic and demersal communities of the shelf edge, continental slope and upper and lower bathyal are largely unknown” (p80). This near-absence of baseline information on the deep living communities, coupled with the spatiotemporal complexity of the brightly lit, warm epipelagial, to the dimly lit, thermally variable mesopelagial, to the lightless, cold bathypelagial zones added to the ecological processes within each of these depth domains exhibiting high temporal variability on scales ranging from hours to years, makes assessing this complex ecosystem as a desk-top study completely inadequate.</p>	<p>(refer to Annex D of the EIA Report) were undertaken by independent experts in their fields:</p> <ul style="list-style-type: none"> <li>• Marine Baseline: Description of the physical and biological environment that includes marine ecology, which underpins the assessment of the proposed Projects' impact to marine sensitive receptors such as whales, turtles, seabirds etc.</li> <li>• Fishing – an assessment of the proposed Projects' impact on fishing activities in the area.</li> <li>• Oil spill– modelling to identify the predicted dispersion of oil in an unplanned event.</li> <li>• Dispersion modelling – a dispersion simulation of drill cuttings during drilling activities.</li> <li>• Cultural heritage analysis.</li> </ul> <p>The marine specialist's (Annex D1) description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010) and scientific information sourced from the Internet. The sources consulted are listed in the Reference chapter of Annex D1.</p> <p>The used references, literature and secondary data available has been sufficient to cover all the aspects to be assessed; the impacts analysis of project activities on the marine and coastal ecology has been fully completed and confirmed sufficient by the independent experts . Based on the precautionary principle if the presence of sensitive species (eg: deep water corals) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on theses receptors were assessed in Chapter 7 of the EIA Report. In addition to the secondary data, primary data will be collected during the pre-drilling ROV survey, which will be conducted at the well site prior to drilling. If any vulnerable habitats or sensitive species are found during this survey the well site will be located more than 500 m from the identified location (refer to Chapter 9 of the EIA Report). The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species</p>
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				<p>biodiversity in deep sea environments, (Przeslawski et al., 2012). Results of the ROV survey will be communicated to the Competent Authority</p> <p>Przeslawski, R., Dundas, K., Radke, L., and Anderson, T. J. (2012) Deep-sea Lebensspuren of the Australian continental margins. Deep-Sea Research Part I, Volume 65, issue (July, 2012), p. 26-35. ISSN: 0967-0637 DOI: 10.1016/j.dsr.2012.03.006</p>
Janet	Solomon	Vanishing Present Productions	<p>ii. The exploration sites have neither been visited nor sampled and therefore baseline data remains unknown and the sea floor undisturbed, hence it is unfeasible for the DEIAR to conclude that impacts (of all phases of exploration) to the sea floor to be "Negligible". A proper impact assessment is only possible after the ROV study has been made of the sites, having been made public and undergone appropriate stakeholder engagement. This is a critical research need for this application.</p> <p>a. The occurrence of deep-water corals in Block ER236 is undetermined and not is enough known about the coelacanth lifecycles and where they spend their time during their life stages (that is, between the juvenile stage and the adult stage) for the DEIAR to claim that their presence is "unlikely" in the drill sites. An argument from a lack of knowledge simply proves an insufficient investigation and not the veracity of their absence.</p> <p>b. Similarly statements that submerged prehistoric archaeological sites or material being present in the study area is "extremely unlikely" calls for the mitigation measure of not only impartial marine ecologists but also experienced archaeologists, without competing financial interests, monitoring the discoveries of the ROV in real time.</p>	<p>ii) There are sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species (eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on theses receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail). Results of the ROV survey will be communicated to the Competent Authority.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on theses receptors were assessed based on this precautionary</p>

				<p>principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p> <p>The archaeologist recommended that any video footage collected by the ROV in the vicinity of proposed well locations should be reviewed for evidence of shipwreck material on the seabed. Should these reviews of data identify wreck material at or near the location of a proposed drill site, micro-siting of the well location and the possible implementation of a drilling activity exclusion zone around the archaeological feature should be sufficient to mitigate the risks to the site. He also stipulated that a chance find procedure must be developed for the project and should any shipwreck material that was not identified by the measures set out above be encountered during the exploration drilling process.</p>
Janet	Solomon	Vanishing Present Productions	<p>2) PROCEDURAL ISSUES</p> <p>i. The Environmental Management Programme (EMPr) has been incorporated as a 30-page document into the DEIAR instead of being a stand-alone report as is required by the DEIAR Regulations.</p> <p>ii. ERM claims that a review of the Draft EIA Report was available at the Port Shepstone library, however it was under renovation and inaccessible at the time, leaving the whole of the KZN South Coast without access to the printed report.</p> <p>iii. The Scoping Report was not completed in the designated time and should have been repeated, as is required by section 21 of the EIA Regulations (GNR982 of 4 December 2014, as amended). The regulation allows an existing scoping report to be used in certain circumstances. One of these is that a scoping report need not be undertaken again if the findings of the initial scoping report are still valid and the environmental context has not changed. Considering that the DEIAR claims the “areas of interest are unknown” potential gains and/or losses at the inter- and intra-species levels; changes in</p>	<p>i) The EMPr (Chapter 9 of the EIA Report) was written to be extracted as a standalone document and fulfils the requirements listed in section 24N of the Act of Environmental Impact Assessment (EIA) Regulations of 2014 (as amended). It has also been extracted and included as a spate Annex to the Final EIA Report (Annex F)</p> <p>ERM has proof that the EIA Report was sent to the Port Shepstone library on 25 September 2018 and resent on 16 October 2018 (Annex B). Electronic and paper copies of the EIA Report were also sent to stakeholders who requested a copy after the public meetings on 8-10 October 2018. There was sufficient time for review as the comment period was also extended by 2 weeks to the 8 November 2018. An electronic copy of the Draft EIA Report, along with all the Annexes was also available on the project website: <a href="https://www.erm.com/eni-offshore-eia">https://www.erm.com/eni-offshore-eia</a> on the 25 September 2018.</p> <p>The final scoping report was finalized and approved by PASA on 16 April 2018 (Annex C). ERM is confident that the baseline environmental and social conditions described in the final Scoping Report have not changed since it was compiled. In line with Section 21(2)(a) and (b) of the NEMA</p>

			<p>species abundances; loss of habitat; loss of physical connectivity between habitats, and ecosystems and the unknown impacts on seabed features as well as undiscovered species are unaccounted for. It follows that context has not been properly established by ERM, nor whether there have been changes within it. Due to these concerns I lodged an objection to the lack of follow-up Scoping Report at the Public Participation meeting with ENI and Sasol (9th October) and requested that the EIA be suspended pending the completion of a proper scoping procedure. This objection had 40 seconders whose signatures I attach.</p>	<p>EIA Regulations, Eni commenced the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment. PASA confirmed that this approach was acceptable on 29 August 2018</p> <p>ERM has conducted a transparent and inclusive public participation process during the scoping and EIA phase as described in Chapter 5 of the EIA Report. Both Scoping Reports and the Draft EIA Report have been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days. No further extensions to the EIA Report comment period could be made as the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017).</p> <p>Regulation 23 (1) (a) of NEMA EIA Regulations provides for public participation period of at least 30 days and ERM extended this to 45 days, which is more than the minimum required by law. ERM therefore is of the view that a reasonable and sufficient time period was afforded to interested and affected persons to provide comments. ERM notes further that under the NEMA EIA Regulations (at Regulation 23(1)(a)), the Final EIA must be submitted to the competent authority within 106 days of acceptance of the Scoping Report, or in this case the Application Form. Due to the legislated timeframes associated with the NEMA EIA process, extending the comment period by longer than two weeks would prevent in responding to all comments appropriately and from finalising in the EIA within the legally prescribed time period.</p> <p>This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process. The Final EIA Report is due to the Competent Authority on 14 December 2018 in order to comply with the regulated timeline.</p>
Janet	Solomon	Vanishing Present Productions	<p>3) CHANGES THAT AFFECT DECISION MAKING</p> <p>i. Cabinet has now approved the promulgation of twenty Marine Protected Areas (MPAs). Pertinent to the ENI/Sasol application is the promulgation of the extension of the iSimangaliso and Aliwal Shoal MPAs and two new MPAs, namely Tugela Banks and Protea Banks. Given that the scoping report, as originally approved in April 2018, no longer reflects the "current environmental context" it is clear that a new scoping report is required and the DEIAR process needs to be re-visited with this new environmental context in mind.</p> <p>ii. In early September 2018 a resolution was proposed at the</p>	<p>The assessment was performed in the Draft EIA on both existing and proposed MPAs so the recent promulgation has no effect on the outcomes of the assessment as these MPAs were already included in the assessment. Chapter 4 of the Final EIA Report has been updated to reflect the approval of the 20 new MPAS on 24 October 2018. There is still no overlap of MPAs with the drilling areas of interest.</p> <p>This resolution has been added to Chapter 2 of the EIA Report. The Resolution, co-sponsored by the European Union Member States, Argentina, Brazil, Costa Rica, Monaco, Panama, Switzerland and South Africa, commits the IWC's Scientific Committee to review the impacts of underwater noise on cetaceans (whales, dolphins and porpoises) along</p>

			<p>67th International Whaling Commission (IWC) for the elimination of acoustic pollution that affects whales (of all 13 species and populations considered under the IWC). This resolution was passed by consensus with South Africa being one of the signatories. This is a real and internationally upheld obligation, which impacts the planning around sound mitigation for this DEIAR. The IWC classes anthropogenic sound “as either acute or chronic. Acute noise such as seismic surveys or military sonar is high in intensity and short in duration. Chronic noise refers to low intensity but generally increased noise in the marine environment, for example from shipping and industrial activity.” As such the scoping report and the DEIAR needs a higher survey effort reflecting South Africa’s commitment to the aforesaid convention.</p>	<p>with the effectiveness of mitigation options. It also tasks the IWC’s Conservation Committee with developing a list of priority actions to address the impacts of underwater noise on cetaceans. The Resolution further calls for action and cooperation in other international forums like the International Maritime Organization.</p>
Janet	Solomon	Vanishing Present Productions	<p>iii. On the 8th November the North Gauteng High Court set aside the 2016 decisions of former Mineral Resources Minister Zwane and the late Environmental Affairs Minister Molewa to permit a new coal mine to be developed in the Mabola Protected Environment near Wakkerstroom, Mpumalanga. The court criticised the Ministers for relying on the processes followed by other decision-makers instead of exercising their discretion under the Protected Areas Act independently, referring particularly to their failure to apply a cautionary approach when dealing with “sensitive, vulnerable, highly dynamic or stressed ecosystems” as “an impermissible abdication of decision-making authority”.</p> <p>The court also held that: “A failure to take South Africa’s international responsibilities relation to the environment into account and a failure to take into account that the use and exploitation of non-renewable natural resources must take place in a responsible and equitable manner would not satisfy the ‘higher level of scrutiny’ necessary when considering whether mining activities should be permitted in a protected environment or not. Such failures would constitute a failure by the state of its duties as trustees of vulnerable environment, particularly where it has been stated that ‘most people would agree, when thinking of the tomorrows of unborn people that is it a present moral duty to avoid causing harm to the environment’”.</p>	<p>ii) This comment is noted, however the project you are referring to relates to mining in protected areas and therefore out of the scope of this project. The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. No exploration drilling will occur in the marine protected areas that are in the vicinity of the Project Area. The white paper provides a foundation for the promotion of renewable energy technologies and also states that ‘Government will ensure the optimal and environmentally sustainable exploration and development of the country’s natural oil and gas resources to the benefit of all’ and undertakes to ‘ensure private sector investment and expertise in the exploitation and development of the country’s oil and gas resources’.</p>
Janet	Solomon	Vanishing Present Productions	<p>4) CONTRADICTIONS</p> <p>i. Lack of consistency in time-frame application for the DEIAR</p>	<p>i) The assessment of potential “no-go” impacts has been updated in Chapter 7 of the Final EIA Report, to reflect the significance of impacts</p>

		<p>impacts assessments renders them unreliable. Environmental and social impacts are measured only during the operation of exploration, whereas the No-Go Alternative projects impacts into the future beyond the project. This creates a complete lack of parity for any rational comparison of effects and makes the significant ratings therefore irrational and skewed.</p> <p>ii. There is contradiction in the DEIAR around issues relating to bioavailability of NADFs (p190) stating they experience rapid biodegradation and yet they are harmless because they have a low bioavailability.</p> <p>The DEIAR cites a "Potential for short-term localised impacts on seafloor (benthic community) and water column biology due to chemicals and sediments in the water column and settling on the seafloor". However there is research that shows that chronic intermittent exposure of species such as corals, shrimp, scallop, including larval stages of many species, to dilute concentrations of operational drilling wastes (characterized by tests as practically non-toxic) can affect growth, reproductive success and survival , .</p>	<p>should the project not going ahead. The significance remains Moderate as the No- Go alternative may also result in the following negative impacts:</p> <ul style="list-style-type: none"> <li>• No local economic impact in term of procurement (direct and indirect), taxes (royalties and other taxes) and salary paid to direct employees and suppliers employees that would have been realised if the project proceeded and potentially went on to exploitation phase.</li> <li>• No diversification of the South Africa energy mix that may be realised if the project proceeded (and a viable hydrocarbon source was discovered).</li> <li>• Sustained (or even increased) reliability on importation from other countries depending on the growing demand.</li> </ul> <p>By implementing the recommended mitigation measure (and inadvertently proceeding with the exploration activities), the residual impact is likely to be a Moderate positive significance (as per Table 7.27 of the EIA Report)- this is due to the benefits associated with obtaining knowledge regarding the viability and extent of available reserves that may be exploited at a later stage. Such an understanding is likely to have a national reach and attract investment opportunities leading to further economic development.</p> <p>ii) Related to the potential toxicity and bioaccumulation effects of NADF effects on marine fauna there is no contradictions because it has been reported an extract from the literature and scientific data used by independent marine specialist for the assessment. Based on those scientific references (listed in Annex D1) the impact of residual NADF adhered to drilling cuttings on marine fauna has been assessed as Minor (pre-mitigation)</p>
		<p>5) CRITISISM OF THE OIL SPILL MODELLING</p> <p>i. This Oil Spill Modelling appears to only consider surface movement of oil and its impacts.</p> <p>ii. There is no modelling for recurrent small spills. Small spills have immediate adverse biological effects and their recurrent nature is likely to affect marine ecosystem functioning .</p> <p>iii. There is no modelling for spills during transportation.</p> <p>iv. The modeling is based in the assumption that the most significant damage will be on shoreline biota. Potential impacts to deep-sea communities from seabed through the water column are not taken into account.</p>	<p>i. This Oil Spill Modelling appears to only consider surface movement of oil and its impacts: This is statement is incorrect- The modeling is 3-dimensional and includes currents, salinity, and water temperature which varies with depth.</p> <p>ii. There is no modelling for recurrent small spills. Though small spills are more likely to occur than larger spills or a rare blowout, small spills do not necessarily have significant adverse biological effects due to their small size and short duration. A small spill would most likely occur in a location around the well operations where response equipment is immediately available. Ecosystem-wide impacts from a small spill is unlikely since concentrations would be small, duration would be short, the area affected limited, and they would typically occur on or near the surface, where evaporation can mitigate. Since they would occur near the well, no spill of this size will reach any shorelines. Small spills, called</p>

			<p>v. There is no follow up in the DEIAR to the peer reviewer's suggestions or requests for clarification.</p> <p>vi. The Oil Spill Modelling Report was vetted by an oceanographer with specialist knowledge of the offshore KwaZulu-Natal conditions and brings to light many deficiencies and under-representations of potential impact in the DEIAR. Please find this independent review produced for groundWork attached.</p> <p>This review also cites the real case study of the Katina P, which was laden with oil at the time of her sinking in 2 800 m depth, some 200 nautical miles off Maputo. This incident was selected for illustrative purposes and may not represent either the most severe case or the most likely results. It is, however, representative of a recent accident and has been investigated as to its consequent effects. It created a slick on the South African east coast from Kosi Bay to the Transkei.</p>	<p>"Tier 1" events, are often defined as 50 bbl spills or less. To put the impacts into perspective, a spill of 98,000 gallons (2,333 bbl) occurred in Buzzards Bay, Massachusetts, USA in April, 2003. Despite the size of the release, the natural resource damage assessment determined that there was no significant aquatic impacts beneath the slick due to the dissolved oil toxicity. "The modeling concluded that the concentrations from the spill were not high enough for a long enough duration to cause acute injury to aquatic organisms."(Draft Final B-120 Oil Spill Shoreline Injury Assessment: Injury Quantification , June 2008 @ <a href="https://casedocuments.darrp.noaa.gov/northeast/buzzard/admin.html">https://casedocuments.darrp.noaa.gov/northeast/buzzard/admin.html</a>)</p> <p>iii. "There is no modelling for spills during transportation", this statement is incorrect. The diesel spill analysis represented a release from a vessel. The location was selected around the wells since these are the locations with the most traffic and activity and therefore the most likely places where a vessel collision would occur.</p> <p>iv. With respect to your statement, "The modeling is based in the assumption that the most significant damage will be on shoreline biota. Potential impacts to deep-sea communities from seabed through the water column are not taken into account", this statement is incorrect. No such assumption was made. Since oil is less dense than water, impacts naturally focused on the water surface, where oil above thickness thresholds were quantified, and on shorelines. Dissolved components in the water column were also considered. Examination of equivalent studies and impact assessment after actual spills would yield the same focus.</p> <p>Potential impacts to deep-sea communities cannot be accurately quantified, as stated previously, as any such estimates of marine snow would be highly speculative given the absence of sufficient data to attempt such modeling. Even if some estimates were made of deposits on the seafloor from oil bound with marine snow, the toxicity would be a mystery, especially when considering the bioavailability of the marine snow to benthic organisms, its mixture and burial with uncontaminated marine snow, and its potential mixture with naturally contaminated marine snow from naturally occurring seeps.</p> <p>v. In response to your statement, "There is no follow up in the DEIAR to the peer reviewer's suggestions or requests for clarification" These were provided in Annex B to the report and with edits subsequent to receipt of the comments. The oil spill report has been updated in the final to integrate this into the report.</p>
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				vi. With regards to your statement, "The Oil Spill Modelling Report was vetted by an independent oceanographer with specialist knowledge of the offshore KwaZulu-Natal conditions and brings to light many deficiencies and under-representations of potential impact in the DEIAR", please refer to responses to Lisa Guastella to see the full response
Janet	Solomon	Vanishing Present Productions	<p>This independent review finds:</p> <ul style="list-style-type: none"> <li>a) The Natal Pulse has not been taken into account. <ul style="list-style-type: none"> <li>i. It may result in more variability than seasonal scenarios.</li> <li>ii. The impact of onshore winds with slack currents could mean oil will get transported onshore.</li> </ul> </li> <li>b) It is modelling general conditions.</li> <li>c) The coarse resolution of the HYCOM models means a loss of accuracy near the coast.</li> <li>d) No local content has been used to verify the model output.</li> <li>e) Previous studies of the site with respect to coastal oceanography are referred to but are not referenced.</li> <li>f) Due to there being no understanding of the science of currents in the area, the scientific interpretation is wrong.</li> <li>g) There is no validation to compare with measured data.</li> <li>h) The model has not taken mesoscale cyclonic circulations sufficiently into account.</li> <li>i) Importantly both the peer reviewer and this review question the spill quantity and why conservatively high rates were not used for the oil spill modelling.</li> <li>j) Temporal vagaries brush over the significance of the impacts for example.p3 of Annex D7: "Diesel would naturally degrade and evaporate on the shoreline over time."</li> <li>k) The modelling needs to consider surface wind response, apart from currents,</li> <li>l) The possibility of oil getting entrained into Port St Johns Eddy, which makes shoreline oiling probable, has not been considered.</li> </ul> <p>Both the technical and independent review of this Oil Spill Modelling Report question whether appropriate methods have been used, whether the data was suitable and whether the findings and conclusions were adequately supported. In other words, the Oil Spill Modelling Report does not satisfy recognised good practice requirements. An overarching framework providing guidance on initiating, designing and determining the scope of a post-incident monitoring programme must facilitate this DEIAR.</p>	<p>The premise of most of the independent review by Lisa Guastella focused on perceived yet incorrect accusations of limitations of the HYCOM model, that have been answered in the response provided back to the reviewer. The Natal Pulse is included. The HYCOM model is the reanalysis version that was not only compared to field measurements but the data from sources such as satellites and drifters were incorporated via model assimilation. The model resolution is sufficient, and the presence of mesoscale effects such as various small eddies were provided as proof.</p> <p>Please refer to the responses provided to the oceanographer Lisa Guastella to see the full response.</p>

Janet	Solomon	Vanishing Present Productions	<p>6) LACK OF DETAILED CONTINGENCY PLAN for SUBSEA AND SURFACE RELEASE</p> <p>i. An OSCP (Oil Spill Contingency Plan) must be made public during the DEIAR process, and not “prior to start of drilling” as stated, for proper stakeholder and I&amp;AP engagement.</p> <p>ii. Transparency is needed with regards to Oil Spill Response, Planning and Capacity necessary for public health and welfare as well as that of the marine and coastal environment. An annex to this DEIAR should include the blowout management protocol for the project. Included in this annex should be highlighted any deficit of technological expertise or resources or difficulty of effective co-ordination with all government or conservation agencies that have a statutory responsibility for some aspect of offshore oil and gas activities regarding incident management. The delegated National Incident Commander, along with the intended lines of responsibility for inter-agency efforts, should be made available for proper stakeholder and I&amp;AP engagement. The citizens of South Africa need assurance that incident management is fully informed and has capacity to deal with the latest technology, practices and risks associated with, and due to, the different geological and ocean environments being explored, prior to commencement of drilling.</p> <p>iii. There is significant concern over timeous response to a spill given the listed mitigations and rate of flow of the Agulhas current:</p> <p>a. The capping stack which is supposed to “significantly reduce spill period” will be shore-based, at least 50km away from the drill sites, and will pose a logistical problem due to its tonnage and size in terms of transport to the drill site. It will take time to reach a deep-sea blowout.</p> <p>b. The recommended emergency equipment and team “who will be mobilized immediately” are based in Saldanha Bay 990 nautical miles and 4.1 days away ( travelling at 10 knots). Based on these delays hundreds of kilometres of ocean could be fouled before proper response is in place.</p>	<p>i)As stated in the EIA Report, a project specific Oil Spill Contingency Plan (OSCP) will be developed by Eni. This plan will be developed in terms of the Nationally adopted Incident Management System for spills and the National OSCP, in consultation with the South African Maritime Safety Authority (SAMSA). This plan would instruct all parties as to the correct response procedures for any unlikely oil spill that may occur during the exploration drilling operation. This plan of intervention, providing contacts lists and mobilization procedures will be drafted prior to the commencement of drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>The requirement for an OSCP has been identified in the Environmental Management Programme (Chapter 9). The OSCP will be completed once all information regarding the drilling activity is available and this will be after the submission date for the EIA Report. The OSCP will be completed once all information regarding the drilling activity is available and this will be after the submission date for the EIA Report. The OSCP is not a publically available document.</p> <p>ii)Small spills on the deck of the drillship will be contained with the equipment onboard. Spills at sea will be immediately contained by the supply vessels, which host onboard offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>The Saldanha Bay is the logistic base in country for OSRL for well capping stack system storage; other capping systems can be provided in the country by Wild Well Control from abroad bases. In the unlikely event that BOP is failing to close and sealing the well, the response and containment system will be already effective offshore, meanwhile capping system will be immediately mobilized from Saldanha Bay (OSRL) or from different logistic bases (Wild Well Control). The capping stack can be mobilised to site within 48 hours. Those information will be</p>
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				further detailed in the Oil Spill Contingency Plan (OSCP) developed by Eni.
			<p>iv. The DEIAR makes no mention of mitigation or contingency plans in the event of a fire or explosions. The Chevron Nigeria Limited explosion of January 2012 and the Gunashli oilfield disaster of December 2015 are indicators of the dire need for proper mitigation planning.</p> <p>v. There is no mention made of how the drill ships, pipelines and general infrastructure will respond to the environment in extreme weather. Some sources state that the general intensity of the weather and storms are to increase in the region in the future. Only one South African well has recently been drilled in depths greater than 500m and Total experienced problems with this Brulpadda 1AX prospect rig operation. A key reason for this is the extremely challenging metocean conditions particular to the very strong Agulhas current. The proposed wells in the proposal which forms that subject matter of this correspondence are nearly twice as deep as those of Total. With the oil and gas industries' track record of pollution (ENI alone has reported Oil Spillage statistics of 4.89 million litres in operations between 2009 - 2017), it remains for ENI and Sasol to prove that the proposed offshore drilling will not result in any serious environmental harm.</p> <p>vi. Sasol claims the probability of an oil spill occurring being less than 1% in their Consolidated Response to the Durban Community Questions of May 2018. According to Sasol's risk assessments, please supply the full workings for the less than 1% probability for an oil spill on this project, stating the exact calculated probability percentage. Please provide the estimated return period and the probability of a full-bore rupture in a given year for this assessment. Which expected year of decommissioning these wells was used for this calculation?</p> <p>vii. Whilst the report on financial provisions for decommissioning is appreciated, further proof of insurance safeguards against incidence management and a reasonable level of fiscal readiness for long term cleanup and reparation process, in the event of a major disaster must be made public. This was requested of Sasol on 17th of May 2018.</p>	<p>iv) The Emergency Response Plan and OSCP that will be developed by Eni prior to drilling will contain this information. All the drilling personnel are constantly trained to perform their activities as safely as possible. Weekly drills are performed to maintain rig crew training and capability to promptly react in case of anomalies and emergency situations, e.g., fire fighting, kick detection and well control, escape, gas release, man overboard rescue, etc. In the case of a serious emergency, a technical and logistic team is located onshore to support the offshore crew at any time</p> <p>v) The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production phase (including pipelines and production infrastructure) will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities. The drillship is built and designed to operate in harsh weather conditions, in particular waves, wind, current, compensating up and down movements and loads. The positioning of the unit is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors. In extreme weather conditions the drillship would make the well safe and then disconnect and move to a place of shelter until conditions improve. Drilling would recommence after it is determined to be safe to do so. Eni is one of world most experienced companies in deep water and ultra-deep exploration drilling activities, with a wide experience in 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place.</p> <p>vi) The probability of a blowout is very low where the frequency of occurrence is <math>2.5 \times 10^{-4}</math>, 1 case in 4,000 drilled wells (OGP Report,</p>

			<p>The developers have failed to give clear insight into their proposed OSCP to allow stakeholders and I&amp;APs to engage on whether or not this plan provides sufficient protection to marine and coastal environments.</p>	<p>2010).</p> <p>Eni has implemented the following measures to reduce the risk associated with geological factors, tools reliability and human errors</p> <ul style="list-style-type: none"> <li>• Well design</li> <li>• Adopting mitigation and preventing actions and procedures.</li> <li>• Advanced planning and development of contingency plan</li> <li>• Use of performance tools, real time monitoring technologies. This is necessary to significantly reduce the risk associated with geological factors, tools reliability and human errors.</li> </ul> <p>Eni's adoption of top industry and development of new technologies, the adherence and respect of international best practice, standard and procedures, reduces the risk of the blowout frequency from 10-4 down to 10-6 i.e. 1 case in 400,000 wells drilled.</p> <p>vii) There will be adequate protection and indemnity insurance cover for oil pollution incidents. Eni retains worldwide third-party liability insurance coverage, which is designed to hedge part of the liabilities associated with damage to third parties, loss of value to the Group's assets related to unfavourable events and in connection with environmental clean-up and remediation.</p>
Janet	Solomon	Vanishing Present Productions	<p><b>7) LACK OF DISPERSANT USE PLAN</b></p> <p>The DEIAR suggests dispersants to mitigate any spill but it provides no guidelines, plan or choices for dispersant use.</p> <p>a. Which dispersants will be utilized? An explanation of their chemical components, toxicity, potential for bioaccumulation, ecological impacts through the water column and on the shoreline, and their specific function must be also provided.</p> <p>b. There are many situations where the net environmental benefits of chemical dispersion are not clear. The dispersant effects to local flora and fauna must be indicated for all potential choices of dispersant in order for regulators to confidently decide on dispersant use issues.</p> <p>c. The ability to provide timely and scientifically sound outcome and effects information is essential to support the regulators in their decision making role when approving the initial use of dispersants and whether to continue or cease their use during the incident.</p> <p>i. Predictive migrations maps of dispersants based on sound oceanographic and metrological science must be provided.</p>	<p>Related to the dispersants, their composition and available quantities will be specified in the OSCP in the list of emergency, containment and response equipment and products. Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt;30m to reduce concentrations below most acute toxicity thresholds. Their chemical composition will be duly specified in the OSCP with the inclusion of the Material Safety Data Sheets that include also information on toxicological properties. The NOSCP provides guidelines on dispersant use specifically for us in South African territorial waters. Eni will comply fully with the dispersant guidelines set forth within the NOSCP and approved by the DEA and SAMSA.</p>

			<p>ii. Developers must provide proof of immediate availability of dispersants considering this is of primary importance in effecting recovery rates.</p>	
Janet	Solomon	Vanishing Present Productions	<p>8) LACK OF ASSESSMENT OF ONSHORE ENVIRONMENT AND MITIGATION</p> <p>Buried oil contaminants can resurface as the beach erodes. Buried oil must be removed through mechanical excavation. The DEIAR needs detailed modelling of cross-shore distribution of oil contaminants relating to beach morphodynamic terminology to help optimize beach cleanup planning.</p> <p>9) LACK OF COST BENEFIT ANALYSIS</p> <p>i. A cost benefit analysis not been undertaken for the ENI/Sasol application and no explanation for this oversight has been provided. The consequences of a blow-out on the tourism, recreation and leisure industries may be significant yet the aspect of compensation to these sectors has not been dealt with at all.</p> <p>ii. Without a cost benefit analysis ERM rates the significance of the economic toll a spill would have on livelihoods dependent on safe recreation at beaches, healthy habitats for wildlife, and industries such as tourism and fishing as 'moderate'.</p> <p>a. ERM regards much subsistence, recreational and prawn trawl total fishing effort in KZN as "being unknown" or have not assigned the total catch a value. This effectively means that the pre-spill status of the KZN fishing sector and related businesses remains unmeasured, as would its economic losses by disruptions, loss of earnings plus the effects of negative publicity, persisting public perceptions and potential fishing and harvest bans.</p> <p>It remains for ERM to qualify their assessment associated with this degree of uncertainty, given their statement that Block ER236 "harbours the only commercial shallow-water prawn trawl fishery in the country and is thus of considerable socio-economic importance to KZN" and that spatial distribution of line-fishing effort ("the country's third most important fishery in terms of total tons landed and economic value") coincides with inshore areas of Block ER236".</p>	<p>8) Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. The Oil Spill Modelling is considering the re-suspension of stranded oil due to wave energy effect. Nevertheless the management of shoreline excavation/treatment/restoration of contaminated soil (including buried oi) is not part of EIA assessment but of the Oil Spill Contingency Plan to be developed by Eni.</p> <p>9) The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>The fishing effort, landings and values of each sector are referenced in fisheries specialist report (Annex D2 of the EIA Report). The KwaZulu-Natal prawn trawl fishery comprises two components; a shallow-water fishery on the Thukela Bank and at St Lucia, and a deep-water fishery between Cape Vidal in the north and Amanzimtoti in the south. Landings for 2015 were reported as 301 tons, comprising 0 tons (shallow-water prawns), 118 t (deepwater prawns), 73 t (langoustine), 56 t (red crab), 6 t (rock lobster) and 48 t (bycatch). There are currently seven holders of fishing rights within the sector. Total fishing effort recorded for the sector over the period 2007 to 2017 amounted to approximately 7044 hours per year.</p> <p>Commercial linefishery effort is managed geographically with the spatial effort of the fishery divided into three zones. Zone A extends from Port Nolloth to Cape Infanta, Zone B extends from Cape Infanta to Port St Johns and Zone C covers the KwaZulu-Natal (KZN) region. In 2016, approximately 250 skiboat launches (for the purpose of commercial fishing) took place from registered launch sites along the KZN coastline (Mann et al. 2016). An economic survey of the KZN commercial linefishery was conducted by Dunlop in 2010. Based on the estimated total catch of 785 t and the wholesale (first point of sale) value of linefish</p>

				<p>at that time (i.e. ~R30/kg), the total value of the catch was approximately R23 million. However, costs associated with commercial fishing are extremely high. The estimated costs of labour (crew), fuel, bait, tackle, equipment, vessel and vehicle maintenance, insurance, safety gear, permitting and levies etc. are such that profits by the owner/rights holder are often marginal (Mann et al. 2001, Sauer et al. 2003 in ORI, 2014).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience</p>
Janet	Solomon	Vanishing Present Productions	<p>b. Studies worldwide show that oil spills generate coastal impacts that can last many decades . Oil-polluted beaches, mangroves and estuarine wetlands rely chiefly on anaerobic degradation, which is slow. Below just 10–15 cm in beach sand and 2–3 cm in muddier sediments, oxygen levels plummet, and from these anoxic layers, pockets of oil can leach toxicants for decades. In addition to costs incurred by cleanup activities, serious economic losses can be experienced by tourism-dependent businesses, industries and individuals dependent on coastal resources. Considering that the KZN coastal area has a high amenity value, with between 49.7% and 61.3% of activities undertaken by foreign visitors in KZN being beach related, ERM again needs to justify a significance rating as moderate by producing a cost analysis and proper stakeholder engagement.</p> <p>c. There is a failure by the DEIAR to deal adequately with cost benefit analysis in the event of a spill and the consequences thereof on private individuals, the commercial sector and on the ecosystem itself. The effect of a spill on climate change is not addressed at all. No reference is made to how these affected systems will be compensated in the event of an oil spill.</p>	<p>b) The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>c) Chapter 9 of the EIA Report assesses the impact of unplanned events on environmental and social receptors. The impact on livelihoods is also assessed in this Chapter. As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience</p>

Janet	Solomon	Vanishing Present Productions	<p><b>10) STAKEHOLDER ENGAGEMENT</b></p> <p>This application's public participation process has been shown to be deeply flawed and undemocratic:</p> <p>i. A major deficiency is, and has been, the failure of this DEIAR regime to consider ethnodiversity. Many of the I&amp;APs do not speak English with the proficiency required to fully understand the literature to grasp the implications of the project and how to address these. This needs to be tackled retroactively with immediate effect as this process has been fundamentally exclusionary.</p> <p>Producing a heavily précised DEIAR draft booklet in isiZulu (after repeated public requests for inclusivity at and after the first series of public meetings, during the scoping phase (Between 6 and 8 February 2018)), two weeks before comment submission, is both unfair and a recognition that the process was flawed.</p> <p>ii. There has been a lack of proper response to stakeholder concerns, apart from my own already mentioned. A number of I&amp;APs comments and questions from public meetings have not been properly captured or properly answered, therefore due process has not been followed:</p> <p>a. None of Fred Kockett's questions of 6 Nov 2017 have been properly addressed.</p> <p>b. Many of Branch Chairman at WESSA, Paddy Norman's questions at a public meeting were not noted and remain unanswered, in particular:</p> <p>i. He asks, "If a drilling program has ever been undertaken in similar conditions –of weather, depth, and seabed morphology" and "Is the risk quantifiable?"</p> <p>ii. He questions the "ability of the drilling ship to handle extreme conditions, such as "freak waves" which occur on our coast remarkably frequently. ENI insist that their drilling ship can handle just about anything. However, that may not be comprehensively valid. A freak wave would lift the ship significantly, and this might put excessive strain on the drill string. More importantly, will the possible follow up work be equally robust. There is no justification for prospecting if consequent production activities are subject to unmanageable risk."</p>	<p>10) The Public Participation process was conducted as per the requirements set out in the applicable legislation. English, isiZulu and isiXhosa versions of the Non-Technical Summary were made available at the open house meetings and on the project website. Newspaper adverts were placed in several newspapers in English, isiZulu and isiXhosa (notifying stakeholders of the availability of the Draft EIA Report for review and inviting them to open house meetings Refer to Annex B of the Final EIA Report). All comments received, along with responses have been included in the Comments and Responses Report in the Final EIA Report (Refer to Annex B of the Final EIA Report).</p> <p>Upon requests made by participants at the open-house meetings in KZN, the EIA report was translated into isiZulu and the commenting period was subsequently extended by three weeks to conclude on 8 November 2018. This information was communicated to I&amp;AP's via email on 18 October 2018 and via SMS notifications 19 October 2018 (Refer to Annex B of the Final EIA Report).</p> <p>ii) All comments received, along with responses have been included in the Comments and Responses Report in the Final EIA Report (Refer to Annex B of the Final EIA Report).</p> <p>ERM has confirmed your names, Paddy Norman and Fred Kockett are on the stakeholder database provided as part of the EIA Report, they can be found on page 18 and 35 of 40 in Annex B1 – Stakeholder Database. With regard to the comments, they were captured in the meeting notes for the Port Shepstone meeting, and included in Annex C of the final Scoping Report submitted to PASA. Since the Scoping Report was approved, we have not included this Annex as part of the EIA Report as it is documented in the Scoping Report. We hope that this provides a level of comfort that your issues have been captured and you are recorded as an I&amp;AP.</p>
Janet	Solomon	Vanishing Present Productions	<p>iii. "It also needs to be pointed out that the continental shelf off KZN is unusually narrow and steep. The southern drill site is</p>	<p>iii) Your concern is acknowledged. Well locations are always planned far from seabed instability zones and in particular far from scarps. No</p>

			<p>below a significant scarp. There may be a potential to trigger an underwater landslide, which could have disastrous consequences, not only on the natural environment, but also by generating a tsunami very close to our beaches. Although I doubt if anyone could quantify this risk, the potential damage and loss of life needs to be considered, not to mention the multi-national and financial implications.</p> <p>iv. He requested information "on the destination of the product; since one of the justifications for this program is given as South Africa's energy requirements / energy security, then South Africa should be the primary beneficiary from any production. The response was that SA would be able to purchase the product at the market rate. This scenario must be included in the cost/benefit assessment, since the primary local concern is the cost of importing fuel, and the justification for this program is to reduce that cost"</p>	<p>drilling operations will be executed in proximity of Canyons. In any case a pre-drilling ROV survey is performed before well is spudded to confirm the goodness of the location chosen. Drilling operations are performed at sea bed with no risk of landslide and tsunami. Well locations are always planned far from seabed instability zones and in particular far from scarps. No drilling operations will be executed in proximity of canyons. In any case a pre-drilling ROV survey is performed before well is spudded to confirm the goodness of the location chosen.</p> <p>iv)The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities. The needs and desirability of exploration drilling have been described in Chapter 3 of the EIA Report.</p>
Janet	Solomon	Vanishing Present Productions	<p>11) NEED AND DESIRABILITY OF THE PROJECT</p> <p>South Africa's Nationally Determined Contribution of CO2 currently falls outside of the fair share range. The higher order considerations as to future effects to greenhouse gas emissions and acceleration of global climate impact has been circumvented in this report via zero reporting on estimated end outputs. The DEIAR Summary of Project Activities that will result in Greenhouse Gas Emissions makes a mockery of this by suggesting that there will only be emissions generated by the vessels and helicopter. This DEIAR has not provided a sufficient evidentiary base to answer key questions around contributions to global warming and climate change by the proposed extraction of fossil fuels.</p> <p>d. An assessment of the potential end output of the project, i.e. the expected barrel delivery must be measured for its increase in carbon emissions to South Africa's peak, plateau and decline commitments to the global economy. This DEIAR requires more rigorous expert judgment in evaluating holistic risks to climate change for the benefit of all, and should evaluate the option of not proceeding with further activity.</p>	<p>11) Your concern is acknowledged. The need and desirability section of the EIA Report (Chapter 3) describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The impact of greenhouse gas emissions by the project activities on climate change is assessed in Chapter 7 of the EIA Report. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase was assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</p>



				d) The expected barrel delivery cannot be quantified as there is no certainty of a viable hydrocarbon discovery .
Janet	Solomon	Vanishing Present Productions	<p>12) OPERATIONAL WASTE</p> <p>i. Key findings from the drill cutting modelling show the sediment layer at the wellhead itself being only 1m thickness getting thinner further away from the wellhead. The modelling also shows distribution effects of a 5 cm smothering layer of drill cutting sediment as close to 7 km<sup>2</sup> in a month. The global literature cites that discharges at similar depths may produce cuttings accumulations of up to 20m thickness within 100–500m of the well site and gradually get thinner away from the wellhead . There is no projection for the full length of the drilling operation, which goes on for an average of 54 days. This models' temporal selection of a month seems prevaricative without a substantiation.</p> <p>ROV surveys of 500m<sup>2</sup> around each site are inadequate and need to be therefore expanded to take into account the full footprint of the operation.</p> <p>ii. Also the drill cutting modelling does not take into account further adverse effects on the wider marine environment from decommissioning and removal of the platform.</p> <p>iii. The DEIAR claims that the effects of smothering are "Fully Reversible". Given that smothering leads to mortality of deep water corals and that they are extremely slow growing organisms (hundreds of years old in many cases) please support the claim that the effect of coral death is fully reversible on any ecologically relevant timescale.</p>	<p>i. The findings of other cases found in the global literature is irrelevant since each study examines specific volumes of muds and cuttings discharges at specific depths with specific current speeds and directions. The accusation that modelling was performed for less than the full duration of the drilling operation is incorrect. The drilling operation may take 54 days, but the duration of the actual releases of muds and cuttings were used in the modelling. Times between the releases when each subsequent well section is being prepared, and all previous releases have reached the seafloor, is not necessary to simulate.</p> <p>The drill cutting modelling indicated that the depositions above 2.5 mm were mainly contained within 500 m from the well which will be surveyed by ROV prior to the drilling operation in order to identify the presence of any vulnerable habitat. If any vulnerable habitats or species such as deepwater corals are identified during this ROV survey, the drill site will be relocated to more than 500m from these. Results of the ROV survey will be communicated to the Competent Authority.</p> <p>i. This is an exploration drilling project and the drill cuttings modelling study examines the effects of the drilling operations, not decommissioning and platform removal.</p> <p>ii. First, the statement about the reversibility of smothering impacts meant that unlike a pollutant that persists in the environment and can continue to cause toxicity to new organisms that are subsequently exposed, the effects of smothering happens once and is done. The impacted area is no longer contaminated and life can resume at the same location. Secondly, the discussion of impacts did not specifically refer to deep water coral but benthic organisms in general, with a wide range of lifespans. There is a commitment that the well site will be moved by 500 m if deepwater corals or similar vulnerable habitats/species are identified during the ROV survey. The cuttings model shows that deposition is very small beyond 500 m.</p>
Janet	Solomon	Vanishing Present Productions	<p>13) SEISMIC NOISE AND PRESSURE EMISSIONS SCOPED OUT</p> <p>The Vertical Seismic Profiling, which involves airguns capable of inducing lethal and sublethal injury , , hearing loss , (temporary or permanent), masking of communication, physiological stress , , , acoustic resonance in air cavities, organ rupture, behavioural responses, avoidance of critical habitat areas, disruption in schooling and migration , disruption</p>	<p>13) The VSP (Vertical Seismic profile) is a sort of log that could be performed at the end of drilling operations to complete the reservoir data acquisition. Its name is 'vertical' because it is directed downhole in the vertical section of the well and 'seismic' because an airgun source is required. The shot is instantaneous and usually repeated up three times to register the 'acquisition'. Prior to starting VSP log acquisition, Eni will provide on board a certified Marine Mammal Observer (MMO) to detect the no presence of marine mammals and turtles within the safety zone</p>

			<p>of homing or orientation ; decreased feeding efficiency ; decompression sickness, and mass strandings ,for marine animals, have been scoped out as a significant impact in the Summary of Underwater Noise Activities that may Disturb Marine Fauna. The mitigation of Vertical Seismic Profiling cannot simply be an issue of “short duration” and “limited to the survey area” since airguns produce high decibels and amplitudes of sound with high exposure levels travelling vast distances capable of causing immediate and significant acoustic trauma. Please assess the full scale of this acoustic footprint, especially in light of 3) ii. The use of airguns in a marine environment requires mitigation and no seismic activities should take place during the known breeding and migration periods of cetaceans and turtles.</p> <p>c. Mitigation should include the establishment of a hearing threshold-based safety zone based on the best available data during seismic survey activities. Cumulative acoustic limits should be established. These limits should be appropriately matched to the spatiotemporal scale and exposure rate of the risks to individuals and populations. Measurement of noise budget, such as those under consideration under the EU Marine Strategy Framework Directive (Tasker et al. 2010), should lead to limits on the source levels that are introduced on a regional scale, especially in areas where noise pollution is increasing.</p>	<p>(500 m). In case of presence of marine mammals, operation will be delayed waiting no presence of marine mammals (whales) and sea turtles. A seismic survey is different to a VSP as it is continuous and involves a seismic vessel, using airguns to produce sound waves to understand the subsea geology.</p>
Janet	Solomon	Vanishing Present Productions	<p>The DEIAR has not considered the probability of recurring seismic surveys, the risks associated with compounded behavioural disturbance and how chronically-present sound could constitute a threat to populations by changing behaviour and distribution regularly at critical times and in critical areas.</p> <p>Regulators and project proponents should establish communication for the duration of the survey with stranding networks and conservation organisations local to the survey to fully understand the potential effects of the survey on the greater marine environment and take further mitigatory action should stranding reports register adverse effects to unusual species or increased numbers.</p> <p>14) MARINE PROTECTED AREAS BUFFER ZONES The DEIAR should propose buffer zones adjacent to MPAs in order to protect marine biota inside the designated areas to</p>	<p>Your concern is acknowledged. The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Recurring seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>14) No MPAs overlap with the drilling areas of interest. No buffer is necessary as no activity may occur within a designated MPA</p> <p>15) If well testing is conducted on the appraisal well, then emissions will be generated from hydrocarbon flaring for the limited duration of the well test. It is anticipated that a maximum well test time for this project, if required, will be approximately 20 days. All flaring is logged and reported to authorities in the audit report relating to compliance with the EMP. This is not a publically available document. The final well testing report (quantity and type of produced/flared hydrocarbon including oil/gas/water properties rates, volume and quantity, duration of flare,</p>

			<p>mitigate mining impacts in the areas where evidence does not exist.</p> <p>15) AIR POLLUTION If gas must be flared, an accurate determination of the volume of gas flared, its emissions quantity and concentration must be made known.</p>	choke dimension etc.). The results of well testing is commercially sensitive information and is provided to the competent Authority.
Janet	Solomon	Vanishing Present Productions	<p>16) CORRECTIONS There is a species that is incorrectly classified according to the IUCN red list in this report: The leatherback turtle (<i>Dermochelys coriacea</i> (Southwest Indian Ocean subpopulation)) is Critically Endangered, not Vulnerable (that is the global status) as described. The proximity of these potential wells to our environmentally significant areas - The Maputaland and St Lucia Marine Reserves, Tugela Banks, The Natal Bite with its crustacean trawl fisheries, Protea Banks, Aliwal Shoal and iSimangaliso Wetland Park World Heritage Site - poses a great risk to our marine commons and heritage, the economic importance of our fisheries, and leisure and tourism industries dependent on functional healthy oceans. All the above reasons warrant questioning the lack of a precautionary approach and the impact significance ratings given by this DEIAR, based on minimal data. The scoping report and the DEIAR have been shown to be neither comprehensive nor technically robust thereby not meeting its terms of reference or providing the required information for decision making. In light of this, it is requested that the application be withdrawn until the process can result in full consideration of all relevant information on the affected environment, of proposed alternatives and their impacts, and of the measures necessary to monitor and investigate residual effects.</p>	<p>Global ratings as provided in report are correct</p> <p>IUCN SWIO ratings: Leatherback – critically endangered Loggerhead – Near Threatened</p> <p>From a report that was done for NMMU: "Considering the wealth of data on turtles collected along the coasts of KwaZulu-Natal and southern Mozambique over the past 50 years, and the extent of monitoring and research undertaken during that time (Nel 2014), the most recent conservation status (i.e. Hughes &amp; Nel 2014a, 2014b), which assessed the species on a sub-regional scale, appears the most appropriate and will be applied for the purposes of this impact assessment." George Hughes is the turtle expert in South Africa, with particular focus on the southern stock of loggerhead and leatherback turtles and that the status listing provided in Chapter 4 of the EIA Report is aligned with NMMU's listing on a regional scale, in addition to IUCN red listing.</p> <p>The Global and Regional Conservation Status of the turtles occurring off the South African coastline show variation depending on the listing used. References to be looked at include:</p> <p>Hughes G, Nel R, (2014a) Family Cheloniidae. In: Bates, MF, Branch WR, Bauer AM, Burger M, Marais J, Alexander GJ, De Villiers MS (eds) Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland. Suricata 1, SANBI, Pretoria. Hughes G, Nel R, (2014b) Family Dermochelyidae. In: Bates, MF, Branch WR, Bauer AM, Burger M, Marais J, Alexander GJ, De Villiers MS (eds) Atlas and Red List of the Reptiles of South Africa, Lesotho and Swaziland. Suricata 1, SANBI, Pretoria. Nel R, (2014) 50 Years of Turtle Conservation, Monitoring and Research: A State-of-Knowledge Report. Contract Report to iSimangaliso Authority and Ezemvelo KZN Wildlife, pp43. The Draft EIA Report was robust as there is sufficient secondary data available to assess the impacts of project activities on the marine and</p>

				<p>coastal ecology and MPAS. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report. In addition to the secondary data, primary data will be collected during the pre-drilling ROV survey refer to Chapter 9 of the EIA Report for this detail), which will be conducted at the well site prior to drilling. If any vulnerable habitats are found during this survey a commitment has been made by Eni to ensure the well site is located more than 500 m from the identified location (refer to Chapter 9 of the EIA Report). The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species biodiversity in deep sea environments, (Przeslawski et al., 2012) . The result of the ROV survey will be communicated to the Competent Authority.</p>
Ros & Terrence	Giliam	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Ros & Terrence	Giliam	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of</p>

			There are just 30 exemplars and is one of the rarest fish in the world.	<p>Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Ros & Terrence	Giliam	Private	3. I am very concerned about the migration of about 130.000 whales from East Africa trough the prospected areas, towards the Cape where they breed and nurse their young.	Noted, whale migration has been taken into consideration in the IA.
Ros & Terrence	Giliam	Private	4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these are species of high conservation importance
Ros & Terrence	Giliam	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in</p>

			<p>health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Ros & Terrence	Giliam	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the</p>

				<p>environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Ros & Terrence	Giliam	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Ros & Terrence	Giliam	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on</p>

				fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience
Ros & Terrence	Giliam	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Ros & Terrence	Giliam	Private	3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression. Considering all the above I oppose the approval of such project.	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.  Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Laura	Manz	Private	I object to the approval of such exploration in particular for environmental and human related concerns: Environmental Issues: 1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).	Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.
Laura	Manz	Private	2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill.	As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.  Chapter 4 of the EIA Report explains the current understanding of



			<p>There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Laura	Manz	Private	<p>3. I am very concerned about the migration of about 130.000 whales from East Africa trough the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>
Laura	Manz	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>Noted, these species are of high conservation importance.</p>
Laura	Manz	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in</p>

			<p>health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Laura	Manz	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem</p>

				<p>due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Laura	Manz	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Laura	Manz	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the</p>

				compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
Laura	Manz	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Laura	Manz	Private	3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.	Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.  Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Michelle	Hayward	Private	I object to the approval of such exploration in particular for environmental and human related concerns: Environmental Issues: 1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).	Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'. Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.
Michelle	Hayward	Private	2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of	As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1)

			<p>the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.</p>	<p>reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Michelle	Hayward	Private	<p>3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>

Michelle	Hayward	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Michelle	Hayward	Private	6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Michelle	Hayward	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p>

				<p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Michelle	Hayward	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Michelle	Hayward	Private	<p>Human related Concerns:</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>

				<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Michelle	Hayward	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Michelle	Hayward	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Jean-Pierre	Roux	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit</p>



			compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).	of all'. Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.
Jean-Pierre	Roux	Private	2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for</p>

				coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.
Jean-Pierre	Roux	Private	3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Jean-Pierre	Roux	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Jean-Pierre	Roux	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Jean-Pierre	Roux	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound</p>

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Jean-Pierre	Roux	Private	<p>8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.</p>	<p>Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.</p>
Jean-Pierre	Roux	Private	<p>Human related Concerns:</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that</p>

				<p>no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Jean-Pierre	Roux	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Jean-Pierre	Roux	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>

Barbara	Ito	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p>
Barbara	Ito	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As</p>

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Barbara	Ito	Private	3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Barbara	Ito	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Barbara	Ito	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Barbara	Ito	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft & Li, 2017). Main source of noise are

			destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due to the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Barbara	Ito	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Barbara	Ito	Private	<p>Human related Concerns:</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the</p>

			line.	<p>Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Barbara	Ito	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Barbara	Ito	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>



Susan	Walker	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p>
Susan	Walker	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any</p>

				direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.
Susan	Walker	Private	3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Susan	Walker	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Susan	Walker	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less then 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Susan	Walker	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and	The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit

			destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due to the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Susan	Walker	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Susan	Walker	Private	Human related Concerns:  1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent</p>

			poverty and lead to more people joining the unemployment line.	<p>in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Susan	Walker	Private	2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.	Noted, desalination does not form part of the scope of this project.
Susan	Walker	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved</p>

				would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>Thank you for providing Ezemvelo KZN Wildlife<sup>1</sup> (Ezemvelo) with a copy of the Draft Environmental Impact Assessment Report (DEIAR) for review and comment. Ezemvelo would like to thank both Environmental Resources Management (ERM) and Eni South Africa BV (Eni) for meeting with Ezemvelo on 10 October 2018 to discuss and clarify some of the issues and concerns Ezemvelo has with respect to this application. This clarification, was unfortunately not sufficient for Ezemvelo to revise its overriding concern that the proposed exploration drilling poses a serious and credible threat to marine biodiversity.</p> <p>It is the professional opinion of Ezemvelo's marine specialists, as well as a number of external specialists who were requested to provide a second opinion, that the assessment of the potential impacts of the proposed activity is founded on unsupported inferences and limited information and knowledge of the bio-physical characteristics of the exploration area together with the physical oceanography of this deep ocean ecosystem. Furthermore, it was discovered that the DEIAR contains, and hence its conclusions are reliant on, outdated and incorrect information. Examples of these observations are discussed in brief in Appendix A. Throughout the DEIAR, the seriousness of impacts and risks that offshore exploration drilling poses to the KwaZulu-Natal marine and coastal environment are under-rated. A number of these shortfalls, which serve as an example and hence may not be a complete list, of the DEIAR have been highlighted below in Appendix A. As stated in the meeting of 10 October 2018, Ezemvelo stands firm on the requirement that applications, particularly those that involve activities that may pose a significant risk to biodiversity, must be complete and be of sufficient detail for an informed decision to be made.</p>	<p>Your appreciation of the clarification meeting is noted. A record of this meeting is attached to the EIA Report in Annex C.</p> <p>The following specialist studies (refer to Annex D of the EIA Report) were undertaken by independent experts in their fields:</p> <ul style="list-style-type: none"> <li>• Marine Fauna – an assessment of the proposed Projects' impact to marine fauna (e.g. whales, turtles, seabirds etc).</li> <li>• Fishing – an assessment of the proposed Projects' impact on fishing activities in the area.</li> <li>• Oil spill– modelling to identify the predicted dispersion of oil in an unplanned event.</li> <li>• Dispersion modelling – a dispersion simulation of drill cuttings during drilling activities.</li> <li>• Cultural heritage analysis.</li> </ul> <p>The marine specialist's (Annex D1) description of the natural baseline environment in the Project Area was based on a review and collation of existing information and data from the scientific literature, internal reports and the Generic EMPr compiled for oil and gas exploration in South Africa (CCA &amp; CMS 2001). The information for the identification of potential impacts of well-drilling activities on the benthic marine environment was drawn from various scientific publications, the Generic EMPr (CCA &amp; CMS 2001), previous specialist reports on well-drilling (Atkinson 2010; Atkinson &amp; Shipton 2010). The sources consulted are listed in the Reference chapter of Annex D1. It is therefore the professional opinion of ERM that the data and information used in the EIA is correct and based on best scientifically available information. There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle, if the presence of sensitive species (e.g. deep water corals) could not be confirmed, they have been indicated as 'unknown presence' but were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on these receptors were assessed in Chapter 7 of the EIA Report.</p> <p>Secondly, the drillsite environment will be surveyed prior to start the drilling activities with a ROV (Remotely Operated Vehicle) and if any sensitive receptors (e.g. deep water corals and other benthic sensitive invertebrates) are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat</p>

				<p>(refer to Chapter 9 of the EIA Report for this detail). The ROV pre-survey and possible change in location due to the presence of sensitive receptors, would subsequently be reported to the Authorities. Chapter 5 of NEMA, as amended, outlines the general objectives and implementation of Integrated Environmental Management. This provides a framework for the integration of environmental issues into the planning, design, decision-making and implementation of plans and development proposals that are likely to have a detrimental effect on the environment. Whilst Section 23 sets out the basic objectives and principles of the IEM procedure, Section 24 sets out how these objectives and principles are to be accomplished. Section 24(1) of NEMA requires that the environmental impacts of a listed activity must be considered, investigated, assessed and reported on to the competent authority tasked with making a decision on environmental authorisation. Therefore, once an application for environmental authorisation has been made, an environmental impact assessment process must be undertaken. An environmental impact assessment is meant to provide competent authorities with all relevant information on the environmental impacts of the proposed activity. Section 240(1) of NEMA obliges competent authorities to take account of all relevant factors in deciding on an application for environmental authorisation, including any pollution, environmental impacts or environmental degradation likely to be caused if the application is approved or refused. There is material compliance with the mandatory preconditions of Section 240(1) of NEMA which requires the consideration of all relevant factors when deciding on an environmental authorisation, as the EIA Report and attached EMPr detail the applicable (and in some cases, worst case) potential impacts associated with the proposed exploration drilling project.</p> <p>With specific reference to the findings of Justice Murphy in Earthlife Africa Johannesburg v Minister of Environmental Affairs [2017] All SA 519 (GP) case; the decision stated that “Section 240(1) of NEMA is to be read with the relevant provisions of the Regulations, which prescribe what must be contained in an environmental impact assessment report. Regulation 31(2) provides that the environmental impact assessment report must contain all information that is necessary for the competent authority to consider the application and to reach a decision. The relevant information includes a description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity and a description of identified potential alternatives to the proposed activity with regard to the activity's advantages and disadvantages.[11] Regulation 31(2)(k) requires the report also to include a description of all environmental issues identified</p>
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				<p>during the assessment process and an indication of the extent to which the issues could be addressed by the adoption of mitigation measures. The report furthermore must address each identified potentially significant impact, including: (i) cumulative impacts; (ii) the nature of the impact; (iii) the extent and duration of the impact; (iv) the probability of the impact occurring; (v) the degree to which the impact can be reversed; (vi) the degree to which the impact may cause irreplaceable loss of resources; and (vii) the degree to which the impact can be mitigated.[12] Regulation 34(2)(b) obliges the competent authority to reject the environmental impact assessment report if it does not substantially comply with the requirements in regulation 31(2).” This case refers to an environmental authorisation that was granted for a coal fired power station in the Limpopo Province, where the climate change impacts were not assessed. It must be noted that different activities may have specific impacts, based on the process and nature of the project. It goes without saying, that a project that involves processing activities and the subsequent release of large- scale emissions must consider the potential climate-change impacts. This case therefore does not relate to this exploration EIA as all of the potential impacts associated with the proposed project activities have been considered in the Scoping and EIA Reports and addressed based on the best available solutions available (as required).</p> <p>To imply that the impacts on marine biodiversity has not been assessed is incorrect , as Chapter 7 of the EIA Report details the potential marine impacts and Chapter 9 of the EIA Report clearly outlines Eni’s commitment to re-locating the wellsite 500m away from any vulnerable habitat identified during the ROV survey that will be conducted prior to drilling.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>Here the Applicant is not only referred back to the provisions of Chapter 5 of National Environmental Management Act 107 of 1998, but also is referred to the findings of Justice Murphy in Earth life Africa Johannesburg v Minister of Environmental Affairs [2017] 2 All SA 519 (GP).</p> <p>This application, as it stands, does not allow for informed and defensible decision making.</p>	<p>Chapter 5 of NEMA, as amended, outlines the general objectives and implementation of Integrated Environmental Management. This provides a framework for the integration of environmental issues into the planning, design, decision-making and implementation of plans and development proposals that are likely to have a detrimental effect on the environment. Whilst Section 23 sets out the basic objectives and principles of the IEM procedure, Section 24 sets out how these objectives and principles are to be accomplished. Section 24(1) of NEMA requires that the environmental impacts of a listed activity must be considered, investigated, assessed and reported on to the competent authority tasked with making a decision on environmental authorisation. Therefore, once an application for environmental authorisation has been made, an environmental impact assessment process must be undertaken. An environmental impact assessment is meant to provide</p>

				competent authorities with all relevant information on the environmental impacts of the proposed activity. Section 240(1) of NEMA obliges competent authorities to take account of all relevant factors in deciding on an application for environmental authorisation, including any pollution, environmental impacts or environmental degradation likely to be caused if the application is approved or refused. There is material compliance with the mandatory preconditions of Section 240(1) of NEMA which requires the consideration of all relevant factors when deciding on an environmental authorisation, as the EIA Report and attached EMPr detail the applicable (and in some cases, worst case) potential impacts associated with the proposed exploration drilling project.
Jennifer	Olbers	Ezemvelo KZN Wildlife		With specific reference to the findings of Justice Murphy in Earth life Africa Johannesburg v Minister of Environmental Affairs [2017] All SA 519 (GP) case; the decision stated that "Section 240(1) of NEMA is to be read with the relevant provisions of the Regulations, which prescribe what must be contained in an environmental impact assessment report. Regulation 31(2) provides that the environmental impact assessment report must contain all information that is necessary for the competent authority to consider the application and to reach a decision. The relevant information includes a description of the environment that may be affected by the activity and the manner in which the physical, biological, social, economic and cultural aspects of the environment may be affected by the proposed activity and a description of identified potential alternatives to the proposed activity with regard to the activity's advantages and disadvantages.[11] Regulation 31(2)(k) requires the report also to include a description of all environmental issues identified during the assessment process and an indication of the extent to which the issues could be addressed by the adoption of mitigation measures. The report furthermore must address each identified potentially significant impact, including: (i) cumulative impacts; (ii) the nature of the impact; (iii) the extent and duration of the impact; (iv) the probability of the impact occurring; (v) the degree to which the impact can be reversed; (vi) the degree to which the impact may cause irreplaceable loss of resources; and (vii) the degree to which the impact can be mitigated.[12] Regulation 34(2)(b) obliges the competent authority to reject the environmental impact assessment report if it does not substantially comply with the requirements in regulation 31(2)." This case refers to an environmental authorisation that was granted for a coal fired power station in the Limpopo Province, where the climate change impacts were not assessed. It must be noted that different activities may have specific impacts, based on the process and nature of the project. It goes without saying, that a project that involves processing activities and the subsequent release of large- scale emissions must consider the



				<p>potential climate-change impacts. This case therefore does not relate to this exploration EIA as all of the potential impacts associated with the proposed project activities have been considered in the Scoping and EIA Reports and addressed based on the best available solutions available (as required). To imply that the impacts on marine biodiversity has not been assessed is incorrect , as Chapter 7 of the EIA Report details the potential marine impacts and Chapter 9 of the EIA Report clearly outlines Eni's commitment to re-locating the drillship 500m away from any vulnerable habitat identified during the ROV survey that will be conducted prior to drilling.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p><b>RECOMENDATION</b></p> <p>Given the above, it is Ezemvelo's sincere recommendation that this DEIAR be substantially revised for re-evaluation by Ezemvelo and prior to its submission to the Petroleum Agency of South Africa (PASA) and the Department of Mineral Resources (DMR).</p> <p>Please do not hesitate to contact us should you require further information or guidance in terms of the required additional studies. Ezemvelo requests the opportunity to review and comment on the Terms of Reference for the additional studies / specialist investigations.</p> <p>That Eni undertook at the meeting of 10 October 2018 to collaborate with Ezemvelo with respect to baseline surveys was welcomed. Ezemvelo would like to work closely with both ERM and Eni going forward and will naturally share and or direct ERM to information that could be used to fill the various information gaps.</p>	<p>Noted. However, the EIA Report has sufficient detail for an informed decision to be made as it is based on detailed secondary data from multiple specialist studies and scientific research by the EIA team. As there is sufficient detail for an informed decision to be made, ERM is of the view that no additional specialist studies that are required in terms of NEMA. Further, ERM notes that the EIA Report implemented the Plan of Study that was included in the Final Scoping Report, which was approved PASA. PASA was satisfied that the Final Scoping Report and Plan of Study comply with NEMA.</p> <p>As stated above the following specialist studies (refer to Annex D of the EIA Report) were undertaken by independent experts in their fields:</p> <ul style="list-style-type: none"> <li>• Marine Baseline: Description of the physical and biological environment that includes marine ecology, which underpins the assessment of the proposed Projects' impact to marine sensitive receptors such as whales, turtles, seabirds etc.</li> <li>• Fishing – an assessment of the proposed Projects' impact on fishing activities in the area.</li> <li>• Oil spill– modelling to identify the predicted dispersion of oil in an unplanned event.</li> <li>• Dispersion modelling – a dispersion simulation of drill cuttings during drilling activities.</li> <li>• Cultural heritage analysis.</li> </ul> <p>As per meeting of 10 October 2018, Eni confirmed its capability to perform a pre-drilling survey applying new technologies (such as Cleansea) to support the data collection and is available to further collaborate with Ezemvelo.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p><b>APPENDIX A</b></p> <p><b>SOME KEY SHORT FALLS OF THE DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT</b></p> <p>Below, in brief, are some examples of the key shortfalls of the DEIAR, as noted by Ezemvelo.</p>	<p>The baseline chapter (Chapter 4) of the EIA Report and the specialist studies (Annex D) provide a summary of the detailed secondary data that is available in the Project Area. The northern area of interest for well drilling comprises Southwest Indian Upper and Lower Bathyal benthic habitats, whereas Southern Indian Lower Bathyal benthic habitat</p>

			<p>1. No in situ Baseline investigation has been undertaken as part of the DEIAR</p> <p>There is currently no information / knowledge of the deep offshore marine environment and therefore what exploration drilling could potentially impact upon in terms of biodiversity within block ER236.</p> <p>It is understood that Eni has access to an innovative robotic system making possible the execution of asset integrity and environmental monitoring tasks around oil &amp; gas installations by means of a commercial Autonomous Underwater Vehicle (AUV) as part of their CLEAN SEA (Continuous Long-term Environmental and Asset integrity monitoring at SEA) project. Eni have advised that they are required to wait for environmental approval before planning activities commence and hence before this AUV technology will be used to optimize pre-drilling survey acquisition to gain useful environmental data around the anticipated well location. While it is expected that the use of this technology is expensive, which is likely the reason for Eni wanting to secure exploration rights before undertaking a deep shore survey, this is contrary to the intention and purpose of the EIA process. Baselines studies are required as part of the EIA and to allow for informed and defensible decision making.</p>	<p>dominates in the southern area of interest (Figure 4.4). Both have been assigned an ecosystem threat status of 'least threatened' in the SANBI 2011 National Biodiversity Assessment (Sink et al., 2011) reflecting the great extent of these habitats within the South African Exclusive Economic Zone (EEZ) (Figure 4.5).</p> <p>In addition to the secondary data, primary data will be collected during the pre-drilling ROV survey, which will be conducted at the well site prior to drilling. If any vulnerable habitats are found during this survey a commitment has been made by Eni to ensure the well site is located more than 500 m from the identified location (refer to Chapter 9 of the EIA Report). The benefit of ROV video survey is that images of mobile species and seabed epifauna will be captured for identification by deepwater marine ecology experts. In addition the ROV will capture, if present, evidence of organisms feeding, burrowing, crawling or resting in or on soft sediment as they leave traces of their activities. These bioturbations are now considered useful as a proxy for species biodiversity in deep sea environments, (Przeslawski et al., 2012) .</p> <p>The opportunity to use innovative technology (Eni hybrid ROV-AUV Cleansea device) will provide additional data on the marine environment prior of beginning of drilling operations. However and as stated above, the EIA Report has sufficient detail for an informed decision to be made as it is based on detailed secondary data from multiple specialist studies and scientific research collected by the EIA team to undertake the assessment in terms of NEMA Regulations. There is no formal requirement within NEMA or the EIA Regulations for an in situ baseline investigation to be conducted where secondary data sources are able to provide sufficient information for the regulator to make an informed decision as to the application for environmental authorisation.</p> <p>ENI and ERM note that the acquisition of seismic data licenced through Multiclient agreements and its interpretation are of a competitive and commercially sensitive nature, not only between operators but also on a regional and global scale between territories. The interpreted data is the intellectual property of Eni and allows Eni to identify potential leads and prospects. Based on the interpreted results, drilling areas of interest have been identified and have been made available to the public for informed decision making with regards to location in the local and regional context. The provision of interpreted seismic data is beyond the scope of the EIA process. The EIA framework provides the platform for informed public participation, related to the proposed activities and the identification of associated biophysical and socio economic impacts, with</p>
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				<p>mitigation measures provided in the Environmental Management Programme (EMPr), in addition to Eni's internal compliance and control measures.</p> <p>As such, and in light of the data that has been made available, ENI and ERM are of the view that the confidential seismic data licenced by ENI is not required for the stakeholder to exercise his constitutional right nor is it required for the stakeholder to reach an informed conclusion as to the EIA process.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>2. Risk of oil spillage not adequately evaluated and reported on in the DEIAR</p> <p>It is acknowledged that Eni is a world leader in subsea drilling and have safely drilled across 20 different offshore environments, which allegedly present their own unique challenges. Notwithstanding this acknowledgement, it is deemed improper to use the previous track record and bona fides of Eni (the applicant who naturally has a vested interest in exploration drilling rights being granted) as a means to instil confidence and satisfy concerns pertaining to risk of oil spillage. While a good track record is naturally important, detailed, factual information pertaining to the likely risks of oil spillage occurring as a result of exploration drilling within Block ER236 needs to be presented and preferably peer reviewed by an independent, suitably qualified and experienced specialist.</p> <p>Eni have never worked in the Agulhas Current before, which is regarded as the strongest western boundary current in the world. The current is intense and is characterized by strong velocity currents.</p>	<p>Chapter 8 of the EIA Report and supporting oil spill modelling report (Annex D4) evaluated the risk of an oil spill from a blowout based on the OGP Risk Assessment Data Directory, Report No. 434-2, March 2010. The oil spill modelling report was reviewed by an independent, experienced and qualified specialist and evidence of this review is contained in Annex D6.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations.</p> <p>To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency.</p> <p>All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p>

				<p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date.</p>
			<p>3. The Oil Spill modelling undertaken as part of the DEIAR has serious limitations</p> <p>An independent review<sup>3</sup> of the oil spill modelling report was undertaken by a KwaZulu-Natal based specialist with knowledge of the oceanographic and meteorological conditions off the KwaZulu-Natal coast. In the specialist review report, a number of issues were highlighted which are of serious concern given the dynamics of the Agulhas current. These include: i) the model does not use local content or variability to verify the outputs of the modelling thus the scientific interpretation of the outputs are flawed; ii) there is reference to hydrocarbons naturally degrading and evaporating over time, but 'time' is undefined, making the scale of effect potentially catastrophic or minuscule; iii) there is no reference or consideration of the surface-wind response of any spills, and it is known that oil moves at 2-3% of the wind speed<sup>4</sup>; iv) there is no mention of the Natal Pulse, which is pertinent oceanographic feature, in which its presence can be further exacerbated by the onshore winds, causing very dynamic conditions and scenarios; v) retention of hydrocarbons within the KZN Bight and the potential impacts to the uThukela Marine Protected Area have not been considered; vi) if hydrocarbons are entrained into the Port St</p>	<p>i. The team responsible for the global HYCOM model are familiar with ocean currents from around with the world. As stated in the above question, additional resolution of currents closer to the coastline in the nearshore environment were not included by HYCOM, but were supplemented using COSIM's nearshore model, which uses coastal slopes, and wave data (angle of approach, wave height and frequency) for computation of longshore currents and orbital velocities in the littoral zone. The inclusion of this model did little for the majority of the spill transport from the well location until less than a kilometre off the coastline.</p> <p>ii. The rates of weathering of the oil over time (evaporation and degradation in addition to the spreading, emulsification, and dilution) cannot simply be "defined" as a single value as they are variable rates. The scale of the effects are provided in the reported model output. Some components of the oil weather away at faster rates than others. For example, a simple compound such as a monoaromatic like toluene can evaporate within 24-hours, while a complex aliphatic such as dodecane may persist in the environment for days or weeks as it breaks into simpler forms, ultimately reaching building-block compounds such as carbon dioxide and water. The total oil volume spilled is described as percentages of each of these chemical groups and tracked separately. The outcome of applying these rates is provided in the model output by how far the oil is able to travel before reducing to levels below the</p>

			<p>Johns Eddy, this gives a high probability of oil reaching the coastline in the Eastern Cape. The oil spill modelling report does not sufficiently take the mesoscale cyclonic circulations into account.</p>	<p>various thresholds of concern for oil thickness on the water surface, or dissolved toxicity in the water column.</p> <p>iii. The model accounts for wind influenced drift effects on the oil movement in that range (typically 2-3 %) using the gridded spatially varying NOAA Blended Seawind data and automatically computed by the model as a separate shearing force added to the current vectors from HYCOM and random vectors from dispersion.</p> <p>iv. Regarding Natal Pulses and their related mesoscale cyclonic meanders. The HYCOM model used does take them into account as the reanalysis product used for this study includes assimilation of measured data which has made the simulations more robust. While Backenberger, et al. noted in a 2008 report that in the study area on the east coast of South Africa, "HYCOM reproduces the general circulation pattern with the regional characteristic spatial and temporal variability reasonably well" although commented that the model was limited in its representation of the train of eddies related to Natal Pulses. However, apparently this was previous to the reanalysis product since, the publicly available HYCOM model used in this analysis does simulate the chains of eddies associated with Natal Pulses along the channel (albeit not at the highly refined precision Backenberger et al. provided in their own hydrodynamic model which is not available publicly).</p> <p>v. Chapter 8 of the EIA Report and the marine specialist study (Annex D1) assess the impact of an oil spill on species present in MPAs.</p> <p>vi. The HYCOM model used does take them into account as the reanalysis product used for this study includes assimilation of measured data which has made the simulations more robust. The effect of these mesoscale cyclonic circulations are a part of the study. The study is probabilistic in nature, such that the frequency of an episodic event, like a spill being caught in the Port St Johns Eddy, is considered through many model iterations and quantified to determine whether or not such an event is considered "highly probable" or not.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>4. Risks to marine species in the event of an oil spillage not properly assessed</p> <p>The Impact Assessment Section in the Marine Specialist Report rates the risks to be Negligible to Minor in most cases but ignores any cumulative ecosystem effects, including potential disruption of food webs, life histories or behaviours. The cascading effect of having multiple species within an area disturbed or impacted upon, can have accumulated consequences to multiple ecosystems and species, which are ignored.</p> <p>The exclusion of zooplankton from the Marine Specialist Report and the Oil Spill dispersion modelling report (on the</p>	<p>As described in the Draft EIA Report, the consequence of an oil spill was assessed as Moderate and the likelihood of the spill occurring was ranked as Low, and therefore risk to plankton was assessed as Minor. A new table has been added to the Marine Ecology Study specifically for plankton (Annex D1).</p> <p>The Marine Ecology Study (Annex D1) described the plankton abundance as seasonally highly variable and patchy in the Project Area. This is due to the fact that phytoplankton are drifting microscopic marine algae that live in the surface layers of the ocean called the epipelagic zone and are not strong enough to swim against ocean currents. Zooplankton comprise small crustaceans and other animals that have a</p>

			<p>basis that in comparison to other areas within the South African EEZ, zooplankton concentrations in Block ER236 is relatively low), is a serious and significant omission, rendering the assessment rating on marine species incomplete / flawed. Despite zooplankton concentrations being known to be relatively low in the study area, zooplankton remains the greatest faunal group to be impacted upon in terms of biomass. Impact on zooplankton will have a cascading impact on the entire marine system.</p>	<p>weak ability to swim but generally float with ocean currents. They feed on other phytoplankton and larvae. This means that the spill is unlikely to have a long –term effect as the dynamic nature of the currents the area means that plankton populations will continue to be brought into the Project Area and therefore any loss of plankton from a spill is unlikely to have ecosystem-wide effects.</p> <p>The probability of surface oiling &lt;60% in the long-shore footprint is highly patchy, as is the distribution of plankton. Concurrence of plankton patches and slicks would thus be highly localised and unlikely to significantly affect recruitment of any particular species. Using ERMs assessment methodology risks elevating the risk significant above Minor would not be justified.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>5. Inaccurate conservation status of species recorded The tables within the Marine Specialist report which list the protection status of various species has many inaccuracies. It is recommended these are updated to give a better reflection of the severity of the threats on marine species. In addition, some groups, have generic paragraphs highlighting that they are protected under the Marine Living Resources Act, however this is no longer the Act under which marine protected species are being protected. In 2017, the Marine Threatened or Protected Species regulations were gazetted under National Environmental Management: Biodiversity Act, and the species listed. It is requested that the protection status of each of these are highlighted in the report, and best placed in the table with the IUCN listings. We suggest three columns: i) Global IUCN status, ii) Regional IUCN status and iii) National Protection status.</p>	<p>Noted. The Marine Ecology Report in Annex D1 has been updated together with the EIA Report.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>6. Postulated Recovery Rates lack scientific rigour The DEIAR highlights that recovery is likely to be rapid in some cases. These statements are, however, made with reference to studies of oil platforms within cooler waters such as the North Sea and Alaska. The subtropical and warm-temperate waters of KwaZulu-Natal are starkly different in terms of recolonization abilities, and it is likely that this would also be the case in Kwa-Zulu Natal's deep water environments. The literature acknowledges that biological systems in deep-water operate at a notably slower pace than in shallow waters<sup>5</sup>. Many deep-sea species typically have low metabolic rates, slow growth rates, late maturity, low levels of recruitment, and long life spans<sup>6</sup>. In addition, many deep-sea</p>	<p>Temperature is relatively stable in the deep ocean globally, typically about 5° C at 1,000 meters depth cooling further in deeper depths (0-3°). Macrobenthos are slower growing in deepwater than in warmer seas due to the temperature. Despite the surface temperatures in the Agulhas current being relatively high, at the depths at which drilling (and associated impacts on deep water macrofauna) will occur, temperatures are likely to be very much lower and therefore recovery slower. Jones et al (2012) studied the recovery of megabenthic (&gt;1mm) assemblages from physical disturbance at the Laggan deep-water hydrocarbon drilling site in the Faroe–Shetland Channel using remotely operated vehicle quantitative video survey. The study indicated that deep-water megafaunal density and diversity recovers partially from drilling disturbance after 3 yr and increased after 10 years. Megafauna may recover more slowly than the more commonly studied smaller</p>

			<p>habitats harbour diverse faunal assemblages that are composed of a relatively large proportion and number of rare species but at low abundances<sup>7</sup>. In most deep-sea ecosystems, recovery can be very slow<sup>8,9</sup>, making deep-sea species and assemblages particularly sensitive to anthropogenic impacts, with low resilience to disturbances from human activities<sup>10,11,12</sup>. The assumption that impacts will persist over the short term seems unjustified and considering we have no real knowledge of the fauna and flora at that depth or their actual distribution, the majority of these ratings are highly speculative. With reference to “reversibility”, the following statement is questioned: “Dissolved aromatic concentrations may, however, persist in the top few meters of the water column beneath the slick for a number of days, potentially resulting in acute toxicological effects in marine fauna coming in contact with the slick for extended periods. Should they occur, impacts would be partially (seabirds) or fully reversible (benthic macrofauna, fish and larvae and marine mammals and turtles)”. In the case of seabirds, turtles and marine mammals, if these animals are not located, captured, treated and released, the impacts are not reversible in any way. In addition, once these animals are released, tracking them is costly and would most likely not occur. The assessment seemingly does not take into account those animals which may die before rescue and rehabilitation occurs. Offshore searches for affected fauna in such a vast area would be low on the list of priorities in an emergency. This section needs to be better researched and reported on.</p>	<p>macrobenthic infauna (1mm-500 µm). More rapid recovery will take place in shallower, warmer environments. ERM has reviewed the Specialist study and has determined that the assessment of recovery for deepwater benthic fauna should be changed to long term. Chapter 7 of the EIA Report has been changed to reflect this.</p> <p>Wells will be drilled in unconsolidated sediments and away from sensitive hard substrata hosting long-lived sensitive species. Literature suggests that recovery of macrofauna in unconsolidated sediments occurs within 5 years (which by ERM's definition is short-term). Medium to long-term effects on vulnerable seabed communities were identified in Section 4.3.3 of the Marine Ecology Report (Annex D1).</p> <p>Applying Significance ratings to habitats and species for which very little information exists is by default speculative. But these ratings are based on the experience of the specialist and the precautionary principle is applied. The assessment tables give all of the reversibilities as 'partially reversible'.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>7. Failure to adequately assess impacts on a species of high conservation importance</p> <p>The knowledge we have on coelacanth life-history is minimal and any assumption on their well-being and distribution based on current depth records is unfounded. New depth and distribution records of well-known and abundant species are being reported on a daily basis and the current lack of knowledge on coelacanths leaves these assumptions invalid. In addition, there is concern that the statement on their sensitivity to hydrocarbons as ‘unknown’ is an attempt to down-play the seriousness of any potential impact. As with most marine life, hydrocarbons present a serious risk<sup>13</sup>, which cannot be under-rated or ignored.</p>	<p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 to 140 m in the canyons. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of ‘unknown sensitivity’ was to highlight the information gaps, not to down play the effects.</p>

				<p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g. coelacanths) could not be confirmed, they were indicated as “presence unknown” but assessed as being ‘present’ and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons). As discussed in Chapter 8, surface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>8. Oil Spill Contingency Plan</p> <p>In terms of the South African Maritime Safety Authority Act 5 of 1998, Section 52 delegates the responsibility for combating pollution of the sea and shoreline by oil to the Minister of Environmental Affairs (DEA). The implication of this is that the DEA is responsible for protection and clean-up measures to be taken once oil has been released into the sea, while SAMSA’s responsibilities are limited to those actions required while the oil is within the confines of the ship.</p> <p>With this said, it is understood that the National Oil Spill Contingency Plan (NOSCP) is incomplete and has not been subjected to the necessary scrutiny by provincial departments, organs of state, relevant national departments or public scrutiny.</p> <p>Offshore oil and gas development is high risk and environmental protection should be of utmost importance. Therefore it is unreasonable for any offshore development to take place without the required measures in place, and the relevant departments being privy to their roles and responsibilities, which could potentially be enormous. In the case of an accident, within the Agulhas Current, any pollutant will affect adjacent provinces, therefore the Oil Spill Contingency Plan should include multiple provinces and national departments, hence a NOSCP is required.</p> <p>In the DEIAR, there is an allowance for ENI/Sasol to develop a Contingency plan in the absence of the NOSCP: “Prior to drilling, an Oil Spill Contingency Plan will be required to be submitted to SAMSA for approval and issuance of a certificate.</p>	<p>The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa’s waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organisation (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardised national approach towards managing oil spills in the South African coastline.</p> <p>The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The Incident Command is responsible for maintaining a strategic perspective, to determine the potential impacts that may result from the incident, and establish the overall incident strategy and provide clear direction for the response.</p>



			<p>Both PASA and the DEA will be required to comment on the OSCP prior to issuing of the certificate by SAMSA. It is imperative for Ezemvelo to be given the opportunity to provide comment on the current draft OSCP. Thereafter, the final OSCP, ratified by DEA and PASA, should be made available in the Final EIA, being subjected to public review.</p> <p>The inclusion of the chemical properties and expected toxicological effects of the anticipated dispersants to be used in the event of a spill would presumably be outlined in the OSCP. Given the serious health risks to both humans and marine life of dispersants<sup>14,15</sup>, it is essential that attention is afforded to these issues and should also form part of the DEIAR.</p>	<p>Incident Command establishes the objectives of the response, and ensures that all functional areas work to accomplish these objectives through the Incident Action Plan. The IMS organisation structure was endorsed by the Oceans Economy Ministerial Management Committee on 25 October 2016.</p> <p>The IMOrg has made tremendous advancements in the development of a National Oil Spill Contingency Plan (NOSCP). Eni has actively participated as an industry member in the IMOrg workshops and the OSCP will be developed in line with the NOSCP to ensure a streamlined approach to responsive efforts with the Incident Command. Further to this, specific guidelines have been developed for current and prospective right holders in South Africa to develop Emergency Management Oil Spill Contingency Plans.</p> <p>Eni will develop its own Oil Spill Contingency Plan (OSCP) developed in terms of the Nationally adopted Incident Management System for spills and the NOSCP</p> <p>The OSCP shall be developed in consultation with the South African Maritime Safety Authority (SAMSA). The OSCP prepared by Eni will be submitted to SAMSA for review. SAMSA will review and approve the OSCP. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>Related to the dispersants, their composition and available quantities will be specified in the OSCP in the list of emergency, containment and response equipment and products. Their chemical composition will be duly specified in the OSCP with the inclusion of the Material Safety Data Sheets that include also information on toxicological properties.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>9. Readiness for stranded, injured or oiled marine animals</p> <p>The EMP<sub>r</sub> highlights that any injured sea birds which are found on the vessel as a result of collision or other operation will be 'humanly euthanised on board' (Table 9.8: section 18). No detail is provided as to what methods are traditionally used to carry out euthanasia and whether euthanasia presents a last resort option or the only option. Given the use of helicopters between the shore and vessel on a daily basis, reasons for euthanasia are questioned as to why are these animals not afforded the chance to be rehabilitated or even transported back to land to be attended to by a veterinarian? Although KwaZulu-Natal has an active Animal Stranding Network, coordinated by Ezemvelo, that is recognised as having a high standard of operation (the expertise among the people on this Network is probably the most skilled set of</p>	<p>Noted</p> <p>We have amended the text to allow, where feasible, return to seabirds to shore.</p> <p>Table 9.8 in Chapter 9 Environmental Management Plan Programme states the following : "ensure that there is adequate protection and indemnity insurance cover for oil pollution incidents".</p> <p>A National Oiled Wildlife Preparedness &amp; Response Plan (NOWCP) is currently being developed and includes all South African Territorial Seas including offshore islands and territories, South Africa's Exclusive Economic Zone (EEZ), and the High Seas, where an oil spill has the potential to impact on South African interests. The NOWCP aims to promote the planned and nationally coordinated response to any marine oil spill affecting wildlife, to:</p> <ul style="list-style-type: none"> <li>• Protect the welfare of wildlife threatened or impacted by oil</li> </ul>

			<p>marine animal expertise in South Africa), the group is small and comprised of a collaboration of willing organisations and volunteers who undertake rescues and rehabilitation initiatives of marine species throughout the province. The equipment used is scant and spread thinly along the coastline. The Network deals with less than 100 animals per year. If an accident or any other detrimental operation in the vicinity of the drill ship were to occur, this group are not equipped to deal with a high load of animals within the province. The DEIAR, OSCP plan and EMPr needs to demonstrate that sufficient funds have been specifically ring fenced by Eni to provide financial provision in the event of an inadvertent oil spillage.</p>	<ul style="list-style-type: none"> <li>• Assist with co-ordination of field assessments of threatened or impacted wildlife, if necessary</li> <li>• Assist, if necessary, to prevent or minimize exposure of wildlife to oil by undertaking:</li> <li>• Activities to deter wildlife from oiled habitats;</li> <li>• Pre-emptive capture of wildlife as appropriate.</li> <li>• Establish a system for stabilization, cleaning and rehabilitation of impacted wildlife.</li> <li>• Release back into their native habitats, animals who will be healthy and contributing members of their wild populations</li> <li>• Remove dead oiled wildlife from the food chain</li> <li>• Dispose of dead oiled wildlife appropriately.</li> </ul> <p>The NOWCP will mainly cover species most at risk from oil spills, such as seabirds, pinnipeds and sea turtles, amongst others. The Department of Environmental Affairs (DEA) will be the responsible department to coordinate response actions concerning the protection and rehabilitation of oiled marine wildlife. The NOWCP will describe the responsibilities and capabilities of the Oiled Wildlife Response Working Group during an oil spill where each organisation's roles &amp; responsibilities to protect, rescue and rehabilitate marine wildlife will be outlined.</p> <p>Further to this, Eni will specifically develop its own Oiled Wildlife Response Plan as part of its OSCP. Eni intend to work closely with organisations such as SANCCOB in the development, planning of response strategies and through service agreements during operations to ensure adequate resources and appropriate response and rehabilitation strategies are place for wildlife. SANCCOB is an internationally recognised leader in oiled wildlife response and rehabilitation. In the past 4 years, SANCCOB has rehabilitated approximately 10,000 seabirds, with annual figures ranging from 2,100 to 2,500 individuals.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>10. The DEIAR makes no mention of post drilling monitoring In the description of the decommissioning and abandonment phase the following is stipulated "a final seabed and wellhead inspection will be performed with an ROV and finally the drillship and support vessels will depart the area". It is of serious concern that no mention is made of post-drilling environmental monitoring. If the exploration wells are abandoned and no production wells are expected to be drilled, environmental monitoring should be undertaken at various intervals, as with all developments which cause environmental damage. Recovery, at varying degrees have been assumed</p>	<p>Long-term (hundreds, thousands years, theoretically more) corrosion and natural erosion of wellheads left at the seabed won't affect the integrity of the sealing of the well.</p> <p>In fact the presence or the removal of the wellhead at the seabed is immaterial to the integrity and longevity of the seal inside plugged and abandoned wells, i.e. the well head is not part of the abandoned system.</p> <p>Eni follows plugging and abandoning procedures based on the principle of multiple barriers from a possible flow zone and surface. This means that plug and abandon operations are specifically executed with redundancy barriers to guarantee a permanent seal of the well; cement</p>

			<p>throughout the DEIAR but no monitoring to prove or confirm this has been proposed. Therefore recovery or lack thereof cannot be determined and the lack of data will continue to limit our ability to comment on further exploration projects which are proposed. Monitoring after the exploration drilling is essential to understand, recovery in our deep ocean ecosystems after these types of projects and will assist all parties in future developments of this nature.</p> <p>It is therefore recommended that ENI/Sasol include in their Financial Provision document (Annex E) a budget to undertake environmental monitoring for at least a 10-year programme, with monitoring being undertaken four times per year for the first two years after decommissioning, then twice a year (winter and summer) for a further three years, and then annually for the remaining five years. In addition, it remains unclear who is responsible if a plug leaks or the wellhead becomes unstable, over the long term, i.e. in 50-years from now, who is responsible for repairing, re-plugging or any other environmental rehabilitation? This is important information that needs to be included in both the DEIAR and EMP.</p>	<p>plugs and cemented casing constructed in the hole are extremely effective to guarantee the integrity of the seal and are configured so that no future intervention is required. This is international best practise and is demonstrated around the world in plug and abandon procedures, without the requirement for further monitoring. Eni follows P&amp;A procedures in compliance with Industry Best Practices, which include API-RP-96 (American regulation), OGUK-OP006 (UK regulation) and NORSOK D-010 (Norwegian Regulation), all of which are applied in fields where Eni is operators (e.g. UK, North Sea, GOM, Mediterranean sea, Far and middle East, Australia and West Africa).</p> <p>Cement plugs are tested and the results of such tests will be included in final well report to be submitted to Authority. Prior to leaving the location, a final ROV (a remote operating vehicle equipped with monitoring tools and camera) survey will be conducted at the location to verify the condition of the well site, including detection of absence of leaks. The video and report of final site survey will be included in final well report and provided to the Authority.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>11. Failure to consider / include new information on the KZN Bight</p> <p>The African Journal of Marine Science published a special volume (Volume 38; 2016) on the KZN Bight, in which novel and new information was revealed of the area. The information within these papers have not been considered or cited in the DEIAR which is a serious exclusion to the oceanographic, geological and ecological information known for this area.</p>	<p>The Marine Ecology Study (Annex D1 of the EIA Report) has been updated to include relevant 2016 publications. These references have added additional data and therefore value in updating the baseline chapter of the EIA Report (Chapter 4) however, these additional data sources have not changed the outcome of the impact assessment.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>12. Invasive Species considerations downplayed</p> <p>Reference is made in the DEIAR to the high possibility of invasive species through ballast water and on equipment which has been used in other areas. According to the report, the mitigation or management measures of this is to: 'ensure all infrastructure (e.g. wellheads, BOPs and guide bases) that has been used in other regions is thoroughly cleaned before use in South Africa; and to avoid presence and spread out of invasive species by the implementation of a ballast water management plan, according to International Maritime Organization (IMO) guidelines and standards which govern the discharge of ballast waters at sea'.</p> <p>Although it is acknowledged that the probability of invasive species being introduced is relatively high, the DEIAR does not account for these structures providing stepping stones,</p>	<p>The major risk of transfer of invasive species is when species are transferred from similar environment such as depth, temperature and other factors that enable one species to potentially compete with the native species present. This has been seen in South Africa where the vectors are identified as marine fouling on ships, ballast water and from aquaculture of non-native species and South African Ports a potential source. The IMO requirements for Ballast Water Management have been established with the objective to minimise risk of transfer. The International Convention for the Control and Management of Ships' Ballast Water and Sediments require all ships to implement a Ballast Water and Sediments Management Plan. All ships will have to carry a Ballast Water Record Book and will be required to carry out ballast water management procedures to a given standard. Measures include:</p> <ul style="list-style-type: none"> <li>• Compile a Ballast Water Management Plan, which aims to ensure that</li> </ul>

			<p>through enhancing population connectivity<sup>16</sup> for both native and invasive species, which has been demonstrated for shallow-water species that may not normally be able to disperse across large expanses of open water<sup>17,18,19</sup>. The potential of this occurring in deep water has never been demonstrated and is difficult to make predictions of what the benefits or harm with this increased availability of hard structures at depth could be.</p>	<p>de- and re-ballasting is undertaken in terms of the IMO 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments.</p> <ul style="list-style-type: none"> <li>• Use adequate filtration procedures during loading in order to avoid the uptake of potentially harmful aquatic organisms, pathogens and sediment that may contain such organisms.</li> <li>• Whenever possible, conduct the exchange of ballast water at least 200 nm (<math>\pm</math> 370 km) from the nearest land and in water of at least 200 m depth. Where this is not feasible, the exchange should be as far from the nearest land as possible, and in all cases a minimum of 50 nm (<math>\pm</math> 93 km) from the nearest land and preferably in water at least 200 m in depth.</li> </ul> <p>Based on the implementation of these measures the risk was considered low and was screened out.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>13. Need and desirability - no reference to climate change and SA's agreements / obligations</p> <p>The DEIAR does not adequately address the need and desirability of offshore exploration drilling with the intention to mine oil and gas off the KwaZulu-Natal coast. While it is acknowledged that the present DEIAR is for exploration drilling, if oil and gas is located and deemed viable, a mining application will follow. The DEIAR makes no attempt to comment on / investigate how the mining of oil and gas will influence / impact on South Africa's responsibility in responding to the Paris Agreement on climate change which was a key output of the Conference of Parties (COP21) held in Paris in 2015. The commitment to the agreement by South Africa resulted in the country needing to achieve a 42% reduction of its carbon emissions over 'business as usual' by 2025<sup>21</sup>. Mining of oil and gas will likely culminate in South Africa being unable to meet these targets unless it is sent offshore, which is counter intuitive and against the 'selling point' of the development of offshore oil and gas. The need and desirability of mining oil and gas as well as possible alternative "green" energy options should form part of the EIA.</p>	<p>The Paris Agreement (United Nations Framework Convention on Climate Change) 2016 has been added to Chapter 2 of the EIA Report. The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'</p> <p>Any potential changes in the environment that may occur due to climate change during the time period in which Eni may be in operation is highly unlikely considering Eni plans operations within the next year and could last XX number of years. The amount of change to the environment during this time period is unlikely to affect the conclusions of this study.</p> <p>An analysis was performed by Nordam, et al.,(2017) to assess hour climate change 40 years in the future might affect a spill model's results. The conclusion showed that while in some ways the spill impacts might be mitigated (greater biodegradation, greater evaporation, less oil on the water surface), the change in water density, temperature, sea level rise, etc. might also increase forces that would increase percentage of submerged oil, and in some cases increasing the amount of oil that could deposit in the sediments. Note, that while this study was performed in the arctic conditions, increases in evaporation and biodegradation are expected elsewhere from higher average temperatures. While global average temperatures may rise, it does not necessarily mean that a given location and time of a spill event would necessarily occur on warmer than average conditions in the future.</p>

Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>14. Ship to shore disposal</p> <p>The DEIAR is vague with respect to ship to shore disposal. No information is provided with respect to where the hazardous material will be taken (i.e. which landfill), what the time frames would be for certificates of disposal, if there are service provider/s who will/could offer this service. This level of detail is required for informed and defensible decision making.</p>	<p>Chapter 9 Environmental Management Plan Programme describes the following</p> <p>A Waste Management Plan (WMP) will be developed before activity start for implementation during the Project activities. The WMP establishes the procedures adopted for the management of waste to be generated during the course of conducting offshore and onshore operations (drilling, vessels trips, onshore support facilities). It covers collection, storage, treatment, transport, disposal, discharge, reporting and data management. The WMP will comply with all local legislation and applicable International Conventions for the Prevention of Pollution at Sea from Ships (MARPOL 73/78)</p> <p>Suitably approved and fully licensed companies providing waste treatment and disposal services will be selected by review and evaluation in line with international good practice and Eni's internal waste management procedures. Waste tracking procedures will be defined in the WMP to provide traceability from source of generation to end point.</p>
Jennifer	Olbers	Ezemvelo KZN Wildlife	<p>15. Mitigation Measures</p> <p>While it is noted that the DEIAR specifies the adoption of best practice guidelines for various phases of the operation, the DEIAR has not adequately considered and identified mitigation measure for inter alia light and noise. Equipment, vessel and helicopter maintenance to reduce noise cannot be regarded as being a mitigation measure - this is more a safety and economic measure.</p> <p>No mitigation for offshore species is put forward in the DEIAR to reduce possible impacts on spawning, migration, seasonal occurrence, avoidance of certain species etc. The only mention of timing restrictions is that the survey is restricted to calmer sea periods to avoid rough sea conditions, in the summer months. This mitigation measure is not mitigation for environmental harm but an operational and safety measure.</p>	<p>Seasonality with respect to key annual migratory specie events has been described in Chapter 4 and included in the impact assessment in Chapter 7 and 8 of the EIA Report. Based on the assessment, it was found that the migratory corridor identified on the east coast of South Africa, in addition to key specie events, such as the sardine run, are located inshore, on the continental shelf, extending to the continental slope for migratory baleen whales. The areas of drilling interest are located further offshore, beyond the continental slope. Given that the activities proposed are for exploratory drilling (of which sound impacts are not comparable to seismic activities), it was ascertained that timing restrictions related to migratory species were not required given the offshore location of the drilling areas of interest. Table 9.8 of the EMPr Commitments Register states the following as a Mitigation /Management and Enhancement Commitments to reduce light and noise impacts on marine fauna from exploration drilling activities:</p> <ul style="list-style-type: none"> <li>• Adopt use of lights compatible with safe operations whenever and, wherever possible, reduction of the intensity and emissions to the surrounding environment.</li> <li>• Keep disorientated, but otherwise unharmed, seabirds in dark containers for subsequent release during daylight hours. Injured birds should be returned to shore where feasible to allow for treatment. Ringed/banded birds should be reported to the appropriate ringing/banding scheme (details are provided on the ring)</li> </ul>

				<ul style="list-style-type: none"> <li>• The National Environmental Management: Protected Areas Act (2003) stipulate that the minimum over-flight height over nature reserves, national parks and world heritage sites is 762 m (2,500 ft)</li> <li>• The Marine Living Resources Act (1998) prohibits aircraft to approach within 300 m of a whale. Therefore, except for when the aircraft lands on or takes off from the drillship and logistics base, the flight altitude would be &gt;300 m.</li> <li>• The operation of helicopters and fixed-wing aircraft is governed by the Civil Aviation Act (No. 13 of 2009) and associated regulations</li> <li>• Pre-plan flight paths to ensure that no flying occurs over IBAs;</li> <li>• Avoid extensive low-altitude coastal flights (&lt;914 m and within 2 km of the shore).</li> <li>• Maintain an altitude of at least 914 m within Marine Protected Areas;</li> <li>• Comply fully with aviation and authority guidelines and rules; and</li> <li>• Brief all pilots on the ecological risks associated with flying at a low level along the coast or above marine mammals. It should also be noted that the seasonal timing is an environmental one, based on the avoidance of the main migration and due to the outcomes of the Oil Spill Modelling report.</li> <li>• Vessels shall undergo a regular maintenance regime to reduce noise.</li> <li>• If VSP is required, apply JNCC Guidelines for minimising the risk of injury to marine mammals</li> </ul>
Caroline	Sevilla	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Caroline	Sevilla	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p>

			would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.	<p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>
Caroline	Sevilla	Private	3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Caroline	Sevilla	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Caroline	Sevilla	Private	5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.	Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless

			<p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Caroline	Sevilla	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of</p>



				<p>Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Caroline	Sevilla	Private	<p>8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.</p>	<p>Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.</p>
Caroline	Sevilla	Private	<p>Human related Concerns:</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability,</p>

				<p>2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Caroline	Sevilla	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Caroline	Sevilla	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Samantha	Raftery	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions. I question how the South African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration</p>

				is the only means to investigate potential resources and assess their viability for extraction and future development.
Samantha	Raftery	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years. They are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and it is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects. It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p>

Samantha	Raftery	Private	3. I am very concerned about the migration of 130,000 whales from East Africa through the prospected areas, towards the Cape where they breed and nurse their young.	Noted, marine mammal migrations have been considered in the EIA Report.
Samantha	Raftery	Private	4. I am very worried for the interference with many delicate species such as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.	Noted, these species are of high conservation importance.
Samantha	Raftery	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</p> <p>6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Samantha	Raftery	Private	7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabeds, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea</p>

				<p>surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Samantha	Raftery	Private	<p>8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current.</p>	<p>Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.</p>
Samantha	Raftery	Private	<p>Human related Concerns:</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50,000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures</p>

				<p>which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
Samantha	Raftery	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Samantha	Raftery	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project.</p>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Marsha	Stanek	Private	<p>I object to the approval of such exploration in particular for environmental and human related concerns:</p> <p>Environmental Issues:</p> <p>1. These investments are not in line with the application of the Kyoto Protocol and international agreement for the reduction of greenhouse gas emissions; I question how the South</p>	<p>Your objection is acknowledged. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>The need and desirability section of the EIA Report describes South</p>

			African Designated National Authority (DNA) is evaluating the compatibility of this project with the successful implementation of the Clean Development Mechanism (CDM).	<p>Africa's objectives for environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all'.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Marsha	Stanek	Private	<p>2. This project is going to threaten the survival of the Coelacanth, a species which dates back 420 million years, they are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world.</p>	<p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an</p>

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Marsha	Stanek	Private	<p>3. I am very concerned about the migration of about 130.000 whales from East Africa trough the prospected areas, towards the Cape where they breed and nurse their young.</p>	<p>Noted, marine mammal migrations have been considered in the EIA Report.</p>
Marsha	Stanek	Private	<p>4. I am very worried for the interference with many delicate species as Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher.</p>	<p>Noted, these species are of high conservation importance.</p>
Marsha	Stanek	Private	<p>5. Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium. 6. Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur during the production and transport of crude oil and pollutes the waters surrounding the rig.</p>	<p>Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less then 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p>
Marsha	Stanek	Private	<p>7. I fear the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and</p>	<p>The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Seismic surveys are not included in the scope and therefore this comment is not relevant to this EIA Report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are</p>



			destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.	<p>thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p> <p>The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due to the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14)</p>
Marsha	Stanek	Private	8. The East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Marsha	Stanek	Private	<p>Human related Concerns</p> <p>1. Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the</p>

				<p>Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience</p>
Marsha	Stanek	Private	<p>2. Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</p> <p>.</p>	<p>Noted, desalination does not form part of the scope of this project.</p>
Marsha	Stanek	Private	<p>3. With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</p> <p>Considering all the above I oppose the approval of such project</p>	<p>Health conditions decribed here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved</p>

				would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.
Corrine	Gill	Private	<p>KwaZulu-Natal, the coastal region target of this project, is renowned for its famous and beautiful beaches. However, healthy oceans are critically important to marine life and to coastal communities whose economies rely on tourism, fishing and recreational activities. Opening up new offshore areas to drilling risks permanent damage to ocean and beaches without reducing our dependence on oil.</p> <p>KZN's coast could be subject to huge oil spills equivalent to the BP oil spill in the Gulf of Mexico in 2010, with long-term costs for the tourism and fishing industries. Referring to ENI's proposal, our concerns, in particular are:</p> <p>1. Wildlife:</p> <ul style="list-style-type: none"> <li>• Heritage and prehistoric fish species are going to be put at risk. The Coelacanth dates back 420 million years, grow up to 2 metres in length and adults can weigh up to 80 kilograms. Coelacanths are classified as Critically Endangered on the Red List of the International Union for Conservation of Nature, and are also officially protected from being traded internationally according to the Convention on International Trade in Endangered Species (CITES). However, these protections would not be enough to save them in the event of an oil spill. There are just 30 exemplars and is one of the rarest fish in the world. Only a very small colony is known to exist off the east coast of South Africa in underwater canyons near South Africa's Sodwana Bay, adjacent to the iSimangaliso wetland park and world heritage site. The Sodwana Coelacanths are about 40 km from the northern boundary of the ENI exploration area and nearly 200 km north of the first drilling sites. Air-blasting and drilling into the seafloor as part of oil exploration produce intense vibrations and sound waves which have been proven by multiple studies and researches to have a catastrophic impact on marine life. South Africa currently has a network of 23 Marine Protected Areas which will be inevitably put at risk and hugely affected by this project.</li> </ul>	<p>Impacts related to fisheries and marine ecology have been assessed in Chapter 7 and 8 of the EIA Report. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>Chapter 4 of the EIA Report explains the current understanding of Coelacanth distribution and known locations where they have been found in the Area of Indirect Influence. It also explains that they tend to favour submarine canyons that have a connection to the upper continental slope and shelf and are of a suitable depth and temperature. All recorded catches/sightings of coelacanths to date have occurred between 90 and 140 meter water depths. Water depth is only one factor that represents unfavourable habitat range conditions of the deepwater submarine canyons located in BlockER236. Based on available research to date, dissolved oxygen, temperature, suitability and availability of cave overhangs for shelter, connectivity to the shelf by way of tributaries and availability of prey have also been considered when assessing at the suitability of the deepwater submarine canyons to host this rare order fish species. The statement of 'unknown sensitivity' was to highlight the information gaps, not to down play the effects.</p> <p>It should also be noted that there are no deep water canyons in the areas of drilling interest. However, based on the precautionary principle, if the presence of sensitive species (e.g.: deep water corals and coelacanths) could not be confirmed, they were indicated as "presence unknown" but assessed as being 'present' and therefore the impacts of spills on these receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 and 8 of the EIA Report. Eni also committed to avoiding the canyons (i.e. no drilling will take place in the canyons) as a conservative measure to avoid any direct impact to possible sensitive receptors inside canyons.. As discussed in Chapter 8, only the subsurface slicks would not pose an impact to coelacanths. Subsurface (plume) dispersion has been modelled in the Oil Spill Report. The that would be an issue for coelacanths and modelling results and speed of dilution suggests that these subsurface plumes in the worst case scenario slicks are highly unlikely to 1) reach known coelacanth habitats, and 2) be of sufficient concentration to be lethal.</p> <p>As discussed in Chapter 8 of the EIA Report, only the subsurface slicks</p>

				<p>from an oil spill would be an issue for coelacanths and modelling results and speed of dilution suggests that these slicks are highly unlikely to 1) reach coelacanth habitats, and 2) be of sufficient concentration to be lethal. Therefore, the risk significance of a spill on coelacanths was assessed as Minor. The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p> <p>The Marine Ecology Study (Annex D1 of the EIA Report) identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994). The marine ecology study also assessed the impact of an oil spill on key species that would be present in the MPAs.</p>
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>Many species of Turtles, Cape Fur Seals, African Penguins and Black Oystercatcher birds are among the most famous marine species</li> </ul>	Noted, these species are of high conservation importance
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>The Whale Route starts from Durban (KZN, South Africa) and extends to the south of Cape Town, along 1,600 plus kilometres of whale watching coastline. The route traverses several famous protected areas. At least 37 species of whales and dolphins can be found in the waters off South Africa.</li> </ul>	Noted. Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>Each year Southern Right whales migrate from East Africa waters into the coastal waters of the Western Cape to calve and nurse their young. The animals, often mere metres from the shore, provide unsurpassed whale watching opportunities between June and November. Humpbacks migrate through the region between May and December each year, while Bryde's whales are found slightly further offshore all year round.</li> </ul>	Whales migrate from the Antarctic past the Western Cape to the East African coast to calve, and mother-and-calf pairs return along similar routes, and not in the direction suggested in this comment.
Corrine	Gill	Private	<p>2. The Environment</p> <ul style="list-style-type: none"> <li>Offshore drilling will potentially produce petroleum along with a host of other environmentally harmful substances including arsenic, nickel, copper, chromium, zinc and barium.</li> <li>Heavy metals and hydrocarbons can be devastating for the health of marine organisms and to the people who live and feed off the coast. Another major environmental concern is linked to the disposal of highly toxic production waste caused by the hydrocarbon drilling. Small oil leaks usually occur</li> </ul>	Biochemical effects on marine biota are assessed in marine ecological impact assessment in Annex D and in Chapter 7 of the EIA Report. Based on volumes reported in Table 3.10 of Chapter 3, during riserless drilling sea water is used to drill; in case of sweeps (WBM pills) preparation, the maximum content of barite utilized is less than 10% in total volume. During the next drilling section, drilled with WBM or OBM, barite content in mud is less than 30% in total volume. Only cuttings and WBM will be discharged overboard if in compliance with the limitations provided. For this reason, the proposed calculations of amounts of

			<p>during the production and transport of crude oil and pollutes the waters surrounding the rig.</p> <ul style="list-style-type: none"> <li>Discharges from drilling consist mainly of crushed material from the borehole (cuttings) and chemicals used during the operation. The literature on the discharge of drill cuttings and associated drilling fluids indicate that it will cause the death of the benthic (bottom-living) organisms living in and on sediments covered by cuttings in the immediate vicinity of the discharge point.</li> <li>We therefore would demand that a full survey of such bottom living organism is established prior to the drilling process and that this is monitored as to its state of health.</li> </ul>	<p>Mercury and Cadmium are incorrect; reflecting the amount of barite to be used, assuming that discharged fluids will have the maximum allowed concentrations of heavy metals, for this reason the maximum expected quantity of heavy metals are 0.7 kg Hg (Mercury) and 2 kg Cd (Cadmium) for single well drilled.</p> <p>Eni is selecting chemicals, barite and cement providers that certified composition of products. For instance related to Barite, Eni is selecting providers that can provide only high quality barite with Hg contamination close to 0 mg/kg. The specifications included in the EIA Report are the maximum level of acceptance for discharge overboard; such values are the same or less than international best practise IFC guidelines</p> <p>Physical and biochemical effects of drilling muds on marine biota have been assessed in Chapter 7 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as Moderate to Minor.</p> <p>There is sufficient secondary data available to assess the impacts of project activities on the marine and coastal ecology. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals and coelacanths) could not be confirmed they were assessed as being 'present' (which is essentially the worst case scenario) and therefore the impacts of the project activities on theses receptors were assessed in Chapter 7 of the EIA Report. Secondly, the baseline environment at the drill site will be confirmed prior to drilling by a ROV survey and if any sensitive receptors are found, then Eni has committed to ensure that the drill site is re-located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report for this detail).</p>
Corrine	Gill	Private	<p>3. We support the prevention and avoidance of negative impacts</p> <ul style="list-style-type: none"> <li>We would like the Ecological Importance Sensitivity (EIS) to prevent and avoid negative impacts rather than listing assessments of risks and proposing the monitoring of these negative impacts. The blasts are supposed to be repeated every 10 seconds. The sound waves travel for over 4000 km, not allowing any wildlife to escape; in South African waters they can injury 138.000 whales and dolphins and disturb or kill million more organisms. Monitoring is not enough.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels</p>

				<p>during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability.</p> <p>Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is</p>
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				not in the range to cause damage or injury; avoidance and behavioral impact is possible.
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>The most common impacts on wildlife are the decline in sea birds populations, the destruction of fish eggs and larvae, the immune system suppression in organisms, the destruction of delicate seabed, the temporary or permanent hearing loss in fish and mammals, the abandonment of habitat, the disruption of mating and feeding, disorientation, beach stranding and death. For whales and dolphins, who rely on their hearing to find food, communicate and reproduce, being able to hear is a life or death matter. These blasts have shown to cause massive mortality and destruction in zooplankton, which is the base of all marine food chains. Resulting in increased economic challenges.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft</p>

				<p>&amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p>
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>• Very worryingly, the East Current is the highway for fish and mammal species travelling down the Eastern seaboard of South Africa to the nutrient-rich and breeding grounds of the Agulhas Bank. Anything that occurs off KwaZulu-Natal's coastline will end up being swept to the Agulhas since this is the inevitable nature of the current. In addition, it is suspected that the south-flowing Agulhas current is of critical importance to the spawning patterns of many fish species that move northwards inshore up our coastline with larval formations carried south by the current.</li> </ul>	<p>This EIA has been prepared based on an offshore exploration drilling project and not a seismic survey project and therefore the sound impacts are different.</p> <p>Well drilling is expected to take up to 71 days per well to complete, therefore the potential impact on the fishery would be of short-term duration. The impact is considered to be local in extent (limited to a few kilometres beyond the area of interest for well-drilling), Negligible in scale and fully reversible</p> <p>The Marine Ecology Study identified that the main sources of noise from the proposed drilling programme include noise produced by the drillship and supply vessels, as well as noise produced by the helicopters undertaking crew transfers. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. In addition it identified that the ocean is a naturally noisy place and marine animals are continually subjected to both physically produced sounds from sources such as wind, rainfall, breaking waves and natural seismic noise, or biologically produced sounds generated during reproductive displays, territorial defence, feeding, or in echolocation (see references in McCauley 1994).</p> <p>Underwater noise generated during the project could affect a wide range of fauna. However, unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range. The underwater noise from well drilling operations may, however, induce localised behavioural changes or masking of biologically relevant sounds in some marine fauna, but there is no evidence of significant behavioural changes that may impact on the</p>



				<p>wider ecosystem (Perry 2005).</p> <p>As the generation of noise from the drillship and support vessels cannot be eliminated due to the operating requirements of dynamic positioning but with proper maintenance and management the impact is assessed as Minor to Negligible.</p> <p>The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards.</p> <p>Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioral impact is possible.</p>
Corrine	Gill	Private	<p>4. The Report is missing crucial information on social and health impacts on communities and people</p> <ul style="list-style-type: none"> <li>• Oil spills can quickly traverse vast distances. These types of devastation will also destroy livelihoods to over 50 000 subsistence fisher folk who eke out a living daily. Even small occasional spills will impact local communities and increase poverty and lead to more people joining the unemployment line.</li> </ul>	<p>The Project activities will take place 60km offshore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event on marine based livelihoods are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>

Corrine	Gill	Private	<ul style="list-style-type: none"> <li>Desalination has been prospected as a solution to severe droughts regularly occurring in South Africa and affecting not only wildlife and worldwide famous National Parks but millions of people. Once again, the quality of coastal sea-water must be utterly and continuously protected.</li> </ul>	Noted, desalination does not form part of the scope of this project.
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>With regards to the health of the communities who rely on a healthy oceanic system to eke out their living, the following has been found: itchy eyes, watery eyes, nosebleeds, wheezing, sneezing, and coughing are all symptoms of exposure to crude oil. Chest pain, respiratory problems, dizziness, gastrointestinal problems also common ailments. A study of clean-up workers from the 2002 Prestige oil spill in Spain found increased DNA damage, especially among those who worked along beaches. Such genetic changes can sometimes lead to cancer. Mental health increases in symptoms of post-traumatic stress, generalized anxiety disorder and of depression.</li> </ul>	<p>Health conditions described here cannot be attributed to operations of a limited duration. The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community are expected due to the proposed drilling.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this Project in the event of a spill. As part of this plan, it will be stipulated that in the event of a spill requiring clean-up workers, all those involved would be issued with the appropriate Personal Protective Equipment (PPE) in line with Eni's Health and Safety Standards.</p>
Corrine	Gill	Private	<p>5. The Report is not taking sufficiently in account the safety and rescue standards of South Africa</p> <ul style="list-style-type: none"> <li>Precedent international disasters have shown how oil spills spread far and swiftly. The drilling operation will rely on the rescue of traditional South African rescue services. South Africa simply does not have any capability or capacity to provide long distance rescue effort and certainly not in the weather conditions likely to precipitate a disaster. For example, South Africa does not have an existing offshore rescue craft capable of providing a rapid response. The National Sea Rescue Institute (NSRI) is strictly inshore and the naval capability is virtually non-existent. Furthermore, it is not the navy's role to provide standby services for private institutions and companies like ENI. In addition, aerial support also requires specialist aircraft that South Africa simply does not possess.</li> <li>The odds therefore that a plant upset could become a runaway uncontrolled event impacting on both life and the environment are significantly greater than the norm of rigs in the 1st World North Sea or Gulf of Mexico where, as we know, enormous ecological harm has been wreaked by this industry</li> </ul>	<p>The Department of Transport (DoT) has the responsibility of providing and fulfilling statutory obligations towards pollution prevention and response in the Republic of South Africa's waters [territorial waters and the Exclusive Economic Zone (EEZ)] in terms of powers provided in the Marine Pollution (Control and Civil Liability) Act, 1981, and in the Marine Pollution (Intervention) Act, 1987. Through Operation Phakisa, an Incident Management Organisation (IMOrg) has been established, which consists of among other institutions; SAMSA, National Disaster Management Centre, Petroleum Agency of South Africa, National Department of Environmental Affairs and National Department of Mineral &amp; Resources. The IMOrg is charged with managing the oil and gas spillages as well as to undertake sea rescue missions for distraught vessels and seafarers within the 2,798km SA coastline. The establishment of the IMOrg will enable South Africa to maintain a national system for preparedness and response to major marine pollution, as well as to assess the level of preparedness and response. It will also ensure that there is a standardised national approach towards managing oil spills in the South African coastline. The DoT was selected to hold the Incident Commander position, with the South African Maritime Safety Authority (SAMSA) as the enabler and implementing agency, because of its current role of combating and preventing oil spills</p>

			<p>despite the proximity of state of the art rescue and repair facilities.</p> <ul style="list-style-type: none"> <li>• The prospect of a catastrophic spill and the near impossibility of introducing a successful capping of the blow out at the depths cited are of huge concern.</li> <li>• We require significant detail to be presented in this aspect given the learnings of the Deep Water Horizon disaster.</li> </ul>	<p>in the marine environment, as mandated in section 52 of the SAMSA Act.</p> <p>The industry focus, commitment and effort, in particular for major oil companies like Eni, is to conduct operations with the highest safety standards, in order to perform drilling operations with the lowest possible level of risk for the people, the environment and the asset. In order to minimize the residual risk of incidents, strict rules are defined by international standards (API/ISO) and best practice and are followed by the company, the drilling contractors and all parties involved in drilling operations, including maritime and logistic operations. To prevent an unwanted oil spill, the industry has defined number of mandatory response, control and management measures and resources that must be implemented during drilling operations. These includes advanced planning of programs and procedures, tools selection that can be used and training of personnel to reduce the severity of impacts in the event of a spill. These tools include the use of subsea BOP (Blow-out Preventer), to immediately shut in the well in case of emergency. In addition, the availability of a capping system can provide a backup tool to be used in case of failure of BOP. The new capping system has been developed after the Macondo incident, in which a similar tool has been used to successfully shut-in the well and contain any further spill. The capping system is now an effective option in case of emergency. All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval, SAMSA will issue a Pollution Safety Certificate.</p> <p>Eni are world leaders in deep water exploration drilling programmes, with 872 subsea wells drilled in more than 20 countries. Of this, 284 wells are Deepwater or Ultra-Deepwater. Eni performed drilling activities in very rush off-shore environment such as GoM (USA), North Sea (UK) and Norwegian Sea (Norway).</p> <p>The most comparable and recent drilling program which reflects similar ultra-deep water conditions to that of the east coast of South Africa includes Eni's Mozambique offshore exploration drilling campaign. The oceanographic, water depth, currents, weather, sea-bed morphology and the operative context are comparable to the east coast of South Africa.</p> <p>Eni has drilled 14 deep and ultra-deep exploration wells in Mozambique with similar water depth and current conditions, equating to 800 days of</p>
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				continuous drilling without any incidents taking place. It is not improper to use Eni's track record of safe and reliable operations in equally challenging environments to demonstrate Eni's experience in deep and ultradeep offshore environments and its commitment to safety, with no incidents of oil spill in exploration operations to date
Corrine	Gill	Private	<p>6. Political consideration</p> <ul style="list-style-type: none"> <li>• The protected areas are only 0.4% of the oceans around South Africa which is far from the target of 10% to be met by 2020 as South Africa has committed to as a Member of the UN. In 2014 the president of South Africa announced that 5% protection would be achieved by 2016 and 10% by 2020, through the establishment of an expanded network of Marine Protected Areas (MPAs) Accordingly, in February 2016 the Minister of Environmental Affairs published the intention to declare a representative network of 21 new, expanded Marine Protected Areas and invited the public and key stakeholders to comment. These areas were identified as important to support fisheries recovery and productivity, to protect fragile and sensitive habitats and endangered species, to help combat climate change, and to ensure resilient and healthy oceans that can support coastal communities and a sustainable blue economy into the future. Unfortunately, over four years later stakeholders have had no feedback from the Department of Environment Affairs about when the MPAs will be declared.</li> <li>• There have also been concerns raised that the delay may be linked to the fact that by 2014 the Petroleum Agency of South Africa had already leased about 95% of our oceans to large companies for oil and gas exploration.</li> </ul>	<p>ERM cannot comment on the timeline of the MPA network promulgation.</p> <p>It is acknowledged that MPAs are important for the protection of marine resources, however, it must be noted that while Block ER236 overlaps with some MPAs (as shown in Chapter 4 of the EIA Report), the Area of Interest where Eni intends to drill does not overlap with any of the existing and recently approved MPAs. The function of MPA's is acknowledged in relation to the protection of marine resources. It should be noted that during the first renewal application of the exploration phase in 2016, Eni relinquished areas covered by iSimangaliso, Aliwal Shoal and Protea Bank MPAs. The promulgation of new or extended MPAs has only recently concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the extension of iSimanaglisio and Protea Banks MPAs. Eni have confirmed that no drilling will be performed in any declared MPAs.</p> <p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy and to unlock the economic potential of the oceans, this includes the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>ERM is not in a position to comment on the activity of fishing vessels in South African waters.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
Corrine	Gill	Private	<ul style="list-style-type: none"> <li>• South Africa's Government has not even started investing in green energy yet. On the contrary, it carries on allowing the expansion of coal mining and fossil fuels investments. Many countries of the third world are far more advanced than South Africa in this sense. The Government should finally put green investments in its agenda and stop allowing these kind of</li> </ul>	<p>The South African Government has invested "green energy" through the Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) which was established by the Department of Energy (DoE) in conjunction with the National Treasury and the Development Bank of Southern Africa (DBSA) at the end of 2010. Since then, 2,094MW of wind power and 1,450MW of solar power have been</p>

			<p>explorations.</p> <ul style="list-style-type: none"> <li>• In addition and very worryingly, it has been reported that Chinese vessels are allowed to overfish in South African waters and that they regularly abandon industrial fishnets, once damaged, in the water; this has been reported to severely affect marine life as well as single-use plastic still heavily used at any industrial level in South Africa.</li> <li>• Sewerage outfalls of big cities like Cape Town are already pouring an average of 40 million litres of untreated sewage per day, with their chemical content, straight into the ocean from the submerged outfall pipes located normally within 2 km offshore. In this context of marine environmental dis-attention, drilling oil near or upstream protected areas full of genuine and untouched ecosystems should be avoided and unmistakably forbidden.</li> </ul>	<p>developed and now contribute to the Country's energy mix.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. This policy speaks to an energy mix and it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</p>
Corrine	Gill	Private	<p>7. Conclusion</p> <ul style="list-style-type: none"> <li>• The protection of African communities and people, their health and wellness is for us of crucial importance.</li> <li>• The protection of the pre-historic Coelacanth species and of so many other iconic marine species, are for us of crucial importance.</li> <li>• A catastrophic oil spill pollutes tens of thousands of kilometres in a very short space of time as the oil is carried by currents. Methods used to reduce the severity of an oil spill, such as chemical dispersants, are also known to have detrimental environmental impacts, persisting in the environment for years after a spill. The Gulf of Mexico oil spill can be made an example of how offshore oil and gas drilling causes detrimental effects to the ecosystem.</li> <li>• We are under the impression that all tiers of Government are promoting the idea of allowing these activities to go ahead without proper and meaningful consultation with the public communities. This type of reaction from Government is contradictory because whilst they are promoting tourism with the main focus on the Sardine shoals, whales and dolphin sighting points, beautiful marine nurseries, various bird life and small B&amp;BS which thrive on our beautiful beaches and ocean, they are destroying or allowing the destruction of this beautiful ocean we have. It seems that the offshore oil and gas project will only benefit the elite and rich people of society whereby once again the poor gets dealt a raw deal.</li> <li>• This project seems to not even offer any employment or benefit opportunity for South Africans.</li> </ul>	<p>7. The project is located over 60 km offshore. However, this project has taken into consideration the potential impact of an oil spill on coastal communities.</p> <ul style="list-style-type: none"> <li>• Noted, the EIA Report has considered the conservation importance of marine fauna present in the Project Area in Chapter 4 of the EIA Report.</li> <li>• Oil spill modelling (Annex D4 of the EIA Report) was conducted as part of the EIA process in order to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline or nearshore receptors. In terms of mitigation, (Chapter 9 of the EIA Report) Eni will use low toxicity dispersants offshore, i.e. more than 5 nautical miles offshore or in water depths &gt; 30 m to reduce concentrations below most acute toxicity thresholds. The use and type of dispersant is a contingency of boundaries (e.g. booms) and recovery (e.g. skimmers) systems and will be detailed and authorized by competent authority within OSCP.</li> <li>• Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. ERM is not entitled to reply to such assertions and comments to the Government's activity.</li> <li>• Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The need and desirability of the Project is discussed in Chapter 3 of the EIA.</li> <li>• The impact of accidental spills on marine fauna have been assessed in</li> </ul>

			<ul style="list-style-type: none"> <li>Considering the high risk of pollution and disaster in one of the strongest currents in the world, plus the scant employment opportunities that the offshore oil and gas industry offers South Africans, the market, legislative and governance uncertainties and lack of public participation within this sector, and the economic importance of our fisheries, leisure and tourism industries dependent on functional healthy oceans, we must question the logic of extracting a fuel that produces further climate change and ocean acidification acceleration. WE STRONGLY OPPOSE THE APPROVAL OF THIS PROJECT</li> </ul>	Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance.
Monica.E	Merle	Private	<p>I have many concerns I wish to raise in respect to the above and I present them in no particular order of importance and wish that all concerns are seriously addressed.</p> <p><b>AFFECTED BIRDLIFE</b></p> <p>There has been an attempt to list all sea birds possibly affected , but I feel that to exclude birds that live near the sea and at estuaries is a glaring omission . I understand that a direct effect is likely to be small, I still believe this should still be investigated eg mangrove kingfishers, fish eagles etc . Many red data species and endangered species of birds are found in these zones.</p> <p><b>AFFECTED WHALES , DOLPHINS ETC – previous drill sites</b></p> <p>I am concerned that in all the background info given no comment or cross reference is made to any previous drilling endeavours in other zones , specifically done by the same company embarking on this project . There must surely be data and observations made on other completed operations as to the actual effect on sea life , and bird life , and this must be incorporated in this proposal , as this is not a once off and this whole project is being put forward to us as being done by people and companies who have done this many times over. Please include the relevant data.</p> <p><b>THE DRILL SITE</b></p> <p>What is to happen to the infrastructure that gets created to drill for oil and gas , the wells etc , if nothing is found . How is this dismantled or is this left ?It appears to cost 9million usd to decommission a well ,who would pay for this ?</p> <p><b>VIABILITY</b></p> <p>I understood from the presentations given that this is a prelim eia that does not deal with the outcomes of actually finding oil or gas . This is to be covered by other eia's. I cannot understand how we can drill for oil and have no idea what next</p>	<ul style="list-style-type: none"> <li>The impact of accidental spills on marine fauna have been assessed in Chapter 8 of the EIA Report and the Marine Ecology Study (Annex D1 of the EIA Report) as a Moderate (seabirds) to Minor (invertebrates, fish, larvae, marine mammals and turtles; including species inside MPAs) risk significance. The marine ecology study touched on avifauna very briefly to alert the reader to the occurrence of seabirds in the project area. Table 7 list examples of some of the resident and visiting seabirds and is not intended to be comprehensive.</li> <li>The cumulative impacts of the project are assessed in Chapter 7 of the EIA Report. The potential for cumulative environmental and social interactions caused by the project in combination with other planned activities were identified as: <ul style="list-style-type: none"> <li>o GHG emissions from the project vessels and their contribution towards climate change in combination with other vessels in the region;</li> <li>o Underwater noise generation from the project vessels and their contribution to underwater noise in combination with other vessels in the region and the combined impacts on marine mammals; and</li> <li>o Disturbance to benthos due to oil and gas activities.</li> </ul> </li> <li>At the end of drilling and testing operations, prior to leave location, the well will be plugged and abandoned (P&amp;A). The scope of well plug and abandonment is to protect the environment by effectively sealing off all distinct permeable zones (i.e., the zones of potential hydrocarbons or water inflow penetrated by the well or perforated casing zones), to ensure that formation fluids are isolated, both within the wellbore and in annular spaces, and that their migration among different formations and/or up to seabed is prevented. As per Annex E there Eni has financial provisions in place for decommissioning (plugging and abandoning the well).</li> </ul> <p>A cement plug setting job will be performed in both types of wells (exploration and appraisal) and for a successful hydrocarbon discovery or in the case of dry well. In both configurations, the cement plugs are suitable to guarantee the effectiveness and integrity of the seal and are</p>

			<p>, if we do or do not discover oil , or if quantities ( also unknown )are not viable or are viable . If we do not plan for every probable or possible outcome , we will fail .We cannot even pretend that the effect of this project has been carefully considered if the differential outcomes are not disclosed and considered. It is also probable that oil is found but there is no economically viable way to bring it to market , or there is a fatal flaw in this part of the project , and the project is just abandoned.</p> <p><b>NEED FOR OIL AND GAS</b></p> <p>I am not sure of a timeline as to when any discovery could be delivered to the country , but my concern is that the world is turning away from oil and gas to greener options , and hopefully soon all cars will be solar or wind powered as will most homes be, then this whole exercise is for nothing and will simply destroy our environment and there is no mitigating benefit. <b>THE EXPLORATION PARTNERSHIP</b></p> <p>No financial information has been provided to be able to assess whether or not this is an economically viable project . There are no numbers for costs , let alone projections , or Annual Financial Statements for the legally contracted parties . I am a Chartered Accountant and have seen many projects fail because the numbers are wrong , yet no numbers are presented . There is also no report from a suitably qualified financial expert to show the likelihood of success .Please include these .</p>	<p>configured so that no future intervention is required. The wellhead and seabed will be surveyed by a ROV after well(s) plug and abandonment (“decommissioning”).</p> <p>Section 24P of NEMA requires that the determination of financial provision must be in place by an applicant for EA relating to prospecting, mining, exploration, production or related activities on a prospecting, mining, exploration or production area. In terms of the NEMA: Regulations Pertaining to the Financial Provision for Prospecting, Exploration, Mining or Production Operations, Operations (amended on 16 April 2018), an applicant or holder of a right must determine financial provision to guarantee the availability of sufficient funds to undertake rehabilitation and remediation of the adverse environmental impacts of exploration operations, as contemplated in the Act and to the satisfaction of the Minister of Mineral Resources. The financial provision determination and a decommissioning plan must be submitted to the Minister as part of the Environmental Authorisation application process. The prescribed financial provision for the rehabilitation, management and closure of environmental impacts will be in place before the commencement of the drilling activities (Refer to Annex E).</p> <ul style="list-style-type: none"> <li>• The impacts assessed as part of this project have been limited to the proposed exploration drilling activities as this is the full ambit of the scope of this proposed project. Impacts related to production will be assessed as part of a separate EIA process, should a viable source of hydrocarbons be found during the proposed exploration drilling activities.</li> <li>• The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. The white paper states that ‘Government will ensure the optimal and environmentally sustainable exploration and development of the country’s natural oil and gas resources to the benefit of all’ and undertakes to ‘ensure private sector investment and expertise in the exploitation and development of the country’s oil and gas resources’. In addition, it provides a foundation for the promotion of renewable energy technologies such as solar, hydro, biomass and wind.</li> <li>• Annex E provides the details of the financial provisioning related to the Plugging and Abandonment (“Decommissioning”) of one Exploratory Well.</li> </ul>
Monica.E	Merle	Private	<p><b>MARINE PROTECTED AREAS</b></p> <p>Protea Banks has just been declared a Marine Protected Area , as has Aliwal Shoal and does fall within the block .Your submission needs to change as it clearly states that there are no MPA’S to consider , and now there are . How will this change things?</p>	<ul style="list-style-type: none"> <li>• Chapter 4 of the Draft EIA Report included a description of the proposed MPAs as well as the existing MPAs and included the consideration of both existing and proposed MPAs in the Draft EIA Report. The Draft EIA Report stated that no MPAs overlapped the Block as they had not been promulgated yet. Chapter 4 of the Final EIA Report has been updated to reflect the approval of the 20 new MPAs on 24</li> </ul>

		<p><b>NEED AND DESIRABILITY</b>  It is clear that the reason for this whole project is the ANC government , especially Mr Zuma . I know it may sound harsh , but the reasons I have found behind most of his projects has been self enrichment and greed, and I worry that the main reason for this exploration is greed of a known corrupt regime. I know the regime is changing but I am not sure how our current government views this project and whether they would continue with it at all . Stable fuel prices is also frankly a joke, as most of our fuel price is taxes imposed by the government , so I have found your needs and desirability section very difficult to stomach. Please also refer to greener alternatives , as well as the possible collapse of Eskom and government will be forced to allow wind and solar farms to compete in an open market , and this may cause this whole project to be shelved .</p> <p><b>GOVERNMENT DOCUMENTATION</b>  There is no evidence in the packs that the government even knows about this project . There are no approved tender documents , no mining license and absolutely no copy of a piece of paper from the government or any government department. This Phakisa strategy is a concept the government wishes to adopt in all manner of things . it is a bit like presenting that the government wishes to improve employment numbers and you propose a scheme to employ thousands in an illegal venture , yes you are striving to meet a government goal, but it is not endorsed or approved . I feel that with this type of venture, transparency is so important .</p> <p><b>FUNDING</b>  My understanding is that two legal entities are doing this as a joint venture , yet there is no number given as to the cost and who pays . this is especially relevant if the project needs to be aborted or there is an environmental calamity which needs to be cleaned and funded.</p> <p><b>THE PICTURE</b>  In principle , I understand that this EIA is the first step in a process , requiring various EIAs. I just cannot picture the set up , I find that no company info is given to strengthen the ability of the proposal to be completed , neither do I see a government clearly on board .</p> <p><b>LEGAL ENTITIES</b>  The bundle refers to a private company Eni South Africa BV, no company reg. number is given , albeit ERM refers to a (Pty) Ltd no company number is given .Sasol does not appear to be involved past the first page .Please reflect legal entities</p>	<p>October 2018. Three recently approved MPAs now overlap with the Block, however there is still no overlap of MPAs with the drilling areas of interest.</p> <p>On the 09 December 2014, Eni farmed into Block ER236, originally assigned to Sasol. At the very first opportunity, that coincided with the 2016 relinquishment (20%) at the end of the First Exploration Period, Eni relinquished the areas covered by the iSimangaliso, Aliwal and Protea MPAs. The promulgation of the 'proposed' MPAs has just concluded and by July 2019, at the end of the First Renewal Period, Eni and Sasol will immediately relinquish the areas covered by the iSimangaliso extension and Protea MPAs. Eni confirms that no drilling will be performed in any declared MPAs</p> <ul style="list-style-type: none"> <li>• Chapter 3 of the EIA Report describes the Needs and Desirability of the project. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</li> <li>• The EIA Report contains all of the relevant information legally required in terms of the NEMA. The Department of Mineral Resources (DMR) is the Competent Authority for the EIA application. DMR will make the final decision on the project, with PASA acting on behalf of the DMR in the administrative aspects of the process. There is Record of Authority Communications (Annex C) there is evidence that government bodies such as the Department of Environmental Affairs and the DMR are aware of the project. Additionally, the South African government, through PASA and the DMR, granted Eni and Sasol an Exploration Right for the block (ER236). The Government is involved in an EIA process in a number of different ways. ERM will consult with various levels of Government, such as local municipalities, national ministries and departments as part of the EIA process.</li> <li>• Sasol holds the right to explore Block ER236 together with Eni. Eni is the operator of the block with 40% participating interest. Sasol holds the remaining 60%. The relationship between Eni and Sasol are regulated by a Joint Operating Agreement (JOA), which defines the role, responsibilities and the modus-operandi of each partner. Eni in its role of operator has the responsibility to run the studies, analysis and operations required to assess the hydrocarbon potential of the Exploration Right. Sasol is contributing both financially and in the decision making process for the definition of the technical work program.</li> </ul> <p>Eni and Sasol are joint venture partners of Exploration Right ER236. Sasol holds a 60% participating interest and Eni 40%. Eni is the Operator</p>
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			<p>correctly so we can assess who is responsible for what.</p> <p>THE RIGS</p> <p>The fact that the exploratory drilling rigs will not be visible from the coast does not follow the concept that what we cannot see the heart cannot grieve over . The problem is that damage could still be closer to shore , having been initiated at the drill site .</p>	<p>of the Exploration Licence and is responsible as the operator to obtain Environmental Authorisation related to exploration drilling activities</p>
Lisa	Guastella		<p>Review of Oil Spill modelling for ENI Proposed Exploration Drilling in Block ER 236</p> <p>Terms of reference:</p> <p>The terms of reference are to review the oil spill modelling reports that were submitted to ERM as part of the EIA process for an offshore exploration drilling programme in Block ER 236, off the east coast of South Africa, more specifically off the KZN coast. The brief is to explore whether the currents and potential dispersion is accurately represented by the modelling scenarios. I have been approached owing to the fact that I have specialist knowledge of the coastal currents and meteorological conditions off the KZN coast (see Appendix 1). Note that although I have previously attended a marine pollution course, I am not qualified to comment on the chemical nature of oil, therefore this review is based more on the physical forcing and dispersal aspects of the modelling as well as local knowledge and references (see reference list provided). I also did not look at Annex D5 (Drill cuttings and muds discharge) in any detail.</p> <p>Note that oceanographic convention is that current directions are given as direction towards which the current flows, whereas meteorological convention is that winds are described as direction from which the wind blows.</p>	Noted
Lisa	Guastella		<p>GEMSS (Generalized Environmental Modelling System for Surfacewaters) model was used, 3D, uses HYCOM (HYbrid Coordinate Ocean Model) global circulation model as input to GEMSS to predict “worst case scenarios”.</p> <p>Physical input data used 5 years of data, ocean currents, water temperature and salinity, air temperature and wind velocity (speed and direction) over the five-year study period (2013 through 2017). Used 1/12° modelled data = 9.25 km resolution.</p>	<p>This is correct. To clarify: the parent model is GEMSS and its spill modeling module is COSIM. COSIM incorporated model inputs from HYCOM for currents, salinity, and water temperature</p>
Lisa	Guastella		<p>No mention of what the boundary conditions are, i.e. parent grid – is it the area defined in Fig. 4-1? Suspect not, because need to include further north to adequately get conditions for N1 &amp; N2. Is the parent grid sufficient to represent winds and</p>	<p>The region shown in Figure 4-1 was a closeup area intended to show the resolution of the hydrodynamic model. Hydrodynamic modeling is used to provide the 3-dimensional current vectors. The full model domain is shown in Figure 5-1. HYCOM currents and NOAA Blended</p>

			currents adequately? Is it scientifically robust? Were any zooms (child grids) used for better resolution? Looks like they have used what they term “sub-grids” (p31), but it’s unclear	<p>Seawinds data populate this entire region. Both HYCOM and NOAA Seawinds are considered state-of-the-science technically robust models and are industry standards for these types of modeling exercises.</p> <p>Sub-gridding described with Figure 5-1 is used for additional resolution to delineate the land from the water and does not provide additional vectors. For a domain as large as this, nesting higher resolution grids for additional vectors is generally considered superfluous as the detail they would provide (typically along the nearshore environment) are Negligible compared to the general level of uncertainty in making predictions of future spill trajectories. However, a nearfield model was activated within COSIM to address potential criticism of nearshore limitations in the HYCOM model.</p>
Lisa	Guastella		Being from the USA and reliant on global data, the modeller, although well qualified, lacks the local knowledge of oceanographic currents off the KZN coast. Although the model will simulate conditions in a general sense, local variability (particularly closer to the coast) may not be known or accounted for, or picked up by the model. A literature search may have helped to put things into context, but the references in the report indicate no local content has been used to even verify the model output, the results are purely reliant on the model. In the Model inputs chapter (p32), it was stated that “inputs were gathered and formatted for use with COSIM and GIFT. These input data included: Previous studies of the site with respect to coastal oceanography”, but where are the references to these “previous studies”?	The team responsible for the global HYCOM model are familiar with ocean currents from around with the world. As stated in the above question, additional resolution of currents closer to the coastline in the nearshore environment were not included by HYCOM, but were supplemented using COSIM’s nearshore model, which uses coastal slopes, and wave data (angle of approach, wave height and frequency) for computation of longshore currents and orbital velocities in the littoral zone. The inclusion of this model did little for the majority of the spill transport from the well location until less than a kilometer off the coastline.
Lisa	Guastella		As a result there is no understanding of the science of currents in the area, scientific interpretation is wrong, e.g. wrt Fig. 4-1 “Note the high velocities of the Agulhas Current southwesterly and parallel to the eastern African coastline, as well as the various circulating eddies along the Tugela Shelf, off the continental shelf (such as in the Natal Bight ...), and below the African continent where the warm Agulhas Current meets the cold Benguela Current from the west coast. “ If this image is indeed for 1 Jan 2015, the HYCOM model in this instance has modelled the area offshore of the KZN Bight and Durban as a larger Natal Pulse, whereas this is not the case (I have checked against available satellite SST imagery), there was a KZN	The importance of Figure 4-1 is overstated. The figure provided in the report is a moment in time from a single date, chosen arbitrarily at the start of a year, simply to illustrate the current vectors provided by HYCOM at the water surface. The opinion of “wrong” understanding of oceanic currents on the part of the HYCOM modeling team is thereby based on a single snapshot in time.
Lisa	Guastella		Bight swirl (refer Roberts, et al., 2016), but what is modelled as the equivalent of the Natal Pulse is interpreted as eddies along the Tugela Shelf – what is modelled here extends	HYCOM is a reanalysis, whereby it assimilates measured data from satellites, floats and buoys ( <a href="http://www.hycom.org">www.hycom.org</a> ). The independent reviewer at PRDW stated that his company has direct experience using HYCOM

			<p>further offshore of the Tugela Shelf.</p> <p>The Agulhas current core off the Transkei is well represented, but then the model looks like it has exaggerated the Port Alfred upwelling cell or has modelled an early retroflection of the Agulhas Current (usually off PE, where the Agulhas Bank starts) or another Natal Pulse. However the cyclone (cyclonic circulation cell) east of the Agulhas Current core is well represented – this is a good indication of the model working better further offshore than nearer the coast where there is more error, especially at only 1/12° resolution – but perhaps that is resolved in their COSIM modelling, which is supposed to include nearshore? There is no “west coast” or “cold Benguela Current” in the figure – you would need to extend it to the west coast to see that! Therefore there is bad interpretation of the output.</p>	<p>for similar studies around the world and has previously validated HYCOM currents against current meter measurements off the coast of South Africa.</p> <p>As stated in the previous question's response, HYCOM's 1/12° resolution is sufficient for the offshore environment where the majority of the spill trajectory takes place. Once a spill particle arrives close to a shoreline, the nearshore model become relevant to guide the transport. However, the precision in the nearshore environment matters little to the probabilistic analysis to account for the uncertainties inherent with predictions of future events.</p> <p>See subsequent comments regarding the Bight swirl's inclusion within HYCOM.</p>
Lisa	Guastella		<p>Model Validation</p> <p>I agree with the comments by Luger: “only a single snapshot in time of the current field was provided. Current roses or time-series would have provided evidence that the temporal characteristics of the currents applied in the model were realistic.” i.e. it would have been useful to have presented some more current field outputs so the reader could establish whether the model is simulating it correctly, or a modelled output time series or current rose from sample sites to compare to what is expected.</p> <p>Presume current and SST data derived from HYCOM, i.e. presume satellite-derived.</p> <p>No mention of the resolution of the wave data used and there is no validation to compare with measured data.</p> <p>Wind data 0.25 X 0.25 arc-degree resolution – what does this mean? 0.25° X 0.25°, i.e. 27.75 X 27.75 km square? There is no validation to compare with measured data, e.g. actual case study comparisons or wind roses (this was also picked up by Stephen Luger in his review).</p> <p>Air temperature – actual data used, which is a +ve, but why did they include west coast stations when we are modelling the east coast? The model output figures presented concentrates on the east coast in any case</p>	<p>Noted.</p> <p>Resolution of wave data provided in Section 4.1.2: “Within WAVEWATCH III®, the Global database for the Atlantic and Indian Oceans was used to obtain wave heights, wave periods, and peak directions every three hours in a grid spaced with data every 0.5° latitude and longitude.</p> <p>0.25 X 0.25 arc-degree resolution means there is a value every 0.25° latitude and 0.25° longitude. Wind models such as NOAA Blended Seawinds are well-respected and widely used because measured data are absent across most of the ocean surface where the values are most needed for this type of modeling. Long period records of wind speed available along the coastline provide little to help authenticating the wind velocities where the data matters the most in the ocean.</p> <p>Air temperature measurements along the coastline we gathered to cover the model domain from east to west. The model performs a spatial interpolation to estimate the air temperature at any given location.</p>

Lisa	Guastella	<p>Scenarios What is the reasoning behind the selection of the points N1, N2 and S? Not given.</p> <p>According to Annex D: “The midpoint between well locations in the southern region of the Block under consideration for well locations, but not confirmed at the time of this writing.” i.e. it appears there is some uncertainty whether the scenario S is in the right place.</p> <p>An oil spill could take place at any location within the block ER236 and closer to the SA east coast, e.g. shelf off Scottburgh, or shelf area north of Richards Bay (close to iSimangaliso shoreline); why were the specific localities N1, N2 and S chosen? Justification?</p> <p>If an oil spill had to occur in the area closest to Durban (south block), oil would get entrained into the Durban Eddy, if present (55% of the time) or in a Natal Pulse (less frequent occurrence), i.e. it would get recirculated along the coastline south of Durban.</p> <p>Did the model pick up the KZN Bight swirl or Durban Eddies? Again, no idea if representative because only one modelled currents snapshot provided. What if oil enters KZN Bight (from the north block, if source closer to coast than the selected N1 or N2)? – e.g. nurdles recirculations.</p>	<p>Eni provided locations that were most likely coordinates for drilling locations. There is greater certainty regarding plans to drill at N1 and N2. The exact well location for the south well has not been determined at this present time. A mid-point between the range of possible locations for the southern well was chosen.</p> <p>For the locations of the spill scenarios, obviously the blowout and riser disconnect scenarios were located at the well locations. For the diesel spill, accidents are more likely to occur where there is vessel traffic surrounding the drilling operations, as opposed to in the open sea and therefore was also located at the same locations as N1, N2 and S on the surface.</p> <p>The model did simulate eddies in the KNZ Bight and the Durban Eddies.</p> <p>For example, according to your poster from 2012 entitled “Influence of the Durban cyclonic eddy on the east coast oceanography of South Africa,” on February 6, 2010 there was a Durban Eddy (This was taken from Gustella, et al., 2012).</p> <p>Similarly, HYCOM depicts a Durban Eddy on this day off the coast of Durban.</p> <p>According to Roberts, et al., (2016), the southern half of the KZN Bight had a cyclonic “swirl” during September 2007. Examining HYCOM in the middle of September 2007, a clockwise rotational pattern is evident in the southern half of the KZN Bight north of Durban</p> <p>We did not model sources closer than N1 and N2, as these were the most likely well locations. Answering the “what if?” question without first modelling the scenario would be speculative, requiring an imagining of many different variables at play including the complex combination of currents and winds.</p>
Lisa	Guastella	<p>I agree totally with the comments by Stephen Luger (Appendix D6) under 3.1 oil spill scenarios modelled, e.g. why were conservatively high rates not used for the oil spill modelling? Modelling report states “very worst case in line with international requirements.” yet according to Stephen’s calculations, this is certainly not the case, esp for Scenario 2. Scenario 1 - Diesel spill from a vessel collision near the well: “In either case, in the absence of response efforts a diesel spill will likely reach shoreline within four days.” – surely that is cause for concern? (Exec summary, p12).</p>	<p>Scenario 2 rates were chosen to reflect a worst case volume with a realistic duration as Eni is confident in its ability to respond to a blowout and cap it within 20 days.</p> <p>Scenario 1: The comment about the “absence of response efforts” was not to indicate an absence of concern, but rather to quality that the modeling performed assumed no intervention takes place, and that the oil was free to travel unimpeded in the simulation absent of booms, skimmers, burning, and other response activities.</p>

Lisa	Guastella		<p>Scenario 2 - Blowout from the wellhead: “the oil mass disperses within the water column and travels on the surface parallel to the coastline due to the strong influence of the Agulhas Currents, such that oil reaching the shorelines would be below the significant impact threshold.” What is the significant impact threshold?</p> <p>“An oil slick thicker than the minimum smothering thickness would stay off the coastline.” – what about onshore wind transport?</p> <p>Blowout (Scenario 2) – claimed 1% of the oil is on the sea surface, less than 1% comes ashore, 40% is dissolved into the water and 40% dispersed as droplets. But the fact that only 1% is on the surface doesn’t mean that there isn’t a problem – the 1% may only affect surface feeders and birds, what about the biota in the water column?</p> <p>Blowout = consistent, persistent oil emitted – under-represented in model.</p> <p>Season 1 summer and autumn (1 Dec - 31 May) and Season 2 for winter and spring (1 June to 30 November)</p>	<p>The significant impact threshold is defined in the report based on the oil thickness floating on the surface, &gt;1 µm.</p> <p>What about onshore wind transport? — The NOAA Seawinds database is a comprehensive model that includes the effects of the land elevation when computing estimates of the winds along and off the coastline.</p> <p>The report does not conclude that the % of the oil on the surface is indicative of there not being a “problem.” The report is clear that areas with oil thickness &gt;1 µm is indicative of a potential risk for birds and wildlife, while &gt;10 µm is a strong indication of a potential risk for birds and wildlife.</p> <p>Biota in the water column are at risk typically in regions below the slick where dissolved aromatics exceed 5 ppb for the most sensitive biota. Mobile biota may be capable of avoidance of these dissolved plume, especially when the plume is primarily resident in just the top few meters below the slick.</p>
Lisa	Guastella		<p>Scenario 3 - Release of Non Aqueous Drilling Fluid (NADF), after a riser disconnection:</p> <p>Zoomed in results were provided for the NADF scenarios. Further to reading through Annex D7 p3 of Annex D7 and main report conclusion (p100): “Diesel would naturally degrade and evaporate on the shoreline over time.” – how much time is required?</p>	<p>According to NOAA spill response, “small diesel spills will usually evaporate and disperse naturally within a day or less” where NOAA defines a small spill between 500 to 5000 gallons (NOAA, 2018). While the spill simulated in this analysis is much larger, the diesel weathers to the point of being &lt;5000 gallons in over 98% of the iterations examined from N1 (considering, 93% of the iterations had no shoreline contact at all). One iteration reached 7,340 gallons and one 13,900 gallons on shore. In these two iterations, representing a less than 2% probability of occurrence, it is reasonable to assume it may take several days to a week to degrade and evaporate.</p>
Lisa	Guastella		<p>Considering the output provided in Figs 5-4 to 5-41, it would have been useful if results had been presented in a more zoomed in output, e.g. from Sodwana Bay to East London, because no plumes or shoreline oilings are predicted beyond these locations (the furthest south is presented in Fig 5-21, which extends to just SW of East London, so perhaps Port Alfred could have been used as a southern limit here. The zoom would have provided an improved depiction of plume spread.</p>	<p>Noted. Space was left for inclusion of annotations to help the reader with summaries of key points from each figure.</p>
Lisa	Guastella		<p>Additional comments:</p> <p>Apart from currents, need to consider surface wind response, not sure if winds adequately represented as no validation of these. Oil tends to move at between 2 and 3% of the wind speed (Department of Environmental Affairs, 2011).</p>	<p>Yes, the model accounts for wind influenced drift effects on the oil movement in that range using the gridded spatially varying NOAA Blended Seawind data.</p>

Lisa	Guastella		<p>From what I can make out (I still need to read more on technical detail of the model used), the model is modelling average conditions. So:</p> <p>What if a Natal Pulse is present + onshore winds? Expected trajectories from when a Natal Pulse is present are not indicated – or perhaps they didn't occur within the “worst case” scenarios included in the presented results? How was this feature (Natal Pulse) represented in the model, we have no idea because only one sample model snapshot was provided of the modelled current field.</p> <p>This is relevant to both release position scenarios (N1 &amp; S, N2 is further offshore so may be unaffected). Natal pulses generally occur 2-4 times, 1.6 times a year for significant pulses that are detectable all the way down to PE (Rouault, 2011) and usually form offshore of the KZN Bight (response to anticyclone offshore), centered approx off Durban and can last in the area from 2-4 weeks –my data (ADCP currents + satellite imagery) shows it is possible to be present off Durban area 23% of time (that was possibly a max/worst case scenario as I had 4 long Natal pulses during 18 month sampling period), am guessing probably occur an average of 15% of time (I would need to work this out/verify using a longer sampling period; can be done with satellite imagery – have good new data set from NOC/Plymouth lab). Natal Pulse “swamps” everything out in terms of currents – i.e. slack currents offshore of KZN, Agulhas Current pushed further offshore by meander, inshore currents (slack) SW'ward, offshore currents (slack) NE'ward, i.e. reversal of normal flow. Natal pulse extends out to approx 90 – 125 km offshore of Durban. Natal Pulse grows in offshore extent as it then migrates SW'ward along the coast, can extend 200 km offshore by the time it reaches Cintsa/EL. The Natal Pulse does not appear to be taken into account in modelling scenarios + impact of onshore winds with slack currents, could mean oil will get transported onshore. More relevant to scenario S than N1 and N2, but N1 could fall within the formation area, N2 at the outer limit</p>	<p>Regarding Natal Pulses and their related mesoscale cyclonic meanders. The HYCOM model used does take them into account as the reanalysis product used for this study includes assimilation of measured data which has made the simulations more robust.</p> <p>Backenberger, et al. noted in a 2008 report that in the study area on the east coast of South Africa, “HYCOM reproduces the general circulation pattern with the regional characteristic spatial and temporal variability reasonably well” although the model is limited in its representation of the train of eddies related to Natal Pulses.</p> <p>However, I believe the version of the model the authors used was before the HYCOM reanalysis product had been made available to the public. The authors make no mention of the reanalysis or any data assimilation performed.</p> <p>Though perhaps not as high resolution as the modeling study performed by the work of Backenberger, et al., the publicly available HYCOM model does simulate the chains of eddies associated with Natal Pulses along the channel.</p> <p>Comparing the eddies depicted in the publication by Backenberger, et al. for October 2002 to the eddies in the publicly available HYCOM model, it is evident that HYCOM does include the chain of eddies, albeit not as well resolved as the Backenberger team does with their research project.</p>
Lisa	Guastella		<p>P5 of Annex D7: “oil slicks thicker than the smothering thickness (1.0 µm) for risks to birds and wildlife would stay off the coastline” – is he inferring that there are no birds/wildlife further offshore?</p> <p>P5 of Annex D7: “Much of the oil mass is estimated to be assimilated within the water Column” – not sure if I'm missing</p>	<p>There are birds and wildlife further offshore but in this scenario, Oil weathers significantly to low risk exposure thickness (&lt;1.0µm) where smothering and physical injury is not expected to mammals and seabirds.</p> <p>In a blowout situation, the liquid oil is resolved into tiny liquid droplets.</p>

			<p>something here, but I was under the impression that oil is less dense than water and would be more inclined to move up through the water column to the surface, i.e. float (certainly initially); it may be assimilated within the water column at a later stage if particles adhere and therefore becomes heavier. Not only surface oil that is a problem to wildlife, but also that which may be present in the water column or sinks to the bottom.</p> <p>Presence of Natal pulse may result in more variability than seasonal scenarios (Figs. 1.3 &amp; 1.4 of Annex D7). There is actually not that much seasonal variation in the Agulhas Current transport (Lutjeharms, 2006) – yes summer-autumn temperatures are higher and more recently volume transport has been calculated to be higher in late summer, peak Jan-Feb (ACSA results). A recent PhD on seasonal variation definitely picks up Jan-Feb peak in transport.</p>	<p>These droplets rise at different rates. As spherically shaped droplets, the opportunities for dissolution is high due to the optimal surface area-to-water contact. The remaining mass that does not dissolve often has a density closer to water than the oil originally had as a whole.</p> <p>While larger droplets rise more directly to the surface, once the momentum of the explosive force is lost the tiny droplets may become trapped at various depth layers as the buoyant forces can be overtaken by other forces such that the net direction is relatively constant or slowly upwards. Within the water column, a modest amount of biodegradation is assumed to break down the hydrocarbons. As the droplets continue to be pushed by currents and spread out radially, especially in the horizontal plane, from dispersion, the liquid may eventually reach the surface but at different locations. There, the mass of oil may join with other oil mass and form a slick, or weather and evaporate to thickness levels below the thresholds of concern.</p>
Lisa	Guastella		<p>Possibility of oil getting entrained into Port St Johns Eddy – we are fortunate to have the nurdle spill incident from last year, releasing 2.25 billion nurdles, representing ideal floats for studying pollution dispersion. As the nurdles float and respond to wind and currents, they can be used as an indicator of where surface pollutants (e.g. oil) may disperse. Thus, if the scenario provided in 2b (S) on pg 6 of Annex D7 is to be believed, it would appear that there is a high probability of oil getting entrained into the AC close to the Wild coast (MPA) – high nurdle concentrations found at Port Grosvenor and Agate Terrace (PSJ) shows there is a good probability of oil ending up on the coast. The same logic applies to Fig 1.2 (Scenario 1) S output.</p>	<p>Oil fate and transport is not the same as nurdles. While a single incident provides some insight into transport, it is most relevant to that day, at that location, with a conservative substance. This analysis is the synthesis of motion of both the water and the oil separately atop of the water with wind shear forces that affect a thin slick differently than a floating nurdle. Whether or not the oil reaches a given location is dependent on both the transport and the fate as the oil weathers, spreads, dissolves, and disperses in ways pieces of plastic does not.</p>
Lisa	Guastella		<p>The case of the Katina P</p> <p>The sinking of the Katina P at a depth of approximately 2 800 m, some 200 n.mi off Maputo, Mozambique (25°01' S, 27°01' E), on 26 April 1992 serves as an ideal real case study of oil dispersion. The Katina P was a Greek oil tanker carrying 72,000 tonnes of oil (Wikipedia, 2018), although an ITOFF (International Tanker Owners Pollution Federation) report states 66 700 tonnes. Information presented here is obtained from two reports by Mason, et al., 1992 and Ramsay et al., 1993, both of which contain similar information. The ship was carrying a cargo of Venezuelan heavy furnace oil (HFO) and broke into two as it sank, leaking 13 000 tonnes of oil in the process.</p>	<p>Citing the example of the Katina P incident off the coast of Mozambique does not serve the purpose of this analysis well. This is fundamentally a probabilistic analysis relying on multiple iterations to derive predictions of potential future events. Single incidents at locations a significant distance away cannot be used to calibrate or validate the model.</p> <p>This was an incident which released oil into the environment of a very rare catastrophic amount, firstly almost 400 km north from N1 very near the coast by Maputo Bay (about 10 km from the coast), and later while the vessel sank into waters over 600 km northwest of N1 about 2800 m deep. The specifics of this incident – the locations, the volumes, the depths, the currents, and the storm conditions which first caused the event – were a very specific and rare combination of conditions</p>

		<p>The leading edge of the oil slick reached Kosi Bay on the 10th May, (travel time of 15 days with an actual average velocity of 0,36 m/s), although the main body of the slick grounded on the 17th May when large quantities of oil were reported along the Zululand coast, i.e. travel time 23 days with actual velocity of 0,30 m/s)..</p> <p>"During the last week of May oil deposits were reported from beaches as far south as Port Edward. On May 26th the oil had bypassed Durban and landed on the Natal south coast, but only reached Durban on the 29th May. The presence of the Agulhas Current gyre located off Scottburg-Durban was the reason for this local-scale reversal in the pollution vector, is the reason for this reversal of the regional pollution spread." The spill reports are interesting in that knowledge of the currents off the KZN coast has since improved and can be used to corroborate their findings. What the authors refer to as the "Agulhas Current gyre" is actually the Durban Eddy, thus some of the oil that was transported south-westwards in the Agulhas Current got entrained into the Durban Eddy, south of Durban, and entered it's cyclonic circulation such that it was first deposited on Scottburgh beach and subsequently was transported north-eastwards in the eddy to reach Durban on a later date (refer Fig 8 from Roberts circulation paper – refer Appendix 1). That which was deposited at Port Edward was probably transported there by the Agulhas Current (i.e. it was in the main current, but on the outer edge of the eddy and did not get entrained into it), and may have got driven ashore by onshore (NE) winds.</p> <p>Whilst the initial slick washed up on the east coast from Kosi Bay to the Transkei, further slicks beaches from 23/7/92 – 20/8/92 at selected beaches from Richards Bay to Margate, with Sheffield Beach being one of the worst hit areas. This is also interesting as this was also a "popular" beach for nurdle deposition following the nurdle spill incident in Durban Harbour on 10 Oct 2017, and is thus a depositional centre. This may be related to the oil (and, more recently, the nurdles) getting entrained and circulated in the KZN Bight Swirl (Roberts, et al., 2016). It is also interesting to note that the MT Phoenix grounded at Sheffield Beach (26 July 2011).</p> <p>Thus if oil is transported south-westwards in the Agulhas Current over an area corresponding to position N1, it has the potential to enter the Durban Eddy and/or KZN Bight and get</p>	<p>fundamentally different than the scenarios examined in this study. The trajectory of oil during this event cannot therefore be compared easily to the spill scenarios and locations of spills in the Eni report.</p> <p>Climate Change:</p> <p>Any potential changes in the environment that may occur due to climate change during the time period in which Eni may be in operation is highly unlikely considering Eni plans operations within the next year and could last XX number of years. The amount of change to the environment during this time period is unlikely to affect the conclusions of this study.</p> <p>An analysis was performed by Nordam, et al.,(2017) to assess how climate change 40 years in the future might affect a spill model's results. The conclusion showed that while in some ways the spill impacts might be mitigated (greater biodegradation, greater evaporation, less oil on the water surface), the change in water density, temperature, sea level rise, etc. might also increase forces that would increase percentage of submerged oil, and in some cases increasing the amount of oil that could deposit in the sediments. Note, that while this study was performed in the arctic conditions, increases in evaporation and biodegradation are expected elsewhere from higher average temperatures. While global average temperatures may rise, it does not necessarily mean that a given location and time of a spill event would necessarily occur on warmer than average conditions in the future.</p>
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			<p>recirculated and deposited on the beaches. If a larger Natal Pulse is present, oil from S1 may also be recirculated onto the coast. I do not believe the model has taken mesoscale cyclonic circulations sufficiently into account.</p> <p>The authors assert that it is most likely that all of the oil which was deposited along the Natal coastline came from the wreck site, 800 km northeast of Durban. They also went on to suggest that “oil entrained in the Agulhas Current is brought close to shore by (clockwise) eddy current activity” and that “waves, wind and tidal action re responsible for finally beaching the oil”.</p> <p>A lighter oil may disperse more rapidly and perhaps further.</p> <p>It is surprising that the oil spill report did not even refer to the Katina P to put it into context, as it is a well known oil spill and a basic google search would have yielded a result.</p> <p>Still to consider global warming and climate change scenarios – will it increase risk?</p>	
Lisa	Guastella		<p>References:</p> <p>Fichera, MJ, 2018: Environmental Impact Assessment for Proposed Exploration Drilling in Block ER 236, offshore of Kwa-Zulu Natal Coast of South Africa – Oil Spill Modelling Report, Annex D of Environmental Impact Assessment, ERM, September 18, 2018, 123pp.</p> <p>Fichera, MJ, 2018: Environmental Impact Assessment: Drill Cuttings and Muds Discharge Modelling Report, Exploration of the Block ER236 Block, South Africa, Annex D5 of Environmental Impact Assessment, ERM, September 18, 2018, 33pp.</p> <p>ERM, 2018: NON-TECHNICAL SUMMARY OF OIL SPILL MODELLING REPORT, Annex D7 of Environmental Impact Assessment, ERM, September 2018, 10pp.</p> <p>Luger, S, 2018: EIA FOR OFFSHORE DRILLING IN BLOCK ER 236: PEER REVIEW OF OIL SPILL MODELLING REPORT, Annex D6 of Environmental Impact Assessment, ERM, PRDW, 7 September 2018, 4pp.</p> <p>Additional references:</p> <p>GUASTELLA, L.A. &amp; ROBERTS, M.J. 2016: Dynamics and</p>	<p>Noted</p> <p>References:</p> <p>Backeberg, B.C., J.A. Johannessen, C.J. Reason. 2008. "The greater Agulhas Current system: An integrated study of its mesoscale variability." Journal of Operational Oceanography Vol.1, No. 1, 2008.</p> <p>Goschen, W., T, Bornman and S.Deyzel. 2015. "Investigating coastal upwelling during Natal Pulses of the Agulhas Current" URL: <a href="http://www.saeon.ac.za/enewsletter/archives/2015/december2015/doc10">http://www.saeon.ac.za/enewsletter/archives/2015/december2015/doc10</a></p> <p>Guastella, L., M. Roberts, F. Shillington. 2012. ""Influence of the Durban cyclonic eddy on the east coast oceanography of South Africa" Poster presented at the 2012 AGU Chapman Conference, Western Cape, South Africa, 7-12 October 2012</p> <p>NOAA. 2018. "Small Diesel Spills (500-5,000 gallons)". NOAA Office of Response and Restoration. URL accessed November 2018: <a href="https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/small-diesel-spills.html">https://response.restoration.noaa.gov/oil-and-chemical-spills/oil-spills/resources/small-diesel-spills.html</a></p>

		<p>role of the Durban cyclonic eddy in the KwaZulu-Natal Bight ecosystem, African Journal of Marine Science 38 supp1, S23-S42, DOI: 10.2989/1814232X.2016.1159982.</p> <p>GUASTELLA, L.A. &amp; SMITH, A.M. 2018: The influence of oceanographic and meteorological conditions on nurdle dispersion following the Durban Harbour nurdle spill of 10 October 2017, SCCP, 5-9 November 2018, St Ives.</p> <p>ROBERTS, M.J., NIEWENHUYTS, C. &amp; GUASTELLA, L.A. 2016: Circulation of shelf waters in the KwaZulu-Natal Bight, South Africa, African Journal of Marine Science 38, supp1, S7-S21, DOI: 10.2989/1814232X.2016.1175383.</p> <p>Lutjeharms, JRE, 2006: The Agulhas Current, Springer-Verlag.</p> <p>Mason, T.R; Ramsay, P.J. &amp; Smith, A.M., unpubl: THE KATINA P AFFAIR - A POST-MORTEM ACCOUNT.</p> <p>Ramsay, P.J., Smith, AM &amp; Mason, T., 1993: The Katina P: a long-term oil pollution source., Council for Geosciences Report No. 1993-0037, 12pp.</p> <p>Rouault, M., 2011: New perspectives on Natal Pulses from satellite observations, JOURNAL OF GEOPHYSICAL RESEARCH,</p> <p>Muthige, MS &amp; Engelbrecht, FA., 2018: Projected changes in tropical cyclones over the South West Indian Ocean under different extents of global warming, SASAS abstracts, p22.</p> <p>Department of Environmental Affairs, 2011: Coastal oil spill contingency plan: No. 20: Durban Zone: January 2011.</p>	<p>Nordam, T., D.A.E. Dunnebier, C.J. Beegle-Krause, M. Reed, D. Slagstad. 2017. "Impact of climate change and seasonal trends on the fate of Arctic oil spills." Ambio 2017, 46 (Suppl. 3): S442-S452</p> <p>Roberts, M.J., C. Nieuwenhuys &amp; L.A. Guastella. 2016. Circulation of shelf waters in the KwaZulu-Natal Bight, South Africa, African Journal of Marine Science, 38:sup1, S7-S21, DOI: 10.2989/1814232X.2016.1175383</p>
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EIA Process Comments				
Name	Surname	Organisation	Comment	Response
Cheryl	Smart	Advocates Group Seven North	You refer to Section 21 of the EIA Regulations. Could you please send me a copy of the regulations you refer to? I look forward to your urgent response	A copy of the NEMA EIA Regulations was emailed to Cheryl on 14 August 2018, as requested.

Shona	Aylward	South Coast Herald	My name is Shona Aylward from the South Coast Herald. Please can we be informed why the meetings are postponed? The reason behind the postponement. I am also interested to know how the South Coast is involved in the Exploration Drilling within Offshore Block.	<p>Unforeseen delays in finalising the specialist studies for the exploration drilling within Block ER236 were experienced; which resulted in subsequent delays in the drafting of certain chapters of the EIA Report.</p> <p>Additional time was necessary to guarantee independent peer review of studies; the oil spill report and model reporting particularly.</p> <p>Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the final EIA Report by the 3 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the current EIA Application lapsed on the 3rd August 2018.</p> <p>The location of the drilling areas of interest inside Block ER236 is described in Chapter 3 (Section 3.3). The area of direct influence and indirect influence are described in Chapter 4 (Section 4.2) of the EIA Report.</p>
Desmond	D'Sa	SDCEA	<p>Are you flexible with the dates as the schedule you have provided is very tight and does allow people to breathe and make arrangements . When you decided to cancel the report back meetings in June 2018 all over KZN without proper consultation , it was clear you believe you can do what you want to without meaningful and proper consultation with those whose entire life will be turned upside down with noise, destruction. Marine life and their meagre wealth destroyed .</p> <p>We want you to send us other dates more suitable in the 3rd week in October 2018 with community venues .</p>	<p>The EIA process follows a stringent, regulated timeframe as prescribed in the NEMA Environmental Impact Assessment Regulations, 2014. The Process takes 12 months to complete, including the 30 day comment periods set aside for the scoping and EIA phases. ERM is obligated to submit the Final EIA Report within the regulated NEMA timeframe.</p> <p>The EIA team have made the draft EIA Report available for a thirty (30) day public comment period from 25 September 2018. Due to requests received during the draft EIA open house meetings, an isiZulu translated report has been made available to the public for comment. The comment period was also extended by a further fourteen (14) days, which ended on 8 November 2018.</p>
Briege	Williams	South African Heritage Resources Agency	Thank you for the notification regarding the current status of the above project. Can I please request that once the draft EIA has been finalised that it is uploaded onto SAHRIS under the current case ID 11842 so that SAHRA is able to issue a comment. I will upload this notification letter onto SAHRIS for our records.	The Draft EIA Report was uploaded on to the SAHRIS Portal on the 26 September 2018.
Margie	Pretorius	Sustaining the Wild Coast	<p>I wish to register myself and the organisation I work with - Sustaining the Wild Coast - as interested and affected parties in the matter of off shore oil and gas exploration off the East Coast of Africa by SASOL and Eni.</p> <p>- the consultation process for this EIA had been inadequate. The possibility of an oil spill could affect coastal communities all the way down the East Coast of South Africa, and these communities have not</p>	<p>You have been added to the I&amp;AP database and will receive notifications relating to the EIA going forward.</p> <p>The public participation process was designed based on the nature and scale of the anticipated impacts associated with the Project, taking into consideration the level of interest in the Project. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is</p>

		<p>been adequately consulted. 5 meetings were held in urban coastal centres, but this did not give the many, many coastal residents, particularly in areas far from urban areas, opportunity to learn and comment on the possible impacts of this project. Sustaining the Wild Coast works in the Mpondoland Wild Coast area and there is little, if any, awareness in this area of how exploration and drilling could negatively impact the ocean and the coast.</p> <p>- South Africa should be focusing on harvesting the energy of the sun rather than focusing on exploiting oil and gas reserves - the extraction of which is destructive towards the environment, both in terms of climate change and damage to the ocean and the coast and all their ecosystems which are essential to our economic wellbeing.</p>	<p>not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>In light of the above, the five open house meetings were deemed sufficient to disseminate the findings of the EIA stakeholders, together with the availability of the draft EIA on the Project website and at the following public places:</p> <ul style="list-style-type: none"> <li>• Durban Central Lending Public Library</li> <li>Austerville Library</li> <li>• Richards Bay Library</li> <li>• Port Shepstone Library</li> <li>• East London Central Library</li> <li>• Nelson Mandela Bay Municipality – Linton Grange Library</li> <li>• ERM offices, Suite S005, 17 The Boulevard, Westway Office Park, Westville</li> </ul> <p>The proposed project is for exploration drilling to ascertain whether oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before extraction can occur. RM (as the EAP has conducted a comprehensive public participation process as defined in Section 41 of the 2017 Environmental Impact Assessment Regulations states that “The public participation process contemplated in this regulation must provide access to all information that reasonably has or may have the potential to influence any decision.” The NEMA Public Participation Guideline No. 807 of 2012 was also utilised to rollout an inclusive consultation process.</p> <p>Exploration Government, through Operation Phakisa, is seeking to grow the country’s ocean economy through several industrial</p>
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				<p>sectors, including the promotion of the oil and gas sector. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Margie	Pretorius	Sustaining the Wild Coast	<p>The impact of possible oil spills is always underestimated by mining companies all over the world. The impact of spills on affected communities can be devastating and long lasting. South Africa should in no way be risking damage to the whole of the East Coast through this kind of extractive project.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a moderate - negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Margie	Pretorius	Sustaining the Wild Coast	<p>South Africa should be focusing on harvesting the energy of the sun rather than focusing on exploiting oil and gas reserves - the extraction of which is destructive towards the environment, both in terms of climate change and damage to the ocean and the coast and all their ecosystems which are essential to our economic wellbeing.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. The white paper states that 'Government will ensure the optimal and environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all' and undertakes to 'ensure private sector investment and expertise in the exploitation and development of the country's oil and gas resources'. The successful exploitation of these natural resources would contribute to the growth of the economy and</p>

				relieve pressure on the balance of payments. For more discussion on the need and desirability of the Project, refer to Chapter 3.
David	Pearton	South African Associated Marine Biological Research	<p>As you are no doubt now aware, the Cabinet recently released a decision to promulgate 20 new MPAs, including the extension of iSimangaliso, and Aliwal Shoal MPAs and two new MPAs , namely Tugela Banks, and Protea Banks, in KZN. All of these are potentially affected by the proposed exploratory drilling or any incidents that might occur.</p> <p>In the light of this the current EIA and, indeed, scoping report is inadequate and almost certainly irrelevant. Given that the scoping report as originally approved in April 2018 no longer reflects the "current environmental context" it is clear that a new scoping report is required and the EIA process needs to be restarted with this new environmental context in mind.</p> <p>In addition I would like to amend the comments I submitted on October 15 2018 as follows:</p> <p>Rather than: Why were the rights to the proposed MPAs (for e.g. Tugela Banks, Protea Banks, Aliwal Shoal extension, iSimangaliso extension) not relinquished during the Exploration Right renewal process of 2016? The proposed MPAs were gazetted in February 2016 (Government Gazette no. 10553, February 2016) and the public participation was before this, so there was sufficient time to consider the proposed MPAs in the renewal process. Will you commit to no exploration or future drilling in the recently promulgated and extended MPAs, including, but not limited to, the Tugela Banks, Protea Banks and the extensions of the iSimangaliso Wetland Park and Aliwal Shoal MPA?</p>	<p>The EIA report was amended to include the 20 new MPAs. The marine specialist has reviewed the new MPAs in the sensitivity studies. Please refer to Chapter 4 and 7 of the EIA Report for detailed information on the marine environment of the area and the potential impacts on the marine ecology. The proposed exploration drilling is limited to two areas of interest within block ER326, and neither of these areas of interest overlap the MPA boundaries.</p> <p>The presence and importance of MPAs (already defined and proposed extension) were assessed in the Scoping report released in April 2018 and the draft EIA report. The new MPA's do not affect the original evaluation as the new confirmed boundaries have been included in the EIA report.</p> <p>The Specialist has reviewed the new MPAs in the sensitivity studies, confirming that all key sensitivities has been included and assessed in the EIR. Please refer to Chapter 4 and 7 of the EIA Report for detailed information on the marine environment of the area and the potential impacts on the marine ecology. The proposed exploration drilling is limited to two areas of interest within block ER326, and neither of these areas of interest overlap the MPA boundaries.</p> <p>Comments on future or potential development cannot be provided at this stage, nor is this a reasonable request for the scope of this EIA process. This is based on the project description provided in the Scoping Report, EIA report and explained at the public meetings held: i.e. the exploration activities will inform future considerations related to development opportunities based on whether a viable energy source is confirmed.</p> <p>Your comment has been updated as requested.</p>
Noelle	Garcin	African Climate Reality Project	<p>1. Section 24 of the Constitution, further supported by the National Environment Management Act (NEMA), emphasise the duty on the state to protect the environment and, when authorising polluting activities, to prevent creating an environment that is detrimental to health and wellbeing, and ensure that pollution is avoided or at the very least minimised and remedied.</p> <p>We therefore submit that the granting of an authorisation on the basis of the draft Environmental Impact Assessment (EIA) report would be unlawful and unconstitutional as it conflicts with the imperatives of</p>	<ul style="list-style-type: none"> <li>• If gas flaring is conducted for the disposal of test fluids, an efficient test flare burner head equipped with an appropriate combustion enhancement system should be selected to minimize incomplete combustion, black smoke, and hydrocarbon fallout to the sea. Volumes of hydrocarbons flared should be recorded</li> <li>• Use of a low sulphur fuel, if available; and</li> <li>• Implementation of a maintenance plan to achieve efficient performance.</li> </ul> <p>With respect to the public health and wellbeing, pollution is being</p>

		<p>Section 24 of the Constitution and the objects and provisions of NEMA.</p> <p>The granting of an authorisation to proceed with the proposed exploration drilling would in effect permit an activity that is potentially detrimental, and most likely devastating to the health and well-being of coastal residents and persons who are dependent on the ocean ecosystem for a livelihood; and to the whole of South Africa due to its direct and indirect global warming effect through the release of additional greenhouse gas emissions into the atmosphere. As such, permitting an activity that contains the potential to inflict catastrophic socio-economic consequences onto local communities and the general public would be in violation of the constitutional imperative to protect public health and wellbeing, and in conflict with the objects of NEMA</p>	<p>avoided through internal best practise, Eni control measures and local legislative requirements.</p> <p>The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicates that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels will have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Any small spills on the deck of the drillship will be contained with the spill management equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board, offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base; ready and available for deployment in the event of a spill. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene within 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, which will need to be approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the</p>
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				form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.
Noelle	Garcin	African Climate Reality Project	<p>2. We further submit that the draft EIA fails to place all relevant considerations before the decision-maker, as contemplated under Section 6(2)(e)(iii) of the Promotion of Administrative Justice Act, of whether the stated need and desirability of the activity justify taking risks associated with the activity, or on the contrary the project should not proceed since such risks can never be completely prevented. The authorisation decision must be based on the consideration It must seek to understand the level of socio-economic impact that the proposed activity could have on the coastline communities, the coastal ecosystems and the natural environment as a whole (climate), both in normal and worst case scenarios; establish the cost thereof; and then determine whether there is sufficient need and desirability to take on such risks, using the best practicable environmental option.</p> <p>When a proposed activity may present a significant potential negative impact on the environment, the regulatory duty of the decision-maker is to evaluate and anticipate such potential consequences, determine their cost and whether authorising the activity would entail a cost acceptable to the society both in the short and long term.</p> <p>By considering these issues, the EIA forms the basis of the decision to authorise or not the exploration project. However, the draft EIA contains information which only promotes the project instead of appraising the full cost, including hazard and externality costs, and evaluating whether there is a need for this project in the context of this total cost.</p>	<p>Section 2 (4) f of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties in environmental governance must be promoted. People must also have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. To fulfil this principal and in keeping with Chapter 2 of the 2017 Environmental Impact Assessment Regulations (No. 326) which stipulated that the comment period on reports disclosed is 30 days; ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. The Scoping Reports and the draft EIA Report have been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days.</p> <p>No further extensions to the EIA Report comment period can be made as the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017). This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process.</p> <p>The draft EIA disclosed for comment contained all of the relevant information legally required in terms of the NEMA. Chapter 3 of the draft EIA report contained the necessary information pertaining to the need and desirability of the proposed project. It is important to note that the environmental legislation requires an assessment of impacts and not primarily a risk assessment.</p> <p>Furthermore, the aversion of all risks alone is not the only criteria for EAs and the Competent Authority has been mandated to make decisions based on the principles of sustainable development and not isolation of singular potential impacts. As such, the draft EIA report (and final) have complied with the requirements set forth in the applicable legislation, regulations and guidelines, such that an informed decision can be made.</p> <p>The application of the precautionary principle (in terms of a risk-averse approach) is triggered by two conditions namely: • a threat</p>



				of serious or irreversible environmental damage; and • scientific uncertainty as to the nature and scope of the threat of environmental damage. Since these conditions are both not met, there is no basis upon which the precautionary principle can operate.
Noelle	Garcin	African Climate Reality Project	<p>2.1. The draft EIA doesn't meet the requirements for a need and desirability assessment. NEMA requires rigorous analysis based on a methodology set out in the guidelines for assessments of need and desirability. The DEA (2017) has issued guidelines on need and desirability in the context of environmental authorisations under NEMA, namely the "Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa"<sup>1</sup>. The draft EIA fails to refer to the guidelines pertaining to need and desirability. The only guidelines referred to are those of Eni South Africa BV (Eni) itself.</p> <p>2.2. The draft EIA only presents the potential benefits of the proposed exploration, namely "improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons" (Draft EIA report paragraph 3.2).</p> <p>The EIA must also cover the potential negative long-term implications of a possible future oil and gas production. These includes the potential for a major catastrophic release or worst case scenario spill; greenhouse gas emissions and toxic volatile organic compounds (VOCs) resulting from extraction, transformation, transport and combustion of oil and gas.</p> <p>The eventuality of a spill is merely presented as a remote prospect in the draft EIA, although such releases have happened in other parts of the world with devastating consequences for the ocean habitat and lives and livelihoods along the coastlines affected. As such, the draft EIA provides insufficient or incorrect information about the risks and consequences of a catastrophic incident.</p>	<p>Although not specifically mentioned in the draft EIA report as the applicable guideline document, the Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the relevant reporting. The applicable environmental regulations require EAPs to have a knowledge of and take into account relevant guidelines, and ERM meets this criteria. As stated in the guideline, "need and desirability is based on the principle of sustainability", implying that there must be a balanced approach in decision making. The guideline further states that need and desirability must be considered together with the content of the" IDPs , SDFs, EMFs and other relevant plans, frameworks and strategies" when considering each application. Chapter 3 of the draft EIA clearly set out this description.</p> <p>In terms of financial viability, the guideline requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs". Consideration of the needs and interests of the broader community are said to be reflected in the IDP, SDF and EMF of an area that must be considered. As such, Chapter 4 of the draft EIA detailed the socio- economic baseline of the area, in line with findings from the SFD and IDP of the area. The current status of the broader communities are described in terms of contribution to workforce and GDP, access to basic services, access to basic infrastructure, key economic sectors, commercial fisheries and basic livelihood needs.</p> <p>The small scale fishery sector was identified as "small-scale fishers fish to meet food and basic livelihood needs" and these operates in "nearshore" waters unlikely to extend beyond approximately 5.5 km. Therefore, such activities would not directly coincide with the proposed drilling areas. As the northern area of interest is located a minimum of 62 km offshore and the southern area of interest a minimum of 65 km offshore, it is unlikely that the proposed exploration drilling activity will interfere with onshore recreational users either.</p>

				<p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, this plan will need to approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.</p>
Noelle	Garcin	African Climate Reality Project	<p>2.3. Section 2(4)(a)(vii) of NEMA requires to apply a risk-averse and cautious approach that takes into account the limits of current knowledge about the consequences of the decisions made and the actions that will derive from them.</p> <p>The application of the precautionary principle is triggered by the satisfaction of two conditions precedent or thresholds: i) a threat of serious or irreversible environmental damage; and ii) scientific uncertainty as to the nature and scope of the threat of environmental damage. The draft EIA fails to demonstrate that a risk-averse and cautious approach was applied in terms of the environmental impacts of the project. By failing to assess and highlight all direct and indirect environmental risks related to the proposed activity, the draft EIA prevents the relevant decision-making authorities from determining whether they ought to apply the precautionary principle. 2.4. The best practicable environmental option must be applied, as per Section 2(4)(b) of NEMA.</p>	<p>The Guideline of Need and Desirability (2017), states that: "a risk averse and cautious approach (the precautionary principle) in the context of the protection of environmental rights is essentially about the assessment and management of risk." In line with this, the impacts and risks associated with the proposed project have been detailed in the draft and final Scoping Reports (refer to Table 7.2 for a summary thereof) as well as the draft and final EIA reports. In addition to embedded controls adopted to maintain a risk-averse approach, various client-specific standards have been presented in the reports to emphasise the commitment to identifying and managing foreseeable risks. Additionally, various factors were taken into consideration during the alternatives assessment, where the risks associated with proposed options were screened in terms of environmental, health &amp; safety, economical and engineering risks. The selection of the more feasible alternatives was conducted through this process and</p>

			<p>The best practicable environmental option means “the option that provides the most benefit or causes the least damage to the environment as a whole, at a cost acceptable to society, in the long term as well as in the short term.”</p> <p>EIA reports must provide information as to how the development will address whether any socio-economic impact resulting from the development may affect people's environmental rights. The draft EIA undertook no such analysis. The assessment should have included a socio-economic assessment of the impact and cost of a catastrophic incident on the lives and livelihoods of affected parties in KwaZulu-Natal, as envisaged under the NEMA best practicable environmental option.</p>	<p>based on a risk- averse approach. Refer to Chapter 4 of the Scoping Report and Chapter 3 of the EIA for further details.</p>
Noelle	Garcin	African Climate Reality Project	<p>2.5. Healthy oceans are critically important to marine life and to coastal communities whose livelihoods rely on tourism, fishing and recreational activities. Opening up new offshore areas to drilling risks permanent damage to the marine and coastal environment. The coast will be at risk of potential huge oil spills equivalent to the BP oil spill in the Gulf of Mexico, with calamitous long-term impacts and costs for the tourism and fishing industries.</p> <p>The draft EIA claims that this spill is likely not to reach the coastline, however this eventuality cannot be completely excluded. By failing to assess this risk, it prevents the authorising authority to make a decision that is compliant.</p>	<p>The potential impacts associated with spills are described in the Scoping Report (Chapter 4, Chapter 5, Chapter 7 and Chapter 8). The EIA report records consideration of the potential impacts of spills in Chapters 3, 6, 7 and 8. Additionally, Oil Spill Modelling was conducted to assess the physical and chemical environmental impacts on surface waters from potential hydrocarbon spills w using a comprehensive modelling approach. In the comprehensive modelling approach, a single model, GEMSS® (Generalized Environmental Modelling System for Surface waters), was used to determine the fate and transport of unplanned hypothetical oil spills.</p> <ul style="list-style-type: none"> <li>• The following scenarios were assessed:</li> <li>• Scenario 1 - diesel spill associated with vessel collision happening either during drilling of wells;</li> <li>• Scenario 2 - release of NADF due to the accidental disconnection of the riser occurring during the drilling phase</li> <li>• Scenario 3 – blowout of crude oil at the wellhead on the seabed.</li> <li>• For each scenario, the “worst cases” were determined using three different criteria: the conditions that result in the shortest time for oil to contact a shoreline, the case with the most amount of shoreline oiling, and the conditions in which the most amount oil spreads across the water surface.</li> </ul> <p>Impacts were assessed in terms of the probability of the presence of a visible hydrocarbon slick on the surface, probability of oil contacting shorelines, and dissolved aromatic concentrations in the water column. For the riser disconnect scenario, impacts also include an evaluation of the suspended solids concentration and untreated NADF contamination on the sea floor using the GIFT module.</p>

				<p>Results of the modelling were provided as a stand-alone report, included as an annex to the main EIA report.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, this plan will need to approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.</p>
Noelle	Garcin	African Climate Reality Project	<p>2.6. The draft EIA doesn't investigate alternatives to avoid negative impacts. It simply investigates options to mitigate the impacts of the proposed activities. Contrary to the DEA Guidelines, there is no assessment of the no-go option.</p> <p>In particular, the worst case scenario of the drilling creates an immediate threat to biodiversity, ecosystems and human health. As such, it triggers a regulatory duty on the authorising authority to minimise such negative impact, as per Section 23 of NEMA. This duty requires and assessment of the likely pollution levels, the impact that a catastrophic incident would have on the immediate environment (including socio economic costs) and whether there are other methods, or activities that achieve what the project hopes to achieve, without these potential risks. The EIA must consider to what extent</p>	<p>This comment is inaccurate. Refer to Chapter 3 of the EIA report for details of the alternatives considered and the criteria for selection of some of the preferred options. It is important to note that by adoption certain mitigation measures, potential impacts can be minimised substantially. Additionally, the comment that the No- Go Alternative was not assessed is also incorrect. Refer to the Scoping Report and Chapter 7 of the EIA report (draft and final) for details of the impact significance of the No- Go Alternative and a description of the analysis of this impact.</p> <p>Potential pollution risks were assessed and reported on in Chapter 7 of the EIR report. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA. The</p>

		<p>other oil and gas fields already discovered such as in Mozambique, or the delivery of gas from further afield is an alternative which presents less risk and is therefore acceptable.</p>	<p>potential risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities.</p> <p>The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill. Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p>
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				<p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
Noelle	Garcin	African Climate Reality Project	<p>2.7. The EIA must assess what measures are taken to ensure that the responsibility for the environmental health and safety consequences of the development are addressed throughout the development's life cycle. The draft EIA fails to describe the consequences of a catastrophic incident, both economically and socio economically or on the ecosystem. As a consequence, it is unable to determine who will take responsibility and what resources they will require in the future to address such an eventuality. This is a failure to place relevant considerations before the decision-maker in accordance with the EIA scheme.</p>	<p>Refer to Chapter 3, 7 and 9 of the EIA report for a detailed description. No catastrophic events are anticipated, based on the project description and input from specialists.</p>
Noelle	Garcin	African Climate Reality Project	<p>3. If successful, this exploration project allows for perpetuating an unacceptable dependence on fossil fuels that is incompatible with the need to transition rapidly to a low-carbon economy.</p> <p>3.1. The EIA must interrogate how the proposed development align with the need to leave an oil and gas in South Africa's underground, so as not to bust the government's own carbon-budget strategy of reducing greenhouse gas emissions by 34% from 2030.</p> <p>3.2. For this EIA to be adequate and comprehensive, it needs to investigate all environmental impacts and costs potentially triggered by drilling and extraction activities, directly and indirectly. It must therefore consider the impacts of oil and gas refining, transport and combustion which will be made possible, should the extraction be given the go-ahead.</p> <p>Exploring gas and oil opens the way for future greenhouse gas emissions as well as air pollution that cannot be ignored in this EIA. Refining has devastating consequences on air, land and water quality, while pipeline blow-outs are a real risk when it comes to oil and gas transport.</p> <p>The draft EIA only addresses the predicted total greenhouse gas emissions from drill ships and vessels as well as flaring and venting</p>	<p>The exploration project will not perpetuate any dependencies. The objective of this project is to assess the viability of the reserve. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenue, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. The potential exploration for oil and gas would be in line with the government's vision</p> <p>Refer to Chapter 7 of the EIA report (and the attached specialist study) related to GHG. The potential effects from air emissions is</p>

			<p>during drilling operations. Greenhouse gas emissions that will necessarily ensue through the entire life-cycle of the fuels extracted, i.e. through the processes of extraction, transformation, transport and combustion of these fuels, are the biggest environmental threat which are grossly overlooked in the draft EIA report. 3.3. Climate change is already being experienced in KwaZulu-Natal through droughts, thunderstorms, other extreme weather events. These impacts and the additional costs they represent, including the costs of adaptation, are not considered in this EIA, nor are they factored in by oil and gas companies intent on drilling offshore our coastlines.</p>	<p>minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</p> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO<sub>2</sub> emissions generated by the project equate to only 0.0003 percent of the total CO<sub>2</sub> emissions for South Africa.</p>
Noelle	Garcin	African Climate Reality Project	<p>4. Although all oil and gas exploration activities predict economic benefit for South Africa, the draft EIA fails to provide full-cost accounting, especially in terms of 'natural capital accounting' which the late Environment Minister Edna Molewa committed South Africa to in the 2012 Gaborone Declaration. Once fossil fuel reserves are measured as not simply a 'credit' to GDP but also as a 'debit' to the country's natural wealth, it will become evident that the extraction systems proposed are not a positive but instead a negative contributor to South Africa's overall wealth.</p>	<p>The proposed project is related to exploration activities and not abstraction/ exploitation of a resource. The need and desirability of the Project is discussed in Chapter 3 of the EIA. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country</p>

				<p>investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>The Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa (2017) was used to guide the EIA reporting. As stated in the guideline, "need and desirability is based on the principle of sustainability", implying that there must be a balanced approach in decision making. The guideline further states that need and desirability must be considered together with the content of the" IDPs , SDFs, EMFs and other relevant plans, frameworks and strategies" when considering each application. Chapter 3 of the draft EIA clearly set out this description. In terms of financial viability, the Guideline on Need and Desirability (DEA, 2017), requires consideration in terms of "justifiable economic development, measured against the broader societal short-term and long-term needs". Consideration of the needs and interests of the broader community are said to be reflected in the IDP, SDF and EMF of an area that must be considered. As such, Section 4 of the EIA detailed the socio-economic baseline of the area, in line with findings from the SFD and IDP of the area. The current status of the broader communities are described in terms of contribution to workforce and GDP, access to basic services, access to basic infrastructure, key economic sectors, commercial fisheries and basic livelihood needs.</p> <p>The small scale fishery sector operates in "nearshore" waters unlikely to extend beyond 3 nm from the coast (approximately 5.5 km) and tourist activities are located near the shore as well. Therefore, such activities would not directly coincide with the proposed drilling areas- as the northern area of interest is located a minimum of 62 km offshore and the southern area of interest a minimum of 65 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery and such fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. Affected stakeholders will be notified of the location, duration and timing of</p>
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				drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).
Noelle	Garcin	African Climate Reality Project	<p>5. We submit that the public participation for this whole process has been flawed from the inception stage.</p> <p>According to Department of Environmental Affairs (2017), All potential and I&amp;APs have a right to be informed early and in an informative and proactive way regarding proposals that may affect their lives or livelihoods. Early communication can aim to build trust among participants, allow more time for public participation, and improve community analysis and increases opportunities to modify the proposal in regards to the comments and information gathered during the Public Participation Process. ERM states that the main objectives of Public Participation are:</p> <p>“To ensure that adequate and timely information is provided to those potentially affected by the project;</p> <p>To ensure that comments are received in a timely manner so that they can be taken into account in project decisions.”</p> <p>The steps taken to publicise and seek public comment on the draft EIA fall short of this statement.</p> <p>5.1. The developers and consultancy focused their public participation efforts on areas of Richards Bay, Durban and Port Shepstone. These three areas do not represent the entire coastline of KwaZulu-Natal. Many areas have been excluded from the public participation process including Kosi Bay, Sodwana Bay, St Lucia, Hluluwe, Mtubatuba, Mtunzini, Stanger, Tongaat, La Mercy, Umdloti, Verulam, Umhlanga, Central Durban, Bluff, Merebank, Isipingo, Amanzimtoti, surrounding townships like Chatsworth, Inanda, Umlazi, Phoenix, KwaMakhuta, Illovo, Umkomaas, Ifafa Beach Scottsburgh, Margate, Mtwalume and Port Edward. All these areas would be directly and indirectly affected in the case of an oil spill.</p> <p>5.2. In addition, there was no advertising or participation in the rural communities of KwaZulu-Natal which amounts to social exclusion and discrimination.</p> <p>5.3. The IsiZulu translation of the draft EIA report remained inaccessible to a large section of the public deprived of regular Internet access, thus unable to download the document from the ERM website. It remains the responsibility of the consultants to ensure that all interested and affected parties have access to the EIA report.</p>	<p>Refer to Chapter 6 of the Scoping Report and Chapter 5 of the EIA reports for a detailed description of the context, purpose, objectives and conduct of the Public Participation Process. Public participation with regards to EIA's in South Africa is determined by the principles of the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended) and elaborated upon in 'GN 657: Guideline 4: Public Participation' (Department of Environmental Affairs, 2017), which states that: “Public participation process” in relation to the assessment of the environmental impact of any application for an environmental authorisation, is defined in terms of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) as a process by which potential interested and affected parties are given opportunity to comment on, or raise issues relevant to, the application.”</p> <p>ERM has complied with the requirements set out for a fair and inclusive process as detailed (and proven) in the EIA. Chapter 5.1 of the EIA states that Public consultation is an inclusive and culturally appropriate process, which involves sharing information and knowledge, seeking to understand the concerns of others and building relationships based on collaboration. It allows stakeholders to understand the risks, impacts and opportunities of the project in order to achieve positive outcomes. The public participation process is designed to provide information to and receive feedback from I&amp;APs throughout the EIA process, thus providing organisations and individuals with an opportunity to raise concerns, make comments and suggestions regarding the proposed project. Stakeholders and I&amp;APs were encouraged to register and participate throughout the process, as detailed in Table 5.1 of the EIA report.</p>
Noelle	Garcin	African Climate Reality Project	5.4. The advertising of public participation meetings and comments for the EIA was inadequate as many community members cannot afford to buy newspapers, nor can they afford to travel to the mentioned	The Public Participation process was conducted as per the requirements set out in the applicable legislation. A preliminary database was compiled of authorities (local and provincial), Non-

			<p>libraries to look at the notices. There was also no advertising in the local community tabloids which are distributed freely in communities of KwaZulu-Natal. There were no other mediums of advertising like radio advertisements or the distribution of knock and drop pamphlets. The tourism industry, recreational industry, boat fishing and subsistence fishers, communities who use the ocean for spiritual significance and the general public were not informed of this development. It was only through the efforts of non-profit organisations such as the South Durban Community Environmental Alliance (SDCEA) and others that some of these industries and communities were informed. This alone shows that the consultants and developers are inconsiderate of the need to involve as many communities as possible; they just want to tick the box to move the process along.</p>	<p>Governmental Organisations, neighbouring landowners and other key stakeholders (refer to Annex B of the final Scoping Report). This database of registered I&amp;APs was maintained and updated during the ongoing EIA process. BIDs were distributed via email/post to all I&amp;APs on the stakeholder database on the 15 September 2017. See Annex B of the final Scoping Report. The BID provides an introduction to the project and the EIA process. The project was advertised in four newspapers; the Mercury (in English) and Isolezwe (in Zulu) with distribution around Durban, and the Zululand Observer and Ilanga Newspaper (in Zulu), with distribution around Richards Bay. The dates of distribution were as follows:</p> <ul style="list-style-type: none"> <li>• The Mercury – 18 September 2017</li> <li>• The Zululand Observer – 18 September 2017</li> <li>• Ilanga (advert in isiZulu) – 21 September 2017</li> <li>• Isolezwe (advert in isiZulu) – 21 September 2017</li> </ul> <p>See proof of advertisement in Annex B of the final Scoping Report. Site notices were placed at the following locations:</p> <p>eThekweni Municipality libraries:</p> <ul style="list-style-type: none"> <li>• Durban North;</li> <li>• Durban Central Lending;</li> <li>• Amanzimtoti;</li> <li>• Warner Beach;</li> <li>• Isipingo Beach;</li> <li>• Umkomaas; and</li> <li>• Tongaat Beach.</li> </ul> <p>uMhlathuze Local Municipality:</p> <ul style="list-style-type: none"> <li>• Richards Bay Municipality; and</li> <li>• Richards Bay Library.</li> <li>• Entrance to the Port of Richards Bay.</li> </ul> <p>All comments received during the initial consultation period were recorded into a Comments and Response Report. Refer to Annex C of the final Scoping Report.</p>
Noelle	Garcin	African Climate Reality Project		<p>On 22 January 2018, the draft Scoping Report was released for public comment and was made available online and in the following libraries:</p> <ul style="list-style-type: none"> <li>• Durban Public Library</li> <li>• Richards Bay Public Library</li> <li>• Port Shepstone Public Library</li> </ul>

				<p>On the same day, an advert was published in four newspapers; The Mercury (in English) and Isolezwe (in Zulu) with distribution around Durban, and The Zululand Observer and Ilanga Newspaper (in Zulu), with distribution around Richards Bay. Notifications were also sent to all stakeholders on the database. The comment period started on 22 January 2017 and ended on 1 March 2018. All comments received by 5 March 2018 were included in the final Scoping Report. *It should be noted that an earlier version of the Draft Scoping Report was released for comment on 27 October 2017. Due to a change in project scope, a notification was sent out on 7 November 2017 to notify stakeholders that the report would be re-released for a full 30 day comment period in early 2018. A total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>Stakeholders were notified about the public meetings through the notification distributed on 22 January 2018. A reminder to stakeholders about the public meetings was distributed on 5 February 2018.</p> <p>These meetings were held to present the proposed project and solicit input from stakeholders into the scoping process. As a result of the concerns raised during the public meetings, the Non-Technical Summary (NTS) of the Scoping Report was revised and translated into isiZulu. The isiZulu version of the NTS was then placed on the project website on 22 February 2018. The public comment period was then extended for a week from 22 February 2018 to give the public an opportunity to comment on the isiZulu version.</p> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator. ERM had prepared and distributed a letter of response to the follow up meeting with SDCEA attendees. This letter aimed to address issues raised during the Durban public meeting (on 7 February 2018), which</p>
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				<p>were not responded to in detail during the meeting due to time constraints.</p>
Noelle	Garcin	African Climate Reality Project		<p>As a result of the concerns raised during the meeting of 28 February, the comment period was further extended until 5 March 2018 to enable the public to comment on the letter of response prepared.</p> <p>Presentation, attendance registers and meeting notes were included in Annex B of the final Scoping Report. Notification that the final Scoping Report was submitted to PASA was distributed to stakeholders on 9 March 2018. Ahead of the release of the draft EIA Report, on 28 May 2018 registered I&amp;APs were notified that open house meetings would be held in the week of 11 to 15 June 2018. Due to unforeseen delays in the preparation of the draft EIA Report, stakeholders were notified on 4 June 2018 that the open house meetings had been postponed.</p> <p>Five Open house meetings occurred from 3 – 10 October 2018). The meetings were held in Port Elizabeth, east London, Richards Bay, Durban and Port Shepstone. All Registered I &amp; AP's were notified of the meetings through emails sent on 17 September 2018 (Refer to Annex B of the Final EIA Report). SMS notifications were also sent to I &amp; AP's (Refer to Annex B of the Final EIA Report). On 13 August 2018 all registered I&amp;APs were sent a notification informing them that the EIA Application had lapsed, and that Eni intend to initiate a new EIA process for the project. On 25 September 2018, an English version of the draft EIA Report and EMPr was made available to stakeholders and the relevant authorities, for a 30-day comment period. The draft Environmental Impact Assessment Report was released for public comment and was made available online and in the following libraries:</p> <ul style="list-style-type: none"> <li>• Durban Public Library</li> <li>• Richards Bay Public Library</li> <li>• Port Shepstone Public Library</li> <li>• Austerville Public Library</li> <li>• East London Public Library</li> <li>• Linton Grange Library (Port Elizabeth)</li> </ul> <p>English, isiZulu and isiXhosa versions of the Non-Technical Summary were made available at the open house meetings and on the project website. An email notification letter was sent to all registered I&amp;APs on the stakeholder database (Refer to Annex B</p>

				of the Final EIA Report). This letter informed I&APs that a new EIA Application was submitted to PASA and that the EIA process had recommenced, and invited I&APs to comment on the draft EIA Report.
Noelle	Garcin	African Climate Reality Project		<p>Newspaper adverts were placed in several newspapers (notifying stakeholders of the availability of the draft EIA Report for review and inviting them to open house meetings Refer to Annex B of the Final EIA Report). All comments received, along with responses have been included in the Comments and Responses Report in the final EIA Report (Refer to Annex B of the Final EIA Report).</p> <p>Newspaper adverts were published during the week of 17 September 2018 as follows: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>SMS notifications with directions to the project website, where the draft EIA was available and reminders to submit comments on the Draft EIA report were sent to I &amp; AP's on 09 October 2018 (Refer to Annex B of the Final EIA Report for a screenshot of the site website).</p> <p>Upon requests made by participants at the open-house meetings in KZN, the EIA report was translated into isiZulu and the commenting period was subsequently extended by three weeks to conclude on 8 November 2018. This information was communicated to I&amp;AP's via email on 18 October 2018 and via SMS notifications 19 October 2018 (Refer to Annex B of the Final EIA Report). Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders.</p> <p>Open House meetings were held as follows: at The Boardwalk</p>

				Hotel in Port Elizabeth on 03 October 2018; at The Beach Hotel in East London on 04 October 2018; at the Premier Inn Hotel in Richards Bay on 08 October 2018, At Gooderson Tropicana Hotel in Durban on 09 October 2018, and at Venture Inn Hotel in Port Shepstone on 10 October 2018 As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape. A summary of key concerns, comments and queries and general observations from open house meetings are recorded in section 5.5. Summary of Comments Raised During the EIA Phase and the Comments and Responses Report (Refer to Annex B of the Final EIA Report).
Noelle	Garcin	African Climate Reality Project	<p>5.5. The public participation meetings which took place on the 8th, 9th and 10th of October 2018 in Richards Bay, Durban and Port Shepstone did not constitute meaningful public participation. The consultants chose to exclude people out of the meeting on the claim that the venue was full. This appears to be a deliberate action, based on the anticipation that many people would attend. The meetings were held in small venues with insufficient chairs for the public; people had to sit on the floor. In addition, the specialists who conducted the independent studies were not present at these meetings, nor were the competent authorities for this project (Department of Mineral Resources, Petroleum Agency of SA and Department of Environmental Affairs). The developers said that they would share the information from these meetings with these government departments, This is deeply unsatisfactory, as certainly the consultants are in no position to adequately and objectively represent the views of interested and affected parties.</p> <p>5.6. The consultants failed to publicise the minutes of the public meetings.</p> <p>We trust that these comments will be duly considered to revise the EIA to allow for an informed and considerate decision by the licensing authority.</p>	Refer to the comment above for a full description of the process undertaken and refer to the EIA report (and Annex B) for proof of attendance at the open house meetings. A legally compliant, fully inclusive and meaningful process was conducted. ERM disputes the incorrect statement's that "The consultants chose to exclude people out of the meeting" and "The consultants failed to publicise the minutes of the public meetings" and calls for the commenter to be honest and factual when making claims or commenting in future. Annexure B of the EIA report provides proof (written/ electronic/ photographic) of all meetings, announcements, adverts, etc. associated with the process.

General Comments				
Name	Surname	Organisation	Comment	Response
Hoosen	Bobat	Bobats Wealth Solutions	Thanks. I will attend Durban presentation	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Ashantia Nerissa	Pillay	Ezemvelo KZN Wildlife,	This email serves to inform you that the DEIA for the abovementioned application was received by our offices on the 25	Your comment has been noted.

		Scientific Services	September 2018. Please feel free to contact this office should you have any queries regarding the application.	
Aditya	Grover	Swire Pacific Offshore	I am writing in from Swire Pacific Offshore and would like to attend the open house being held in Hotel Blue Lagoon, East London on 04 Oct 2018. Please advise if any registration process is required for the same? Thank you and look forward to your feedback.	There is no pre- registration process required, you are most welcome to attend the meeting.
Marc	Caplan	Private	I've had a brief look at the EIA but would like to know where the Oceanographers report is?  It seems important as how can models of the dispersion of pollutants be done without climatic & current sea movements. Can you direct me to such a report in this EIA.	Please refer to the Oil Spill Modelling Report attached to the EIA in Annex D.
Marc	Caplan	Private	I've noticed that Ms Jefferies has not responded to my email from yesterday. Does she plan to answer my question at the event in PE tomorrow?	ERM responded to this email on 4 October 2018. Ms Jefferies was not in attendance at the open house meetings.
Marc	Caplan	Private	We are concerned that ERM is not training Xhosa, Khoi Khoi, Zulu, and Pedi, scientists to conduct studies that your bosses hand over to foreign scientists.	Please note that qualified specialists have been appointed to conduct the various specialist studies listed in the EIA Report. Their qualifications are summarised in Chapter 1 of the EIA Report. ERM is not at liberty to train up new scientist for the purposes of this project.
Marc	Caplan	Private	I've also noticed that there is too many errors in the final scoping report one is does Ms Wilkson hold a BSC Hons from UCT in Oceanography? or just Botany?	The qualifications of the specialists and the EIA Team are summarized in Chapter 1 of the EIA Report.
Marc	Caplan	Private	Most important can you confirm that Mr Fiscela the ERM man from Manhattan is attending all events to defend his PhD?!!	No specialists were present at the open house meetings held in October 2018. However, ERM and Eni representatives were capable of answering questions and recording comments. The qualifications of all the specialists involved in this project reporting, are summarized in Chapter 1 of the EIA Report. There was no need for any of the specialists to "defend" their qualifications at any events or otherwise.
Aditya	Grover	Swire Pacific Offshore	I was unable to attend today. Apologies for that. Is it possible for you to advise who in ENI is handling this project for the future? Thank you.	The Eni reference of the project is the Managing Director Eni South Africa BV. For contact details, please refer to Chapter 1 of the EIA Report.
Gill	Gough-Palmer	Private	Thank you for this notification. Unfortunately I'm unable to open the EIA on your website via my cell phone. Port Shepstone library ( the closest option) requires a round trip of ± 45 km & with the scope of the document would necessitate a number of visits, as it may not be removed. Therefore, would it be possible for you to bring me a hard copy, including annexures to the public meeting at the Venture Inn on 10/10/2018 please. Thank you	A hard copy of the draft EIA report was sent to Gill on 22 October 2018.
Thando	Mtshizana	Private	Good day Please assist with draft EIA.	The draft EIA Report was released online on the 25 September 2018 and can be downloaded: <a href="https://www.erm.com/eni-offshore-eia">https://www.erm.com/eni-offshore-eia</a> . Alternatively, the report can be accessed at one of

				<p>the following locations:</p> <ul style="list-style-type: none"> <li>• Durban Central Lending Public Library</li> <li>• Richards Bay Library</li> <li>• Port Shepstone Library</li> <li>• East London Central Library</li> <li>• Nelson Mandela Bay Municipality – Linton Grange Library</li> <li>• ERM offices, Suite S005, 17 The Boulevard, Westway Office Park, Westville</li> </ul>
Paddy	Norman	WESSA, Southern KZN Branch	<p>I have attempted to download the EIA report from your website, but I am finding it difficult to read on my small screen; especially the diagrams and plans.</p> <p>Therefore, could you please supply me with a hard copy, including the appendices.</p> <p>It would probably take a few days to get to me by courier, so It would be acceptable to me if I can collect it at the ppm at the Venture Inn next Wednesday.</p>	A hard copy of the draft EIA Report was sent to Paddy Norman on 18 October 2018.
Sharin	Govender	City of uMhlathuze	<p>Thank you for the notification. The City of uMhlathuze will be in attendance and participating further in the process. Please may I request that the ERM provide the Municipality with a hard copy of the Draft EIA report on Monday</p>	A hard copy of the draft EIA was sent to the City of uMhlathuze on 10 October 2018.
Jennifer	Olbers	Ezemvelo KZN Wildlife, Scientific Services	<p>Good day, Would it be possible to send me the shape files (.shp) for both the block ER236 and the 2 areas of interest?</p>	The Shape files were sent to Ezemvelo on 19 October 2018.
Allimuthu	Perumal	Private	<p>Hi, is this meeting on</p>	Open house meetings were held in Port Elizabeth, East London, Richards Bay, Durban and Port Shepstone between 3 and 10 October 2018.
Sibulele	Sigxashe	DEDAT	<p>This communication serves to request for the PowerPoint presentation which was presented on the 5th/10/2018 at DEDEAT.</p>	The PowerPoint presentation was sent to the DEDEAT on 11 October 2018.
Londeka	Ngcobo	King Cetshwayo District Municipality	<p>I am an Environmental Officer for King Cetshwayo District Municipality in Richards Bay, I was not aware of the meeting that happened here on Monday (08/10/2018) and hence missed it. I therefore humbly request information on the deliberations of the day as well as further documentation that I can read to help me better understand. Your assistance in the matter will be highly appreciated.</p>	The meeting was to provide further information about the finding of the EIA process for the Exploration Drilling within Offshore ER236, KZN, South Africa. The draft EIA Report for the project, a non-technical summary and copies of the posters that were on display at the open house meeting on Monday 08/10/2018 are all saved on the project website <a href="https://www.erm.com/eni-offshore-eia">https://www.erm.com/eni-offshore-eia</a> . For further information, meeting observations have been included in Annex B of the Final EIA Report.
Warren	Hale	Private	<p>Thank you for the correspondence. Please would you provide me with a copy of the final scoping report?</p>	A copy of the requested report was sent electronically on 17.07.2018. An electronic copy of the draft EIA Report, along with all the Annexes are also available on the project website: <a href="https://www.erm.com/eni-offshore-eia">https://www.erm.com/eni-offshore-eia</a> .



Sean		Private	I was hoping to make it to meeting today but work pressures have not allowed it. Is there a way I could find out what happened at the meeting?	The meeting was to provide further information about the finding of the EIA process for the Exploration Drilling within Offshore ER236,KZN, South Africa. The draft EIA Report for the project, a non-technical summary and copies of the posters that were on display at the open house meeting on Monday 08/10/2018 are all saved on the project website <a href="https://www.erm.com/eni-offshore-eia">https://www.erm.com/eni-offshore-eia</a> . For further information, meeting observations have been included in Annex B of the Final EIA Report.
Fred	Kockott	Roving Reporters	Please could you advise whether ERM were able to communicate the findings of the draft EIA at the open house meeting held at Gooderson Tropicana Hotel in Durban on Tuesday. As I was personally unable to attend the public hearing, ERM's feedback on this will be greatly appreciated.	ERM was able to communicate the results of the draft EIA Report during the first 30 minutes of the meeting. After which, attendees interrupted the open-house proceedings and requested that a formal meeting be conducted. Participants began chanting, demanding chairs and a bigger meeting venue. Refer to Annex B of the EIA Report for the meeting observations, which provide a detailed account of the open house meeting.
Sherelee	Odayar	SDCEA	SDCEA requests X10 hard copies of the EIA'S X10 Electronic copies of the EIA  In both English and IsiZulu.	SDCEA would have received notification on 18 October 2018 that the isiZulu version of the EIA is available on the project website, and additional copies of the English and Zulu Report have been sent to the Austerville library.  In response to your request, ERM have sent an additional hard copy and electronic copy of the English and Zulu EIA report to SDCEA, for SDCEA to duplicate and distribute as needed.
Sbusiso Derick	Mthembu	Mnotho Trust	In future, should the drilling be successful and the resources be discovered, is there possibility that new entrant mariners (esp. black Africans) may benefit? By the way I am a boat builder and skipper.	In case of discovery, Eni could decide to apply to develop the field. In this case further investment are expected, including socio-economic investment and development projects, as it is part of Eni's business model to actively contribute to the development of local communities in the countries in which they operate.
Sherelee	Odayar	South Durban Community Environmental Alliance (SDCEA)	We need 9 more IsiZulu copies and 7 more English copies. Please can you register me as an the Interested and affected party so I can receive notifications.	You have been added as a stakeholder and will receive updates on the project. SDCEA would have received notification on 18 October 2018 that the isiZulu version of the EIA is available on the project website, and additional copies of the English and Zulu Report have been sent to the Austerville library.  A hard copy of the EIA report (isiZulu translation) was delivered to SDCEA upon request on 18 October 2018; for copying and distribution at the preference of the organisation and according to the requests that SDCEA received for such hard copies. ERM has not received any other requests (other than SDCEA) for hard copies of the isiZulu version of the EIA Report via email, telephone or at the public meetings held.

Seokwang	Modise	DAFF	<p>Due to the location and nature of this project - exploration drilling within offshore; the Department of Agriculture, Forestry and Fisheries (DAFF) - Forestry Branch will not be able to provide comments as the main focus is only on the natural forest or protected trees under the National Forests Act (Act No.84 of 1998). However, the documents have been forwarded to the relevant Branch - Fisheries Management for thorough review and commenting.</p>	<p>Thank you for your correspondence and forwarding of the EIA report to the relevant personnel.</p>
Desmond	D'Sa	SDCEA	<p>The South Durban Community Environmental Alliance (SDCEA) represents communities from the North to the South Coast of KwaZulu Natal. The communities are from Hluhluwe, Mtubatuba, Mtunzini, Richards Bay, Empangeni, Scottsburgh, Umkomaas, Port Shepstone, Margate, Mthawlume, Port Edward, Umgababa and surrounding areas of Durban. The date of which comments are due is 8 November 2018 is unfair and unacceptable to many communities.</p> <p>The IsiZulu EIA was only delivered to SDCEA mid-October and only 1 was delivered when we initially asked for 10 IsiZulu EIA's. Many of these communities do not have internet access to actually download an entire IsiZulu EIA. How do you expect these communities to comment when EIA's are difficult to access? People still need time to actually go through 357 pages of the EIA. You cannot expect people to comment in a short space of time. This process should not be rushed considering what's at stake.</p> <p>We demand that ERM extends the comment period until they have sent and delivered EIA'S to all the community members who attended their open house meetings in Richards Bay, Durban and Port Shepstone. A register of attendance was signed at these meetings therefore ERM does have the contact details of the communities.</p>	<p>A hard copy of the EIA report (isiZulu translation) was delivered to SDCEA upon request on 18 October 2018; for copying and distribution at the preference of the organisation and according to the requests that SDCEA received for such hard copies. ERM has not received any other requests (other than SDCEA) for hard copies of the isiZulu version of the EIA Report via email, telephone or at the public meetings held.</p> <p>Section 2 (4) f of the Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties must be promoted in terms of environmental governance. People must also be given the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. To fulfil this principal and in keeping with Chapter 2 of the 2017 Environmental Impact Assessment Regulations (No. 326) which stipulates that the comment period on reports disclosed is 30 days; ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. The Scoping Reports and the draft EIA Report has been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days. No further extensions to the EIA Report comment period can be made as the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017). This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process. The final EIA report is due to the Competent Authority on 14 December 2018 in order to comply with the regulated timeline.</p>
				<p>Section 41 (2) of the 2017 Environmental Impact Assessment Regulations states that "The public participation process contemplated in this regulation must provide access to all</p>

				<p>information that reasonably has or may have the potential to influence any decision." It is not a requirement of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, associated Environmental Impact Assessment Regulations or the Public Participation Guideline document that hard copies of reports are provided to all I&amp;APs, but more so that such documents are made available for I&amp;APs to access. This condition has been met as the EIA has been made available at the following locations:</p> <ul style="list-style-type: none"> <li>• Durban Central Lending Public Library</li> <li>• Richards Bay Library</li> <li>• Port Shepstone Library</li> <li>• East London Central Library</li> <li>• Nelson Mandela Bay Municipality – Linton Grange Library</li> <li>• Austerville Library</li> <li>• ERM offices, Suite S005, 17 The Boulevard, Westway Office Park, Westville</li> <li>• Project website: <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a></li> <li>• Electronically upon request.</li> </ul> <p>The EIA process has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process. The final EIA report is due to the Competent Authority on 14 December 2018 in order to comply with the regulated timeline and no further extension can be granted on the draft EIA report. Copies of the final EIA report to be submitted to the CA will be made available to the public also.</p>
<p>The following comments were received by post from stakeholder. The comment sheet consisted of five questions that the stakeholder had responded to, along with an allowance for general comments. Each question, together with the stakeholder response, has been presented in the comment column below, and a response from the Project team is provided in the Response column.</p>				
Geetha		Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Oil spills and waste dumping are seriously dangerous, very bad.	<p>Oil spill modelling was conducted to predict the fate and behaviour of the oil in the unlikely event of an oil spill, The Oil Spill modelling Report may be found in Annex D 4 and the risk assessment together with the detailed measures that will be undertaken to minimise the likelihood of a spill and what response actions are presented in Chapter 8</p> <p>Unplanned/Accidental Events and Chapter 9 EMPr. The potential effects of the proposed drilling activities associated with exploration, on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect</p>

				<p>on Fisheries was assessed through a study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>There will be no dumping of waste. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p>
			How will this oil and gas exploration affect my community? In too many ways	<p>The positive and adverse impacts associated with the Project are presented in Chapter 7 of the EIA. There are negligible social benefits to communities associated with the project due to the specialist nature of the activity and the limited duration of exploration drilling activities. No health impacts have been identified as the drilling activity is more than 60 km from the shore.</p>
			Do you think that oil and gas exploration will benefit me or my community? Why? No not all benefit me	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The development of an oil and gas industry may however take several years.</p>
			How were you informed about this oil and gas exploration activity? SDCEA	<p>It is noted that SDCEA has been raising awareness around this project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul>

				<p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>This is not a good idea</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. The need and desirability of the Project is discussed in <i>Chapter 3</i> of the EIA.</p>
Moonsamy	Govender	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Fishing stocks will be depleted</p> <p>Whales and dolphins will be affected and will beach</p> <p>Bird and animal life will be affected if there is an oil spill.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed and have a Moderate to Negligible residual significance. These are summarized in Chapter 9.</p> <p>The location of the project is over 60 km from the shoreline and subsistence fishers who operate closer to the coast line will not interact with the drillship, implying that under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p>
			<p>How will this oil and gas exploration affect my community</p> <p>There will be less fish, meaning no food on the table. If there is no fish, people are going to be idle also lots of fishing areas will be cordoned off. Fisherman will have to find new places to fish.</p>	<p>The location of the project is over 60 km from the shoreline. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities.</p> <p>Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will</p>

				<p>have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No it will not because of the previously mentioned reasons. Our community would not be employed by these companies.</p>	<p>Refer to responses above.</p> <p>Given the project's focus on exploration at this stage and the subsequent limited time frame of drilling activities, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons</p>
			How were you informed about this oil and gas exploration activity? Through the offices of SDCEA, the media, radio and TV.	It is noted that SDCEA has been raising awareness around this Project.
			<p>General Comments:</p> <p>Because of fish and bird life being affected, I am totally against oil</p>	The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.

			and gas exploration. Also, if there is a oil spill its going to be disastrous. Our beaches are in their natural state. please leave it as such.	The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (>100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
D	Bipat	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This brings catastrophic harm to marine life and causes losses to local businesses. it also ruins our beaches, bringing harm to those who live, work and vacation along the coasts, as well as harming habitats critical to plants and animal species. This oil and gas exploration offsets and pollutes drinking water in wells.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed and have a Moderate to Negligible residual significance. These are summarized in Chapter 9.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of</p>

				<p>the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>There is no risk to onshore groundwater sources from this project as it is for offshore exploration and project activities will take place over 60 km offshore.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>Gas flaring is a contributing factor to global warming and these are risks no community is willing to take especially south Durban and the communities all along KZN coast line.</p>	<p>Eni actively participates in the main international climate initiatives. One of these initiatives involved Eni in the development of the "Oil and Gas Climate Initiative" (OGCI – BP, CNPC, Eni, PEMEX, Reliance, Repos, Saudi Aramco, Shell, Statoil and Total), established in 2014 by Eni and other companies from the petroleum sector representing over 20% of the global production of hydrocarbons. In 2016, the CEOs of the OGCI companies relaunched their commitment at an event in London, announcing a joint investment of \$1 billion over 10 years for the development of technologies capable of reducing GHG emissions. Technological deployment will cause the OGCI's investment to have a multiplier effect on the low-carbon economy, with the expected aim of reducing global GHG emissions by 1 Gt CO2 over the next ten years.</p> <p>Furthermore, on 28 September 2018 in New York, along with 12 other companies that are part of the Oil and Gas Climate</p>



				<p>Initiative (OGCI), Eni set the first target for reducing the intensity of methane emissions in the Upstream operations and signed a Memorandum of Understanding with the United Nations Development Programme (UNDP). Eni has been recognised as Global Compact LEAD by United Nations' corporate sustainability initiative. G183</p> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO<sub>2</sub> emissions generated by the project equate to only 0.0003 percent of the total CO<sub>2</sub> emissions for South Africa.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No. it will destroy our marine life and beaches. Businesses will have huge losses.</p>	<p>Please refer to responses in the previous rows responding to the same concern.</p>
Sulere		Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will bring a lot of harm to us. A lot of harm will be done.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in</p>

				<p>addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil , diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The likelihood (probability) of significant oil spills (i.e. those that can reach the coastline or other sensitive areas) is very low with most oil spills being very small and having only limited environmental effects. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>In so many ways. I think this is bad.</p>	Noted
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>Not at all to much</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How were you informed about this oil and gas exploration activity?SDCEA</p>	It is noted that SDCEA has been raising awareness around this Project.
			<p>General Comments:</p> <p>This must be stopped.</p>	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. The need and desirability of the Project is discussed in <i>Chapter 3</i> of the EIA.

Suveer	Gangaparashd	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Expanded offshore drilling poses the risk of oil spills ruining our beaches, bringing harm to those who live, work and vacation along the coasts, as well as harming habitats critical to plants and animal species. Oil pollution also damages fishing equipment and pollutes drinking water in well. Oil spills and waste dumping have also seriously damaged agricultural land.</p>	<p>Oil spill modelling was conducted to predict the fate and behaviour of the oil in the unlikely event of an oil spill, The Oil Spill modelling Report may be found in Annex D 4 and the risk assessment together with the detailed measures that will be undertaken to minimise the likelihood of a spill and what response actions are presented in Chapter 8</p> <p>Unplanned/Accidental Events and Chapter 9 EMP. The results indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential effects of the proposed drilling activities associated with exploration on the marine environment have also been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor-negligible residual significance.</p> <p>The drilling will take place more than 60 km from the coast. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards</p>
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				<p>provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries.</p> <p>The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>There is no risk to agricultural land from this Project as it is for offshore exploration and Project activities will take place 60 km offshore.</p>
			<p>How will this oil and gas exploration affect my community? If this affects our beaches which is a tourist attraction, then we as a community will not benefit from this.</p>	<p>The location of the project is over 60 km offshore. The horizon is approximately 15km from the shoreline and therefore the drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? The protection of our marine resource is also fundamental to South Africa's food security. Allowing what amounts to indiscriminate</p>	<p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose.</p>

			drilling by a single vested interest that will without fail lead to the introduction of toxic wastes and products whether from industrial accident or working process.	<p>All vessels will have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78</p> <p>The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicates that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. Eni will be required to develop an Oil Spill Contingency Plan for this project, which will need to be approved by the SAMS, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Any small spills on the deck of the drillship will be contained with the spill management equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board, offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base; ready and available for deployment in the event of a spill. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene within 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p>
			How were you informed about this oil and gas exploration activity? With the help of South Durban Community Environmental Alliance (SDCEA), after a meeting.	It is noted that SDCEA has been raising awareness around this Project.

			<p>General Comments:</p> <p>Surveys must be done over a longer period of time.</p> <p>The independent study that SASOL has conducted for must be provided for. They must look at marine life that are protected and that are currently in recovery and how this will impact it.</p> <p>Proper risk assessments must be done by appointed experts.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine (Annex D1 and D2). These studies have taken cognisance of protected, or threatened species and this has been taken into consideration assessment of potential impacts associated with the project, refer to Chapter 7 of the EIA Report.</p> <p>Pre-drilling surveys will be undertaken by Remotely Operated Vehicles (ROVs) to record any sensitivities on the seabed. Should any sensitivities be found such as historical artefacts, shipwrecks etc., the drill site will be relocated 500m from these sensitive receptors.</p> <p>In terms of risk assessment, oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills will be undertaken as part of the EIA Report. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included within the plan.</p>
Shalina		Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This is very bad. Not good at all. To much danger to sea.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.</p> <p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>Fishing activities will only be temporarily restricted by a 500 m</p>

				<p>exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			How will this oil and gas exploration affect my community We love the sea Durban fun place for us	Noted
			Do you think that oil and gas exploration will benefit me or my community? Why Never, to much harm	<p>Refer to response above.</p> <p>While there are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in potential long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a</p>

				development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? SDCEA	<p>It is noted that SDCEA has been raising awareness around this Project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			General Comments: No Good	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
S	Pillay	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Beaches will be affected by oil turning it to grease ball. Boating and all sporting also actively will be causing all sort of problems with different race groups.</p>	<p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of</p>



				hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
			How will this oil and gas exploration affect my community Biggest input at present is the locals who rely on tourist support. Fishermen who rely for their living off these beaches will suffer.	<p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts</p>

				associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>Our waters are rich in marine sea life and our fisheries are integral part of SA. SA must do proper research before destroying one industry to place another. This is a new beginning for all South Africans.</p>	<p>The location of the project is over 60 km from the shoreline. The potential effects of the proposed drilling activities associated with exploration on Fisheries was assessed through a study undertaken by Capp Marine. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA, most of the potential impacts assessed have a minor- negligible residual significance.</p>
			<p>How were you informed about this oil and gas exploration activity? My fisher folk joined a forum and our problems were solved by SDCEA.</p>	<p>It is noted that SDCEA has been raising awareness around this Project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>We as fisher folk our heartfelt happiness what we received from</p>	<p>It is noted that SDCEA has been raising awareness around this Project.</p>

			(SDCEA) all information and also giving free bay permits at no cost. we will stand by your side at all times. Thank you God Bless.	
Charlotte	Sultan	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>When oil spills occur it will bring harm to marine life and will pollute our beaches so we will no longer be able to go to the beaches. It will also harm our plants which will also bring harm to our animals. Oil and gas exploration is going to pollute both land and sea.</p>	<p>The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill. The drillship will be located more than 60 km from the coast and will not be visible from the shore. It is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>The potential effects of the normal operations during drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>Due to the fact that we live near the coast we are going to be affected by air pollution and plant life will get affected. the local fishermen will not be able to fish if the sea is polluted.</p>	<p>The potential effects from air emissions is Minor and would not directly affect the health of residents as the location of the drillship will be over 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel</li> </ul>

				<p>engines.</p> <ul style="list-style-type: none"> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, So+G87th African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p> <p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time, depending on the nature and extent of the spill. However, the risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>As much as it will be good if we strike oil we also have to look at the ripple effect that these exploration can have if we have a oil spill or gas leak. Due to this it will cause an affect on our economy in a negative way which will cause poverty in our community.</p>	<p>An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time, depending on the nature and extent of the spill. However, the risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in</p>

				<p>all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How were you informed about this oil and gas exploration activity? We were informed through meetings held by SDCEA</p>	<p>It is noted that SDCEA has been raising awareness around this Project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>+G336</p> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			<p>General Comments: As much as oil and gas exploration will give us job opportunities we can not ignore the fact of climate change that will affect our community and also cause more global warming.</p>	<p>Impacts related to climate change have been assessed in Chapter 7 of the EIA Report. The proposed project will have limited impact on climate change, due to the temporary nature of the activities. Eni have committed to compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines. The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p>

				The sensitivity is assessed as High due to South Africa's vulnerability to climate change.
Evert	Moonsamy	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Marine life will be affected (causing death and contamination). Will not be able to swim in beaches. Food source will be affected as well as people's ability to work and earn money.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor-negligible residual significance. Please refer to chapter 9, EMPR for further information on the risks assessed</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>Once beaches are polluted it will be off no use to mankind. People will not be able to feed on the food source that is found in the sea. Loss of employment.</p>	<p>During routine operations, there will be little or no impact on the beaches, and given that location of the project is over 60 km from the shoreline, the drillship will not be visible from the shore. Therefore, it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p> <p>An unplanned event such as a spill could result in a loss of</p>

				<p>access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil , diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The likelihood (probability) of significant oil spills (i.e. those that can reach the coastline or other sensitive areas) is very low with most oil spills being very small and having only limited environmental effects. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of a highly unlikely accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No. There will be no recreational facility to enjoy. Tourist attraction will be minimised. Lots of sickness and disease due to pollution.</p>	Refer to responses above.
			<p>How were you informed about this oil and gas exploration activity? Via meetings with SDCEA.</p>	It is noted that SDCEA has been raising awareness around this Project.
			<p>General Comments:</p> <p>I think that the community's input should be considered vastly.</p>	The draft EIA Report was available for a thirty (30) day comment period from 25 September 2018. In response to stakeholder requests, the comment period was extended by 14 days and closed on 8 November 2018. ERM has received over 200 sets of comments from stakeholders across numerous communities, and these have been captured in this comments and responses report, together with a response from the project team. The comments and responses report will be submitted to PASA as part of the final EIA Report, and PASA take these comments into consideration in their decision making, as required under the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended)
Rhylen	Naicker	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Oil pollution will affect our lives and community will suffer. Environment will be affected and our community will suffer in many ways. Causing illness and "illegible text"</p>	<p>The Project is located 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African</p>

				regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.
			How will this oil and gas exploration affect my community? It will bring suffering to different groups	<p>The Project is located 60 km offshore, and the findings of the Environmental Impact Assessment shows that during routine operations, most of the impacts associated with the Project are of minor or negligible significance, refer to Chapter 7 of the EIA.</p> <p>The potential impacts associated with an unplanned event such as an oil spill are explained in Chapter 8. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore activities or coastal communities.</p>
			Do you think that oil and gas exploration will benefit me or my community? Why? No, once our ocean is damaged it cannot be replaced by humans.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9.
			How were you informed about this oil and gas exploration activity? Meetings with SDCEA	<p>It is noted that SDCEA has been raising awareness around this Project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p>



				<ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>I will be fighting as long I am do justice for people of S.A.</p>	Your comment is noted.
Vishaal		Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Oil pollution damage the fishing equipment and pollutes water.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). Furthermore, the location of the proposed drilling areas are over 60km away from the shore and will thus only affect the fishing sector within a 500m exclusion zone around the drillship. There will be no other interruptions to other sectors working closer to the shore or subsistence fishermen. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p>

			<p>How will this oil and gas exploration affect my community</p> <p>Fishing is bread and butter. No money will be made.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>The risk of an oil spill into the marine environment is inherent in all offshore oil exploration and appraisal projects. An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time, however, the results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No! More damage will be done.</p>	<p>Refer to responses above.</p> <p>While there are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South</p>

				Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? SDCEA Alliance.	It is noted that SDCEA has been raising awareness around this Project.
			General Comments: I don't think this is good.	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
Krishna	Reddy	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Will destroy livelihoods of many families and also our tourist rely on our beautiful beaches.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor-negligible residual significance.  Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).  As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project
			How will this oil and gas exploration affect my community There will be no more attraction	
			Do you think that oil and gas exploration will benefit me or my community? Why? There will be no benefit for the people of SA.	

				Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.
			How were you informed about this oil and gas exploration activity? I am in the fishing forum with (SDCEA)	It is noted that SDCEA has been raising awareness around this Project.
			General Comments: There will be no more tourist attraction.	<p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Agnitha	Pillay	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It effects the fish which we catch and eat. People just love going to the beach and spending a fun filled day and who goes to the beach and not swim? When we swim in the water we could get effected.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D2). The potential impact on fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the</p>

				<p>location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.</p>
			<p>How will this oil and gas exploration affect my community If the oil smells it could cause air pollution. Oil and water does not mix, if the oil gets into our dams and maybe by mistake not get purified properly, when we consume this water we could get sick or even die of the oil is poisonous.</p>	<p>. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time, however, the results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>This Project will not impact on drinking water as the Project activities will take place 60km offshore.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p>	<p>The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels)</p>

			<p>No, it is not beneficial because it is air pollution. It could cause harmful effects to the environment.</p>	<p>involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>The project activities will take place over 60 km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9.</p>
			<p>How were you informed about this oil and gas exploration activity? I first found this out from the news, I had seen of pollution in our blue waters.</p>	<p>Your information via the news is noted, although it is unclear who reported on the project and the context of what was stated. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> </ul>

				<ul style="list-style-type: none"> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>I strongly feel this oil is a very harmful pollution towards our environment or even the ocean. Just like us humans , the ocean only has life and when we put oil in the ocean it shows danger to sea creatures.</p>	<p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project. D80 waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>
Anjalay	Govender	Merebank	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <ul style="list-style-type: none"> <li>-Increase in air pollution</li> <li>-Increase health issues</li> <li>-These gas/oil will effect the ecosystem</li> </ul>	<p>The potential effects from air emissions is Minor and would not directly affect the health of residents in coastal communities project activities will take place 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions</p>

				<p>from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>Cancer will increase due to inhaling of oil and gases</p> <p>Many will have difficulty in breathing</p> <p>Poverty will increase because those effected will not be able to be employed or find employment</p>	<p>The potential effects from air emissions is Minor and would not directly affect the health of residents as the location of the drillship will be over 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including</p>



				<p>acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, many deaths were lead as the result of oil/gas exploration.</p>	<p>This is an unsubstantiated comment. The results of the specialist studies and impact assessment indicates that no fatalities are expected. To reiterate this, the drill ship will be located approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The marine study indicated no potential threat to the lives of fisherman in the area and furthermore a 500m radius is applicable around the drill ship.</p>
			<p>How were you informed about this oil and gas exploration activity? Through South Durban Community Environment Alliance.</p>	<p>It is noted that SDCEA has been raising awareness around this Project. ERM (the EAP) placed advertisements in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the Draft EIA Report was available for comment.</p>

Ashita	Unknown	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will damage the ocean and fishing industry will be destroyed.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. A summary of these impacts are presented in Chapter 9. During routine operations no impact expected on the current line fish and crustacean trawl fisheries. No cumulative impacts are expected on the other fisheries sectors. Fishing activities will be temporarily restricted only in a 500 m exclusion zone around the drillship which is located more than 60 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? People will lose jobs and business will suffer.</p>	<p>It is not anticipated that people will lose their jobs as result of the Project. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship which will be more than 60 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.</p>

				<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How were you informed about this oil and gas exploration activity? Meetings (S.D.C.E.A)</p>	<p>It is noted that SDCEA has been raising awareness around this Project.</p>
			<p>General Comments:</p> <p>No more activity and sporting</p>	<p>Refer to answers above.</p>
Barry	Chetty	Phoenix, Durban	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>My livelihoods will be affecting my family badly. Also my recreational activities will be affected. And not forgetting my general use of the beach together with my family and friends will have a devastating affect. The beaches are a natural beauty of which god as designed for human kind.</p>	<p>There is a risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment in all offshore oil exploration and appraisal projects. However the likelihood of a significant spill such as a blowout is low, more than 1 in 400,000 wells drilled. The results of the Oil Spill Modelling Report (Annex D4) commissioned as part of the EIA Report, indicates that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p>

			<p>How will this oil and gas exploration affect my community</p> <p>This going to have a very serious impact on our health resources as many people are sick. I have noticed that people are getting all kind of sickness. People are already suffering from stress in their daily lives mostly poverty. I personally feel this gas and oil exploration will have serious implications in the future to come.</p>	<p>An increase in poverty and/ or unemployment as a result of project activities is not anticipated. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>I do not think that it will benefit the community at large, the reason why as it is the community is suffering from pollution of many kinds , such as throwing to the streets plastic, bottles and unwanted articles.</p>	<p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels will have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78</p>
			<p>How were you informed about this oil and gas exploration activity? I am actively engaging in meetings and East Coast of Africa meetings in conjunction with Mr Desmond. But sadly yes authorities are not putting it in the media and letting the larger communities know.</p>	<p>In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul>

				<p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>I am not in favour of this Draft Environmental Impact Assessment Report. I personally hope that the authorities do not go ahead with the drilling and exploration of oil and gas experiment with it will come the negative effect on our children and not forgetting our grand children.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Bina	Singh	Westham	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Its going to destroy everything and harm the environment.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. A summary of these impacts are presented in Chapter 9. Most of the potential impacts assessed have a Moderate to Negligible residual significance. During routine operations no impact expected on the current line fish and crustacean trawl fisheries. No cumulative impacts are expected on the other fisheries sectors. Fishing activities will be temporarily restricted only in a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report</p>

				<p>commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community People will die and it will cause harm to us.</p>	<p>The project activities will take place over 60km offshore, it is highly unlikely that the project will directly harm people living on the coast or marine users during routine operations. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report.</p> <p>The potential effects from air emissions is Minor and would not directly affect the health of residents as the location of the drill ship will be over 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? No its unnecessary.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>

				<p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. The white paper states that 'Government will ensure the optimal and environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all' and undertakes to 'ensure private sector investment and expertise in the exploitation and development of the country's oil and gas resources'. The successful exploitation of these natural resources would contribute to the growth of the economy and relieve pressure on the balance of payments. For more discussion on the need and desirability of the Project, refer to Chapter 3.</p>
			<p>How were you informed about this oil and gas exploration activity? KZN Fishing Forum.</p>	<p>It is noted that the KZN Fishing Forum has been raising awareness regarding the project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments: No exploration must take place.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>

				<p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. The white paper states that 'Government will ensure the optimal and environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all' and undertakes to 'ensure private sector investment and expertise in the exploitation and development of the country's oil and gas resources'. The successful exploitation of these natural resources would contribute to the growth of the economy and relieve pressure on the balance of payments. For more discussion on the need and desirability of the Project, refer to Chapter 3.</p>
David	Moodley	Westham	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This exploration will effect my livelihoods in many ways as I am in my old age</p>	<p>The proposed project is for exploration drilling to ascertain whether oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. Please note, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>There are many sick people in my community that are very ill and this exploration will cause endless harm to the community.</p>	<p>The project activities will take place over 60km offshore, it is highly unlikely that the project will directly harm people living on the coast or marine users during routine operations. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report.</p> <p>The potential effects from air emissions is minor and would not directly affect the health of residents in coastal communities. Project activities will take place 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p>	<p>As described in previous responses, the project activities will take place over 60km offshore, it is highly unlikely that the project will directly harm people living on the coast or marine</p>



			No because it can get us killed as we are already dying with our own worries and body sickness.	users during routine operations. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report.
			How were you informed about this oil and gas exploration activity? Through the KZN fishing forum	<p>It is noted that the KZN Fishing Forum has been raising awareness regarding the project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			General Comments: The oil and gas exploration should not take place.	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Deon	Unknown	Phoenix	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Oil is effecting our beaches sand is black at times.	Please note that this project has not yet started. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of

				<p>the Oil Spill Modelling Report (Annex D4) commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni currently has a service agreement with Wild Well Control for a well sealing device (capping stack) equipment. Eni will have a service agreement with Oil Spill Response Limited, which will intervene in 48 hours providing oil spill response equipment, boom/skipper equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a capping stack from its base in Saldanha Bay, within the Country.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p>
			<p>How will this oil and gas exploration affect my community With fishing community fish are dying fish stocks are low.</p>	<p>The Project has not yet commenced, and cannot be linked to a perceived decline in fish stocks. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine.</p> <p>The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the</p>

				location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
			Do you think that oil and gas exploration will benefit me or my community? Why? Yes with asthma and chest infection.	<p>The potential effects from air emissions is Minor and would not directly affect the health of residents in coastal communities as project Activities will take place over 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>Eni has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be</li> </ul>

				flowed and well-test durations will be reduced to the extent practical.
			How were you informed about this oil and gas exploration activity? Fishing Forum	<p>It is noted that the KZN Fishing Forum has been raising awareness regarding the project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			General Comments: Oil and Gas is effecting our seas with fish stocks.	<p>The Project has not yet commenced, and cannot be linked to a perceived decline in fish stocks. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine.</p> <p>The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the</p>

				location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
Desiree	Bishop	Austerville	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? As someone who consistently goes to the beach this exploration is going to effect valuable family time. As a resident of Durban, this will effect the economy of Durban because no one will want to visit.	The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.
			How will this oil and gas exploration affect my community My community of Durban, will be drastically affected.	The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism, access to and use of beaches under normal operating conditions.
			Do you think that oil and gas exploration will benefit me or my community? Why? No it wont developments in the area do not benefit the poor	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.  Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.  There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits

				for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? Through SDCEA	It is noted that SDCEA has been raising awareness around this Project.
Gladys	Pillay	Unknown	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Merebank cutting beach there's full of oil an clanet an bottle. I go fishing there no fish only oil and dirt. I lay fishing permit only waste of time we don't get fish because of oil my husband and I get sick in the morning when we get up I have tick.	Note that this project has not yet started and any pollution or ill-health experienced can not be a result of the proposed project. Once exploration commences, fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).  As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Furthermore, the project is not anticipated to affect Merebank beach.
			How will this oil and gas exploration affect my community The oil and gas has effect 1 o'clock in the morning and 2 o'clock well no sleep.	Note that this project has not yet started and is therefore not the cause of your current disturbed sleep patterns. The project activities will take place over 60km offshore, it is highly unlikely that the project will directly harm people living on the coast or marine users during routine operations.
Jaipaul	Singh	Phoenix	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Increase number of Environmental Incidents such as oil and gas spills the continued pollution of gas and oil is threat of availability of	This project is for exploration drilling only, there is no pipeline associated with the project. Please refer to Chapter 3 for more detail on the Project Description.

			<p>fresh breathing air, increase in water related disease. Distract the livelihood to fishermen and bathers who ate and sold the fish. A burst pipeline of oil or gas will destroy marine life. Moreover is highly dangerous as it could easily explode as years go by.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine (Annex D1 and D2). The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained.</p> <p>The potential effects from air emissions is Minor and would not directly affect the health of residents in coastal communities as project activities will take place over 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO2), methane (CH4), oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>There is no risk of water borne diseases from this project as it will take place over 60 km from the shoreline. Furthermore, no wastes that could affect the health of the community will be discharged directly into the marine environment. Refer to the EMP for the waste management and mitigation protocol.</p>
			<p>How will this oil and gas exploration affect my communityPeople living almost nauseating odour's , disruptive sounds and repulsive sight. Burning eyes, nose and throats , headaches and coughs.</p>	<p>The potential effects from air emissions is minor and would not directly affect the health of residents in coastal communities as Project activities will take place approximately 60km offshore.</p>

			<p>Increasing rates of leukaemia and cancer. High percentage of people especially children will get very sick.</p>	<p>The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No it will destroy marine life and all species of species. Accidental spill due to blowout or climate change. Accidental oil spill due to a vessel collision and accidental oil and gas spill due to the accidental disconnection of the riser occurring during drilling.</p>	<p>The location of the drillship is more than 60 km from the coast. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent but highly unlikely to occur in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA Report indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA Report together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small</p>



				<p>volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni currently has a service agreement with Wild Well Control for a well sealing device (capping stack) equipment. Eni will have a service agreement with Oil Spill Response Limited, which will intervene in 48 hours providing oil spill response equipment, boom/skipper equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a capping stack from its base in Saldanha Bay, within the Country. Eni will be required to develop an Oil Spill Contingency Plan for this project to management a spill event.</p> <p>Eni has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines;</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> </ul> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>Attended to meeting</p> <p>Read in the newspapers</p> <p>Read leaflets and booklets</p>	<p>Noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p>

				<ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			General Comments: Not advisable to give it ago ahead	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. The need and desirability of the Project is discussed in Chapter 3 of the EIA.
Krish	Hating	Westham	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It will harm the environment and destroy the flora and the fauna.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. Refer to chapter 9, EMPR, for further information on the residual impact ratings.
			How will this oil and gas exploration affect my community Many people in the community are very old and sickly this will harm them in every way which is very sad.	This project is not anticipated to have significant impact on the health, wellbeing or welfare of the elderly, ailing or members of the surrounding community under normal operating conditions as the location of the drill ship will be approximately 60km away from the shore. The results of the specialist studies and impact assessment indicates that under normal operating conditions, no significant impacts on health and well being of the community are expected. The drill ship is located at a substantial distance away from the shoreline where any community based activities will occur.
			Do you think that oil and gas exploration will benefit me or my community? Why? No because its causing harm to me and my community.	Please refer to the response above.
			How were you informed about this oil and gas exploration activity? Through the KZN Fishing forum	It is noted that the KZN Fishing Forum has been raising awareness regarding the project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide

				<p>an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>This exploration should not take place.</p>	<p>The No- Go alternative is in contravention of Operation Phakisa's aim to implement South Africa's policies and programmes better, faster and more effectively, and to unlock the economic potential of South Africa's oceans. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Logie	Ramsamy	Merebank	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? If they put oil and gas on the beach this will effect the fish and they will die and the chemical they put will be harmful for us to eat the fish and nobody will be able to swim on the beach due this chemicals.</p>	<p>The drillship more than 60 km from the nearest coast. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p>

				<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>How will this oil and gas exploration affect my community The smell is polluted , and people suffer from headaches , asthma nausea etc. It is harmful to your health. Many people got no money to the doctors reason being some people are poor.</p>	<p>The current ill health suffered by the people or the alleged offensive odour/ smell can not be a result of this proposed project due to the fact that activities have not yet commenced. These complaints are therefore a baseline condition suffered by the community, however the proposed project is not expected to contribute to these. The results of the specialist studies and impact assessment indicates that under normal operating conditions, no significant impacts on health and well being are expected. The potential effects from air emissions is assessed as minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO2), methane (CH4), oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO) and volatile organic compounds (VOC). Although many of these compounds are known to have the potential to contribute to a number of</p>

				<p>environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution, the client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No this smell is still harmful. We feel like vomiting and children feel ill and the fish that they sell are polluted and they sell it for us with all that chemical.</p>	<p>The current ill health suffered by the people or the alleged offensive odour/ smell can not be a result of this proposed project due to the fact that activities have not yet commenced. These complaints are therefore a baseline condition suffered by the community, however the proposed project is not expected to contribute to these. Furthermore, because the project has not commenced yet, the reference to "that chemical" which is said to have contaminated the fish being sold, is not a result of this project.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I was attending meetings by SDECA this is how I know.</p>	<p>It is noted that SDCEA raised awareness regarding this proposed project.</p>
			<p>General Comments:</p> <p>How are people going to live when they are chemicals in the water? (beach). If this don't stop this will effect peoples living because many of them depend on the fish to have a living.</p>	<p>Please refer to four rows above.</p>
M	Shaik	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Sir , the surf sand is turning black due to the oil , washing out. Knowing the holidays seasons is coming soon and the holiday makers will be coming to the golden miles, will they like to sea the so call golden mile with black sand with oil spill washing out No? Think about it.</p>	<p>No spills have occurred as a result of this project, as the project has not yet commenced. Current pollution and black sand also therefore cannot be attributed to this as the project. The potential risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>

				<p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p>
			<p>How will this oil and gas exploration affect my community Visit Addington Hospital and see patients suffering from short breath and asthma.</p>	<p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Although many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution, the client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc. •</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? No! There will be more patients with asthma and short breath even holiday makers.</p>	<p>The results of the specialist studies and impact assessment indicates that under normal operating conditions, no significant impacts on health and well being are expected. The potential effects from air emissions is assessed as minor and would not</p>

				<p>directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC).</p> <p>Although many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution, the client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>How were you informed about this oil and gas exploration activity? Through the fishing forum.</p>	<p>It is noted that the KZN Fishing Forum raised awareness regarding this proposed project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul>

				SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.
			General Comments: Avoid oil spill and washing out on the golden mile. Well come more holiday makers. To our clean blue surf like it used to be.	The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (>100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
Arumgam	Naiker	Umkomaas	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It will destroy the lives of the +- 301 00 subsistence fisherman , our livelihoods destroy the marine life commercial fisherman will be displaced fisher folk will also be effected by the oil and gas exploration.	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards</p>



				provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
			How will this oil and gas exploration affect my community We live alongside the coastline and unemployment is rife in our country.	<p>The No- Go alternative is in contravention of Operation Phakisa's aim to implement South Africa's policies and programmes better, faster and more effectively, and to unlock the economic potential of South Africa's oceans. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Donoven	Naiker	Phoenix	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Waste from drilling on ocean bed will wash ashore and damage our shores.	A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.
			How will this oil and gas exploration affect my community There will be no places left for fun on our beach.	The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism or beach accessibility under normal operating conditions. Furthermore, the horizon is located approximately 15km away from the shoreline and the drill ship will therefore not be visible from the shore.
			Do you think that oil and gas exploration will benefit me or my community? Why? No this is not viable without proper survey.	There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased

				government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? SDCEA Meetings	<p>It is noted that the KZN Fishing Forum raised awareness regarding this proposed project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			General Comments: Open our sea is damage by unknown people who don't care for lives of people.	<p>Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons (should the recourse be viable enough to exploit). There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>

Munsami	Naiker	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This will have serious affect on coral reef. Oil flows with ocean currents will destroy all nesting grounds along our shoreline. Fishing an all activity off sports on along beaches will be affected.</p>	<p>The project is located more than 60 km off the coast. Based on the precautionary principle if the presence of sensitive species ( eg: deep water corals) could not be confirmed they were assessed as being 'present' and therefore the impacts of the project activities on theses receptors were assessed based on this precautionary principle and the outcomes presented in Chapter 7 of the EIA Report. Secondly, a pre-drilling ROV survey will be conducted at the well site and if any sensitive receptors are found a commitment has been made by Eni to ensure the well site is located more than 500 m from any identified vulnerable habitat (refer to Chapter 9 of the EIA Report)</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community</p> <p>The future generation will suffer the worst if not managed properly. Degree of which impact may cause irreplaceable loss of resources and mitigation measures.</p>	<p>The proposed project involves offshore exploration to determine the presence of hydrocarbons off the shore of the East Coast of South Africa. Should hydrocarbon reserves be found and Eni choose to pursue extraction, a new impact assessment process would be required. Extraction may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues,</p>

				contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>We have vast mineral resources on land and sea only all off this is done properly with all public party involved and marine spatial planning benefit people of SA.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>The South African White Paper on the Energy Policy (1998) is the overarching policy document which has guided and continues to guide future policy and planning in the energy sector in South Africa. The white paper states that 'Government will ensure the optimal and environmentally sustainable exploration and development of the country's natural oil and gas resources to the benefit of all' and undertakes to 'ensure private sector investment and expertise in the exploitation and development of the country's oil and gas resources'. The successful exploitation of these natural resources would contribute to the growth of the economy and relieve pressure on the balance of payments. For more discussion on the need and desirability of the Project, refer to Chapter 3.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The legislated public participation process was followed, in an effort to raise awareness about the project and engage with people on perceived impacts and obtain comments. Public engagement related to the extraction of resources however, must be subject to a separate EIA process, should a viable resource be identified and a desire to extract this be pursued by Eni in the future.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>Member of SDCEA Forum and Fishing Forum</p>	<p>It is noted that SDCEA and Fishing Forum raised awareness regarding this proposed project. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates</p>

				<p>throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>The marine plans must be reviewed by all stakeholders.</p>	<p>Section 2 (4) f of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties in environmental governance must be promoted. People must also have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. To fulfil this principal and in keeping with Chapter 2 of the 2017 Environmental Impact Assessment Regulations (No. 326) which stipulated that the comment period on reports disclosed is 30 days; ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. The Scoping Reports and the draft EIA Report has been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days. No further extensions to the EIA Report comment period can be made as the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017). This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process.</p>
Namwisa	Mdietshe	Richards Bay	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?	The location of the project is over 60 km from the shoreline and the horizon is located approximately 15km away from the

			There will soon be restrictions to use of our beach/public beach. Policies will soon be availed by the drilling company that will drastically affect coastal communities.	shoreline, the drillship will therefore not be visible from the shore and it is not anticipated that the project will have any impact on tourism or local trade under normal operating conditions.
			How will this oil and gas exploration affect my community There will be a change in peoples livelihoods and how they use or what they acquire from the ocean. As a community living near the coast of Richards Bay. I believe the general impacts generated by oil drilling will negatively affect coastal activities such as leisure on the beach during holidays as well as the informal sector (selling of crafts/goods) at the beach to tourists/ holiday downers.	<p>The location of the project is over 60 km from the shoreline and the horizon is located approximately 15km away from the shoreline, the drillship will therefore not be visible from the shore and it is not anticipated that the project will have any impact on tourism or local trade under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment, have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			Do you think that oil and gas exploration will benefit me or my community? Why?	The location of the project is over 60 km from the shoreline and the horizon is located approximately 15km away from the

			<p>No, firstly the informal jobs in the coast of beach will be drastically reduced due to possible hazardousness caused by oil exploration. Secondly this exploration will not produce sustainable jobs because most of our community members are not skilled for 'proper' jobs during the project.</p>	<p>shoreline, the drillship will therefore not be visible from the shore and it is not anticipated that the project will have any impact on tourism or local trade under normal operating conditions.</p> <p>Given the project's focus on exploration only at this stage and the limited operational time frame, there will be limited employment opportunities. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. However this outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support production activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? NGOs within Zululand e.g. MCEJO not the newspaper , or radio or any media.</p>	<p>It is noted that the local Zululand NGOs raised awareness regarding the proposed project.</p>
			<p>General Comments:Please stop commodifying and privatizing public/ natural areas. You cannot keep exploiting our oceans for your own benefit and pockets. There are communities in South Africa near coastal areas that make a living out of marine ocean resources. It is enough, we have had it with the empty job promises and wealth!</p>	<p>Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons (should the recourse be viable enough to exploit). There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Nkanyiso	Unknown	Newcastle	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>The beach is both recreational and natural scene that is used for fun, entertainment and spiritual purposes. If water is now used to pump gas and oil that can destroy the natural state of the ocean.</p>	<p>The proposed drilling area is approximately 60km away from the shore line and will thus not affect the local trade. The beach access will not be affected by the drilling activities under normal operating conditions. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA. The potential risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and</p>

				<p>it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, this plan will need to approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.</p>
			<p>How will this oil and gas exploration affect my community Communities are large can be either restricted or inconvenienced in exercising their right of clean and harmless ocean. Water in the ocean can be spoilt by spillages of oil.</p>	<p>The proposed drilling area is approximately 60km away from the shore line and will thus not affect the local trade. The beach access will not be affected by the drilling activities under normal operating conditions. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA. The potential risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report</p>



				<p>commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, this plan will need to approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>It will not at all benefit me and my community.</p>	<p>Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons (should the recourse be viable enough to exploit). There are negligible social benefits</p>

				associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? Through civil society movements that held meetings.	Civil society movements have been noted as awareness- raising forums.
			General Comments: It is forbidden in our constitution according to section 24 , everybody has a right to an environment that is clean and not harmful to health. By going ahead with this project the link is clear you explore oil and gas in the ocean , your playing with peoples life and health.	Please refer to the lines above. The proposed exploration is in line with the governments vision of operation Phakisa. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA. The potential risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (>100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
Pele	Moonsamy	Phoenix	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Increase number of environmental incidents such as oil and gas spills the continued pollution of gas and oil is a threat of availability of fresh breathing air increase in water related disease. Distract the livelihood to fisherman and bathers who ate and sold the fish. A burst pipeline of oil or gas will destroy marine life. More over is highly dangerous as it could easily explode as years go by.	The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA. The potential risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects.  Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing

				<p>device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
				<p>The potential risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put</p>

				<p>into place in the event of an accidental spill. Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p>
			<p>How will this oil and gas exploration affect my community? People living amidst an is eating odours, disruptive sounds and repulsive sight. Burning eyes , nose and throat, headaches and visit Addington Hospital and see patients suffering from short breathe and asthma.</p>	<p>This project is not anticipated to have significant impact on the health, wellbeing or welfare of the elderly, ailing or members of the surrounding community under normal operating conditions as the location of the drill ship will be approximately 60km away from the shore. The results of the specialist studies and impact assessment indicates that under normal operating conditions, no significant impacts on health and well being are expected. The drill ship is located at a substantial distance away from the shoreline where any community based activities will occur.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No!!! Not at all there will be more patients with asthma and short breath. Even holiday makers.</p>	<p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts however, the client has committed to the following inbuilt compliance and control measures:</p> <p>Compliance to MARPOL 73/78 Annex VI regulations regarding</p>

				<p>the reduction of NOx, SOx and GHG emissions from vessel engines.</p> <ul style="list-style-type: none"> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc</li> </ul>
			<p>How were you informed about this oil and gas exploration activity? Attending to meeting and through the fishing forum as I am a member of the forum.</p>	<p>Your membership with the Fishing Forum has been noted.</p>
			<p>General Comments: Avoid oil spilling and washing out on the golden mile well come more holiday makers to our clean and blue sure like it used to be.</p>	<p>The Project is located 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
Phillip Patric	Christopher	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It will kill sea creatures and also the people that goes to the beach to swim.</p>	<p>The Project is located 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely</p>

				that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
			How will this oil and gas exploration affect my community? It will get into the soil and cause the trees or any of the plantation to not grow. It will also cause air pollution or even get into our dams.	<p>This Project will not impact on soil or drinking water as the Project activities will take place 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>The potential effects from air emissions is Minor and would not directly affect the health of residents in coastal communities as project activities will take place over 60km offshore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, it is very harmful to our environment.</p>	<p>The Project is located 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8</p>

				of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
			How were you informed about this oil and gas exploration activity?The news on television.	We note the reach of the media in drawing attention to the proposed project.
			General Comments: We should reduce the use of oil pollution. And the only way to reduce the use of oil pollution to reduce the amount you make.	<p>The production of oil is not within the scope of this proposed project and this comment is therefore not relevant to this project. Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p> <p>Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Rani	Singh	Westham	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It will harm and affect the animals , plants and us humans in every possible way.	The proposed drilling area is approximately 60km away from the shore line and will thus not affect the local terrestrial plant and animal life. The beach access will not be affected by the drilling activities under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.

			<p>How will this oil and gas exploration affect my community</p> <p>In my community they are many breadwinners that are sickly but need to work provide for their family if they get sick due to this exploitation it will increase poverty in my community which cause the economy to decrease.</p>	<p>The current ill health suffered by the community members and the level of poverty endured are not factors linked to this proposed project due to the fact that exploration activities have not yet commenced. These complaints are therefore a baseline condition of the community, and the proposed project is not expected to contribute to these in terms of an increase in adverse health nor an increase in poverty levels.</p> <p>The Project is located 60km offshore. Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>An increase in poverty and/ or unemployment as a result of project activities is not anticipated. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide</p>
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				standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
			Do you think that oil and gas exploration will benefit me or my community? Why? No like said in my above statement it will cause harm to me and community.	Refer to above. Furthermore, the proposed drilling area is approximately 60km away from the shore line and will thus under normal conditions is not anticipated to affect the surrounding communities.
			How were you informed about this oil and gas exploration activity? By attending the meeting cause it apart of fishing forum.	<p>Your introduction to the proposed project has been noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			General Comments: I do not agree for this exploration to take place.	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.
Stanton	Singh	Phoenix	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It pollutes the air as there are sickly people in the area.	The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and

				<p>other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts however, the client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>How will this oil and gas exploration affect my community It will in many ways such as cancer and is all destroying the environment.</p>	Refer to the response above.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? No because people will start have health issues and may also cause death in my community.</p>	This is an unsubstantiated comment.
			<p>How were you informed about this oil and gas exploration activity? I have attended the meeting through the KZN fishing forum.</p>	<p>Your introduction to the proposed project has been noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p>

				<p>• Pondo News in Eastern Cape.</p> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments:</p> <p>This gas and oil exploration should not take place.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p>
Tony	Unknown	Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will affect me as I am fisherman and should it continue there will be no fish in the area. Due to pollution from the oil.</p>	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The potential risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential</p>

				impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.
			How will this oil and gas exploration affect my community? People with sicknesses will be in danger of the toxins that is released and will be at more risk.	<p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts however, the client has committed to the following inbuilt compliance and control measures</p> <p>Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</p> <ul style="list-style-type: none"> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul>
			Do you think that oil and gas exploration will benefit me or my community? Why? No it wouldn't there would be a lot of money used for this exploration and should it fail we stand to loose a lot.	The capital investment for the project is through Eni and Sasol. There will be no financial loss to the community and country if a viable resource is not available. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? By a meeting forum.	Your introduction to the proposed project via a forum meeting has been noted.
			General Comments: I wish there was a better way around this issue.	Thank you for your comment. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.

				<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
Unknown	Unknown	Westham , Phoenix	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It is going to destroy the environment which will cause the fish to die.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA)</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>

			<p>How will this oil and gas exploration affect my community</p> <p>Breathing in air that is consumed with oils and gas will harm me and the people around me.</p>	<p>The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No people will start falling sick die plant and animals will also die due to this exploration.</p>	<p>No human fatalities or adverse health conditions are expected to arise from the exploration activities. The proposed drilling area is approximately 60km away from the shore line and will thus not affect the local terrestrial plant and animal life. The beach access will not be affected by the drilling activities under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>
			<p>How were you informed about this oil and gas exploration activity? I was informed through the KZN fishing forum.</p>	<p>Your introduction to the proposed project via the KZN Fishing Forum has been noted.</p>
			<p>General Comments:</p> <p>I really wish for this exploration not to take place.</p>	<p>Thank you for your comment. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p>

Vuyo	Mfolozi	Glebelands Hostel	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?It is going to affect us bigtime because it is going to cause the climate change. That is going to make people ill children are going suffer from asthma, TB etc..	<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The proposed drilling area is approximately 60km away from the shore line. Therefore, the potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>No adverse health conditions are expected to arise from the exploration activities.</p>
			How will this oil and gas exploration affect my communityThe community is going to be affected because everything is going to change. The standard of living about criminal activities that is going to take place there.	<p>Due to the location of the drillship (i.e. approximately 60km offshore), beach accessibility, tourism and local trade will not be affected under normal operating conditions, therefore the standard of living and criminal activities will not be altered due to the potential exploration drilling.</p>

			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No because these people only care for them self not the other way around. For example we've been fighting with ENGEN for so long for the same thing. To look after the people because people are dying because of these chemicals they using.</p>	<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenue, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p>
			<p>How were you informed about this oil and gas exploration activity? Through South Durban Community Environment Alliance and Ubunye Bam hostel meetings.</p>	<p>Thank you for registering as an I&amp;AP and for sending comments through to ERM.</p>
			<p>General Comments:</p> <p>We as the people of south Durban we say no this oil and gas thing because it is going to destroy the nature. People wont be able to use the beach freely this things is going to kill us an and it is going to destroy to our children's future.</p>	<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The proposed drilling area is approximately 60km away from the shore line and will thus not affect the local terrestrial plant and animal life. The beach access will not be affected by the drilling activities under normal operating conditions.</p>
Victor	Kupsamy	Merebank, Durban	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This project will upset current sea activities, like the tides. Possible Oil Spills and noise any activity generated by this project will impact on visits to the beach.</p>	<p>The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill</p> <p>.</p> <p>The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 µPa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to</p>



				<p>guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel far downwards. Thus the produced noise falls in hearing range of marine mammals, it is not in the range to cause damage or injury; avoidance and behavioural impact is possible. The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of Small magnitude in the drilling area and for the duration of the drilling campaign. Ultimately there will be no change to the natural ecosystem due to this disturbance as it is only temporary. Based on the environmental baseline conditions discussed in Chapter 4, the sensitivity of the receptors in the region in terms of masking impacts from underwater noise is High due the presence of species of conservation concern in the Project Area. The sensitivity of the receptors in the region is in terms of avoidance impacts from underwater noise is Low due to the distance of the drilling from the shore.</p> <p>Based on the analysis provided above, the impact of underwater noise potentially masking biologically significant sounds is considered of Minor significance without mitigation, whereas the impact of underwater noise resulting in avoidance of feeding and/or breeding area is considered Negligible without mitigation due to the extreme offshore location of the areas of interest (Table 7.14).</p> <p>The proposed operational phase activities will take place approximately 60km offshore and as such, there will be no direct impacts to beach access and recreational shoreline activities.</p> <p>The potential impacts of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in</p>
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				Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.
			How will this oil and gas exploration affect my community We don't know of the value this will add to our community. Fishing is a major part of our livelihood, which will adversely be impacted.	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship+G208 The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			Do you think that oil and gas exploration will benefit me or my community? Why? No. I have not heard of any benefit. Just an adverse impact on the sea and marine life.	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			How were you informed about this oil and gas exploration activity? Through SDCEA	<p>Your introduction to the proposed project has been noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> </ul>

				<ul style="list-style-type: none"> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
Allois	Mbambo	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It affect it a lot because the oil will spill in the sea and fish will die, people who live in poverty will eat them and die.</p> <p>This also means our heritage is being destroyed.</p> <p>Job opportunities will be scarce because tourists will not come to swim if water is polluted with oil.</p> <p>Restaurants and tourists attraction will vanish because of this project.</p>	<p>The South African Heritage Resources Association (SAHRA), have been informed of the proposed drilling. A heritage impact assessment has been included in the EIA report and a screening of the ocean floor will occur prior to any drilling. Should any significant material be identified, SAHRA will be contacted immediately and the drilling will be relocated. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km from the nearest coast.. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to</p>

				<p>evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Due to the location of the drillship being approximately 60km away from the shore line, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How will this oil and gas exploration affect my community? There are a lot of communities that depend on the sea to find food because there are no jobs, these will suffer starvation. Fishermen will lose their jobs because fish will die or relocate. The air we breathe will also change and be polluted and we will get sick.</p> <p>There were areas where we were free to go but these places will be beyond limit now, or no go areas, this project is disrupting our lives.</p>	<p>Refer to the response provided above.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>This project seems to be designed for the rich people because there are no job opportunities it will bring.</p> <p>We do not have people who skilled or educated for this kind of technology here in South Africa.</p> <p>We really don't need this project here because it will turn our area to Ethiopian status, those poverty stricken countries.</p> <p>We want job opportunities which is not clear in this project.</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. However this outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities.</p>

				Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I got this information from non-governmental organizations that came to alert us as the community about this proposed project because those that are involved in it do not care about democracy, they think they have the right to make final decisions. My question is how are they going to make such decisions if we are a free country and we have democracy.</p>	<p>The Competent Authority is the decision maker and the EAP/s together with the specialist have assessed the potential impacts associated with the proposed project such that the Department can make an informed decision.</p> <p>A comprehensive public participation Process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p>
			<p>General Comments?</p> <p>We do not need this project, it has come to disrupt our lives, our culture, we will lose our jobs and we will have food shortages. We request the government to apply majority rule in this manner, not that they make decisions themselves.</p> <p>People from rural areas know nothing about this project even though we are free now, this is our country but still white men from other countries are ruling, doing as they please?</p>	<p>The Competent Authority is the decision maker and the EAP/s together with the specialists have assessed the potential impacts associated with the proposed project such that the Department can make an informed decision. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. The No- Go alternative is also in contravention of Operation Phakisa's aim to implement South Africa's policies and</p>

				<p>programmes better, faster and more effectively, and to unlock the economic potential of South Africa's oceans.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Muzi	Ngidi	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Swimming will be a challenge and fishing too for those who fish.</p> <p>Vendors will be affected. The fish will move to other places, even certain trees will perish, let alone climate change</p>	<p>Due to the location of the drillship being approximately 60km away from the shore line, beach accessibility, tourism and local trade will not be affected under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Eni has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding</li> </ul>

				<p>the reduction of NOx, SOx and GHG emissions from vessel engines;</p> <ul style="list-style-type: none"> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.;</li> </ul> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p>
			<p>How will this oil and gas exploration affect my community? If the sea is ever polluted, it will never recover. The polluted air will cause sickness to the community. The community will not be able to get the fish so vital and healthy. If the sea is polluted, the community will be in danger because big waves will bring dirt to the people.</p>	<p>Refer to the response provided above.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? I don't see any benefits because this kind of work require people that are well educated and qualified scientists. We who know next to nothing will not benefit in any way.</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? I heard of this from SDCEA and other people at the Hostel</p>	<p>Your exposure to the proposed project via SDCEA has been noted.</p>
			<p>General Comments? The view that the whole community at KwaMashu Hostel have is that this has to stop if there is ever justice in our country.</p>	<p>Thank you for your comment, however it is incorrect here say to assume that your comment represents the entire community of KwaMashu (unless you can substantiate this statement with proof). There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues,</p>

				<p>contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Muzi	Ntuli	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>In our community there are many people who make their living by means of the sea and also selling things at the beach in that way provide for their families.</p> <p>There are also a lot of heritage that will be disturbed in offshore if this drilling of oil continues. Most importantly, we will never have tourists coming to KwaZulu-Natal area ever again.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km from the nearest coast.. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Due to the location of the drillship being approximately 60km away from the shore line, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities.</p> <p>Exploration success, however, would result in long-term benefits</p>



				<p>for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>Due to the location of the drillship being approximately 60km away from the shore line, beach accessibility, tourism and local trade will not be affected under normal operating conditions. As the water depths in both drilling areas of interest are more than 1,500m deep, there is no likelihood of any submerged prehistoric archaeological sites or material being encountered in the course of exploration drilling in of the two drilling areas of interest. Further to this, there are no known or recorded shipwreck within the two areas of interest identified for exploration drilling as part of this project The South African Heritage Resources Association (SAHRA), have been informed of the proposed drilling. A heritage impact assessment has been included in the EIA report and a screening of the ocean floor will occur prior to any drilling. Should any significant material be identified, SAHRA will be contacted immediately and the drilling will be relocated.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>My community will be affected because here at the hostel we have people who work as vendors at the beach and now the festive season is approaching a time when the business is good but visitors will avoid coming to this area because of this project.</p>	Refer to the response provided above.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>I don't see that happening because in this country we were never taught about oil drilling and things like that, which means again this will benefit foreigners who came with this.</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>All thanks to SDCEA and UBH who helped us to understand there was something like this because people who were suppose to inform us chose to post this information in a place where it is difficult for normal people like us to have access to.</p>	<p>A comprehensive public participation Process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for</p>

				<p>people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party. Additionally, notifications were distributed and posters put up. All reports were posted on the dedicated project website and at various libraries for people to access.</p>
			<p>General Comments?</p> <p>I beg the South African government to remember that they are holding those positions because we voted them in. The decisions should not be taken without consulting us when those decisions affect us all and especially the ocean.</p>	<p>Section 2 (4) f of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties in environmental governance must be promoted. People must also have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. To fulfil this principal and in keeping with Chapter 2 of the 2017 Environmental Impact Assessment Regulations (No. 326) which stipulated that the comment period on reports disclosed is 30 days; ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. The Scoping Reports and the draft EIA Report has been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days. No further extensions to the EIA Report comment period can be made as the EIA process is a controlled 350 days process as regulated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended and associated Environmental Impact Assessment Regulations (No. 326 of 2017). This application has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process.</p>

				<p>The EIA process has been managed within the regulated timeframe and the appropriate comment periods have been provided throughout the process. The final EIA report is due to the Competent Authority on 14 December 2018 in order to comply with the regulated timeline and no further extension can be granted on the draft EIA report. Copies of the final EIA report to be submitted to the CA will be made available to the public also. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Nelisiwe	Myeza	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>First, this project is going to disrupt peace in the community because not everyone is going to benefit, only a selected few just to silence us, instead of training people giving them needed skills. Secondly, there are families whose livelihood depends on the sea and they will starve if this project continues. Our children will not grow up to see this beautiful place we have and the tourist will no longer come.</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>Due to the location of the drillship being approximately 60km away from the shore line, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>This will destroy the little we have because I think the gas and oil does not mix with sea life and we fish for a living. The KwaZulu-Natal province does not even have much when it comes to economic resources compared to other provinces.</p>	<p>The potential impacts of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities.</p>

			No. We will lose tourists that visit this place every month and every year. We are very poor here, and some people would go to bed without food but due to the fish in the sea, that is avoided. People from other places are the ones that will benefit most out of this project and we as a community will get nothing but peanuts if we ever get something. People from other places are the ones that will benefit most out of this project and we as a community will get nothing but peanuts if we ever get something.	Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.
			How were you informed about this oil and gas exploration activity?I heard this from other community members who are concerned about this proposed project.	
			General Comments?I do not think that extracting gas and oil in this area is a good idea because we enjoy the nature we have here. We want the coming generation to see for themselves the beauty of this place rather than to hear stories of how it used to be. This gas and oil thing is going to destroy our place and even recreational areas will decrease.	It important to note that this project relates to the exploration of a viable reserve and not the extraction of such resource for commercial purposes. Due to the location of the proposed drilling approximately 60km offshore, it is not anticipated to have any direct impacts on the terrestrial environment (ecological or recreational) as a result of exploration activities during the operational phase. The proposed drilling location is approximately 60km away from the shoreline with the horizon being situated approximately 15km away from the shoreline. The drill ship would thus not be visible from the shoreline and would not affect tourism and beach accessibility. Onshore recreational activities and tourism will not be affected by the proposed exploration. The potential risks associated with the project are assessed in Chapter 9, EMPr.Please note, all isiZulu comments received will be responded to by 17 January 2019.
Nkosingiphile Gabade	Nyawo	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Things will change for worse because people will not be able to swim because of the chemicals that will be used in this project.	Due to the location of the drillship being approximately 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.  The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (>100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities

				<p>(tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p> <p>The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p>
			<p>How will this oil and gas exploration affect my community? This will affect my community negatively because those who fish will no longer be able to do so to have something to eat since they will not be able to work at the sea. The sea will be polluted and the fish is our means of livelihood, we sell them to support our families.</p>	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, which will be located 60km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards These standards</p>

				<p>provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Eni will take measures to prevent the pollution of the ocean through compliance with MARPOL 73/78, which seeks to reduce pollution of the marine environment by offshore vessels. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No benefits to me and my community but a lost since people will no longer be able to sell stuff because there will laws that will end up interfering with what we do, and shopping Malls close to the sea will also be affected.</p>	<p>As noted in previous responses above, the Project activities will take place 60km offshore, and will not impact marine based livelihoods under routine operating conditions and will not have an effect on community members ability to sell under normal operating conditions - nor would it affect malls close to the sea. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I found out about this from a not well know organization, my neighbour told me about it.</p>	<p>Noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed in newspapers throughout the process to inform stakeholders</p>

				<p>about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul> <p>SMS notifications were also sent to individuals who have registered as an interested and affected party to inform them when the draft EIA Report was available for comment.</p>
			<p>General Comments?</p> <p>We are tired of these people who are coming here to destroy our country, they have already brought with them drugs as I speak, our children have become nothing but hobos and thugs. We do not need them, they should go back to where they come from. They did not come here for any good but to tear things down.</p>	<p>Your concern is noted. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. While there are negligible social benefits associated with the Project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Nokukhanya	Nyawo	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Things will change for worse because we can't do the fishing any more, the fish will be unsafe for consumption and if we eat them we will get sick. We will no longer have freedom because there will be added rules and regulations that control access to the sea.</p>	<p>Project activities will take place 60km offshore with the horizon at approximately 15km away from the shoreline. The drill ship would therefore not be visible from the shore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate</p>

				<p>closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>Due to the location of the drillship being approximately 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? The community will be in danger because the wells they are digging at the sea may collapse and people may fall into them. People will not have fresh air to breathe because of the chemicals used and sea pollutions that will take place</p>	<p>The exploration wells will be drilled approximately 60km offshore, therefore, they will not be a hazard to the community in terms of people falling into them. The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling</p>



				<p>activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, myself and my community will not benefit because if you look at it objectively you can see that this project is going to take away the very jobs that we have. If you look at the people that are selling staff, the vendors, their business will fail because this project will control access to the sea preventing people from coming to these places.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. Beach accessibility, tourism and local trade will not be affected under normal operating conditions. There is potential that exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How were you informed about this oil and gas exploration activity? We heard of this from non-profit organization.</p>	<p>Your notification source has been noted</p>
			<p>General Comments?</p> <p>This project should not be allowed to continue. We have been stripped of so many resources here in South Africa as we speak, the gold is mined here and taken to outside countries to be refined and when it is imported back here it is very expensive. It will be the same with this, they will be the ones to benefit than us, we do not want them here, they must go back.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. As per the answer above, exploration success would have benefits across the South Africa. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Nozipho	Sikhakhane	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This is really going to disturb us in the beach, we have beliefs that</p>	<p>Project activities will take place 60km offshore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps</p>

			<p>we have to go there to observe. We also do the fishing there and especially me, I am very close to the sea. This oil drilling project will disturb the community as well because we will end up having to governed by regulations about how to use our heritage</p>	<p>with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Since Project activities will take place 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p>
			<p>How will this oil and gas exploration affect my community? Our community will be very much affected because there are some women who work as vendors by the beach to support their families. In addition, the sea produces air that need to breathe, now it will be unsafe if they drill wells for the gas.</p>	<p>Project activities will take place 60 km offshore, and the drillship will not be visible from the shore. The tourism industry will not be affected by the exploration drilling under normal conditions. It is important to note that the sea does not "produce air" as stated in your comment. The potential effects of air emissions from the drillship is minor and would not directly affect the health of residents due to the distance of the drillship away from the+G355 shore.</p> <p>The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. under normal operating conditions, the emissions will not affect breathing quality. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO2), methane (CH4), oxides of nitrogen (NOx), sulphur dioxide (SO2), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and</p>

				<p>local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? I totally disagree with this project because this will limit our means of making a living, we have tourists that come here and bring money to boost the economy by their coming to visit the beach, and where will we sell our things, I really object this.</p>	<p>Since Project activities will take place 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How were you informed about this oil and gas exploration activity? I got this information from people around because those responsible for this project never came to the community to explain to us why this project is necessary.</p>	<p>A comprehensive public participation Process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance</p>

				<p>(SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments?</p> <p>My word is they must not go ahead with this proposed project because this will rob us of our livelihood, just as it happened with gold that is mined and exported to other countries only to imported again and very expensive. The same will be true with this oil, it will be extracted here and taken to other places to be prepared for use and then become expensive just like petrol, no, this is rubbish.</p>	<p>It is important to note that this project relates to exploration activities and no resources will be extracted for commercial use at this stage. As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>Since Project activities will take place 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be</p>

				<p>substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Sabelo A.	Mzileni	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>Things will be bad when it comes to health because of the air we breathe. Most of the air we breathe comes from the ocean. The rich heritage that we have will be destroyed because of oil spills and gas. Tourism, hotels and restaurants near the sea will retrench workers if the tourists no longer come to visit the sea.</p>	<p>Project activities will take place 60 km offshore, and the drillship will not be visible from the shore. The tourism industry will not be affected by the exploration drilling under normal conditions. It is important to note that air is not produced by the ocean. The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drillship will be approximately 60km away from the shore.</p> <p>The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. under normal operating conditions, the emissions will not affect breathing quality. . The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), oxides of nitrogen (NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NO<sub>x</sub>, SO<sub>x</sub> and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and</p>

				<p>it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? Our community- especially the young adults work with tourism, now the air and sea pollutions will disrupt tourism in the area. Besides, as a community we also use the sea to perform some of our customs, rituals and cleansing. Animal life and plants will be affected, we support ourselves through fishing, now the fish will die, and what are we to eat then?</p>	<p>Refer to the answer above. In addition, the potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? We are not going to benefit anything, this thing is just going to</p>	<p>The Project will not have impacts on the health of coastal communities, for reasons outline in the responses above. Exploration success would result in long-term benefits for South</p>

			cause poverty to people at the coast, mostly black people. What will occur here is just sickness and death.	Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.
			How were you informed about this oil and gas exploration activity? We heard from Non-governmental organizations (NGO and NPO) because the people that want to do this mining deliberately don't try to communicate and consult with us. These people are tyrants.	<p>A comprehensive public participation Process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> </ul>

				<ul style="list-style-type: none"> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments? Government does not care about living conditions of the people. Poverty will increase greatly, this government must be changed now. We are troubled by what happened in Wetland park, and now they are going to destroy our wealth in the sea. Gold and diamond is being exported to overseas, petrol prices keep on rising but the government is not able to assist the people.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Samkelo	Ntombela	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?The national heritage found in the ocean, people will no longer see it because it will be destroyed. The next generation will never get the opportunity to see this beauty with their own eyes, we are very concerned about drilling wells in the ocean.</p>	<p>Project activities will take place 60km offshore. The South African Heritage Resources Association (SAHRA), have been informed of the proposed drilling. A heritage impact assessment has been included in the EIA report and a screening of the ocean floor will occur prior to any drilling. Should any significant material be identified, SAHRA will be contacted immediately and the drilling will be relocate Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project</p>



				Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. Since Project will take place approximately 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.
			How will this oil and gas exploration affect my community? My community will be affected in many ways as I have indicated that some people go the beach to chill and relax, others to swim. Other people go there to perform some religious ceremonies. All these people will be robbed of access to the sea.	Please refer to response above, the Project activities will take place 60km offshore, the drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.
			Do you think that oil and gas exploration will benefit me or my community? Why? No, I don't see anyone benefiting from this project except those who are close to these people.	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			How were you informed about this oil and gas exploration activity? From an organization that fight to conserve nature.	<p>Noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed by the EAP (ERM) in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p>

				<ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul>
			General Comments? I have only one thing to say, they must stop this project they want to do in the offshore.	<p>The need and desirability of the Project is discussed in Chapter 3 of this EIA.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Samson	Gumede	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? We will lose our freedom in our own place because there will be terms and conditions. There will be places where fishing will be prohibited.	<p>The location of the project is over 60 km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>

				<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p>
			<p>How will this oil and gas exploration affect my community? This project will pollute water, there are natural processes that cannot be avoided like floods, and storms. In the sea, oil spills will cause havoc, even fauna will be destroyed</p>	<p>The Project activities will take place 60km offshore, beach accessibility, tourism and local trade will not be affected under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for</p>

				this project.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>The community will not benefit in anyway because from the beginning we were never promised anything that came true.</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? The NGOs are the ones that gave us some insight on the matter because the ones who were suppose to inform us don't care.</p>	<p>A comprehensive public participation Process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> </ul>

				<ul style="list-style-type: none"> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			General Comments? We are tired of people who come and take advantage of us, we don't want this anymore. How long have we been promised things, jobs? This is only going to enrich rich people, not us who are poor.	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>

				Please note, all isiZulu comments received will be responded to by 17 January 2019.
Sbusiso	Luthuli	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will change social conditions since we will no longer be able to do other things like before because of gases that may spill and affect the community at the coast. Fish will also face challenges and may die. There will be rules and laws that prevent us from fishing and swimming.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship (i.e. 60km offshore). The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and</p>

				<p>appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? It will have bad effect because this is dangerous to the environment and the community, it will disturb tourism because of the regulations they will put in place that will discourage visitors who want to come to KZN. The economy will go down because here the economy is boosted by tourism.</p>	<p>The location of the project is over 60 km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions, as explained above.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? The community will not benefit but will suffer loss because we believe in the ocean. People that work as vendors near the beach and businesses around will suffer and others will lose their jobs. Tourism will be decrease significantly, and it is possible that the gas may spill to the rivers that pour into the ocean and our livestock will die as a result.</p>	<p>Refer to responses above.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>The tourism trade, subsistence trading and other activities at the shore will not be affected by the exploration drilling due to its distance (approximately 60km offshore).</p>
			<p>How were you informed about this oil and gas exploration activity? We heard this from Zuma saying it's called "operation Phakisa." They don't give us proper information and the community is never informed.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. The exploration drilling (this Project), is being undertaken by a private company, not through the government of South Africa.</p>
			<p>General Comments? I don't want this because it is not here to help us but certain ones not everyone. This is just corruption.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p>

				<p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. While there are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Sibusiso	Mahlangu	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>I believe this project will have bad effect socially in the community because many people fish to support their families, and they will lose their livelihood, this will accelerate poverty in our communities. This project is going to kill the tourism industry which will result in many losing their jobs. This project will also destroy the environment and bring diseases to people.</p>	<p>It is not anticipated that people will lose their jobs as result of the Project. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship which will be located more than 60 km offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>It affect the community in that it will rob them of their means of living and bring about poverty since many people do fishing to support themselves. The community will really be disturbed by this. This project will also pollute the environment which will result in tourism industry breaking down. People from the community who work as vendors near the beach will lose businesses that help them support their families.</p>	<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect</p>



				<p>on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No because it will destroy our heritage in this country. This project will also bring diseases. Me and my community will gain nothing out of this.</p>	<p>It is important to note that this project relates to exploration activities and not the extraction of any resources. Therefore the perceived destruction of heritage resources is inaccurate. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. . The results of the specialist studies and impact assessment indicates no impact on the health and wellbeing of the surrounding community or the spread of diseases are expected due to the proposed drilling. To reiterate this, the drill ship will be located approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The marine study indicated no potential threat to the lives of fisherman in the area and furthermore a 500m radius is applicable around the drill ship</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I heard about this from an organization that protect the environment, which is a NGO.</p>	<p>Noted. In line with the legislated requirements of the EIA public participation processes, advertisements were placed by the EAP (ERM) in newspapers throughout the process to inform stakeholders about the project and to provide an opportunity for people to register to receive updates throughout the EIA</p>

				<p>process. The advertisements were published in the following newspapers:</p> <p>English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga; and</li> <li>• Isolezwe.</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape.</li> </ul>
			<p>General Comments?</p> <p>I say this project must not go ahead, because it is full of corruption and it will destroy the lives of the people and the environment. This project is simple a criminal activity.</p>	<p>Please refer to responses above. The proposed exploration project is neither corrupt nor a criminal activity nor is it destructive to the community.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Sisi	Luthuli	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This will benefit some selected few but we as the community at the coasts will be affected negatively by this because the things that support us will be lost, and the families are struggling economically. We will get nothing out of this because even the tourist will decrease, and our cherished marine life will die and our means of livelihood. We will get nothing out of this because even the tourist will decrease, and our cherished marine life will die and our means of livelihood.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA</p>

				<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			How will this oil and gas exploration affect my community? This will benefit other people who are opportunists, and the wealth that we grew up close to will be taken away leaving us in poverty because	The Project activities will take place approximately 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism

			<p>the sea is our source of income. There are some well established and flourishing companies that reaped our economy but we do not get anything.</p>	<p>under normal operating conditions.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA)</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why? The community will not benefit in my opinion. The very nature and heritage we have will be taken away from us, and our kids will suffer. The most painful thing about this is that the beauty we see will become history and we will not have benefited in the process as the community.</p>	<p>Refer to responses above. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of</p>

				hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.
			How were you informed about this oil and gas exploration activity? I heard about this from a fishing organization, the coastal links.	Your notification source has been noted
			General Comments?The extraction of oil/gas will kill the fish and disrupt other life forms by means of we support ourselves. The tourism will also be affected, people that come here will stop coming and their coming benefit us. It is our desire that we are not hindered from fishing because this is how we make a living.	Refer to responses above. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Sizwe	Shiba	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?We always hear about disasters taking place in other countries and here in South Africa it has occurred in the past that the sea waves came out causing some damage, we do not want to live in fear. The sea will always be important for a number of reasons including heritage it contains and our cultures. So we should not be deprived of our right to follow our cultures. The ocean is everything to us. Tourism will be affected when nothing is attracting people to come to the see the ocean and it will become dirty.	The drillship is built and designed to operate in adverse weather conditions. The positioning of the drillship is guarantee by redundancy stability and positioning control equipment, including thrusters and GPS sensors. The weather is constantly monitored, in particular every day (and at different times of the day). Weather forecasts are analysed by the crew in order to plan the rig activity accordingly. If the weather is particularly poor, the rig is able to physically disconnect the riser from the wellhead and move to a safer location. In doing this the drilling activity is temporarily suspended in the safest way and the BOP closed as a precaution. Finally, it should be noted that a drilling ship, as a vessel, has a marine crew and captain on board 24 hours per day to guarantee the safety of personnel and the vessel. As the water depths in both drilling areas of interest are more than 1,500m deep, there is no likelihood of any submerged prehistoric archaeological sites or material being encountered in the course of exploration drilling in of the two drilling areas of interest.
			How will this oil and gas exploration affect my community? This project will disturb the community, other families will be forced to relocate due to the fear for their safety near the sea. The ocean provide us with the oxygen we breathe which this also will be affected. The sea is responsible for the weather which means if it is disturbed there will be a lot of damage that will happen in the country as a whole just as we have already seen extreme draughts, floods and other natural disasters.	The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.  The client has committed to the following inbuilt compliance and control measures with regards to GHG emissions: <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines;</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot</li> </ul>

				<p>and unburnt diesel released to the atmosphere;</p> <ul style="list-style-type: none"> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul> <p>Furthermore, the proposed drilling area is located approximately 60km from shore. There will be no risk to safety under normal operating conditions of the project.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No benefit will be experienced here. All plans exclude us the affected which means they will have no share in the benefits that will come even though they are affected. There are no job opportunities here, they are fooling around, people that will benefit from this are businessmen from outside countries who do not even care about our lives.</p>	<p>As stated in the EIA, given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>While there are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support production activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? These people who want to destroy our ocean do nothing to inform us, we are helped by the NGOs to get the information. SDCEA organization ensures that people are informed and this is our life, we are entitled to know what will happen to it.</p>	<p>The proposed project relates to exploration activities and not destruction of the marine environment. It is important to note that the EAP (ERM) conducted a comprehensive public participation Process to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> </ul>

				<ul style="list-style-type: none"> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape G274</li> </ul> <p>Sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments? Since there is no way we and our people are going to benefit from this, we cannot allow people from outside countries to come and abuse us. Therefore we want nothing to touch our sea, there will be bloodshed I swear.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>Exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues,</p>

				<p>contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Thokozani	Mbutho	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will affect us because people like us who are fishermen will be limited to places we can go to fish. We will not be able to observe our customs. People who want to come take vacation here will no longer come because the what they love is the ocean. The economy in the area will affected badly.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA</p>



				Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.
			<p>How will this oil and gas exploration affect my community?</p> <p>If does affect the community because the sea is what put bread on the table for us. We will not be allowed to fish in other areas. We use our sea for tourism and people from other countries come to visit and boost our economy. We also use the beach a lot to perform our traditional customs.</p>	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship more than 60 km from the nearest coast effected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>We do not benefit anything in this oil and gas because job opportunities will not be opened for us. We make a living in the sea and at the same time our very means of sustenance is being taken away from us. There is a lot of fish that will die at the sea.</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p>

				<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? We were not informed about this except by the NGOs and NPOs. And these people have the desire that we agree with what they want. These organizations are the ones that have concerned themselves about teaching us on this matter of what is taking place in the ocean.</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February</li> </ul>

				<p>2018.</p> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments? Our view as the community is that we do not want this project that will take place at sea. You must go back to where you came from and do this there, not here in our ocean. We want to support our families and then you come here to take advantage of us, there are not job opportunities. We do not want other people to come and make decisions for us.</p>	<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p> <p>The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Tozi	Mthiyane	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? This is going to affect us badly as a community in the coast because it is our means of living. They will require that we obtain permits to get to places that have rights to go to, but we will no longer be allowed. This will even interfere with fishing which is what we use to support our families.</p>	<p>The Project activities will take place 60km offshore. This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal</p>
			<p>How will this oil and gas exploration affect my community? The effect will be great because we are not only fishing but we also</p>	

			<p>find things we use for craft that we make. Everything will be destroyed since gas is dangerous, even to us as a community we are in danger of getting sick due to breathing this gas. And I don't think that fish will survive this oil and gas, they will perish and after that we will starve.</p>	<p>operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited</p>

			<p>The community will not benefit anything, the job opportunities will be temporary. Our right to the ocean will be hindered and we will get nothing. Fishing will not be possible and the produce will be affected by the gas.</p>	<p>employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration activity? Nobody ever came to our community to tell us, what we know now is due to the NGOs. Nobody ever thought of informing us of such a thing.</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p>

				<ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul>
			<p>General Comments?</p> <p>If possible we really would like this project to be prevented from taking place because I do not see any good that will come out of it, instead it will take away our rights when it comes to fishing. In fact we are already pressed and this will be an additional problem, since this will benefit other people not us. As a community we say this have to be stopped, it should not continue.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
Winganmthuli		Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?The job creation will not happen because of this, only machines will do the job here. Fishing, gardening work and domestic work will suffer. Tourism too will suffer, we cannot go to bathe at the ocean the way we want, we cannot sell or pray near the beach. This proposed project is nothing</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. The employment opportunities</p>

			<p>because it will provide jobs to people from overseas who know how to operate the machines. I don't agree that this project continue, no gas and oil extraction, me and people from my community we say no to oil and gas.</p>	<p>associated with the onshore logistics base will be limited, and filled by existing companies. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>The Project activities will take place 60km offshore. This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship . The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate</p>
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				to Negligible residual significance.
			How will this oil and gas exploration affect my community?We have asked a lot from government but we get nothing, but now they have decided to shut down all that we have.	We cannot comment on government policy. It is important to view the project from an objective perspective of sustainable development and how this will impact (either positively or negatively) on the community. This proposed project is specific to exploration at this stage and the community will not suffer a loss of resources.
			General Comments? The environment is affected, the community is affected. Everything they discuss is not shared with us, the government makes decisions on their own, we are voters, we want to be heard. This is our country, we are citizens. We are experiencing a lot of poverty, where are our people.	<p>Section 2 (4) f of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties in environmental governance must be promoted. People must also have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. The Scoping Reports and the draft EIA Report has been disclosed to the public for a 30 day comment period and further to this, the comment period on the draft EIA was extended to 45 days. Comment received, together with responses have been captured in this comments and responses report, to be included as part of the final EIA Report.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Zamahlubi	Radebe	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? This project will create a lot of damage for it possible that while this project is in progress the oil will be spilled to the ocean and the marine life will be disturbed. When this drilling process take place the noise that will be created will disrupt the marine animals and their normal way of life.	<p>Project activities will take place 60km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of</p>



				<p>the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Eni will be required to develop an Oil Spill Contingency Plan for this project. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p>
			<p>How will this oil and gas exploration affect my community? The community will be negatively affected because while this project is in progress socio-economic conditions will worsen, the number of unemployment will increase since some people make a living selling things there. Now when this project start they will not be allowed to do their business as usual.</p>	<p>The location of the project is over 60 km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to</p>

				<p>evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No! Instead the community will suffer a great loss because people will lose their jobs because the sea will be polluted as a result of this project.</p>	<p>Refer to the responses above, to reiterate, the Project will not have adverse impacts on marine and coastal based livelihoods during normal operations. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small</p>

				<p>volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project.</p>
			How were you informed about this oil and gas exploration activity? I received this information from Non-profit organizations as well as at the community meetings where concern were voiced out about the bad effects of this project.	Your notification source has been noted
			<p>General Comments?</p> <p>What I can say is that I disagree with this project since it will create problems in the sea and it will also create starvation as people will lose their means of making a living. My request is that this project be taken away from here be done in other countries and not in our country! They must leave.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Cabangile		Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? The wealth that the ocean have is already scarce, if there is going to be oil drill that will eliminate the little we have. That in turn will discourage tourist from visiting the	Project activities will take place 60km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent

			<p>beach. The coming generation will have nothing at all that will support their communities in this area. Our generation will have to travel to places far to see this beauty that we have because it will be no more.</p>	<p>specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.</p>
			<p>How will this oil and gas exploration affect my community? Since we have people who depends on the sea for livelihood, this will have a negative impact because it will mean they will have find other ways of making a living.</p>	<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p>

				<p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, because they will choose a team that will benefit more than us as a community, and the possibility is that we will get the remnants while "the wealthy" get the bigger piece, we will be getting peanuts instead of us being given full opportunities.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>While are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues,</p>

				contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.
			How were you informed about this oil and gas exploration activity? I heard about this in a community meeting.	Your notification source has been noted
			General Comments?The oil should not be extracted here in KwaZulu-Natal because people are already trying hard to make ends meet, and there is some new wealth now that has come up, however this is a treasure and it bring us joy to see other races coming to visit. We benefit instead of losing.	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>While are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Israel Boysie	Mbhele	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?Marine animals will be disturbed because of the noise that will be in the sea. The water will be polluted and tourist will not come to our place but will choose other places. Our people who support themselves by means of fishing will be prohibited to fish in the place they used to fish before. We do not have the experience needed to do this kind of work. The polluted	Project activities will take place 60km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine

			<p>sea will never recover and people that will benefit will be the Italians only, and we will suffer diseases. The government does not care about us and our children.</p>	<p>environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
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				<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			General Comments?The department of mineral resources should start this process from scratch again to get people's opinion on the matter. The process must start from the people and progress from there, the government should then investigate from countries that	<p>Section 2 (4) f of the National Environmental Management Act, 1998 (Act No. 107 of 1998) as amended, requires that the participation of all interested and affected parties in environmental governance must be promoted. People must also</p>



			has done this work before and inform the people about the effects of this project in those countries. I am very much concerned about our future and the future of the generation that is to come after us. We simple have no leaders, those that are in power are just criminals.	have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation. ERM has conducted a transparent and inclusive public participation process as described in Chapter 5 of the EIA Report. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Lindiwe	Ndlovu	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Things will change here because the tourists that come to visit the beach will no longer come here and that will affect our economy, and vendors that sell to these tourists will face economic hardships as result of their no longer being able to sell their products. There will also be an increase in mugging and robbing since some vendors will turn to crime to escape poverty.	Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The Project is not expected to have an impact on crime levels on the beachfront, as it will take place offshore. Any onshore activities will be confined to the onshore logistics base, which will be located in the Port of Richards Bay or Port of Durban.
			How will this oil and gas exploration affect my community? The community will be affected in a sense that environment will be disturbed by the oil spills that will take place in the ocean and fish will die as well as other marine animals. The people that make their living through fishing at the sea will suffer and the people in the area will breathe polluted air filled with dangerous gases.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, more than 60 km from the nearest coast. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA). As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential

				<p>impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, our community will not benefit in any way, our health will be put at risk, that is what is going to happen.</p>	<p>The Project is not going to impact on the health of coastal communities under routine operating conditions as Project activities will take place 60km offshore. Refer to the responses above around unplanned events.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I heard this from community organizations because they care about the community, the ones that are doing this project do not even consider the community.</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling.</p>

				<p>The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments? These people should not be allowed to continue with their planned project in our sea, they should not disturb the environment.</p> <p>They should not take advantage of us and our rights, they should</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess</p>

			rather return to wherever they come from and leave our natural resources alone.	<p>their viability for extraction and future development.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Maurus M.	Ndlangisa	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>First of all this project is going to disturb by destroying marine life which is against the nature conservation regulated by Law in South Africa.</p> <p>Secondly, the people were not informed early enough about this since those that will benefit from it are not even South Africans. Nothing will improve economy wise because we as black people will be told that we do not have the necessary skills and we shall get nothing at the end.D306</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul> <p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu</p>

				translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.
			How will this oil and gas exploration affect my community? It will be affected because people that support themselves and their families will no longer be able to do that. People that will benefit here will be the rich people. The poor will always go poor hoping for something better and get nothing. A lot will be done using the technology that none of us understands and our community will not be able to benefit.	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>While there are negligible social benefits associated with the project due to the limited duration of exploration drilling activities, exploration success would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support production activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>Nobody will benefit only the companies that are involved in this project. People in our communities do not have skills and resources to work in this project. Natural resources and wealth of this country will supply other countries. We will pay a lot so that companies from other lands will benefit.</p>	Refer to response above.
			<p>How were you informed about this oil and gas exploration activity?</p> <p>I heard this from an organization that fight against destroying environment called SDCEA, that notified us as Hostel dwellers. Over and above this organization is the very organization that teaches us and give us enlightenment where we lack such.</p>	Your notification source has been noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process.
			<p>General Comments? Nature must be conserved, the air pollution should stop. Jobs that people have should be left open so that our people can continue to make a living. Government should support the people in their effort to improve their small businesses.</p>	<p>Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed</p>

				<p>through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. A project specific Waste Management Plan (covering all wastes generated offshore and onshore) would be developed in accordance with MARPOL requirements, South African regulations and Eni's waste management guidelines. Waste disposal sites and waste management facilities would be identified, verified and approved prior to commencement of drilling.</p> <p>The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Nokukhanya	Nyawo	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? Oil and gas exploration programme will disrupt marine life, that's a given. As an occasional user of the Richards Bay beach, I wouldn't want dead fish washed off onshore. This would affect my leisure time on the beach as a citizen of South Africa with equal rights. My skiing and canoeing times will be affected because of drilling noises that will divert sharks in our direction.	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship, which will be located 60km</p>

				<p>offshore. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p> <p>The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions. An unplanned event such as a spill could result in a loss of access to marine-based income generating activities, livelihoods and food source for an unknown period of time.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			How will this oil and gas exploration affect my community? I have friends, I commonly ski with at the Richards Bay Harbour beach, all	Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project.

			great lovers of the beach. The exploration programme will pollute our ocean, therefore affecting our recreational activities.	<p>Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills,</p> <p>Furthermore, the proposed drilling area is located approximately 60km away from the shoreline, with the horizon located approximately 15km away from the shore. The drill ship would thus not be visible from the shore. Under general operating conditions, the proposed project is not anticipated to affect tourism and beach accessibility.</p>
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>No, if it is the jobs they are proposing then we wouldn't qualify because we do not have the required skill set to operate</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			How were you informed about this oil and gas exploration activity? SDCEA	Your notification source has been noted. A comprehensive public participation process was conducted by ERM (the EAP) to



				ensure that the public were notified and provided with an opportunity to participate in the process.
			General Comments? Please do not drill during November up to February - That's summer and most beach lovers high/peak season	As noted above, the Project activities will take place 60km offshore, and will not be visible from the beach. The Project will not affect marine and coastal activities under routine operating conditions. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Mthokozisi Cyril	Smamane	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It completely change things since we will not be able to go visit the beach freely and as we wish to. This means there will be rules and regulations for using or visiting the beach shores. As fishermen we will be most affected because the noise levels will chase the fish away, and they will be killed by the oil spills.</p> <p>This means that all businesses that depends on the sea will shut down. All those people will starve because of all the demarcated no entry places. Even ordinary people visiting the beach will not be allowed in. I am personally against this project.</p>	<p>Project activities will take place 60km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship (60km offshore). The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>

				<p>The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? It will rob residents of their freedom to entertainment by the beach. It will also starve all entrepreneurs whose businesses depend on the sea to survive. Eg: rickshaw drivers, shops, mothers selling at food stalls and fisherman who sell fish to support their families. The areas that will be used to explore oil and gas will be unfairly closed off to the public, so they should take this project and implement it at their own home countries.</p>	<p>Refer to the response above. Tourism, beach accessibility and local trade would not be affected under normal operations as the proposed drilling area is located approximately 60km offshore.</p>
			<p>Do you think this oil and gas exploration effect my community? We will not gain anything but instead we will lose everything. We will lose a place to enjoy ourselves and businesses. But instead people from overseas will be the only ones able to operate the gas and oil exploring machines and not a single South African.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector.</p> <p>Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>

			<p>How were you informed about this oil and gas exploration?</p> <p>At the Fisherman meeting which was held in La Mercy on October last year, as well as by another Indian Organization we met in Durban called The South Durban Community.</p>	<p>Your notification source has been noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process. Your notification source has been noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process. G337</p>
			<p>General Comments?</p> <p>I am totally against this project, it will destroy our beaches and also enrich only a few.</p>	<p>Please refer to responses above. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Nonhlanhla.W.	Jiyane	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>It will affect local residents by creating a lot of diseases caused by the polluted air since most of the fresh breeze comes from the sea side. Our precious animals and trees will suffer and eventually die, so much so that our children will not live to see all that. Even tourists will never come see oil spilled beaches all Hotels will close down.</p>	<p>The project activities will take place approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The potential effects from air emissions are minor and would not affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. This is a substantial distance away from the shoreline where any community based activities will occur. The results of the specialist studies and impact assessment indicates no affect on the health and wellbeing of the surrounding community or the spread of diseases are expected due to the proposed drilling.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>Since we are Fishing Community, the fish we depend on for survival will die plus there are no job opportunities that will come from this. Our precious resources in and out of water will die. The small peace jobs our kids get from the different Lodges around will be no more since no guests will be visiting.</p>	<p>Project activities will take place 60km offshore. Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the</p>

				<p>identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p>
			<p>Do you think this oil and gas exploration affect my community? There is nothing my community will benefit from this initiative since it only comes with only five (5) job types. Of which no one around our area is trained for or has the experience and is qualified to be employed.</p>	<p>Refer to response above. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration? People receive help from independent Non Governmental Organizations (NGO's) that inform the affected communities. Government does not bother communicating with us but only when they want money for themselves.</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay. G329</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p>

				<p>• Pondo News in Eastern Cape sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul> <p>As requested at the Scoping Phase meetings, three isiZulu translators were present at meetings in KZN during the EIA phase public meetings. An isiXhosa translator was present at the meetings in the Eastern Cape.</p>
			<p>General Comments?</p> <p>My opinion is that since we have a democratic government, they should learn to listen to the people. They should come visit these affected communities and inform residents of the available job opportunities created such as fisheries, tourism and sea leisure. A lot of land has been damaged because of the oil and gas exploration.</p>	<p>Refer to above regarding the comprehensive public participation process that was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Thabiswa	Mdletshe	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach?</p> <p>This could disturb fish migration especially whales on the Dukuduku Beach, (in St Lucia around November to January). This will also affect our cleansing rituals if the water is polluted with oil and gas. Around the holiday season we enjoy recreational activities in St Lucia (Jabula Beach) we would not enjoy swimming in contaminated water.</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>

				<p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship (60 km offshore). The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>How will this oil and gas exploration affect my community? It will not be possible to go fishing and make a living from that if the water is polluted and the fish are dead.</p>	Refer to the response above.
			<p>Do you think this oil and gas exploration effect my community? Nothing</p>	Noted.
			<p>How were you informed about this oil and gas exploration? From a friend</p>	Noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Sinovuyo	Majola	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? The oil and gas exploration project will disturb natural reserves, tourist attractions and local residents, especially those living close to the beach and are dependent on fishing.</p>	Project activities will take place 60km offshore. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate

				<p>to Negligible residual significance.</p> <p>This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship (60km offshore). The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>Firstly, the community will lose their food source, precious animals</p>	<p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed</p>

			<p>will die from the polluted water and we do not know what the long term effect will be on the water and living conditions.</p>	<p>through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship (60 km offshore). The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>Do you think this oil and gas exploration effect my community? There is nothing the community will gain from this since there is not a single person qualified to do this work.</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical</p>



				work and require specific skills related to oil and gas, and the drillship will have its own crew. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.
			How were you informed about this oil and gas exploration? I heard from the independent community NGOs.	Noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process.
			General Comments? We do not need this project on our beach shores. It will bring far less job opportunities, we have seen it before in different places and nothing good has come out of it. We do not want anything to touch our beach.	Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development. Exploration success may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Ngcebo Melusi	Nkwanyana	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? This project will ruin a lot of things, especially in the tourism sector plus a lot of people here in Richards Bay love going to the beach, this will be even harder on the people that live of fishing.	The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism or beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study

				<p>undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>A fisheries specialist study has been undertaken as part of the EIA process to assess the potential impact of the proposed drilling on fishing. During routine operations no impact expected on the current line fish and crustacean trawl fisheries. No cumulative impacts are expected on the other fisheries sectors. Fishing activities will be temporarily restricted only in a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in addition to Eni's own, worldwide standards. These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience.</p>
			<p>How will this oil and gas exploration affect my community? It could have both positive and negative effects on the people. This could bring job opportunities to the community but also cause a lot of diseases.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>The location of the project is over 60 km from the shoreline. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of</p>

				<p>the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>Do you think this oil and gas exploration effect my community? This could bring a lot of job opportunities and offer oil and gas exploration skills unknown to the locals.</p>	Refer to response above
			<p>How were you informed about this oil and gas exploration? I heard it from close friends and family.</p>	Your notification source has been noted.
			<p>General Comments? They should go ahead with the oil and gas exploration project but ensure that the community is not ill-treated.</p>	You support of the exploration project has been noted. Very little interaction with the community is anticipated and it is unlikely that there will be "ill-treatment" of any community members by Eni staff/ contractors. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Namiswa	Nxumalo	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? I believe it will change the beach as we know it, because whenever there are projects that are extracting natural resources from underground it is always unsettling. The Richards Bay beach shores will be dirty and drenched will oil and gas coming from the exploration. And when it is left in that state i/we will not be able to go cleanse "spiritually" there.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and the beach areas+G346 under normal operating conditions</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and</p>

				<p>skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Eni will be required to develop an Oil Spill Contingency Plan for this project. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p> <p>Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>Around my community in Mzingazi, we use the beach for different reasons. There are locals selling to visiting tourists especially during the holiday seasons. This will directly affect these specific households because tourists of which they sell to will no longer be visiting</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism or beach activities under normal operating conditions.</p>
			<p>Do you think this oil and gas exploration effect my community?</p> <p>The community will not gain anything since nothing good will come out from this oil and gas exploration.</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p>

				<p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			<p>How were you informed about this oil and gas exploration? I heard from one of the residents from Mzingazi who read about it on the Mercury Newspaper.</p>	<p>Your notification source has been noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process.</p>
			<p>General Comments? Please do not disturb our beaches because that will disrupt ordinary means of survival and leave us with nothing in the end.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.</p> <p>Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
Mzomuhle	Myeni	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? This exploration project will affect us in a negative way from our beaches to the different places around Mtubatuba. Since we all know that we visit the beach whenever we want to, this project will come with rules and regulations restraining us from doing that. During the exploration project oil spills will affect our precious resources since most people make a living out of fishing and also our livestock drinks the water coming from the beach.</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism or beach activities under normal operating conditions. This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>As part of Eni's standards on the management of socio-economic impacts, if the case is determined that the project will have impacts on fishing activities, a procedure is followed to evaluate the socio-economic impact. This process follows International guidelines (IFC Guidance on Addressing Project Impacts on Fishing-based livelihoods; WBG Performance Standards on Environmental and Social Sustainability, 2012), in</p>

				<p>addition to Eni's own, worldwide standards.G345These standards provide a methodology for the determination of the compensation, or 'disturbance allowance', due to potential impacts on fisheries. The disturbance allowance is based on the identification of who will be impacted by the Project activities, and the level of loss or 'disturbance' they will experience. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community? It will affect the community because the gas and oil spills will pollute the water and air making it hard for local residents to live peacefully as this may cause difficulties breathing and fishing out at sea.</p>	<p>The potential effects from air emissions is Minor and would not directly affect the health of residents as the location of the drillship will be over 60km offshore.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels would have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and</p>

				<p>skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore.</p> <p>As noted above, fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities</p>
			<p>Do you think this oil and gas exploration effect my community? Neither I or the community will benefit from the project, all this is doing is polluting the water and killing the fish.</p>	<p>Refer to responses above. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>
			<p>How were you informed about this oil and gas exploration? I heard from my father.</p>	<p>Noted. A comprehensive public participation process was conducted by ERM (the EAP) to ensure that the public were notified and provided with an opportunity to participate in the process.</p>
			<p>General Comments? In short, I think this project will work only if there is a firm partnership with the community to make sure that everyone benefits equally.</p>	<p>Your comment has been noted. Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>
John	Mpanza	Private	<p>How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? This project will ruin a lot of things, especially in the tourism sector</p>	<p>The Project activities will take place 60km offshore. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility</p>

			<p>plus a lot of people here in Richards Bay love going to the beach, this will be even harder on the people that live of fishing.</p>	<p>under normal operating conditions. This Project will not affect fishing rights and fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p>
			<p>How will this oil and gas exploration affect my community? It could have both positive and negative effects on the people. This could bring job opportunities to the community but also cause a lot of diseases.</p>	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p> <p>The Project will not have adverse impact on the health on coastal communities as Project activities will take place 60km</p>



				offshore.
			Do you think this oil and gas exploration effect my community? This could bring a lot of job opportunities and offer oil and gas exploration skills unknown to the locals.	<p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities.</p> <p>Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The outlook would be substantially different if a commercial discovery was made, whereby infrastructure would need to be developed to support productions activities. Such employment opportunities can be provided with appropriate training and are not limited to technical positions.</p>
			General Comments? They should go ahead with the oil and gas exploration project but ensure that the community is not ill-treated.	Your comment on support of the proposed project is noted. Please note, all isiZulu comments received will be responded to by 17 January 2019.
Israel . T	Nkosi	Private	How will this oil and gas exploration affect my livelihood/recreational activities/general use of the beach? It will put people's lives at risk because the air we breathe comes from the ocean. Tourism will suffer. Job opportunities will be lost in all of this area.	It is important to note that the sea does not "produce air" as stated in your comment. The potential effects of air emissions from the drillship is minor and would not directly affect the health of residents due to the distance of the drillship away from the shore. The potential effects from air emissions is minor and would not directly affect the health of residents as the location of the drill ship will be approximately 60km away from the shore. The main sources of atmospheric emissions will be from the drillship and other vessels (i.e. supply and standby vessels) involved in the drilling operation. The principal expected atmospheric emissions from the drilling activities include carbon dioxide (CO <sub>2</sub> ), methane (CH <sub>4</sub> ), oxides of nitrogen (NO <sub>x</sub> ), sulphur dioxide (SO <sub>2</sub> ), carbon monoxide (CO) and volatile organic compounds (VOC). Many of these compounds are known to have the potential to contribute to a number of environmental processes and impacts including acidification (acid rain), the formation of low level ozone, and local air

				<p>pollution.</p> <p>The client has committed to the following inbuilt compliance and control measures:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines.</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere.</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.</li> </ul> <p>The Project activities will occur approximately 60km offshore. As such, the tourism industry will not be affected by the exploration drilling under normal conditions. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Moderate to Negligible residual significance.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p>
			<p>How will this oil and gas exploration affect my community?</p> <p>It will bring suffering to the community because people will not be</p>	<p>Refer to above. Due to the proposed project locality being approximately 60km away from the shoreline, it is not anticipated</p>

			allowed to use the sea freely. This will take away our livelihood and leave us with nothing.	that the drillship will affect tourism, beach accessibility or subsistence fishing.
			<p>Do you think that oil and gas exploration will benefit me or my community? Why?</p> <p>We will not benefit instead we will lose so much. We will lose jobs, and be left helpless. The will be poverty which will create crime.</p>	<p>The government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>Given the project's focus on exploration only at this stage and the subsequent limited time frame, there will be limited employment opportunities associated with the project. Many of the employment positions are associated with highly technical work and require specific skills related to oil and gas, and the drillship will have its own crew.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, may result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons.</p>
			<p>How were you informed about this oil and gas exploration activity? I heard about this from non-governmental organizations. This means those that were suppose to share this information with us chose not to until these organization intervened to conserve nature.</p>	<p>A comprehensive public participation process was conducted to ensure that the public were notified and provided with an opportunity to participate in the process. Advertisements were placed in newspapers throughout the process to inform communities about the project and to provide an opportunity for people to register to receive updates on the proposed drilling. The advertisements were published in the following newspapers: English Adverts were published in:</p> <ul style="list-style-type: none"> <li>• The Daily Dispatch in East London;</li> <li>• The South Coast Herald in Port Shepstone;</li> <li>• The Herald in Port Elizabeth;</li> <li>• The Mercury in Durban and</li> <li>• The Zululand Observer in Richards Bay.</li> </ul> <p>isiZulu adverts were published in:</p> <ul style="list-style-type: none"> <li>• Ilanga and</li> <li>• Isolezwe</li> </ul> <p>An isiXhosa advert was published in:</p> <ul style="list-style-type: none"> <li>• Pondo News in Eastern Cape</li> </ul>

				<p>sms notifications were also sent to individuals who have registered as an interested and affected party.</p> <p>During the Scoping Phase total of three Public engagement meetings were held in the following locations:</p> <ul style="list-style-type: none"> <li>• Richards Bay (The Richards Hotel) – 6 February 2018</li> <li>• Durban (Tropicana Hotel) - 7 February 2018; and</li> <li>• Port Shepstone (Port Shepstone Country Club) – 8 February 2018.</li> </ul> <p>An additional (fourth) follow up meeting was held, upon request of the South Durban Community Environmental Alliance (SDCEA) on 28 February 2018 at the Austerville Community Hall with the presence of isiZulu language translator.</p> <p>Open house meetings were held during the EIA phase comment period, in order to communicate the findings of the EIA process to stakeholders. Open House meetings were held as follows:</p> <ul style="list-style-type: none"> <li>• The Boardwalk Hotel in Port Elizabeth - 03 October 2018;</li> <li>• The Beach Hotel in East London - 04 October 2018;</li> <li>• The Premier Inn Hotel in Richards Bay - 08 October 2018,</li> <li>• Gooderson Tropicana Hotel in Durban - 09 October 2018, and</li> <li>• Venture Inn Hotel in Port Shepstone - 10 October 2018</li> </ul>
			<p>General Comments?</p> <p>I am not happy at all with this oil drilling project. Our wealth will be taken away from us and be given to other countries that has given us nothing in return and this oil will be send back to our own country to be sold in high prices. This must be stopped.</p>	<p>Your comment has been noted. There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. Please note, all isiZulu comments received will be responded to by 17 January 2019.</p>

General Comments 2				
Name	Surname	Organisation	Comment	Response
Xavier.M.	Muller	Private	I object to the drilling off the coast of KwaZulu Nata! The ocean drilling off the coast of KwaZulu-Natal South Africa for oil and gas is an atrocity and it runs the risk endangering the marine life and our oceanic ecosystem, which includes 37 species of whales and	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is

			dolphins, but also turtles, endangered sea birds and prehistoric species of fish. I am firmly against oceanic drilling!	presented in Chapter 7 of the EIA Report. Most of the potential impacts assessed have a Minor to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.
Brenda	Du Plessis	Private	I strongly object to the offshore drilling and exploration along the East Coast. I believe that the impact of this can be devastating to our environment and that local people will be poorer off for it.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Minor to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.
Nicola	Botha	Private	You will kill whales and dolphins. Stop now. Oil and gas are over. Pollution the sea life.	Your objection is acknowledged. As part of the EIA Report, the effects that drilling activities may have on the marine environment have been considered through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report.
Teresa	Smith	2Travel	Please no drilling, your actions are liable to destroy this beautiful coastline and kill off precious sea life.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Minor to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.
Teresa	Smith	2Travel	This will affect the livelihood of the local people who depend on the sea and tourism.	Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. Please note that only one seasonal fishery sector may be affected (i.e. pelagic long line). Affected stakeholders will be notified of the location, duration and timing of drilling activities.  The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is not anticipated that the project will have any impact on tourism under normal operating conditions.
Teresa	Smith	2Travel	Given that this is a very hostile coastline the possibility of disaster is huge and I do not believe the benefits will be worth the risks. Our ocean and its inhabitants are already under attack from plastic pollution please do not add to this burden.	The proposed exploration project is to ascertain whether viable oil or hydrocarbons reserves are present off the east coast of South Africa. If oil or hydrocarbons are discovered and there is a business case to pursue the extraction of

				<p>such reserves, then a separate EIA process will need to be followed before potential extraction may be initiated. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which provides an outline of the scope of the proposed drilling. Chapter 4 and 7 contains detailed information on the marine environment of the area and the potential impacts on the marine ecology respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility. The drillship is equipped with several thrusters which keep it in place, even in the event of difficult weather conditions. Should the conditions be too harsh and unsafe, the drilling will be stopped and work will only continue once it is safe enough to do so. Many mitigation measures and barriers have been put in place to ensure that disasters do not occur while out sea. These measures have been detailed in Chapter 9 of the EIA report.</p>
Bronwyn	Williams	Broncur Beach House	<p>We operate a guesthouse in Palm Beach and have an NPO which assist's the Xolobeni and Mtentu communities, this project will have significant negative impact on tourism to our wild coast and affect our beautiful marine life. We object to this project and support the fight against this infringement of human rights!! Petition is for 6 family members.</p>	<p>The location of the project is over 60 km from the shoreline. The drillship will not be visible from the shore and it is anticipated that the project will not have any impact on tourism under normal operating conditions.</p>
Allen	Goddard	Private	<p>South Africa's coastal biodiversity which among the earth's richest, will be affected by drilling. And in any case, South Africa has committed to reducing reliance on oil, gas, and other fossil fuels, to avert catastrophe in climate change. Our country is already destined to suffer detrimental effects of climate change. We do not need to add to this challenge, compromised ocean environments and depleting fish stocks. Please register my objection to this proposal. I believe that attempts to increase mining or prospecting is seriously ill advised and out of touch with what the latest Climate Change report from the UNO warns countries to heed.</p>	<p>The proposed exploration project is to ascertain whether viable oil or hydrocarbons reserves are present off the east coast of South Africa. If oil or hydrocarbons are discovered and there is a business case to pursue the extraction of such reserves, then a separate EIA process will need to be followed before potential extraction may be initiated. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which provides an outline of the scope of the proposed drilling. Chapter 4 and 7 contains detailed information on the marine environment of the area and the potential impacts on the marine ecology respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility. The drillship is equipped with several thrusters which keep it in place, even in the event of difficult weather conditions. Should the conditions be too harsh and unsafe, the drilling will be stopped and work will only continue once it is safe enough to do so. Many</p>

				<p>mitigation measures and barriers have been put in place to ensure that disasters do not occur while out sea. These measures have been detailed in Chapter 9 of the EIA report. The client has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions from vessel engines;</li> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p>
Jennifer	Thord-Gray	Private	I am totally against the offshore exploration and drilling on the South African East Coast. An oil spill could devastate the coastline. We need to protect our beautiful coastline and waters which sustain a large number of people and is also a stunning tourist attraction bringing in further income to many. Our marine life is essential to the local ecosystems and should be protected at all costs.	The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Moderate to Negligible residual impact significance. Refer to chapter 9, EMPR for further information on the impacts assessed.
Fiona	Rabie	Private	I hereby lodge my objection to any form of mining in the area, especially offshore . As an owner of holiday properties in the area, it will impact my business negatively in the worst possible way. I am also a firm environmental advocate, and I need not tell you that mining is NEVER good for aquatic life, no matter how careful the company doing the mining is.	Thank you for your comments and concerns. These will be taken into consideration. Please note that the proposed project is related to exploration drilling to ascertain whether a viable reserve of oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential production (or mining of such reserves) can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4 and 7

				contains detailed information on the marine environment of the area and the potential impacts on the marine ecology respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility, visibility of the drillship or tourism to a significant extent.
Hayley	Maisch	Pumula Surf Camp	We oppose the oil drilling off our coastline. This will negatively affect our business. The dangers to our marine life are far too great. The dangers of oil spills, and many other dangers. We are a tourism business and house international guests come to stay. We don't want the oil drilling as we have seen so many negative impacts of this in other areas. Oil spills, oil on beaches, animals dying, whales affected etc. We say No.	Please note, the proposed project is for exploration drilling to ascertain whether oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility, visibility of the drillship or tourism to a significant extent.
Justin	Maish	Wedge Surfboards	We oppose the oil drilling. This will have a negative effect on our oceans and our marine life. We are ocean and animal loving and we need to protect them. We don't want dirty oceans. We say no to oil drilling.	Your objection is acknowledged. As part of the EIA Report, the effects that drilling activities may have on the marine environment have been considered through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Moderate to Negligible residual impact significance. Refer to Chapter 9, for a summary of these impacts.
Cheryl	Aveyard	Private	I am 100% opposed to any drilling, exploration or mining of any sort along the KwaZulu-Natal coast. It is a coast line with a large number of marine reserves and home to a number of natural phenomenon such as the annual sardine run and the whale migration. Our marine life is already under threat from pollution and to even suggest that the proposed project would not have a negative effect is laughable. Added to that is the fact that this is a wild coastline subjected to regular heavy seas from cyclone activity and the probability of an environmental disaster is high. Our Government needs to stop selling our country off to the highest bidder and start protecting the environment for future generations.	Please note, the proposed project relates to exploration drilling and investigation and not commercial mining at this stage. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach



				<p>accessibility, visibility of the drillship or tourism to a significant extent.</p> <p>The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine (Annex D1 and D2). These studies have taken cognisance of protected, or threatened species and this has been taken into consideration assessment of potential impacts associated with the project, refer to Chapter 7 of the EIA Report.</p> <p>Pre-drilling surveys will be undertaken by Remotely Operated Vehicles (ROVs) to record any sensitivities on the seabed. Should any sensitivities be found such as historical artefacts, shipwrecks etc., the drill site will be relocated 500m from these sensitive receptors.</p> <p>In terms of risk assessment, oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills will be undertaken as part of the EIA Report. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included within the plan. The risk of an oil spill (including crude oil, diesel and non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicates that no significant (&gt;100 g/m2) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental</p>
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				<p>spill.</p> <p>Eni will take measures to prevent the pollution of the ocean through the management of waste associated with the Project. Eni's waste management principle is to do the following; in the order of priority: reduce, reuse, recycle, recover, treat, dispose. All vessels will have equipment, systems and protocols in place for prevention of pollution by oil, sewage and garbage in accordance with MARPOL 73/78. Any small spills on the deck of the drillship will be contained with the spill management equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board, offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base; ready and available for deployment in the event of a spill. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will intervene within in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, the capping stack can be mobilised and deployed within 48 hours.</p> <p>Eni will be required to develop an Oil Spill Contingency Plan for this project, which will need to approved by the SAMSA, DEA and PASA prior to drilling activities commencing. This has been explored further in the EIA through an Oil Spill Modelling Study. This study evaluates the impacts of three unplanned events in the form of three hypothetical oil spill scenarios, which are expected to have a very low probability of occurring.</p>
Angela	Larkin	Thanda	I do not approve of the proposed off-shore drilling. As a local resident, I am aware of the long-term environmental damage this will cause to our fragile ecosystem. This project cannot be allowed at the benefit of 1 company and to the detriment of our local environment.	Your objection is acknowledged. As part of the EIA Report, the effects that drilling activities may have on the marine environment have been considered through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Negligible to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.
Gary	Cox	Environmental Studios	I am opposed to the offshore drilling along the KZN coastline for the following reasons:	Your comments and concerns have been acknowledged. Please note that the proposed project is for exploration

			<p>1. Having grown up watching this stretch of ocean from an elevated position, I have witnessed the intense marine life and incredible potential this ocean and coastline has to offer. I've also witnessed how treacherous the ocean conditions are.</p> <p>2. Drilling and mining will "illegible" effect.</p> <p>3. The whale migration and spawning.</p> <p>4. The fish growth and reef systems which hold incredible life.</p> <p>5. The annual sardine migration which peaks along the shores.</p> <p>6. The quality of our waters and possible effect on estuarine habitats.</p> <p>7. The threat of oil spills and the consequences thereby.</p> <p>8. I believe that this stretch of coast holds potential for more sustainable industries.</p> <p>9. Fishing, diving, tourism and eco tourism.</p> <p>10. I would rather see the funds going into renewable energy exploration not on oil which is a "illegible" and dying industry.</p> <p>11. When I see that damages caused by oil companies around the globe, weather decimating jungles or polluting the Niger Delta. I would rather not have this coastline "illegible" up in the me way as what I've seen.</p> <p>No DRILLING.</p>	<p>drilling to ascertain whether oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Most residual impact significances are minor to negligible. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility, visibility of the drillship or tourism to a significant extent.</p>
Ivana	Rubino	Private	<p>I would like to be kept informed of the situation regarding the proposed exploration for oil and gas on the south coast on KZN. I am completely opposed to this proposed exploration as it will have a detrimental effect on wildlife in the area and the health of the ocean. The south coast is an area of immense natural beauty and significance ecologically. Exploration for oil and gas will destroy the habitat of millions of sea creatures, important soft corals and sand reefs. It will also cripple tourism in the area as scuba divers and fisher folk from other parts of South Africa and the world will not come to dive and fish in a destroyed habitat. Oil and gas may not even be found in this beautiful place and so many livelihoods will be destroyed. If oil and gas is found, millions of animals, plants and people will suffer to prop up a dying industry. In light of the latest climate change studies, resources should be put into renewable sustainable energy rather than fossil fuels. The planet is running out of time and this kind of exploration is making "illegible" time shorter. For the sake of future generations of South Africa, this exploration cannot be allowed to go ahead. It is a blatant disregard for the people of South Africa</p>	<p>You have been added to the I&amp;AP database and will receive notifications relating to the EIA going forward. Your comments and concerns will be taken into consideration. Please note, the proposed project is for exploration drilling to ascertain whether oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4 and 7 contains detailed information on the marine environment of the area and the potential impacts on the marine ecology respectively. Most of the potential impacts assessed have a Minor to Negligible residual significance, however marine ecology is rated as moderate to negligible. Refer to Chapter 9, for a summary of these impacts.</p>
Fidel	Tshivhasa	TIFF Film and Multimedia Design	<p>I voice my opinion on the drilling of our oceans and object for the following reasons:</p> <p>Durban, South Africa, near marine protected areas, putting at risk 37 species of whales and dolphins. Blasting and the inevitable oils spills</p>	<p>Please note, the proposed project is for exploration drilling to ascertain whether viable reserves of oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to</p>

			<p>from the wells will kill our whales, massacre our plankton, fish eggs and larvae, destroy seabed, destroy the remaining 30 exemplars of Coelacanth, a living fossil fish whose species goes back 420 million years. The only colony of 30, in the world, is off Durban, 40 km away from the drilling area. I hope this will all suffice.</p>	<p>be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to the EIA document, Chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Most residual impact significances are minor to negligible, with marine ecology being moderate to negligible. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a study undertaken by Capp Marine (Annex D1 and D2). These studies have taken cognisance of protected, or threatened species and this has been taken into consideration assessment of potential impacts associated with the project, refer to Chapter 7 of the EIA Report.</p> <p>Coelacanth species have been discovered in Jesser and Wright Canyons. Those Canyons are included in the iSimangaliso MPA more than 80 km away from the northern area of interest of this project and about 200 km from expected location of closest well N1. The results of the Oil Spill Modelling, as per chapter 8 of the Draft EIA report, reports the worst scenario where an unlikely crude oil spill is not properly confined and moves according to the Agulhas current. In addition, the unlikely spill reportedly will be close to surface of sea water, thus not believed to impact habitat suitable for Coelacanth presence. DAH modelling shows similar results, whereby the plume would move east and then southwards. The subsurface and surface oil will not move in the direction of known coelacanth habitats, including potential habitats near Port Shepstone where no discoveries have occurred to date.</p>
Catherine	Lea	Private	<p>I object to any ocean Drilling in South Africa. The noise and pollutants will have a negative affect on all marine life great all small. It will affect the migration of whales. It will affect the last living fossil fish colony the Coelacanth. I am against any form of blasting and drilling.</p>	<p>The proposed project is for exploration drilling to ascertain whether viable reserves of oil or hydrocarbons are present off the east coast of South Africa. If oil or hydrocarbons are found, a separate EIA process will need to be followed before potential extraction can occur. With regards to your concerns on tourism, marine life and use of beaches, please refer to of the EIA report for the project description which</p>

				<p>provides an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and would thus not affect beach accessibility. Coelacanth species have been discovered in Jesser and Wright Canyons. Those Canyons are included in the iSimangaliso MPA more than 80 km away from the northern area of interest of this project and about 200 km from expected location of closest well N1. The results of the Oil Spill Modelling, as per chapter 8 of the Draft EIA report, reports the worst scenario where an unlikely crude oil spill is not properly confined and moves according to the Agulhas current. In addition, the unlikely spill reportedly will be close to surface of sea water, thus not believed to impact habitat suitable for Coelacanth presence. DAH modelling shows similar results, whereby the plume would move east and then southwards. The subsurface and surface oil will not move in the direction of known coelacanth habitats, including potential habitats near port Shepstone where no discoveries have occurred to date.</p>
Devereaux	Muller	Private	<p>The drilling into our oceans is an atrocity, this procedure will damage our oceans ecosystems and effect the species in our oceans. The pollution will cause irreparable damages to our oceans. This is not acceptable, and I object to the drilling in our oceans.</p>	<p>Your comments and concerns have been noted. The potential impacts of the exploration activities on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Minor to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.</p>
Gillian	Gough-Palmer	Private	<p>Certainly hefty documents to peruse &amp; I'm even more grateful for you having organised &amp; delivered a printed copy to me, which has been circulated in our vicinity. Having almost been through the whole bundle I do think you have tried to do a very thorough &amp; exacting study &amp; for this attention to our precious marine environment, I believe you are to be commended.</p> <p>I nevertheless remain convinced that such exploratory drilling, followed by the potential of permanent rigs &amp; wells in situ, will damage the ocean, the adjoining beaches &amp; estuaries &amp; in all likelihood marine life as well.</p> <p>Clearly, despite assurances of this being only exploration &amp; other EIAs will be required for each of the following steps prior to anything</p>	<p>Thank you for the complimentary response to ERM's approach, reporting and provision of requested hard copy documents. The potential impacts of the exploration activities on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the marine environment is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Minor to Negligible residual significance. Refer to Chapter 9, for a summary of these impacts.. We cannot comment on the CSIR meeting</p>

			<p>going ahead, this process has been given a huge tick already. A day after your presentation in Port Shepstone, I attended a meeting at the CSIR, Durban regarding the pipelines to transport natural gas/oil around the country, which have also been virtually rubber stamped to happen.</p> <p>As a citizen, living on the coast this is very scary that so much work has already been done to ensure these projects are going ahead &amp; the work has been largely completed. I feel like a bit of flotsam crushed by the waves, very unpleasant &amp; powerless to influence the outcome !</p> <p>However, I am glad for this opportunity &amp; would request an opportunity to comment further &amp; again once I have fully digested all the facts presented in the documents. Particularly, as even with your kind extension, I have had barely 2 weeks to read them. Not being an expert I've needed to research other opinions on some specialist topics, which I feel sure will lead to more questions.</p>	described as this was unrelated event. Your comments however, have been recorded.
Gillian	Gough-Palmer	Private	<p>Most importantly there is no need for any mitigation if this project does not go ahead : the very indication that there is need for mitigation means that this activity is deemed to be detrimental to the environment !</p> <p>Even the specialists cannot substantiate, with scientific proof, the marine fauna &amp; flora &amp; geophysical characteristics to be disturbed by exploration. Currently provided are extrapolations from elsewhere as to what may be expected. We cannot know what we risk losing until we have ascertained precisely what is present. Please conduct marine research (which in itself is a disturbance ), prior to any further undertaking.</p> <p>The southern most site area lies between two important marine protected areas viz. Aliwal Shoal &amp; Protea Banks. Worldwide, as well as reports from the local Durban, Oceanographic Research Institute have proven that seismic explosions resulted in an increase of marine stranding's. These are the visual effects we are party to, but the far reaching effects of further drilling &amp; blasting operations are pure speculation. Clearly these operations disturb &amp; harm the pristine? marine environment.</p> <p>Mossgas our only South African example of off shore drilling offered only temporary rewards in the form of profit &amp; employment. That enterprise was fatally flawed. There is no reason to expect these proposed areas will be any better. When coupled with the dangers of spills, discarded cuttings, restricted access to the coastal areas for</p>	<p>Please refer to Chapter 7 of the EIA report which describes all the potential impacts assessed, including the No-Go alternative. The potential effects of the proposed drilling activities and the No- Go alternative is in contravention of Operation Phakisa's aim to implement South Africa's policies and programmes better, faster and more effectively, and to unlock the economic potential of South Africa's oceans. Government, through Operation Phakisa, is seeking to grow the country's ocean economy through several industrial sectors, including the promotion of the oil and gas sector. Exploration is the only means to investigate potential resources and assess their viability for extraction and future development.</p> <p>There are negligible social benefits associated with the project due to the limited duration of exploration drilling activities. Exploration success, however, would result in long-term benefits for South Africa, such as access to new energy sources, improved security of supply, in-country investments in a development project (including job creation), increased government revenues, contribution to economic growth and reduced dependence on the importation of hydrocarbons. The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services. The potential impact on the</p>

			<p>the general public, increased shipping traffic, failure to provide sustainable environmental management plans &amp; adequate funds to ensure environmental restoration &amp; safety should no further drilling transpire, we will have gained nothing whilst paying a huge price in environmental degradation &amp; destruction.</p> <p>There are so many terrestrial ecosystems that have already been lost &amp; so little is only currently being discovered about the marine environment, that we should be ensuring that the oceans are preserved by declaring them no go areas.</p>	<p>marine and terrestrial environments are presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a Minor to Negligible residual impact significance. Refer to chapter 9, EMPR for further information on the impacts assessed. It is important to note that the proposed project relates to exploration activities at this stage and not commercial exploitation of a reserve (assuming that there is a viable reserve present). The EIA process aims to ensure that a robust environmental management process is conducted, in line with the governing environmental legislation in order to promote sustainable development.</p> <p>Please note, the protected sites and MPA's were addressed in the scoping report and draft EIA report. The areas of proposed drilling do not overlap the protected areas. Refer to chapters 4 and 7 for more information on the potential impacts on marine ecology.</p>
Ellen	Nissen	Private	<p>I herewith wish to strongly object to the planned oil and gas drilling within block ER 236 off the KwaZulu Natal coast. I am living in Umzumbe and am very concerned in the environmental impact caused by the oil and gas exploration activities. Reasons: Accidental oil spills not being controllable would have a disastrous impact on the marine life and on plankton with its important responsibility in the ocean's ecosystem. Impacts of the spill may cause a substantial change in the population of sensitive species over multiple generations. Unavoidable high noise levels caused by exploration activities could cause behavioural changes or displacement from feeding or breeding areas amongst the sensitive marine life. Hearing injury could interfere with biologically important sounds and signals like communication and echolocation. Coastal based livelihoods like subsistent and commercial fisheries would be affected by the implementation of a 500m safety zone around the drill. This would mean loss of catch as a result of preclusion from fishing grounds. Large areas of our beautiful coastline would be destroyed by potentially unavoidable oil spills with devastating long-term costs for the tourism and fishing industries.</p>	<p>The effects of exploration activities on the marine environment have been assessed in a marine ecology study undertaken by an independent specialist from Pisces Environmental Services- as described in and attached to the EIA report. Scoping phase impact identification and assessment determined that the underwater noise generated during the drilling works and the presence of vessels could lead to disturbances to marine habitats and fauna, especially to marine mammals and fish. The impact of underwater noise and vibrations on marine fauna was thus assessed further in the EIA report. The underwater noise generated by vessels during well-drilling operations is similar to the same produced by standard cargo or marine vessel with the same dimension. The sound level generated by drilling operations fall within the 120 to 190 dB re 1 <math>\mu</math>Pa range at the drilling unit, with main frequencies less than 0.2 kHz, depending on the drill unit and support vessels used (Croft &amp; Li, 2017). Main source of noise are thrusters mandatory to guarantee rig positioning and stability. Sound speed along the water column changes due to temperature and pressure, creating layers within which noise becomes 'trapped' (sound channels), bouncing off of the warm layers. In this case, being as the source of this noise on is at the top of the surface, it should bounce off the bottom of the mixed layer (shallow layer extending below the sea surface for dozens of meters, depending on the season) and not travel</p>

				<p>far downwards. The underwater noise generated by well-drilling operations in general and by the current project, falls within the hearing range of most fish and marine mammals, and would be audible for considerable ranges (in the order of tens of kilometres) before attenuating to below threshold levels. Emissions of underwater noise from well drilling operations and associated drillship and support vessels is not sufficient to cause direct physical injury or mortality to marine life, even at close range.</p> <p>A fisheries specialist study has been undertaken to assess the potential impact of the proposed drilling on fishing. During routine operations; no impacts are expected on the existing line fish and crustacean trawl fisheries. No cumulative impacts are expected on the other fisheries sectors. Fishing activities will only be temporarily restricted only in a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and will therefore not affect beach accessibility or local trade. The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant (&gt;100 g/m<sup>2</sup>) shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>Small spills on the deck of the drillship will be contained with the equipment on-board. Spills at sea will be immediately contained by the supply vessels, which host on-board offshore booms and skimmers, plus dispersants spraying systems and a small volume of dispersants for immediate response. Additional oil spill response equipment will be stored at the logistic base in a readily deployable state. In the unlikely case of larger spills, Eni has a contract with a global provider, Oil Spill Response Limited, which will</p>
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				<p>intervene in 24-48 hours providing oil spill response equipment and oil spill dispersants. In case of loss of control of the well, Oil Spill Response Limited can mobilise a well sealing device (capping stack) from its base in Saldanha Bay, within the Country. Another capping stack can be provided by Wild Well Control from Singapore. Eni will be required to develop an Oil Spill Contingency Plan for this project. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA.</p> <p>Onshore recreational activities and tourism will not be affected by the proposed exploration. The potential risks associated with the project are assessed in chapter 9, EMPr.</p>
Marilyn	Lilley	Private	<p>1. I oppose any offshore drilling and any related seismic testing off the South African coast as per the permit application.</p> <p>2. This is a sensitive area and our very endangered coelacanths and other marine mammals and fish and all marine life are at risk from noise and from the reality of possible oil spills, pipeline ruptures, pollution and toxic radioactive drilling mud and flow back from offshore drilling.</p> <p>3. I believe that oil spills, pipeline ruptures, flaring - that are a reality of offshore drilling would harm the environment. There have been several offshore oil and gas disasters causing extreme pollution and environment impacts. Eni has also apparently been responsible for oil spills.</p> <p>4. The GHG emissions will increase the African GHG emissions levels that we are obliged to reduce as a signatory to the Paris Agreement.</p> <p>5. Seismic testing sonar blasting will harm all marine life including plankton on which all marine life depends. At risk are migrating and breeding whales, coelacanths, endangered turtles, dolphins and our rich diverse marine life and affect local fishing.</p>	<p>Refer to the EIA document, chapter 3 for the project description which will provide an outline on the scopes of the proposed drilling. Chapter 4, 7 and 8 contains detailed information on the marine environment of the area, the potential impacts on the marine ecology and oil spill modelling respectively. Most residual impact significances are minor to negligible. Coelacanth species have been discovered in Jessor and Wright Canyons. Those Canyons are included in the iSimangaliso MPA more than 80 km away from the northern area of interest of this project and about 200 km from expected location of closest well N1. The results of the Oil Spill Modelling, as per chapter 8 of the Draft EIA report, reports the worst scenario where an unlikely crude oil spill is not properly confined and moves according to the Agulhas current. In addition, the unlikely spill reportedly will be close to surface of sea water, thus not believed to impact habitat suitable for Coelacanth presence. DAH modelling shows similar results, whereby the plume would move east and then southwards. The subsurface and surface oil will not move in the direction of known coelacanth habitats, including potential habitats near port Shepstone where no discoveries have occurred to date. Various mitigation and management measures have been detailed in Chapter 9 of the EIA report.</p> <p>The client has committed to the following inbuilt compliance and control measures with regards to GHG emissions:</p> <ul style="list-style-type: none"> <li>• Compliance to MARPOL 73/78 Annex VI regulations regarding the reduction of NOx, SOx and GHG emissions</li> </ul>

				<p>from vessel engines;</p> <ul style="list-style-type: none"> <li>• All diesel motors and generators will undergo routine inspections and receive adequate maintenance to minimise soot and unburnt diesel released to the atmosphere;</li> <li>• Leak detection and repair programmes will be implemented for valves, flanges, fittings, seals, etc.; and</li> <li>• If well testing is conducted for the disposal of test fluids, only the minimum volume of hydrocarbons required for the test will be flowed and well-test durations will be reduced to the extent practical.</li> </ul> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa.</p> <p>This project is exploration drilling, where a maximum of six wells could be drilled to assess the commercial viability of the hydrocarbon reservoir for future development. Seismic campaigns are performed prior to drilling activities, as it is necessary to determine possible reservoir targets. Currently Eni/Sasol have no plans to operate any seismic campaign in South Africa. Eni and Sasol have recently licensed portion of new 2D-3D seismic data acquired from PGS who performed a multi-client seismic survey another geophysical contractors (PGS) in along the Eastern coast of South Africa. PGS operated in terms of Reconnaissance Permits granted by DMR/PASA subsequent to the undertaking of an environmental assessment process. Their operations lasted from January to end of May, and they stopped prior to the whales migration period. The data acquired by Eni and Sasol are limited to a portion of southern area of interest in Block ER236.</p>
Mark	Beyl	South African Deep Angling Sea Organisation	<p>1. Our organization, the SOUTH AFRICAN DEEP ANGLING SEA ORGANISATION ("SADSAA") is the national governing body of all recreational deep sea anglers in South Africa, is made up of all the geographical provinces.</p> <p>2. The said provinces in turn, are made up of various clubs, which has approximately 7000 members countrywide. Amongst our members are highly regarded marine scientists and biologists, which assist us with credible scientific data. Writer is the national environmental officer of SADSAA, a litigation attorney, and a member</p>	<p>Thank you for registering your organisation as an I&amp;AP. The affiliation, membership, objectives, representation and declaration of interest of this organisation has been recorded and note.</p>

			<p>of the ZULULAND DEEP SEA ANGLING ASSOCIATION ("ZDSAA") and Richards Bay Ski Boat Club ("RBSBC").</p> <p>3. SADSAA's objectives relevant to the above issue is inter alia to liaise and co-operate with all levels of government, private enterprise and other concerned and/or interested bodies for the protection and/or conservation of marine fish, their habitats and food fish and/or sport fishing grounds.</p> <p>4. SADSAA is affiliated to various international organization's such as IGFA, the Billfish Foundation and International Light Tackle Association, and is also recognized by SASCOC.</p> <p>5. This letter is also addressed to you on behalf of two of our provinces, the NATAL DEEP SEA ANGLING ASSOCIATION ("NDSAA"), &amp; ZDSAA &amp; the RBSBC.</p> <p>6. The above entities, but particularly the RBSBC have a direct interest in the above intended exploration drilling as the area of interest is approximately 60 km from the Richards Bay Port, which will probably be used as a basis for the drilling vessels.</p> <p>INTERESTED AND AFFECTED PARTIES</p> <p>7. The RBSBC , SADSAA, NDSAA &amp; ZDSAA are interested and affected parties as defined in the National Environmental Management Act (NEMA), and its members have a direct interest in the proposed off shore drilling.</p>	
Mark	Beyl	South African Deep Angling Sea Organisation	<p>COMMENTS</p> <p>8. The area of interest is within a renowned marlin and tuna fishing area that is targeted by our members. The target area is within the Agulhas current that flows southward following the shelf edge, which is the path of migratory bill and gamefish. To an extent some of environmental concerns have been identified by yourselves, although not specifically bill and gamefish. All that was stated is that commercial fishing have overfished these species.</p> <p>9. Now that it is common cause that the said species have been overfished, you were required by the various environmental legislation, to have dealt with the impact of the intended drilling in far greater detail, and a cursory mentioning is well less than required by law. Common sense dictates if the intended exploration drilling will affects various fish species and mammals , it will affect Marlin, Tuna and big game fishing. Yet, save for a cursory reference, the impact on our members fishing has not been addressed properly.</p> <p>10. There are also considerable uncertainty in the oceanographic modelling, and that the scenarios in the EIA report do not acknowledge this adequately. The risk of impact on offshore waters and the marine life has been understated.</p> <p>11. Accordingly we believe the increased levels of risk and impact</p>	<p>The effects of exploration activities on the marine environment have been assessed in a marine ecology study undertaken by an independent specialist from Pisces Environmental Services- as described in, and attached to the EIA report. Scoping phase impact identification and assessment determined that the underwater noise generated during the drilling works and the presence of vessels could lead to disturbances to marine habitats and fauna, especially to marine mammals and fish. It is important to note that the proposed project area is outside of the target area (within the Agulhas current that flows southward following the shelf edge, which is the path of migratory bill and gamefish) following the shelf edge (i.e. the AOI is off the shelf edge further offshore). The impact of underwater noise and vibrations on marine fauna was thus assessed further in the EIA report. The noise characteristics and level of various vessels used in the drilling programme will vary between 130 and 182 dB re 1µPa at 1 m (Simmonds et al, 2003; Richardson et al, 1995). The underwater noise generated by well-drilling operations in general and by the current project, falls within the hearing</p>

			<p>have not been adequately assessed in your EIA.</p> <p>12. We are concerned the intended drilling causes the migratory fish to avoid the area of interest, but this aspect has also not been addressed adequately, if at all.</p> <p>13. For reasons as set out above, and as things stand at present, SADSAA and the said entities, will vehemently oppose the intended exploration drilling.</p>	<p>range of most fish and marine mammals, and would be audible for considerable ranges (in the order of tens of kilometres) before attenuating to below threshold levels. Emissions of underwater noise from well drilling operations and associated drillship and support vessels is not sufficient to cause direct physical injury or mortality to marine life, even at close range. A fisheries specialist study has been undertaken to assess the potential impact of the proposed drilling on fishing. During routine operations; no impacts are expected on the existing line fish and crustacean trawl fisheries. No cumulative impacts are expected on the other fisheries sectors. Fishing activities will only be temporarily restricted only in a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Furthermore, the proposed drilling areas are located approximately 60km away from the shoreline and will therefore not affect beach accessibility or local trade.</p>
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Registration Comments				
Name	Surname	Organisation	Comment	Response
Michele	Rivarola	Private	I want to formally register as an Interested and Affected Party (I&AP) and be provided with further information and notifications during the EIA process. Not acceptable to use lubricants that are not natural lubricants or bio degradable. Consequences of spillages not addressed	You have been added to the stakeholder database and will be kept informed throughout the EIA process. The type of chemicals used in drilling and toxicity are described in Chapter 3 of the EIA Report . The spillage of these chemicals have not been assessed in detail in the EIA Report as small chemical spills on-board the Project vessels will be cleaned up immediately and vessel operators will adhere to the Shipboard Oil Pollution Emergency Plan (SOPEP) and Environmental Management Programme ( EMPr). Therefore the impact of small chemical spills was considered to be not significant (Refer to Chapter 8 of the EIA Report).
Mandy		Sea Harvest	Thank you for your email. In future please use my new email address	Thank you. Your email address has been updated on the stakeholder database.
Rudi		Sea Harvest	Thank you for your email. In future please use my new email address	Thank you. Your email address has been updated on the stakeholder database.
Christina	Hagen	Pamela Isdell Fellow of	Please can you add me to the mailing list for the above project? I would like to receive notification of the EIA report when it is available.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.

		Penguin Conservation		
Kimishka	Chetty	Groundwork	Kindly register myself and my colleague Niven as I&AP's for the abovementioned project. Please send us any related documentation for this project.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Alan	Boyd	Department of Environmental Affairs	Thank you for this update. Please do keep me informed regarding the process.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Petrus	Viviers	Private	Thank you for the update.	Noted.
Elise	Templehoff	Netwerk24	Thank you for this notification	Noted.
Gill	Gough-Palmer	Private	Please register me as an I & A person, using the above email address. My details are Dr G Gough-Palmer. Please also register Monica Merle & M Fraser. Please acknowledge receipt & action in this matter. Thank you	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Gillian	Hamilton	African Climate Reality Project	Please send me information about this EIA and add to me to the list of stakeholders.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Heidi	Cox	Private	Please register me as an interested and affected party with regard to the seismic exploration taking place off the KZN coast.	You have been added to the stakeholder database and will be kept informed throughout the EIA process. Please note, the proposed project is this project is exploration drilling and not a seismic survey as described in Chapter 3 of the EIA Report.
Paul	Martin	Private	Ref the advert in the Herald of 17/9/2018. Please register me as an I&AP for the Exploration Drilling of Block ER236 project and supply me with the relevant documents as they become available.	You have been added to the stakeholder database and will be kept informed throughout the EIA process. The documents were made available on the project website ( <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a> ) on the 25 September 2018.
Judy	Bell	FrackFreesa	I submitted my comments to the first round but was not notified for this one. Please ensure that I am registered and that all my comments have been brought forward to this process.	Please be assured that you are still on the database, but I have added the alternative two email addresses to the stakeholder database
Thando	Mtshizana	Private	Good day. Please send draft EIA when ready: I shall attend as tabled above. Would you keep me posted?	You have been added to the stakeholder database and will be kept informed throughout the EIA process. The documents were made available on the project website ( <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a> ) on the 25 September 2018.
Francois	Du Toit	African Conservation Trust	Please register us as an IAP in the offshore applications. African Conservation Trust	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Denese	Koch	Private	Please send me information about this EIA and add to me to the list of stakeholders	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Leandro	Tridade	DSV South Africa	DSV, as a Global Freight Forwarder (Logistics) would like register as an interested party in the Exploration Drilling within Offshore Block ER236, KZN.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.

			DSV AIR & SEA a global Freight forwarder in over 80 countries with 45000 people Globally. Main activities lie within road transport (trucking) and its global air and sea freight forwarding business. 3PL and 4PL solutions can be provided by DSV. Hope you hear from you soon	
Anne	Skelton	Southbroom Conservancy SBC, South Coast Conservancies Forum and Pondoland CREW group	Please may I be registered as an interested and affected party with regards to Oil exploration/pipelines.  I am Chairman of the Southbroom Conservancy SBC, Secretary of the South Coast Conservancies Forum SCCF and a member of the Pondoland CREW group.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Marilyn	Lilley	Private	Please send me information about this EIA and add to me to the list of stakeholders.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Darryl	Wood	Private	Please send me information about this EIA and add to me to the list of stakeholders.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Nicholas	Jerman	Private	As a property owner on the KZN South Coast and visitor along the coast, I would like to register as an Interested and Affected Person for the off-shore exploration activities planned in the area and to be kept informed of the proposed and planned activities.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Nikki	Brighton	Midlands Mosaic	Please may I register as an I&AP for ER236	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Marc	Ryder	Private	Good day, please could you register me as an IAP	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Luke	Harel	The uMhlathuze Valley Sugar Company (Pty) Ltd	Please receive form to register as I&AP Should exploration be successful, we are keen to establish whether it is the intention to construct a refinery on SA soil	You have been added to the stakeholder database and will be kept informed throughout the EIA process. Another EIA would be required for further exploration/development wells within ER236 and for any production related activities.
Jawahir	Nandha	African Marine Solutions	AMSOL is a Marine Support Solutions provider and has a direct and keen interest in this project. Please keep us apprised.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Kate	Grieve	Private	As a resident on the KZN lower south coast, please register me as an IAP regarding exploration drilling of the east coast (block ER236). Thank you	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Allen	Goddard	Private	Please register me as an interested and affected party to the proposal by the Department of Minerals and Energy to allow offshore drilling for oil and gas off the coast of South Africa.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Francois	Du Toit	Ilifa Africa Engineers	We would like to show interest in the EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa : Commencement of EIA Process	You have been added to the stakeholder database and will be kept informed throughout the EIA process.

Sagie	Chetty	Newlyn Group	We would like to show interest in the EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa : Commencement of EIA Process	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Noelle	Garcin	African Climate Reality Project	Please be so kind to register me as an Interested and Affected Party in relation to the Environmental Impact Assessment for Exploration Drilling within Block ER236. I would like to receive further information and notifications by email.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Bryan	Hilder	Private	Please add me to the I&AP database	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Niall	Kramer	Private	Pls register me as an IAP re the Sasol and Eni plans to explore offshore.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Jeanine	Hilder	Private	Please add me to the I&AP database	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
John	Hislop	Private	Please register me as An Interested and Affected Party. I live very close to the sea on the kwaZulu South Coast, and worked for many years on the design of the Offsites and Utilities on the Moss gas project, including upgrading the tank farm in Mossel Bay.	You have been added to the stakeholder database and will be kept informed throughout the EIA process.
Shannon	Vaughan	Thanda	<p>Please find attached a copy of my registration as an Interested and Affected Party member.</p> <p>The effects of this drilling will have multiple negative impacts on KwaZulu-Natal:</p> <ol style="list-style-type: none"> <li>1. Drilling kill marine life in very popular diving areas</li> <li>2. Reduce tourism</li> <li>3. Impact local communities livelihoods (fishermen, rural communities)</li> <li>4. Impact have prices</li> <li>5. Risk of spills</li> <li>6. Making climate change even worse over time</li> <li>7. Releasing toxins and polluting our water - That tourism brings in for holidays, fishermen use for livelihoods and supply to KZN, surfers will get contaminated and most importantly marine ecosystems will be destroyed.</li> </ol> <p>The south coast benefits from natural phenomenon's like the sardine run and the whale migration to give birth every year. This exploration and drilling will ruin this natural phenomenon and nothing is worth that. The south coast relies on healthy marine life and tourism and believe that animals, the environment and humans are all interconnected. This would be an enormous mistake!</p>	<p>Project activities will take place 60km offshore. Kindly refer to the EIA report which provides the detail on the impacts associated with the proposed exploration drilling (i.e. Chapter 7). The potential effects of the proposed drilling activities associated with exploration on the marine environment have been assessed through a marine ecology study undertaken by an independent specialist from Pisces Environmental Services, while the effect on Fisheries was assessed through a fisheries specialist study undertaken by Capp Marine. The potential impact on the marine environment and fisheries is presented in Chapter 7 of the EIA report. Most of the potential impacts assessed have a minor- negligible residual significance.</p> <p>Fishing activities will only be temporarily restricted by a 500 m exclusion zone around the drillship. The only commercial fishery that overlaps with the drilling areas of interest is the pelagic longline fishery. Affected stakeholders will be notified of the location, duration and timing of drilling activities. Subsistence fishers who operate closer to the coast line will not interact with the drillship, and under normal operating conditions the project will not have any bearing on these fishing activities (refer to Chapter 7 of the EIA).</p> <p>The drillship will not be visible from the shore and it is not</p>

				<p>anticipated that the project will have any impact on tourism and beach accessibility under normal operating conditions.</p> <p>The risk of an oil spill (including crude oil, diesel and Non-aqueous drilling fluid retained on cuttings) into the marine environment is inherent in all offshore oil exploration and appraisal projects. The results of the Oil Spill Modelling Report commissioned as part of the EIA, indicate that no significant shoreline oiling would occur as result of a spill, and it is therefore, unlikely that the unplanned release of hydrocarbons would affect nearshore livelihood activities (tourism/ fishing) or coastal communities. The potential impacts associated with an unplanned event are explained in Chapter 8 of the EIA, together with mitigation measures which will be put into place in the event of an accidental spill.</p> <p>The magnitude of the impact on climate change due to GHG emissions from the project activities during the drilling phase is assessed to be Negligible as CO2 emissions generated by the project equate to only 0.0003 percent of the total CO2 emissions for South Africa (refer to Chapter 7 of the EIA).</p>
Desiree	Laverne	Private	Please send me information about this EIA and add to me to the list of stakeholders.	<p>You have been added to the stakeholder database. Eni South Africa BV (Eni), and Sasol Africa Limited (Sasol) hold an Exploration Right 12/3/236 (ER 236) off the East Coast of South Africa. Eni has the operatorship of Block ER236. Eni and Sasol are considering the possibility of conducting an exploration drilling programme in Block ER 236 to assess the commercial viability of the hydrocarbon reservoir for future development. The project requires Environmental Authorisation (EA) from the National Department of Mineral Resources (DMR) under the National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended, through an Environmental Impact Assessment (EIA) process.</p> <p>An EIA process was commenced in January 2018 with the release of a Draft Scoping Report. The Final Scoping Report was approved by PASA on 16 April 2018. ERM experienced unforeseen delays in the finalising of specialist studies which resulted in subsequent delays in the drafting of the EIA Report. Consequently, ERM was not able to finalise and release the draft report for</p>



				<p>comment and comply with the stipulated 106 day timeframe in which to submit the final EIA Report by the 03 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the EIA Application lapsed on the 03 August 2018. A new EIA process has commenced, which was approved by PASA on 29 August 2018, successive to the approval of the Scoping Report on 16 April 2018.</p> <p>Notice is hereby given that the Draft EIA Report is available to the public for comment. The 30 day comment period is effective from 26 September 2018 to 08 November 2018. The Report is available on the Project website: <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a>, on request from ERM, and at the following public locations:</p> <ul style="list-style-type: none"> <li>• Durban Central Lending Public Library</li> <li>• Richards Bay Library</li> <li>• Port Shepstone Library</li> <li>• East London Central Library</li> <li>• Nelson Mandela Bay Municipality – Linton Grange Library</li> <li>• ERM offices, Suite S005, 17 The Boulevard, West Way Office Park, Westville</li> </ul> <p>Stakeholders are invited to submit comments on the Draft EIA Report to ERM:  Email: <a href="mailto:eni.offshore.eia@erm.com">eni.offshore.eia@erm.com</a>   Tel: 021 681 5400 or 011 798 4300    Project Website: <a href="http://www.erm.com/eni-exploration-eia">www.erm.com/eni-exploration-eia</a>   Post: Postnet Suite 90, Private Bag X12, Tokai, 7966</p> <p>Your comments will be incorporated into a comments and responses report which will be included in the Final EIA Report to be submitted to PASA for consideration. Please ensure that your comments reach ERM on or before 8 November 2018.</p>
Carika	Van Zyl	Private	Can I please be registered as an I&AP for the ENI offshore oil and gas drilling	You have been added to the stakeholder database and will be kept informed throughout the EIA process.

Annex B

## Evidence of Receipt of Omitted Comments

**Environmental Resources Management Southern Africa (Pty) Ltd**

Postnet Suite 90  
Private Bag X12  
Tokai  
7966

**Attention:** Ms Vicky Stevens  
**Per Email:** [eni.offshore.eia@erm.com](mailto:eni.offshore.eia@erm.com)

8 November 2018

**RE: WILDOCEANS**  
***SUBMISSIONS ON DRAFT ENVIRONMENTAL IMPACT ASSESSMENT REPORT (VERSION 1) SEPTEMBER 2018 – EXPLORATION DRILLING WITHIN BLOCK 236, OFF THE EAST COAST OF SOUTH AFRICA***

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## 1 INTRODUCTION

These comments are submitted on behalf of WILDTRUST. WILDTRUST, through its WILDOCEANS Programme, has recently launched a campaign called “Only This Much”, which seeks to mobilise a regional movement for increased protection across all African national waters and Africa’s Southern Ocean territories. This campaign builds on the marine protected area advocacy work being done by a number of organisations including Ocean Unite, WWF-SA, Centre for Environmental Rights and the South African Association for Marine Biological Research (SAAMBR).

The initial 30 day period afforded to interested & affected parties (I&APs) to comment on the draft Environmental Impact Assessment (EIA) report ended on 25 October 2018 and, given the complexity and volume of information contained in the draft EIA document and the need for expert input, this comment period was insufficient for WILDOCEANS to obtain the necessary expert input and draft meaningful comments.

ERM themselves “experienced unforeseen delays in the finalising of specialist studies for the Exploration Drilling within Block ER236, which resulted in subsequent delays in the drafting of certain chapters of the EIA Report.” Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the final EIA Report by the 3 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the current EIA Application lapsed on the 3 August 2018.

On 11 October 2018 WILDOCEANS requested a 30 day extension of time for the submission of comments. Unfortunately, I&APs were only given a 14 day extension. It is submitted that the extended commenting period was still an unreasonable amount of time in which to obtain necessary expert input on the voluminous and complex EIA report document. It also resulted in ERM being unable to furnish responses to queries submitted by WILDOCEANS on 3 November 2018. Notwithstanding these problems, this submission is made based on information available at the time. In the circumstances, WILDOCEANS reserves the right to supplement this submission once the draft EIA report has been finalised, and after ERM has responded to WILDOCEANS queries and to the issues raised herein.

We point out that, in terms of regulation 3(8) of the Environmental Impact Assessment Regulations, 2014 (EIA Regulations), a 30 day commenting period is the minimum period for public participation. In terms of regulation 41(6)(b) of the EIA Regulations, the person conducting the public participation process must ensure that participation by potential or registered interested and affected parties (I&APs) is facilitated in such a manner that all such I&APs are provided with a reasonable opportunity to comment on the application.

Furthermore, in terms of section 2(4)(f) of the National Environmental Management Act (NEMA), the participation of all I&APs in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured. The NEMA Public Participation Guideline points out that *‘Public participation is one of the most important aspects of the environmental authorisation process. It is considered so important that it is the only requirement for which exemption cannot be given. This is because people have a right to be informed about potential decisions that may affect them and to be afforded an opportunity to influence those decisions. Effective public participation also facilitates informed decision-making by the competent authority and may result in better decisions as the views of all parties are considered’*.<sup>1</sup>

## 2 SUBMISSIONS

### 2.1 Oil Spill Modelling and associated Impact Significance Assessments fatally flawed

That a catastrophic oil spill can result in significant environmental and socio-economic impacts is clearly illustrated by the 2010 Deepwater Horizon catastrophe:

In addition to the loss of 11 lives, that single event resulted in the release of 124 million gallons of oil, which spread over 43,300 square miles of the GOM [Gulf of Mexico] and 1,300 miles of shoreline in several states. The environmental and other damages caused by the Deepwater Horizon incident were immense and have had long-lasting and widespread impacts on the Gulf and the affected states. For example, as part of a settlement between BP and Federal and state governments, BP has agreed to pay over \$8 billion for natural resource damages caused by the spill and for restoration of natural resources in the Gulf of Mexico region (GOMR). Those damages include severe adverse effects on wildlife, wetlands and other wildlife habitat, recreation and tourism, and commercial fishing... The released oil “was toxic to a wide range of organisms, including fish, invertebrates, plankton, birds, turtles and mammals... [and] caused a wide array of toxic effects, including death, disease, reduced growth, impacted reproduction, and physiological impairments that made it more difficult for organisms to survive and reproduce.” In addition, state and local government economic damage claims arising from the Deepwater Horizon incident were significant and have been settled for another \$5.9 billion.<sup>2</sup>

The draft EIA report acknowledges that *‘[i]f it is not possible to completely eliminate the risk of accidental events occurring’*,<sup>3</sup> and admits that *‘[t]he risk of an oil spill (including crude oil and diesel) into the marine environment is inherent in all offshore oil exploration and appraisal projects’*.<sup>4</sup>

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<sup>1</sup> GN 807 of 10 October 2012.

<sup>2</sup> Federal Register Vol. 81 No.83 April 20, 2016 Part III, Department of Interior – Bureau of Safety and Environmental Enforcement, 30 CFR Part 250 – Oil and Gas and Sulfur Operations in the Outer Continental Shelf – Blowout Preventer Systems and Well Control; Final Rule, at p25890.

<sup>3</sup> Draft EIA report, p219.

<sup>4</sup> Draft EIA report, p220..

However, the draft EIA report concludes that the post-mitigation potential risks of a catastrophic oil spill are either 'minor' or 'moderate'. To achieve this, ERM relies on risk significance ratings based on likelihood and consequence, combined with the results of its own Oil Spill Modelling (OSM) report.

ERM's approach to this probabilistic risk assessment is replete with subjective value judgments, unsubstantiated assumptions, incomplete or missing information and plans, use of (at best) misleading data and inappropriate critical threshold values. The OSM report is fatally flawed, and taints the Accident Event assessment as well as other impact assessments conducted that rely on this OSM report (such as the Marine Ecology and Fisheries impact assessments and associated specialist studies). Any decision authorising the proposed project based on the draft EIA report would as a consequence also be fatally flawed, and subject to being set aside on appeal or judicial review.

Given the limited amount of time afforded to I&APs to comment on the draft EIA report and specialist studies, it is not possible to document all of the shortcomings identified in ERM's approach. However, some of these shortcomings are highlighted below.

### 2.1.1 Accidental Events

ERM indicate that an unplanned/accidental event is defined as '*a reasonably foreseeable incident that is not anticipated to occur as part of the proposed project, but which may conceivably occur as a result of project activities (e.g. vessel accidents and loss of well containment/blowout), **but with a low probability***' (emphasis added).<sup>5</sup> This definition is unreferenced, but incorporates a value-judgment at the outset – namely that unplanned/accidental events (such as a catastrophic oil spill) have a low probability. ERM thus sets the stage for using the low probability of a catastrophic event occurring to justify its core message – that a catastrophic oil spill will have no more than a moderate impact on the environment.

In contrast, the International Association of Drilling Contractors (IADC) defines an 'accidental event' as meaning an '*unplanned or unexpected event or circumstance or series of events or circumstances that may lead to loss of life or damage to the environment*'.<sup>6</sup> No reference is made to an accidental event having a low probability.

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<sup>5</sup> Draft EIA report, at p 217.

<sup>6</sup> <http://www.iadclexicon.org/accidental-event/>

Notwithstanding the probability or likelihood of a catastrophic spill occurring, the unavoidable reality is that catastrophic oil spills can and do occur. It is for this very reason that the environmental and socio-economic impacts of such an event must be accurately described, quantified and assessed. Without such an assessment, the decision-maker is unable to balance the perceived benefits of the project against its costs to make an informed decision. Nor can appropriate control measures be properly assessed, or the adequacy of financial provisions or insurances to protect those who rely on the ocean and coast to subsist (including historically disadvantaged communities and persons), as well as the South African taxpayer who may have to foot the bill for any clean-up costs that are not adequately covered.

### 2.1.2 Methodology

ERM indicates in its draft EIA report that:

The methodology used to assess the significance of risks associated with accidental events differs from the impact assessment methodology set out in *Chapter 6* of this report. Risk significance for accidental events is based on a combination of the likelihood (or frequency) of incident occurrence and the consequences of the incident should it occur. The assessment of likelihood and consequence of the event also includes the existing compliance and control measures for this project.<sup>7</sup>

ERM states that the assessment of **likelihood** takes a qualitative approach based on professional judgment, experience from similar projects and interaction with the technical team.<sup>8</sup>

ERM states further that the assessment of **consequence** is based on specialists' input and their professional experience gained from similar projects, and informed by the results of various modelling studies undertaken to confirm the extent and duration of an oil spill. ERM points out that *'in order to determine the potential extent and duration of accidental oil spills (in the unlikely event that they occur) an oil spill modelling study was conducted for this project (Annex D)'*.<sup>9</sup>

The flaws and/or shortcomings with this approach include the following:

- No explanation or clear justification is provided for a deviation from the impact assessment methodology set out in Chapter 6 of the draft EIA Report;

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<sup>7</sup> Draft EIA report, p218.

<sup>8</sup> Draft EIA report, p218.

<sup>9</sup> Draft EIA report, p218.

- ERM indicate that the assessment of likelihood and consequence includes existing compliance and control measures for this project. As has been pointed out elsewhere in this report, these compliance and control measures are not adequate (e.g. blowout preventers do not meet international standards; location of spill response equipment at Saldanha) or are not yet in existence (e.g. the Oil Spill Contingency Plan (OSCP) and Emergency Response Plan (ERP) relied upon are not included in the draft EIA report).
- ERM admits that a qualitative approach is taken to the assessment of likelihood based on professional judgment, experience from similar projects and interaction with the technical team. This approach is highly subjective, and fails to specify whose professional judgement is relied upon (e.g. ERM EIA team members, Eni staff, other?), whose experience is relied upon (ERM EIA team members, Eni staff, other?) or who makes up the technical team interacted with (ERM EIA team, Eni, other?), or what form this interaction took (informal verbal discussions, formal minuted meetings, formal reports?).
- ERM admit that the assessment of consequence is based on specialists' input and their professional experience gained from similar projects, but does not clearly identify who these specialists are.
- ERM readily admits that the consequence assessment is informed by the results the oil spill modelling. Numerous significant flaws in the oil spill modelling are discussed in detail separately below.

### 2.1.3 ERM's Oil Spill Modelling is fatally flawed

It is pointed out in the draft EIA report that the purpose of the oil spill modelling is *'to identify the worst case consequences for a range of spill scenarios and identify the probability of oil impacting the sea surface and seawater column, coastline and nearshore receptors'<sup>10</sup> and that 'modelling of the worst case scenario is in line with best practice and is required for the development of the Emergency Response Plan and OSCP'.<sup>11</sup> As has been stated above, the OSM report is fatally flawed, and taints the Accident Event assessment as well as other impact assessments conducted that rely on this OSM report (such as the Marine Ecology and Fisheries impact assessments and associated specialist studies). Some of the key shortcomings and flaws in the OSM report are outlined below.*

#### (a) Duration of Scenario 2a Crude Blowout – Hole Collapse and Scenario 2b Crude Blowout – Cap Install not adequately explained, substantiated or validated

The OSM report indicates that for the 'hole collapse scenario', it was assumed that a specified volume of crude oil would be released from the wellhead over a period of 7 days, while for the 'capping system event scenario',

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<sup>10</sup> Draft EIA report, p221.

<sup>11</sup> Draft EIA report, p222.



it was assumed that a specified volume of oil would be released from the wellhead over a period of 20 days.<sup>12</sup>

Neither the draft EIA report nor the OSM report substantiate why periods of only 7 and 20 days respectively were used for the modelling, especially given that ERM concedes that it is required to model the worst case scenario in line with best practice and for the development of the ERP and OSCP.

By contrast, the *Deepwater Horizon* oil spill duration was 87 days (before it was finally capped).<sup>13</sup>

By further contrast, oil spill modelling by RPS carried out in relation to an impact assessment conducted by ERM for the *Tamirand Resources – Tui Field* in New Zealand covered a 45-day and 110-day well blowout scenario.<sup>14</sup>

The duration of a blowout is clearly a key input into an OSM modelling. An assumed low duration will necessarily lower the prediction of the amount of oil that may be spilled into the ocean, and will also lower the significance of potential environmental and socio-economic impacts arising from any catastrophic spill.

The failure to substantiate and ensure public participation on the assumed 7-day Scenario 2a blowout duration and assumed 20-day Scenario 2b blowout duration constitutes a fatal flaw in the environmental impact assessment process. Any decision authorising the proposed project based on the draft EIA report and OSM modelling report would as a consequence also be fatally flawed, and subject to being set aside on appeal or judicial review.

(b) Volume of Scenario 2a Crude Blowout – Hole Collapse and Scenario 2b Crude Blowout – Cap Install not adequately substantiated or validated

The OSM report indicates that for the ‘hole collapse scenario’, it was assumed that 750m<sup>3</sup>/day of crude oil would be released from the north wellhead over a period of 7 days (i.e. a total of 5250m<sup>3</sup>), while 1050 m<sup>3</sup>/day of crude oil would be released from the south wellhead over a period of 7 days (i.e. a total of 7350 m<sup>3</sup>). The same release rates were applied for the 20-day release ‘capping system event scenario’ (namely a total of 15000m<sup>3</sup> would be released from the north wellhead and a total of 20,000m<sup>3</sup> from the south wellhead).

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<sup>12</sup> OSM report, p12.

<sup>13</sup> <https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill>

<sup>14</sup> Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3 – 4. Available online at <https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf>

By contrast, the *Deepwater Horizon* oil spill released an estimated 134 million gallons of crude oil,<sup>15</sup> or approximately 507,245m<sup>3</sup> (or 5830 m<sup>3</sup>/day over 87 days).

By further contrast, oil spill modelling by RPS conducted in relation to an impact assessment conducted by ERM for the *Tamirand Resources – Tui Field* in New Zealand estimated a total release of 56,721 m<sup>3</sup> (or 1260 m<sup>3</sup>/day over a 45-day period) and 104,068 m<sup>3</sup> (or 946 m<sup>3</sup>/day over a 110-day well blowout scenario).<sup>16</sup>

The volume of a blowout release is clearly a key input into an OSM modelling. An assumed low volume of release will necessarily lower the prediction of the amount of oil that may be spilled into the ocean, and will also lower the significance of potential environmental and socio-economic impacts arising from any catastrophic spill.

A technical review of the ERM OSM modelling by ERM EIA team member PRDW (Annex D6 – *Peer Review of ERM Oils Spill Report*, 7 September 2018, hereinafter referred to as ‘PRDW report’) questioned the crude oil release rates used by ERM in its modelling (indicated as a major comment).

At paragraph 3.1 of the PRDW report, PRDW recorded the following comment:

**Comment #2 – Scenario 2**

The crude oil release rates of 4,717 bpd and 6,604 bpd for the two blowout scenarios requires a thorough justification. These seem low compared to previous studies off the west coast of South Africa and Namibia undertaken for international companies where the modelled oil release rates for blowouts ranged between 10,000 and 80,000 bpd. For reference, the Macondo/Deepwater Horizon blowout in the Gulf of Mexico released 4.9 million bbl over for 87 days giving an average of 56,300 bpd....

*In response to this review comment, Eni provided the following reasons for the flow rates for Scenario 2:*

*The input data provided for the model run are based on lithology and preliminary reservoir assessment and interpretation starting from seismic data. During the 2Q of 2018, new data interpretation were available from 2D/3D seismic data acquired by some multi-client providers in 2016-2018. Based on the analysis already finalized, the reservoir and production profiles are*

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<sup>15</sup> <https://www.epa.gov/enforcement/deepwater-horizon-bp-gulf-mexico-oil-spill>

<sup>16</sup> Per Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3–4. Available online at <https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf>

*expected to be very similar to the same available in other subsea fields developed by Eni in Africa. For this reason the PI (productivity index), porosity, hydrocarbon properties and expected flow rate have been recalculated and optimized using real data from those similar fields. The confirmation of those assumptions will be provided after drilling of the first explorative well.*

Further to this response from Eni, the following comments stand:

Please include this justification for Scenario 2 in the main report. Since these oil release rates still need to be confirmed after drilling the first well, it seems that these may not be the worst-case flow rates in the case of a blowout. Why were conservatively high rates not used for the modelling?

At paragraph 10 of the OSM report *A1 Addendum: Response to Technical Review*, this comment is reproduced (save for omitting the comment that the justification by Eni quoted above be included in the report, as well as the comment that since the oil release rates still need to be confirmed after drilling the first well these may not be the worst-case flow rates in the case of a blowout). In addition to the initial response referred to above (although not attributed to Eni, thereby misleading the reader of the OSM report *A1 Addendum*), the following additional comment is added (also not attributed to Eni):

In addition:

- The pore pressure prediction is computed using a sophisticated technology from the velocity analysis coming from the recent (2016) 3D seismic volume. Moreover, for all the wells drilled in similar deepwater environment, an analogue approach has been utilized for preparing the casing design and mud density, to keep the well under control while drilling. In the recent development of some African deepwater field, Eni has confirmed that those estimation has been confirmed during the subsequent drilling of the wells (sic).
- During the Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to ENI's experience in similar lithology in West Africa, which has allowed for optimizing the flow rate and PI parameters, in the unrealistic situation that no mitigation (e.g. no BOP closure) will be applied, that should provide a better estimation of flow rates.

In a letter attached to Annex D6, PRDW states (among other things) that it was appointed by ERM to undertake an independent peer review of the oil spill study (this independence is disputed in this submission, given that PRDW is indicated as being part of ERM's EIA team – see draft EIR report, Table 1.1 at page 10), that ERM issued a revised study report to PRDW on 18 September 2018, and concludes by stating that:

This letter confirms that all four major comments raised by PRDW have been adequately addressed.<sup>17</sup>

Given that PRDW states that ERM issued the revised report with its additional response on 18 September 2018 (the same date as PRDW's letter confirming that all four major comments had been adequately addressed), it is unclear how PRDW had sufficient time to apply its mind properly to the response, call for and analyse underlying data upon which statements were based, or validate the response received from Eni (via ERM). No rationale is provided for the statement that this (and other) major comment has been addressed. This invites an inference that Eni's responses, untested and unvalidated in the EIA process, have simply been accepted by ERM and PRDW.

An attempt to seek clarity from PRDW telephonically on 2 November 2018 was met with a response to email any queries to ERM (again demonstrating PRDW's lack of independence from the EIA team). A letter was subsequently emailed to ERM on 3 November 2018 raising a number of queries relating to the OSM report A1 *Addendum: Response to Technical Review* and to the PRDW letter dated 18 September 2018. A copy of this letter is attached to this submission marked Annexure WO1, the contents of which should be read as incorporated into this submission.

On 5 November 2018 ERM responded to the 3 November 2018 letter acknowledging receipt, and advising that ERM '*are currently preparing a response to the questions*'. On 6 November 2018 ERM wrote a further email in response, advising as follows:

Your letter dated 03 November 2018, received by ERM on Monday 05 November 2018 refers. Based on the volume and detailed nature of the questions, we require coordinated input from the relevant parties (some outside of South Africa) to appropriately address them. We have enlisted the appropriate people to contribute to a response, however, given the short timeframe, we will not be able to provide a response to your questions by COB today as requested. Responses to your questions will be provided in the comments and response report in the Final EIA Report. We welcome any additional comments on the EIA Report by 8 November 2018 and these comments will also be included in the Final EIA Report.

This response is regrettable, and taints the fairness of the EIA process. In light of the above, it is clear that the draft EIA report cannot simply be finalised by the addition of I&AP comments and ERM/PRDW/Eni's responses thereto. At the very least, a revised version of the report fully responding to the queries raised will need to be made available to I&APs for further comment. A failure to do so will be a serious breach of I&APs constitutional

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<sup>17</sup> PRDW letter dated 18 September 2018 attached to Annex D6 – *Peer Review of ERM Oils Spill Report*, 7 September 2018.

and statutory rights to fair administrative action, as well as I&APs legal rights to participate meaningfully in the EIA process.

In addition, it is submitted that the OSM report and PRDW technical review must be subject to robust independent validation (by suitably qualified experts not forming part of ERM's EIA team, chosen by the competent authority in consultation with I&APs).

(c) Misleading critical threshold assumptions used for oil spill modelling and interpretation of results

The draft EIA report indicates that '[t]hree critical threshold assumptions were used in the design of the models and interpretation of results. These assumptions address critical thresholds for oil slick thickness (as described in Annex D), shoreline flux and DAH concentration and relate directly to the ecological effects'.<sup>18</sup>

The following assumptions are made in the draft EIA report:

- Significant slick thickness – 1.0  $\mu\text{m}$
- Significant shoreline mass flux – 100g oil per/m<sup>2</sup> of shoreline
- Dissolved Aromatic Hydrocarbons (DAH) – 5 ppb

ERM refer to significant surface oiling as being defined as '*any oil having a thickness above the minimum thickness threshold, a value that delineates where oil becomes visible and below which aquatic biota are at near zero risk of smothering from a crude oil*'.<sup>19</sup> This definition is problematic. The value is delineating in relation to the 'smothering' of aquatic biota, and fails to take into account other issues, such as toxicity, ecological changes, indirect effects and socio-economic impacts.

**i. Significant Slick Thickness**

With regard to this 'oil on surface' critical threshold, ERM cite certain studies suggesting that oil slicks less than 1.0  $\mu\text{m}$  are not harmful to seabirds, and that visible oil between 0.1  $\mu\text{m}$  and 1.0  $\mu\text{m}$  was chosen as the low risk exposure thickness range. This is important, as ERM indicate that '*[m]odel output of the surface oiling and arrival time is filtered to remove oil thinner than 1  $\mu\text{m}$* '.<sup>20</sup> This means that visible oil in the 0.1  $\mu\text{m}$  and 1.0  $\mu\text{m}$  range has been filtered out, and are not reflected in the oil spill models and diagrams.

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<sup>18</sup> Draft EIA report, p224.

<sup>19</sup> Draft EIA report, p224, citing Lewis, 2007; OSM report, p19.

<sup>20</sup> Draft EIA report, p225.

In its OSM report, ERM indicates that the *'first clearly visible oil appears as a silvery sheen at thickness between 0.04  $\mu\text{m}$  to 0.3  $\mu\text{m}$  based on values cataloged (sic) in the 2006 Bonn Agreement Oil Appearance Code (BAOAC)(Lewis, 2007)... A minimum threshold thickness value was defined as 0.1  $\mu\text{m}$ . Oil at this thickness may be visible and potentially wash upon the shore as a silver sheen, but is not expected to cause physical injury (e.g., oiling, smothering) to wildlife contacting it.... Model output of the surface oiling and arrival time is filtered to remove oil thinner than 1  $\mu\text{m}$ '*.<sup>21</sup>

In contrast, a recent (26 June 2018) technical review of an oil spill modelling commissioned by the New Zealand EPA<sup>22</sup> (in respect of an oil spill modelling conducted by RPS in relation to an impact assessment conducted by ERM for the *Tamarind Resources – Tui Field* in New Zealand, hereinafter referred to as the 'New Zealand EPA Tamarind Technical Review') criticised the minimum thickness for tracking of 0.5  $\mu\text{m}$  used in the stochastic methods model settings:

For comparison purpose, the same company, RPS ASA, conducted similar spill modelling in the North Atlantic in 2014 (RPS ASA 2014a) in support of the Shelburne Basin Exploration Drilling Programme. Blowout and surface spills were simulated. **Ocean conditions as well as depth of discharge are different. Nonetheless, the method stays the same and can be used here for comparison.**

The **minimum thickness for tracking considered in the RPS APASA Tamarind report was 0.5  $\mu\text{m}$  for oil on surface** (RPS Section 6.2.1). That is, **once a part of the slick became less than 0.5  $\mu\text{m}$ , that part of the slick was omitted from the results. This thickness is still significant.** Based on RPS APASA Tamarind Table 6. **the omission of any thickness less than 0.5  $\mu\text{m}$  means that the RPS APASA Tamarind report did not consider a sheen on surface for exposure calculation.** The RPS ASA (2014a) report **considered 0.04  $\mu\text{m}$  for cut-off in surface oil thickness, with the rationale that this would be the minimum thickness to determine impact on socioeconomic resources.**<sup>23</sup> (emphasis added)

The New Zealand EPA Tamarind Technical Review thus:

- Indicates that the methodology for simulating blowouts and surface spills remains the same and can be used for comparison despite different ocean conditions and well depths (namely in respect of the North Atlantic Shelburne Exploration Drilling Programme and the New Zealand Tui Field);

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<sup>21</sup> OSM report, p18-19.

<sup>22</sup> Technical Review of Oil Spill Modelling - Tamarind Taranaki Ltd. Application EEZ100016, conducted by Coffey on behalf of the New Zealand Environmental Protection Authority (26 June 2018), at pages 3–4. Available online at <https://www.epa.govt.nz/assets/FileAPI/proposal/EEZ100016/External-advice-and-reports-EPA-reports/Coffey-technical-review-oil-spill-modelling-v3-26-06-2018-EEZ100016.pdf>

<sup>23</sup> New Zealand EPA Tamarind Technical Review, at p 9.

- Criticises the omission of slicks less than 0.5  $\mu\text{m}$  from the modelling results and exposure calculation, remarking that surface oil at this thickness is still significant; and
- Points out that in the Shelburne North Atlantic modelling a surface oil thickness of 0.04  $\mu\text{m}$  was used because this would be the minimum thickness to determine impact on socio-economic resources.

The ERM ER236 OSM model output of the surface oiling and arrival time has been filtered by ERM to remove oil thinner than 1  $\mu\text{m}$ . Given that the New Zealand EPA Tamarind Technical Review indicates that a surface slick of 0.5  $\mu\text{m}$  is still significant and that a surface sheen should be considered for exposure calculation, and that the Shelburne oil modelling used a surface oil thickness of 0.04  $\mu\text{m}$  as its cut-off on the basis that this would be the minimum thickness to determine impact on socioeconomic resources, ERM's filtering has effectively excluded results from its modelling that are necessary for exposure calculation and in order to determine socio-economic impacts. **The exclusion by ERM of surface oil thickness of below 1.0  $\mu\text{m}$  thus grossly underrepresents the nature and extent of a surface oil slick.** ERM's modelling report relies upon this inappropriate threshold to claim in respect of Spill Scenario 2A that *'[i]t is highly likely that such a spill at either of the two spill locations (N1 and S) with thickness greater than the minimum smothering thickness (1.0  $\mu\text{m}$ ) would remain out to sea before weathering away into a thin sheen. In the absence of response efforts, the smothering slick of oil is able to travel almost 50 km and 150 km from the release points N1 and S respectively before weathering away into a thinner sheen'*<sup>24</sup> and in respect of Spill Scenario 2B that *'[i]t is highly likely that such a spill at either of the two spill locations (N1 and S) with thickness greater than the minimum smothering thickness (1.0  $\mu\text{m}$ ) would remain out to sea before weathering away into a thin sheen. In the absence of response efforts, the smothering slick of oil is able to travel almost 100 km and 250 km from the release points N1 and S respectively before weathering away into a thinner sheen'*.<sup>25</sup>

The use of inappropriate critical thresholds in the OSM modelling in turn impacts on reliability and accuracy of the risk significance description set out in ERM's draft EIA report. This point is again demonstrated in the New Zealand EPA Tamarind Technical Review (which used much stricter thresholds than were used in the ER236 draft EIA report and OSM report):

...Thresholds. The **potential discrepancy of using a higher threshold to assess exposure and produce maps of oil presence can have a significant impact.** Other similar studies considered a **threshold ten times lower, which could significantly change the amount of oil reported to reach shore, as well as the exposure on the surface and in the water column. The impact on decision-**

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<sup>24</sup> OSM report, p53.

<sup>25</sup> OSM report, p68.

**making is high** because of the **potential for ‘hiding’ results with thresholds, and the discrepancy with similar studies.**<sup>26</sup> (emphasis added)

The ER236 OSM modelling uses a critical threshold for ‘oil on surface’ that is double the threshold used in the Tamarind Tui Field modelling, and 25 times higher than was used in the Shelburne North Atlantic modelling. This clearly has the effect of ‘hiding results’, and would significantly impact significantly on the ERM OSM modelling and subsequent significance assessment.

ERM’s filtering of the modelling results and use of an inappropriate critical threshold is misleading and highly questionable, and shows that the modelling needs to be re-run with appropriate critical threshold assumptions, and must be subject to robust independent validation (by suitably qualified experts not forming part of ERM’s EIA team, chosen by the competent authority in consultation with I&APs).

Any decision authorising the proposed project based on the draft EIA report and OSM modelling report would be fatally flawed, and subject to being set aside on appeal or judicial review.

## ii. *Significant shoreline mass flux*

With regard to the ‘significant shoreline mass flux’ critical threshold, ERM cite a 2009 study (French-McCay, 2009) recommending a threshold of 100 g/m<sup>2</sup> as a reasonable value to indicate when a sufficient amount of oil mass per area unit may cause an impact to shorebirds and wildlife on or along the shore.<sup>27</sup>

In contrast, the June 2018 New Zealand EPA Tamarind Technical Review criticised the setting of a 10 g/m<sup>2</sup> as the minimum concentration of oil on the shoreline for tracking:

... the minimum concentration of oil on the shoreline for tracking was set to 10 g/m<sup>2</sup> in the RPS APASA Tamarind Modelling, whereas a minimum concentration of 1 g/m<sup>2</sup> was considered in RPS ASA report (2014a). **A minimum concentration of 1 g/m<sup>2</sup> would trigger shoreline clean-up on amenity beaches**, however the **10 g/m<sup>2</sup> would be a conservative number for impact on shoreline habitat**. In other words, the **1 g/m<sup>2</sup> represents a threshold for socioeconomic impact**, whereas the **10 g/m<sup>2</sup> represents the threshold for ecological impact.**<sup>28</sup> (emphasis added)

The New Zealand EPA Tamarind Technical Review thus indicates that:

- A minimum concentration of 1 g/m<sup>2</sup> would trigger shoreline clean-up on amenity beaches, and represents a threshold for socioeconomic impact; and

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<sup>26</sup> New Zealand EPA Tamarind Technical Review, at p11.

<sup>27</sup> Draft EIA report, p225; OSM report, p20.

<sup>28</sup> New Zealand EPA Tamarind Technical Review, at p 9-10.



- The 10 g/m<sup>2</sup> threshold would be a conservative number for impact on shoreline habitat, and represents the threshold for ecological impact.

In the circumstances, the use of a threshold of 100 g/m<sup>2</sup> in the ERM OSM report is inappropriate as a threshold for socio-economic impacts (e.g. for triggering clean-up on amenity beaches) and for impacts ecological impacts (shoreline habitat). ERM's modelling report relies upon this inappropriate threshold to claim that *'[m]odel results in Scenario 2a indicate that it is unlikely that significant shoreline oiling (>100 g/m<sup>2</sup>) will reach shorelines along the coast'*<sup>29</sup> and *'[m]odel results in Scenario 2b indicate that it is unlikely that significant shoreline oiling (>100 g/m<sup>2</sup>) will reach shorelines along the coast'*.<sup>30</sup>

The use of inappropriate critical thresholds in the OSM modelling in turn impacts on reliability and accuracy of the risk significance description set out in ERM's draft EIA report. This point is again demonstrated in the New Zealand EPA Tamarind Technical Review (which used much stricter thresholds than were used in the ER236 draft EIA report and OSM report):

...Thresholds. The **potential discrepancy of using a higher threshold to assess exposure and produce maps of oil presence can have a significant impact**. Other similar studies considered a **threshold ten times lower, which could significantly change the amount of oil reported to reach shore, as well as the exposure on the surface and in the water column. The impact on decision-making is high** because of the **potential for 'hiding' results with thresholds, and the discrepancy with similar studies**.<sup>31</sup>

The ER236 OSM modelling uses a critical threshold for shoreline mass flux that is 10 times higher than was used in the Tamarind Tui Field modelling, and 100 times higher than was used in the Shelburne North Atlantic modelling. This clearly has the effect of 'hiding results', and would significantly impact significantly on the ERM OSM modelling and subsequent significance assessment.

This approach is misleading and highly questionable, and shows that the modelling needs to be re-run with appropriate critical threshold assumptions, and must be subject to robust independent validation (by suitably qualified experts not forming part of ERM's EIA team, chosen by the competent authority in consultation with I&APs).

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<sup>29</sup> OSM report, p53.

<sup>30</sup> OSM report, p67.

<sup>31</sup> New Zealand EPA Tamarind Technical Review, at p11.

Any decision authorising the proposed project based on the draft EIA report and OSM modelling report would as a consequence be fatally flawed, and subject to being set aside on appeal or judicial review.

### iii. ***Dissolved Aromatic Hydrocarbons***

Despite the draft EIA report including Dissolved Aromatic Hydrocarbons (DAH) as one of the 3 critical thresholds that relates directly to ecological effects and selecting a level of 5 ppb,<sup>32</sup> the OSM report did not include modelling results for DAH. This was raised in the PRDW report (major comment 3.2), and ERM's response follows **Comment #5 – Address impacts associated with dissolved aromatic hydrocarbons** in ERM's OSM report *A1 Addendum: Response to Technical Review*.

#### (d) Other

ERM's OSM report for Scenario 2A and 2B indicate that the model was run 120 times to simulate releases on different starting days from January 2013 through October 2017.<sup>33</sup> The sufficiency of these simulations needs to be subjected to a robust independent validation.

Diagrams describing the mass balance representing the phases and forms the oil may become are provided in the OSM report. Mass balances are important to understand the fate of spilled oil. The sufficiency of the mass balance (including but not limited to the effects of wind and the decay coefficient used, if any) needs to be subjected to a robust independent validation.

Any depuration rates used in the modelling and emulsification assumptions made also need to be subjected to a robust independent validation

The magnitude and direction of currents used in the sub-surface spill modelling need to be subjected to a robust independent validation, including a validation of any information provided on how the oil reaches the surface, whether any jet and plume has been simulated accurately (or at all), and whether sufficient information is provided (e.g. the diameter of the pipe from which the oil escapes to enable calculation of oil exit velocity).

The draft EIA report indicates that '*Eni is anticipating the oil viscosity to be light for this project*',<sup>34</sup> making the point that such oils are '*less persistent and tend to disappear rapidly from the sea surface*', while in contrast

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<sup>32</sup> Draft EIA report, p224.

<sup>33</sup> OSM report, pages 52 and 67.

<sup>34</sup> Draft EIA report, p234.

'high viscosity oils... are more persistent, usually requiring a clean-up response (e.g. heavy crude oil).' No underlying data has been provided to substantiate Eni's claim that the ER236 oil is anticipated to have light viscosity. This claim also needs to be subjected to a robust independent validation.

## **2.2 Failure to include Oil Spill Contingency Plan (OSCP) in draft EIA violates requirement for public participation**

In comments submitted on the draft Scoping report on behalf of SDCEA, which comments are specifically incorporated into this submission, the following was pointed out:

Dr Chernaik notes that the Draft Scoping Report alludes to the possibility of there being an Oil Spill Response Plan forming part of the DEIR for the project: *"ENI will develop and implement an Oil and Chemical Spill Response Plan in the event of an accidental release of oil offshore."*<sup>35</sup>

Dr. Chernaik advises that it must be ensured that an Oil Spill Response Plan is indeed part of the DEIR for the project.

Dr. Chernaik goes on to state that the Oil Spill Response Plan also needs to conform to guidelines about what information needs to be in the plan. An example of such guidelines is the *Guidelines for Offshore Oil Spill Response Plans - Guidance for Offshore Oil and Gas Exploration, Production and Pipeline Facility Operators* (API TECHNICAL REPORT 1145, SEPTEMBER 2013), available online at: <http://www.oilspillprevention.org/~media/oil-spill-prevention/spillprevention/r-and-d/spill-response-planning/1145-e1-final.pdf>.

In Dr. Chernaik's view, one of the most important elements of a good Oil Spill Response Plan is the identification of available resources for responding to a major spill. If an Oil Spill Response Plan correctly describes what to do in case of a major spill, but the required equipment or trained personnel are not available to rapidly implement the plan, then correctly describing what to do is of no use. This is why guidelines for Oil Spill Response Plans require such plans to identify response resources, such as section 4.2 of the guidelines cited above, which provides as follows:

### **4.2 Resource Inventories and Mobilization Times**

Identify the primary Oil Spill Removal Organizations that are under contract or can provide key response resources (boom, skimmers, barges, dispersants and application platforms, etc.) and how they will likely be utilized in a response. For example, due to varying capabilities between Oil Spill Removal Organizations, some may be more suited or pre-designated for offshore containment and recovery whereas others may only provide shoreline cleanup services. If company owned equipment will be utilized, it should be identified in this section as well.

Resource inventory lists of the major response equipment and personnel should be included for the company and primary Oil Spill Removal Organizations. The lists should include at least those resources that could be mobilized to the site(s) in the first 24 hours to make the Oil Spill Response Plan as stand-alone as possible for the initial response phase. Alternatively, Oil Spill Removal Organizations websites or

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<sup>35</sup> At page 44.

those that maintain compilations of resource inventories such as the Response Resource Inventory can be referenced for that information."

Dr. Chernaik goes on to point out that the question of response resources available to be mobilized in the first 24 hours of a spill may be very critical in the context of South Africa given its relative lack of experience in offshore oil and gas projects, and advises that if South Africa lacks local equipment or trained personnel to respond rapidly (within 24 hours) to a major spill from an offshore oil and gas facility, then this is an issue the DEIR for the Exploration Drilling within Block ER236, off the East Coast of South Africa needs to explore.

In light of the above, it is submitted that the Draft Scoping Report should require the DEIR includes a description of the available resources to respond to a major oil spill.

*In Annexure B6 – Public Participation Comments and Responses* to the draft EIA report, ERM respond to this comment as follows:

Oil spill modelling and identification of mitigation measures associated with impacts relating to major oil spills will be undertaken as part of the EIA. An emergency evacuation plan and an oil spill contingency plan (OSCP) will be developed closer to the time of drilling once all details (exact location, time, vessel, shore base) are confirmed. The results of the EIA studies will be incorporated into the OSCP. The OSCP Detailed Plan describes identified scenarios, roles, responsibilities and techniques to respond to any occurring oil spill. Oil Spill modelling for the evaluation of potential oil spill consequences are included within the plan.

The OSCP must be submitted to the relevant South African Authority (PASA and SAMSA) for approval before the start of any drilling operation, so not only international but also local requirements will be taken into consideration. The Department of Environmental Affairs (DEA) and the Department of Transport (DoT) through the South African Maritime Safety Authority (SAMSA) are two key role players with regards to vessel-source marine pollution, and particularly oil pollution.

Eni's approach is to join international consortiums for main equipment and to develop in-house technologies to improve the intervention capability. Eni is a member of Oil Spill Response Limited (OSRL) who will be contracted to provide oil spill emergency response equipment. OSRL's Saldanha Bay base houses an integrated subsea well intervention system which includes a capping stacks (sic) suitable for international use and two hardware kits for debris clearance, BOP intervention and the subsea application of dispersant at a wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which could be mobilised in the case of an emergency. Additional equipment can be brought in as needed.

The EIR will include details on the required contents of the OSCP and information regarding South African response capacity, however the plan itself will be developed once the details, as outlined above, are known.

However, the draft EIA report submitted by ERM on behalf of Eni fails to include an OSCP, and fails to provide an adequate description of the resources available to respond to a major oil spill.

Instead, the draft EIA report indicates that:

Prior to drilling, an Oil Spill Contingency Plan will be required to be submitted to SAMSA for approval and issuance of a certificate. Both PASA and the DEA will be required to comment on the OSCP prior to issuing of the certificate by SAMSA.<sup>36</sup>

The failure to include the OSCP in the draft EIA report denies I&APs the opportunity to review and comment on the adequacy of the plan, and prevents I&APs from seeking independent technical expert advice thereon. This is in violation to the requirements of s2 of NEMA, the EIA Regulations and the principles contained in the Promotion of Administrative Justice Act No, 2000 (PAJA) .

The importance of the OSCP to the assessment of risk as well as to proposed mitigation and control measures is evident from the draft EIA report:

- All response procedures [including in respect of a well blowout] form part of the OSCP:

All the response procedures form part of an Oil Spill Contingency Plan (OSCP) that must be developed prior to the beginning of the proposed drilling activities. The OSCP shall be reviewed and approved by the South African Maritime Safety Authority (SAMSA) prior to start of drilling. On approval. SAMSA will issue a Pollution Safety Certificate.<sup>37</sup>

- The OSCP informs the activation of emergency response in the event of an oil spill (including as a result of a catastrophic oil spill resulting from a major well blowout):

In particular, in the case of an accidental incident, an emergency response team (this team will be available at all times during the drilling activities) will be immediately activated, in accordance with the OSCP, to react to the event in order to reduce and contain the scale of the spill and, in the case of blowout, shut-in the well.<sup>38</sup>

In the case of a blowout event, the spill migration will be simulated with real time Metocean data, in order to predict the movement and emergency response team will implement the OSCP to contain/reduce/shut in the spill and so limit possible residual risk for shoreline impact.<sup>39</sup>

- The OSCP includes crisis management, spill response and clean-up, as well as well control:

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<sup>36</sup> Draft EIA report, para 2.3.6 p23.

<sup>37</sup> Draft EIA report, para 8.3.1 at p221.

<sup>38</sup> Draft EIA report, para 8.3.2 at p 223.

<sup>39</sup> Draft EIA report, para 8.33 at p 227.

*Table 8.9 Avoidance/Prevention Actions and Mitigation Measures*

...

Response and Recovery (Mitigation Actions)

Despite the prevention measures and management procedures built into the design of the project there is always a risk that a spill can occur. Thus, as standard practice, an OSCP is prepared and put in place at all times during the drilling operation. There are three principal components underpinning an OSCP:

- Crisis management (Emergency Command and Control Management);
- Spill response, containment and clean-up; and
- Well control.

Further details are provided in *Chapter 9*.<sup>40</sup>

- The OSCP is cited as supplementing other measures (including well planning, built-in barriers, capping and spill containment measures) to reduce the magnitude of a catastrophic oil spill resulting from a major blowout, and is relied upon to subjectively reduce the residual risk to the contentious ALARP levels):

Taking into consideration the extensive well planning and built-in barriers, capping and containment measures, the magnitude of the spill will be reduced, supplemented with an OSCP, the magnitude of the spill will be reduced, a spill containment will be in place and the **residual risk** therefore has be (sic) **reduced to As Low As Reasonably Practicable (ALARP)**..<sup>41</sup> (original emphasis retained)

and

The risk of an oil spill (including crude oil and diesel) into the marine environment is inherent in all offshore oil exploration and appraisal projects...

The industry approach to dealing with potential oil spills is to develop technology and operational procedures to reduce the likelihood of spills occurring, while at the same time planning appropriate responses to oil spills to reduce the severity of impacts in the event of a spill. **The response procedures form part of an Oil Spill Contingency Plan (OSCP)**.<sup>42</sup>

In addition, the draft EIR report does not include a detailed description of the available resources to respond to a major oil spill (such as resource inventory lists of the major response equipment and personnel available to Eni, OSRL and Wild Well Control).

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<sup>40</sup> Draft EIA report, Table 8.9 at p232.

<sup>41</sup> Draft EIA report, para 8.3.8 at p245. Reference is also made to an Emergency Response Plan (ERP) at para 9.8.1 of draft EIA report and an OSC Plan at para 9.8.2 of draft EIA report, under 9.8 Specific Management Plans p266. Both indicates as to be done in the future, i.e. not part of the EIA. At p283 immediate activation and mobilisation of OSCP is indicated in the event of an oil spill. The OSCP is also referred to in Table 9.8 EMPr Commitments Register, at p270 of draft EIA report.

<sup>42</sup> Draft EIA report, para 10.2.2 *Unplanned Activities* at pp292-293.

In Table 8.9 of the draft EIA report, it is indicated that *‘in case of a blowout event, Oil Spill Response Limited (OSRL) and Wild Well Control (for source control and well killing) will be immediately mobilised. Both Companies provide a support 24/7. Project vessels will be equipped with appropriate spill containment and clean-up equipment, eg booms, dispersants and absorbent materials’*.<sup>43</sup>

In Annexure B6, it is indicated that:

OSRL’s Saldanha Base houses an integrated subsea well intervention system which includes a capping stacks (sic) suitable for international use and two hardware kits for debris clearance, BOP [blow out preventor] intervention and subsea application of dispersant at a wellhead. This would be used, as appropriate, in case of a well blow out. In addition they have stock piles of dispersant, which can be mobilised in the event of an emergency. Additional equipment can be brought in as needed’.<sup>44</sup>

Given that the proposed wells will be drilled off the East Coast of South Africa while Saldanha is on the West Coast, the location of this intervention system is problematic, and its adequacy needs to be independently validated.

It is unclear from the draft EIA report where Wild Well Control is located.

It is submitted that the failure to include Eni’s OSCP or provide an adequate description of the resources available to respond to a major oil spill constitutes a violation of I&APs rights to participate meaningfully in the EIA process, and effectively denies I&APs an opportunity to in turn influence the decision maker. This constitutes a fatal flaw in the draft EIA report, and any subsequent approval based on this report will stand to be set aside on appeal or subsequent judicial review.

### **2.3 Failure to include Emergency Response Plan (ERP) in draft EIA violates requirement for public participation**

With regard to the ERP, the draft EIA report provides as follows:

An Emergency Response Plan (ERP) is a requirement of the International Finance Corporation (IPC) Performance Standards and EHS Guidelines. This plan will include each stage of the Project lifecycle (mobilisation, drilling and demobilisation) and commensurate with the potential risks and impacts identified in the EIA report.

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<sup>43</sup> Draft EIA report, Table 8.9, p232.

<sup>44</sup> Annexure B6, p53 of PDF document.

The objective of the ERP is to be prepared to respond to accidental and emergency situations in a manner appropriate to the operational risks, and to prevent their negative consequences.<sup>45</sup>

However, the draft EIA report submitted by ERM on behalf of Eni fails to include an ERP.

It is submitted that the failure to include Eni's ERP in the draft EIA report constitutes a violation of I&APs rights to participate in the EIA process and effectively denies I&APs an opportunity to in turn influence the decision maker. This constitutes a fatal flaw in the draft EIA report, and any subsequent approval based on this report will stand to be set aside on appeal or subsequent judicial review.

#### **2.4 Design of Blowout Preventers used to provide well control in the event of an accidental well blowout fails to meet international standards<sup>46</sup>**

A main reason that the Deepwater Horizon oil spill in the Gulf of Mexico (which began in April of 2010) was such an environmental disaster is that the explosion at the platform disabled the ability to communicate with the subsea Blowout Preventer (BOP) that can stop the flow of oil from a damaged well. The inability to activate, or trigger, the BOP to shut the well meant that oil flowed for 87 days (until August 2010) until an emergency "kill well" could be installed.

As a result of the Deepwater Horizon oil spill, in 2016, the U.S. Bureau of Safety and Environmental Enforcement (BSEE) finalized a rule intended to prevent another similar disaster by imposing design requirements for blowout preventers and related equipment for controlling a well in the event of a serious accident:<sup>47</sup>

When operating with a subsea BOP system, you must:

- (1) Have at least five remote-controlled, hydraulically operated BOPs;
- (2) Have an operable redundant pod control system to ensure proper and independent operation of the BOP system;
- (3) Have the accumulator capacity located subsea, to provide fast closure of the BOP components and to operate all critical functions in case of a loss of the power fluid connection to the surface;
- (4) Have a subsea BOP stack equipped with remotely operated vehicle (ROV) intervention capability;
- (5) Maintain an ROV and have a trained ROV crew on each rig unit on a continuous basis once BOP deployment has been initiated from the rig until recovered to the surface. The ROV crew must examine all ROV-related well-control equipment (both surface and subsea) to

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<sup>45</sup> Draft EIA report, para 9.8.1 at p266.

<sup>46</sup> Contribution by Dr Mark Chernaik, E-Law (USA).

<sup>47</sup> For the full text of the rule, see 30 CFR Part 250, Subpart G - Well Operations and Equipment (available online at <https://www.law.cornell.edu/cfr/text/30/part-250/subpart-G>) and in particular 30 CFR 250.734 - What are the requirements for a subsea BOP system? (available online at <https://www.law.cornell.edu/cfr/text/30/250.734>).



- ensure that it is properly maintained and capable of carrying out appropriate tasks during emergency operations;
- (6) Provide autoshear, deadman, and EDS systems for dynamically positioned rigs; provide autoshear and deadman systems for moored rigs;
  - (7) Demonstrate that any acoustic control system will function in the proposed environment and conditions;
  - (8) Have operational or physical barrier(s) on BOP control panels to prevent accidental disconnect functions;
  - (9) Clearly label all control panels for the subsea BOP system;
  - (10) Develop and use a management system for operating the BOP system, including the prevention of accidental or unplanned disconnects of the system;
  - (11) Establish minimum requirements for personnel authorized to operate critical BOP equipment
  - (12) Before removing the marine riser, displace the fluid in the riser with seawater;
  - (13) Install the BOP stack in a well cellar when in an ice-scour area;
  - (14) Install at least two side outlets for a choke line and two side outlets for a kill line;
  - (15) Install a gas bleed line with two valves for the annular preventer no later than April 30, 2018;
  - (16) Use a BOP system that has the following mechanisms and capabilities; (i) A mechanism coupled with each shear ram to position the entire pipe, completely within the area of the shearing blade and ensure shearing will occur any time the shear rams are activated. This mechanism cannot be another ram BOP or annular preventer, but you may use those during a planned shear. You must install this mechanism no later than May 1, 2023; (ii) The ability to mitigate compression of the pipe stub between the shearing rams when both shear rams are closed; (iii) If your control pods contain a subsea electronic module with batteries, a mechanism for personnel on the rig to monitor the state of charge of the subsea electronic module batteries in the BOP control pods.

South Africa does not have comparable standards (see Chapter 2 of the draft EIA report – Administrative and Legal Framework). The EIA does not refer either to the BSEE standards for well control, or to the American Petroleum Institute standard API 53, on which the BSEE standards for well control are based.

The only discussion in the draft EIA report regarding well control and blowout prevention is provided in section 3.6.3 - Well Execution Options:

#### Section 3.6.3 Well Execution Options ....

##### Well Control and Blowout Prevention

Health, safety and environmental protection are prioritised throughout the drilling process. In particular, there is a specific focus and attention during preparation and operations to avoid any potential accidental events, with related hydrocarbon release or uncontrolled flow from downhole to seabed or at surface (rig floor).

Well control during well operations is a routine function, with each well designed and executed to minimise risk of developing a well control incident. Down-hole conditions, such as shallow gas and high-pressure zones can cause control problems as a sudden variations in well pressure. A

well kick can occur if there is an influx of formation fluids with sufficient pressure to displace the well fluids. The primary well control against a well kick is provided by the maintenance of a sufficient hydrostatic head of weighted drilling mud/completion brine in the well bore to balance the pressures exerted by fluids in the formation being drilled.

*Secondary well control is provided by the installation of mechanical device, such as the float collar in the drilling string and the blowout preventer (BOP) at seabed, installed on top of the wellhead after the running and setting of the surface casing.*

The BOP effectively closes and seals the annulus if there is a sudden influx of formation fluids into the well bore, by the use of a series of hydraulically /electrically actuated rams. In addition, this device allows the formation fluids to be safely vented or pumped at the surface with the well closed, thereby enabling other methods to be applied to restore a sufficient hydrostatic head of mud on the well bore, for example pumping a higher density volume of mud, the so called 'kill mud'. The capacity and pressure rating of equipment, safety device and the BOP rating exceed the predicted reservoir pressures. The well control philosophy and procedure, constantly updated by the Eni drilling department, includes the identification and assessment of all well blowout risks.

It is woefully inadequate to state merely that *"Secondary well control is provided by the installation of mechanical device, such as the float collar in the drilling string and the blowout preventer (BOP) at seabed, installed on top of the wellhead after the running and setting of the surface casing."* The Gulf of Mexico deep exploratory well that spilled oil for 87 days following the explosion of the Deepwater Horizon drilling rig *also had a blowout preventer*, but it did NOT provide secondary well control because it could not be activated following the explosion. That is why the project proposed by Eni South Africa BV (Eni), and Sasol Africa Limited (Sasol), which would entail exploratory wells in deepwater, must adhere to well control requirements enacted in the wake of the Deepwater Horizon oil spill.

Prior to an ironclad commitment (vetted during the EIA process) to do so, it would be irresponsible and irrational to approve the EIA submitted by ERM on behalf of Eni.

## **2.5 Marine Ecology**

### **ANNEXURE D1**

The terms of reference indicate that the results of the oil spill modelling have been used to assess the impacts of the proposed drilling on marine biota. Due to the flaws in the *Accidental* Events assessment and *OSM* Report highlighted above and the reliance by the Marine Ecology assessment on these results, it is submitted that the marine ecology assessment of impacts arising from potential accident events and a catastrophic oil spill have not been adequately assessed. As a consequence the Marine Ecology assessment cannot serve as a reasonable or rational basis for a decision on authorisation.

In addition, a number of other shortcomings or flaws in the Marine Ecology assessment have been identified, and are set out below.

The draft EIA report consists of too many unknown factors and bases its significance ratings on subjective assumptions. There is a current lack of knowledge on South Africa's deep ocean ecosystems, and as a result, it is imperative that baseline data is obtained, and until then, a precautionary approach followed.

The lack of baseline data for benthic and pelagic communities has resulted in the draft EIA report rating the impacts on them as 'negligible'. Components of oceanography are not adequately addressed (such as the semi-permanent Durban Eddy<sup>48</sup> which occurs 70km off shore between Durban and Sezela) and there is little or no reference to past studies, including the exclusion of references from the most recent published data for the Natal Bight area<sup>49</sup>.

#### Plankton (page 31):

"The pelagic environment is characterised by very low productivity, with the low variability in water-column temperature resulting in very low frequency of chlorophyll fronts. Phytoplankton, zooplankton and ichthyoplankton abundances in Block ER236 are thus expected to be extremely low."

In comparison to other areas within the South African EEZ, the zooplankton concentrations will be relatively low in Block ER236. However, in terms of biomass it remains the greatest faunal group to be impacted. Impacts of hydrocarbons on zooplankton are excluded in both the Marine Ecology specialist report and the OSM report of the draft EIA report. As mentioned above, the draft EIA report fails to reference vital information for the Natal Bight area.

#### Soft Sediment benthic Macro- and Meiofauna (page 33)

"Due to the lack of information on benthic macrofaunal communities beyond the shelf break, no description can be provided for the deeper portions (Lower Bathyal) of Block ER236."

"Due to the lack of information on benthic macrofaunal communities beyond the shelf break, no description can be provided for the deeper portions (Lower Bathyal) of Block ER236."

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<sup>48</sup> Guastella, L. A. and Roberts, M.J. 2016. Dynamics and role of the Durban cyclonic eddy in the KwaZulu-Natal Bight ecosystem. *African Journal of Marine Science*, 38, 23-42; Lamont, T., van den Berg, M.A. and Barlow, R. G. 2016. Agulhas Current Influence on the Shelf Dynamics of the KwaZulu-Natal Bight. *American Meteorological Society*, 46, 1323- 1338; Roberts, M.J., Nieuwenhuys, C & Guastella, L. A. 2016. Circulation of shelf waters in the KwaZulu-Natal Bight, South Africa. *African Journal of Marine Science*, 38, 7-21

<sup>49</sup> Pretorius, M., Huggett, J. A., & Gibbons, M. J. (2016). Summer and winter differences in zooplankton biomass, distribution and size composition in the KwaZulu-Natal Bight, South Africa. *African Journal of Marine Science*, 38(sup1), S155-S168.

However, with little sea floor topography and hard substrate, such areas are likely to offer minimal habitat diversity or niches for animals to occupy."

This is in contrast to some of the literature and observations from the region, such as those described by MacKay et al. (2014). In their research of the KZN bight (a nearby estuarine/oceanographic feature) it was found that Macrofauna were relatively abundant and particularly rich at >1 000 taxa. Unique and distinctive assemblages were found, owing to the uniqueness of the region. A contributing factor to the Macrofauna richness was the presence of medium sand, fine sand, mud and the variance of overall sediment type were the habitat drivers underlying macrofaunal abundance distributions. This sediment type is expected to be replicated near the bight and within the footprint of the drill region based on probability. It is therefore not viable to claim that there is minimal habitat diversity in the same region as the substrate type is conducive to species richness.

The draft EIA report has excluded vital information of the proposed project area and accordingly has failed to adequately assess the impact.

#### Pelagic and demersal fish (page 41):

"Information on other neritic and demersal fish and megabenthic invertebrates beyond the shelf break is lacking and no description of these communities can be provided for Block ER236."

The draft EIA report failed to include detail on fish larvae, including reference to larvae's seasonality and certain oceanographic conditions.<sup>50</sup> This includes the importance of fish species which form important components of KwaZulu-Natal fisheries. For example, seasonal abundance of two neritic tuna species (*Auxis* sp. and *Euthynnus affinis*), the occurrence of tuna and mackerel (*Scombridae*), the presence of yolk-sac-stage larvae of the temperate chub mackerel *S. japonicus* which strongly suggests that this species spawns along the east coast and Shad (*Pomatomus saltatrix*) larvae, which are only found in the shelf waters off KwaZulu-Natal have been excluded from the draft EIA report.

#### Coelacanths (page 46):

Since the current knowledge of coelacanth life-history is lacking, any assumptions made on their distribution and well-being is unsupported and should be regarded as invalid. In addition, there is concern that the statement on their sensitivity to hydrocarbons as 'unknown' is an attempt to down-play the seriousness of any potential impact.

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<sup>50</sup> Beckley, L. E. and Leis, J. M. (2000) Occurrence of tuna and mackerel larvae (family: *Scombridae*) off the east coast of South Africa. *Mar. Freshw. Res.*, 51, 777–782.

It is strongly suggested that further research is done to establish with certainty whether Coelacanths are present in the Area of Study and, if so, the impact of the proposed activity on them would be. This must be part of a public participation process.

#### Seabirds (page 57):

David Allen, curator of birds, at the Durban Natural Science Museum<sup>51</sup> (Pers Comms, David Allen) responded to the draft EIA report by stating that here is an under representation of pelagic seabirds found within Block ER236. Furthermore, the draft EIA report does not address the threat of pelagic seabirds colliding with the rigs, especially at night and most particularly in strong winds. External infrastructure such as cables and masts would be particularly worrying this regard.

#### Marine Mammals (page 71):

“Beaked whales are particularly vulnerable to certain types of man-made noise, particularly mid-frequency naval sonar. The exact reason why is not yet fully understood, but necropsy of stranded animals has revealed gas embolisms and haemorrhage in the brain, ears and acoustic fat - injuries consistent with decompression sickness (acoustically mediated bubble formation) may also play a role”.

With the obvious increase in noise pollution due to seismic activities, drilling and vessel noise, marine mammals, including beaked whales are under threat. A precautionary approach needs to be taken.<sup>52</sup> A baseline study should be a prerequisite prior to any decisions regarding the exploration drilling and it is recommended that the draft EIA report be updated once this relevant data of vulnerable cetaceans is obtained.

#### Marine Protected Areas

“To this end, numerous offshore focus areas were identified for protection between 30°E and 35°E, and these carried forward through Operation Phakisa for the proposed development of offshore MPAs. Those within the project area show in **Error! Reference source not found.** Although Block ER236 overlaps with the proposed Protea Banks, Aliwal Shoal Expansion and iSimangaliso Wetland Park Extension MPAs, there is no overlap of the areas of interest for well drilling with proposed protection areas.”<sup>53</sup>

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<sup>51</sup> Per communication with David Allen.

<sup>52</sup> Fernández A, Arbelo M, Martín V. 2013. Whales: No mass strandings since sonar ban. *Nature* 497:317–317; Fernández A, Edwards JF, Rodríguez F, De Los Monteros AE, Herraiz P, Castro P, Jaber JR, Martín V, Arbelo M. 2005. “Gas and fat embolic syndrome exposed to anthropogenic sonar signals. *Veterinary Pathology Online* 42:446–457; Findlay KP, Best PB, Ross GJB, Cockcroft VG. 1992. The distribution of small odontocete cetaceans off the coasts of South Africa and Namibia. *South African Journal of Marine Science* 12:237–270

<sup>53</sup> Page 74 of the draft EIA report.

It is impossible to see which off-shore focus areas were identified within the project area as there is an error message when referencing them. This needs to be rectified and the draft EIA report must be made available for public comment thereafter.

A protected area means any kind of protected area defined in the National Environmental Management: Protected Areas Act, 2003. According to the National Environmental Management Act (NEMA) Listing Notice 3<sup>54</sup>, most defined protected areas have a buffer that extends 10 kilometres from the proclaimed boundary of a world heritage site or national park and 5 kilometres from the proclaimed boundary of a nature reserve. This has not been taken into account by the draft EIA report and must be considered in light of recent changes in MPA designation.

Impact of planned impacts of exploration well drilling (page 78):

The magnitude of impact is referenced as follows:

“Some impacts will result in changes to the environment that may be immeasurable, undetectable or within the range of normal natural variation. Such changes are regarded as having no impact, and characterised as having a negligible magnitude.”

This means that immeasurable or undetectable impacts are not considered in this report and given negligible status.

This is an unacceptable manner in which to conduct an EIA. Given the large number of unknowns, and given consideration of the precautionary principle and risk-adverse approaches of NEMA, it is imperative that baseline data needs to be obtained during the first phases of the EIA process. Without this information it is impossible for a constructive consultative process to take place and the public and the authorities are being misguided and misinformed about the impacts of the proposed activity.

Physical disturbance of the seabed (page 85)

The entire section related to disturbance due to drilling needs to be verified.

There is both historical and contemporary research showing that the impacts of seabed drilling may cause

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54 <http://eolstoragewe.blob.core.windows.net/wm-698609-cmsimages/GNR324ListingNotice37April2017.pdf>

adverse environmental impacts on the seabed.<sup>55</sup> Furthermore, it has been recently recognized that the deep-sea is home to billions of microbes, which reproduce on a geological timescale. The living microbial biosphere found in ocean sediment is thought to be the largest biosphere in the world<sup>56</sup> (200X the total biomass of all humans).

The effects of cement dissolving into seawater are not detailed as an impact. There is no mention of the chemical makeup in spite of the fact that the drilling process involves the disposal of waste, including drill cuttings and excess cement, fluids (drilling mud), produced water, and other chemicals that may cause detrimental ecological effects.<sup>57</sup> Impacts have been said to be negligible, but benthic communities are highly sensitive and slow growing. Especially deep cold-water corals which can be hundreds of years old. The draft EIA report simply states that “there is a lack of information on benthic fauna.”

Many deep-sea species typically have low metabolic rates, slow growth rates, late maturity, low levels of recruitment, and long life spans. Deep-sea habitats have diverse assemblages that are composed of several rare species but at low abundances. In most deep-sea ecosystems, recovery can be very slow, making deep-sea species and assemblages particularly sensitive to anthropogenic impacts, with low resilience to disturbances from human activities.<sup>58</sup>

The assumption that impacts will persist over the short term are unjustified and considering there is not enough information about the fauna and flora at the depth of the proposed activity, the majority of the ratings in the draft EIA report are highly speculative.

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<sup>55</sup> Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, 4, p.58.

<sup>56</sup> [https://www.ted.com/talks/karen\\_lloyd\\_this\\_deep\\_sea\\_mystery\\_is\\_changing\\_our\\_understanding\\_of\\_life](https://www.ted.com/talks/karen_lloyd_this_deep_sea_mystery_is_changing_our_understanding_of_life)

<sup>57</sup> Gray, J. S., Clarke, A. J., Warwick, R. M., and Hobbs, G. (1990). Detection of initial effects of pollution on marine benthos: an example from the Ekofisk and Eldfisk oilfields, North Sea. *Mar. Ecol. Prog. Ser.* 66, 285–299. doi: 10.3354/meps066285; Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, 4, p.58.

<sup>58</sup> Vanreusel, A., Hilario, A., Ribeiro, P.A., Menot, L., and Arbizu, P.M. (2016); Threatened by mining, polymetallic nodules are required to preserve abyssal epifauna. *Sci.Rep.* 6:26808. doi:10.1038/srep26808; Schlacher, T.A., Baco, A.R., Rowden, A.A., O'Hara, T.D., Clark, M.R., Dower, C., et al. (2014). Seamount benthos in a cobalt-rich crust region of the central Pacific: Conservation challenges for future seabed mining. *Divers.Distrib.* 20, 491–502. doi:10.1111/ddi.12142; Clark, M.R., Althaus, F., Schlacher, T.A., Williams, A., Bowden, D. A., Rowden, A. A. (2016). The impacts of deep-sea fisheries on benthic communities: a review. *ICESJ.Mar.Sci.* 73(Suppl.1), i51–i69. doi:10.1093/icesjms/fsv123 Cordes, E. E., et al. (2016). "Environmental Impacts of the Deep-Water Oil and Gas Industry: A Review to Guide Management Strategies. *Frontiers in Environmental Science* 4(58): 26.

### Toxicity and Bioaccumulation (page 89)

Whilst the cement may contain low amount of toxic material, the amount of cement is cause for concern. Furthermore, references may be outdated and require recent validation.

There is toxicity associated with many components of Offshore Oil and Gas Drilling. The chemical fate of the complex mixtures of human-made and natural substances contain high concentrations of certain metals (Ba, Cr, Cu, Ni, Pb, and Zn) and hydrocarbons than are later observed in background sediments<sup>59</sup>. Some Zooplankton specifically bio-accumulate certain toxins such as the polycyclic aromatic hydrocarbons (PAC's), which is deleterious to their own health and the health of those ecosystems they are part of.<sup>60</sup>

### Bio accessibility of metals (page 102)

Due to the nature of the deep-sea environment, measuring the effect of acute toxicity caused by heavy metals released through the process is poor. Furthermore, the variety of chemical components in drilling muds and their variation in both percentage composition and inherent acute toxicity means that there is the potential for large variations in toxicity between different muds<sup>61</sup>. One can also take each of the elemental / compound constituents of the fluids, muds and cement into account to determine their localised chemical impact. With respect to chronic pollution by these compounds and crude oil spills, there is research stating that their impacts cause a range of adverse impacts such as histopathological lesions and other cellular effects as well as reduced or inhibited enzyme systems and other molecular effects<sup>62</sup>.

The bio-accessibility of metals found does not have an impact associated with them, despite warnings given. This needs to be accurately assessed.

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<sup>59</sup> Breuer, E., Stevenson, A.G., Howe, J.A., Carroll, J. and Shimmield, G.B., 2004. Drill cutting accumulations in the Northern and Central North Sea: a review of environmental interactions and chemical fate. *Marine Pollution Bulletin*, 48(1-2), pp.12-25.

<sup>60</sup> Almeda, R., Wambaugh, Z., Wang, Z., Hyatt, C., Liu, Z. and Buskey, E.J., 2013. Interactions between zooplankton and crude oil: toxic effects and bioaccumulation of polycyclic aromatic hydrocarbons. *PloS one*, 8(6), p.e67212; Marki, H.H., 2015. Effects of Produced Water on the Marine Phytoplankton *Phaeodactylum tricornutum*-A study of the effects Produced Water, from the Petroleum Industry, can have on Marine Phytoplankton, and the possibilities of a simple yet highly modifiable experimental design (Master's thesis, NTNU); Brussaard, C.P., Peperzak, L., Beggah, S., Wick, L.Y., Wuerz, B., Weber, J., Arey, J.S., Van Der Burg, B., Jonas, A., Huisman, J. and Van Der Meer, J.R., 2016. Immediate ecotoxicological effects of short-lived oil spills on marine biota. *Nature communications*, 7, p.11206.

<sup>61</sup> Holdway, D. A. (2002). The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes. *Marine Pollution Bulletin*, 44(3), 185–203. doi:10.1016/s0025-326x(01)00197-7

<sup>62</sup> Holdway, D. A. (2002). The acute and chronic effects of wastes associated with offshore oil and gas production on temperate and tropical marine ecological processes. *Marine Pollution Bulletin*, 44(3), 185–203. doi:10.1016/s0025-326x(01)00197-7



Impacts (page 115)

“Unlike the noise generated by airguns during seismic surveys, the emission of underwater noise from drilling operations and associated drill unit and tender vessel activity is thus not considered to be of sufficient amplitude to cause direct physical injury or mortality to marine life, even at close range.”

This is an inaccurate assumption and has been given a ‘negligible impact’ allocation in the draft EIA report which must be rectified.

Various researchers<sup>63</sup> mention that physiological changes may also occur when behaviour is forced to change. These include animals feeling stressed due to the loud noise (hormonal imbalance), animals having to change their feeding habits (prey impact), animals having to move out of their migratory paths (territorial avoidance), animals having to change how they communicate (vocalisation shift) and animals trying to cancel out (obliterate) the disruptive sound with their own sound (masking).

Noise impacts have not be included for crustaceans and zooplankton in the draft EIA report and this requires rectification and a revised public participation process.

Cetaceans (page 119-123)

“The effects of underwater noise generated during well-drilling and by the drillship and support vessels on marine fauna is considered to be of small magnitude in the drilling area and for the duration of the drilling campaign. While underwater noise may mask biologically significant sounds and cause behavioural changes, impacts are fully reversible once drilling operations are completed.”

Acute acoustic disturbances, such as those caused by seafloor drilling and seismic surveys, have been shown to impact cetaceans in both a behavioural and physiological manner explained below. South Africa has a high reliance on the whale industry in terms of international and domestic eco-tourism (tourism contributing 10% to South Africa’s GDP).

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<sup>63</sup> Carroll, A.G., Przeslawski, R., Duncan, A., Gunning, M. and Bruce, B., 2017. A critical review of the potential impacts of marine seismic surveys on fish & invertebrates. *Marine pollution bulletin*, 114(1), pp.9-24; Weilgart, L., 2013, November. A review of the impacts of seismic airgun surveys on marine life. In *CBD Expert Workshop on Underwater Noise and its Impacts on Marine and Coastal Biodiversity*. London, United Kingdom (pp. 1-10); Di Iorio, L. and Clark, C.W., 2010. Exposure to seismic survey alters blue whale acoustic communication. *Biology letters*, 6(1), pp.51-54; Romano, T.A., Keogh, M.J., Kelly, C., Feng, P., Berk, L., Schlundt, C.E., Carder, D.A. and Finneran, J.J., 2004. Anthropogenic sound and marine mammal health: measures of the nervous and immune systems before and after intense sound exposure. *Canadian Journal of Fisheries and Aquatic Sciences*, 61(7), pp.1124-1134; Gordon, J., Gillespie, D., Potter, J., Frantzis, A., Simmonds, M.P., Swift, R. and Thompson, D., 2003. A review of the effects of seismic surveys on marine mammals. *Marine Technology Society Journal*, 37(4), pp.16-34; Gausland, I., 2000. Impact of seismic surveys on marine life. *The leading edge*, 19(8), pp.903-905.

As beaked whales are highly sensitive to anthropogenic noise, increased boating traffic, underwater noise from drilling and seismic surveys from deep sea oil development are highly likely to result in avoidance behaviour or cause mass stranding events which could be very detrimental to these species, particularly as nothing is known about their population status. These cryptic, deep-diving species appear to be substantially more vulnerable to the effects of marine noise pollution, compared to other cetacean species, which has resulted in a number of mass stranding events worldwide<sup>64</sup>.

Elevated noise may cause behavioural disturbances, where cetaceans deviate from their normal behaviour. This may include the abandonment of important activities such as feeding or nursing in response to sound. Cetaceans may also move away from feeding and mating grounds, move or alter their migration routes, alter their calls, make navigation errors and accidentally blunder into fishing nets or ships<sup>65</sup>. Cetaceans have also been reported to panic from loud underwater sounds either immediately fleeing, rapidly diving deeper or rising to the surface quickly which can result in decompression sickness.

The following papers express the serious physiological impacts whales experience whilst exposed to seismic activity (including revealed severe diffuse congestion, haemorrhaging and bleeding around acoustic jaw fat, ears, brain and kidneys, gas bubble-associated lesions and embolisms and evidence for decompression sickness). Cetaceans have also been found to show heightened stress responses and a weakened immune system following intense noise exposure.

Persistent and/or acoustic noise should be considered to cause population level impacts and has been thought to contribute to several whale species decline or lack of recovery.

Therefore the basis on which the draft EIA report can declare this impact 'negligible' is unknown and must be justified and/or reassessed.

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<sup>64</sup> Dalebout ML, Robertson KM, Frantzis A, Engelhaupt DAN, Mignucci-Giannoni AA, Rossario-Delestre RJ, Baker CS. 2005. Worldwide structure of mtDNA diversity among Cuvier's beaked whales (*Ziphius cavirostris*): implications for threatened populations. *Molecular Ecology* 14:3353–3371.

<sup>65</sup> Fernandez A, Edwards JF, Rodriguez F, Espinosa de los Monteros A, Herraiz P, Catro P, Jaber JR, Marint V, and Arbelo M. 2005. "Gas and fat embolic syndrome" involving a mass stranding of beaked whales (family Ziphiidae) exposed to anthropogenic sonar signals. *Vet. Pathol.* 42: 446-457. Doi: 10. 1354/vp.42-4-446.PMID: 16006604; Romano, T.A., M.J. Keogh, C. Kelly, P. Feng, L. Berk, C.E. Schlundt, D.A. Carder, and J.J. Finneran. 2004. Anthropogenic sound and marine mammal health: measures of the nervous and immune systems before and after intense sound exposure. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 1124-1134; Weilgart L. 2007. The impacts of anthropogenic ocean noise on cetaceans and implications for management. *Can. J. Zool.* 85: 1091–1116

### Discharge of waste (page 123)

With respect to discharge of waste to sea, the impact should be classified as a major impact and not minor, as stated in the draft EIA report.

Several studies show the impacts of these chemicals on zooplankton and fish physiology (particularly Tuna, which are found in this area). The constituents of the waste such as the production water may also be a cause for concern. Produced water is primarily composed of formation water extracted during oil and gas recovery, but may also contain seawater that has previously been injected into the reservoir along with dissolved inorganic salts, dissolved and dispersed hydrocarbons, dissolved minerals, trace metals, naturally occurring radioactive substances, production chemicals, and dissolved gases<sup>66</sup>.

### Light sensitivity (page 127)

The draft EIA report states that the impact of light pollution is insignificant, however there is no reference to substantiate that claim.

Light is a key determinant of predator and prey accumulations as well as dictating the Diel Vertical Migration (DVM). The Diel Vertical Migration is a type of synchronized behavioural movement of pelagic and planktonic organisms up and down (vertical) regions of the water column. In terms of biomass, it is the greatest migration in the world<sup>67</sup>. When a threat is noted in the water, animals which live in the water column move all at once up or down away from the threat as a form of predator avoidance<sup>68</sup>.

The draft EIA report must reassess the impact of light pollution on the marine environment in relation to the proposed activity.

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<sup>66</sup> Cordes, E.E., Jones, D.O., Schlacher, T.A., Amon, D.J., Bernardino, A.F., Brooke, S., Carney, R., DeLeo, D.M., Dunlop, K.M., Escobar-Briones, E.G. and Gates, A.R., 2016. Environmental impacts of the deep-water oil and gas industry: a review to guide management strategies. *Frontiers in Environmental Science*, 4, p.58; Hansen, B. R., and Davies, S. H. (1994). Review of potential technologies for the removal of dissolved components from produced water. *Chem. Eng. Res. Des.* 72, 176–188.; Neff, J. M. (2002). Bioaccumulation in Marine Organisms: Effect of Contaminants from Oil Well Produced Water. Amsterdam: Elsevier; Fakhru'l-Razi, A., Pendashteh, A., Abdullah, L. C., Biak, D. R. A., Madaeni, S. S., and Abidin, Z. Z. (2009). Review of technologies for oil and gas produced water treatment. *J. Hazard. Mater.* 170, 530–551. doi: 10.1016/j.jhazmat.2009.05.044; Bakke, T., Klungsøyr, J., and Sanni, S. (2013). Environmental impacts of produced water and drilling waste discharges from the Norwegian offshore petroleum industry. *Mar. Environ. Res.* 92, 154–169. doi: 10.1016/j.marenvres.2013.09.012

<sup>67</sup> Longcore, T. and Rich, C., 2004. Ecological light pollution. *Frontiers in Ecology and the Environment*, 2(4), pp.191-198.

<sup>68</sup> Meyer, C.G., Holland, K.N. and Papastamatiou, Y.P., (2007). Seasonal and diel movements of giant trevally *Caranx ignobilis* at remote Hawaiian atolls: implications for the design of marine protected areas. *Marine Ecology Progress Series*, 333, pp.13-25.

### Well testing (page 128)

Well testing may release oil into the local environment, affecting threatened and endangered species. However, it is considered to have a negligible impact in the draft EIA report. This needs to be validated and reassessed.

### Cumulative impacts

The draft EIA report considers cumulative impacts of low significance. However, ecosystem impacts are not accounted for. This draft EIA report only refers to specific species and fails to consider an ecosystem approach.

### Impacts of Benthic fauna:

The report states that there is a lack of information on benthic fauna. Furthermore, there is a lack of accurate information pertaining to rare deep-sea species. On page 138 it states that “[t]hese benthic communities usually comprise fast growing species able to rapidly recruit into areas that have suffered natural environmental disturbance. Epifauna living on the sediment typically comprise taxa which are longer lived and therefore more sensitive to disturbance. No rare or endangered benthic species are known.”

Many deep-sea species typically have low metabolic rates, slow growth rates, late maturity, low levels of recruitment, and long life spans. Deep-sea habitats have diverse assemblages that are composed of several rare species but at low abundances. In most deep-sea ecosystems, recovery can be very slow, making deep-sea species and assemblages particularly sensitive to anthropogenic impacts, with low resilience to disturbances from human activities.

The assumption that impacts will persist over the short term seems unjustified and considering there is not enough knowledge of the fauna and flora at that depth or their actual distribution, the impact ratings are highly speculative.

### Conclusion

The draft EIA report states that there is a lack of and/or no knowledge of seabed communities at the depth of the proposed wells. There is also little knowledge of the geological and physical components surrounding the well area. In spite of this lack of knowledge the draft EIA report states that most impacts are of negligible or of minor significance.

The marine ecology report needs to be revisited by a local expert and further baseline data needs to be collected. Thereafter the draft EIA report revised and released for further comment.

## 2.6 Fisheries

### ANNEXURE D2

This report also relies upon the oil spill modelling conducted by ERM (see page 59 of Annex D2). Due to the flaws in the *Accidental* Events assessment and *OSM* Report highlighted above and the reliance by the Marine Ecology assessment on these results, it is submitted that the Fisheries Study assessment of impacts arising from potential accident events and a catastrophic oil spill have not been adequately assessed. As a consequence the Fisheries Study cannot serve as a reasonable or rational basis for a decision on authorisation.

The report refers to the oil spill modelling in the executive summary but (interestingly) does not state the impact (as it does do for other scenarios). This report refers to Annex D1 Marine Ecology as assessing the impacts of the biological effects of oil contamination on fish, spawn products and vulnerable supporting habitats. Annex D2 thus mainly assesses the potential impact of oil spills on fishing operations resulting from an exclusion of vessels from operating in affected areas. As a consequence, this report cannot accurately reflect the significance of marine ecological impacts in a worst case blowout scenario.

Throughout the draft EIA report the wider scale ecological and ecosystem impacts are not considered. Analysis is based mainly on catch data. Deep sea species, non-carnivorous fish species, non-target species and thus biodiversity and trophic levels are not considered. Assessing the ecosystem and/or ecological implications of oil exploration and spills on fish is vital as it serves as a foundation for pattern and model development as well as forecasting. For example, by noting the fish sexual characteristic influencing nature of alkyl phenols, it can be inferred fish assemblage structure will be impacted. Fish assemblage structures change when "gender-bender" chemicals are released as oil is extracted from the seabed. This has implications on fish-assemblages in general who can carry these chemicals far away from the source as well affects natural predictability of fish spawning<sup>69</sup>.

With respect to physical population being adversely impacted by oil spills<sup>70</sup>, there is a great deal of uncertainty around the ecological and socioeconomic impacts of oil spills, with acute spills often being harmful to fish populations. Most models are vague or subjective as "oil" is not a discrete medium and may have a thousand

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<sup>69</sup> Lofthus, Synnø, Almås, I.K., Evans, P., Pelz, O., Brakstad, O.G., Biodegradation in seawater of PAH and alkyl phenols from produced water of a North Sea platform, *Chemosphere* (2018), doi: 10.1016/j.chemosphere.2018.05.006.

<sup>70</sup> Peterson, C.H., Anderson, S.S., Cherr, G.N., Ambrose, R.F., Anghera, S., Bay, S., Blum, M., Condon, R., Dean, T.A., Graham, M. and Guzy, M., 2012. A tale of two spills: novel science and policy implications of an emerging new oil spill model. *BioScience*, 62(5), pp.461-469.

different types of chemicals present obfuscating which components are damaging. The second limitation is due to a low overall understanding of what biomarkers mean for the health of oil-exposed organisms.

It can also be noted that the effect of on-shore industrial development on fish population health was not considered in the draft EIA report. While on-shore industrial development depends on the success of the exploration, a comprehensive analysis would have at the least mentioned these future developments. Structures such as transport systems, helipads, supply bases, and port expansion all have a tangible impact on fisheries and fish species assemblages<sup>71</sup>. This was not considered in the draft EIA report.

There are errors in reference throughout the draft EIA report which repeatedly read **“ERROR: Reference source not found!”** These sources need to be provided to allow comment and the statements made that rely on these must be considered unsubstantiated until that time.

The draft EIA report gives no site locality alternative or no-go option as it is legislated to provide, instead it rehashes the intended location of the drilling, which is inadequate.

Page 36 onwards makes mention of the Sardine Run – a pelagic event. However, it is not a minor pelagic event as stated in the draft EIA report. The sardine run draws vast numbers of terrestrial, avian and marine predators. As such, incurrence with the drill ship and support vessels can be expected. While this was taken into account on page 66 with respect to some whales and dolphins, it does not take an ecosystem approach on the subject of incidence.

Furthermore, the draft EIA report states that the region around the Natal bight and the continental shelf edge constitute part of an Ecologically or Biologically Significant Area (EBSA). The draft EIA report also recognises that there are currently no management protocols excluding or managing the proposed drilling operations, and therefore this highly biodiverse region has no mandated protection.

In spite of identifying the sensitive areas and the pelagic event (albeit referring to it as ‘minor’), the draft EIA report fails to assess the impact of the proposed activity on this area and accordingly is fatally flawed in this respect.

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<sup>71</sup> Dismukes, D. E. Onshore oil and gas infrastructure to support development in the Mid-Atlantic OCS Region. OCS Study BOEM 2014–657. New Orleans, LA: US Dept. of the Interior, Bureau of Ocean Energy Management, Gulf of Mexico OCS Region (2014).

Exclusion from fishing grounds (page 57 & 58):

No exclusion zone is mentioned for the passage of each transport ship, and mooring vessel- their exclusion zone totals: 0.785km<sup>2</sup> (this is just for drill site). The draft EIA report has failed to adequately assess the impact, particularly as it describes impacts to fisheries as “loss of catch as a result of preclusion of fishing grounds.” What the draft EIA report fails to include are the potential long-term impacts as a result of mortality associated with spills, chemical leaks or other toxic effects drilling may cause to fish.

Demersal fishing/trawling may be prohibited in future due to the blow out preventers abandoned at the bottom of the ocean. South Africa’s Hake offshore trawl (primarily targeting Deep Water Hake) is the country’s most valuable fishing sector. Hake is a net export for the country. It is unknown what the effect of offshore drilling, drill vessels, waste discharge and the eventual Blow-Out Protectors will be on the industry. This must be included in the draft EIA report in order for there to be a thorough public participation process on the issue.

Unplanned emissions and discharges (page 59):

There is little emphasis placed on the detrimental impacts of small/minor leaks in the draft EIA report.

Drill cuttings, drill mud, and wastewater discharge can impact fish ecosystem assemblages. Bunker fuel is also expected to be released periodically around the drill site as the ships maintain proximity to the well-head. Polycyclic aromatic hydrocarbons (PAHs) which are found in crude oil are not well understood in the impact they have on ocean ecosystems. These pollutants individually have some adverse impact on fish or benthic organisms, but collectively and when they occur all at the same time they potentially can impact the essential structure of local fish assemblages<sup>72</sup>.

Crude oil containing polycyclic aromatic hydrocarbons (PAHs), dispersant chemicals and other estrogen-mimicking compounds are suspected to induce vitellogenin production in male and immature female fish, normally only produced by sexually mature females<sup>73</sup>. Furthermore, the behaviour of fish has an impact on human food security as they become harder to catch due to distress. In the North Atlantic, which is prone to seismic surveys, overall catch rates have been reduced by as much as 80%.<sup>74</sup>

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<sup>72</sup> Incardona, J.P., Collier, T.K. and Scholz, N.L., 2011. Oil spills and fish health: exposing the heart of the matter. *Journal of Exposure Science and Environmental Epidemiology*, 21(1), p.3.

<sup>73</sup> Hickey, R., 2015. Evaluation of Endocrine Disrupting Chemicals in the Florida Coastal Pelagic Fish Complex Following the Deepwater Horizon Oil Spill Event.

<sup>74</sup> <http://www.observer.com.na/index.php/business/item/7983-tuna-fishing-industry-under-threat>

Whilst there is no overlap of the area of interest and prawn fishery<sup>75</sup>, there are studies that show that crustaceans are severely impacted by underseas vibrations including seismic surveys and drilling. There is a plethora of literature describing crustaceans internal injuries following seismic surveys.<sup>76</sup>

Potential impact of unplanned emissions and discharges (page 75):

The concept of reversible damage to the benthic fauna such as coral which are found at the depth that the drilling will occur at, needs to be dismissed. These deep-sea/ cold-water / “hard” corals can be directly impacted by substrate removal and smothering due to toxic particulate waste material.

Habitat destruction as a result of machine injury, drill cuttings, drill mud, and wastewater discharge, can cause reduced polyp activity and growth. Spills and other sources of toxicity are potentially lethal for coral as they may induce partial tissue loss and ultimately death.<sup>77</sup> This section needs to take the self-circulating nature of the Agulhas current into account as it is able to trap pollutants, dispersants and pollution<sup>78</sup>. The Agulhas current flows down the east coast of Africa and is one of the fastest currents in the ocean flowing south. Because of its physical properties, any spill will enter the current and quickly make its way down the coast. “The Agulhas Current also plays a critical role in global ocean circulation which is why it’s considered important for climatic conditions across the world.<sup>79</sup> This is due to a process known as the Agulhas Leakage. The current flows along the east coast of South Africa and then turns back on itself flowing into the Indian Ocean. But during this process (known as a retroflexion), large pockets of warm, salty, Indian Ocean water are pinched off from the current. They form ring-like structures called Agulhas Rings or eddies which are massive spinning vortices. These eddies slowly head north-westwards, crossing the South Atlantic Ocean and eventually feed into the Gulf Stream which flows along the east coast of North America.”

The results of the marine fauna impact assessment undertaken by Pisces Environmental Consulting (Pty) Ltd (2018)<sup>80</sup> in the draft EIA report suggests that the impact of a large-scale crude oil blowout on benthic

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<sup>75</sup> Page 74

<sup>76</sup> R. Williams, A.J. Wright, E. Ashe, L.K. Blight, R. Brintjes, R. Canessa, C.W. Clark, S. Cullis-Suzuki, D.T. Dakin, C. Erbe, P.S. Hammond, N.D. Merchant, P.D. O'Hara, J. Purser, A.N. Radford, S.D. Simpson, L. Thomas, M.A. Wale Impacts of anthropogenic noise on marine life: publication patterns, new discoveries, and future directions in research and management; *Ocean Coast. Manag.*, 115 (2015), pp. 17-24

<sup>77</sup> Ragnarsson, S.Á., Burgos, J.M., Kutti, T., van den Beld, I., Egilsdóttir, H., Arnaud-Haond, S. and Grehan, A., 2017. The impact of anthropogenic activity on cold-water corals. *Marine Animal Forests: The Ecology of Benthic Biodiversity Hotspots*, pp.1-35.

<sup>78</sup> <http://www.observer.com/na/index.php/business/item/7983-tuna-fishing-industry-under-threat>

<sup>79</sup> <https://www.news.uct.ac.za/article/-2017-07-19-why-deeper-insights-into-the-agulhas-current-can-shed-light-on-climate-patterns>

<sup>80</sup> At page 77.



invertebrates would be of minor consequence and of overall minor significance. The magnitude of the impact on pelagic fish and larvae would be of moderate consequence and of overall minor significant with effective clean-up operations. The impact was considered to be partially reversible.

It is disputed that the magnitude of oil spill/blow can be considered of minor significance. Following a blowout, the effects of toxicity may persist. There is research to support this which state that macrobenthic species richness, diversity, and evenness were severely impaired within a radius of approximately 1 km around an oil spill wellhead.<sup>81</sup>

Due to the speed of the currents, toxic material will be carried further than 29km, potentially impairing macrobenthic species richness, diversity, and evenness along the entire coast. The comments refuting a minor impact on fish and fish larvae can be found throughout this draft EIA report as well as the marine ecology report.

## **2.7 Marine Heritage Study**

### **ANNEXURE D3**

The draft EIA report details the rich marine cultural heritage of the South African coastline, specifically the east coast, including the existence of 2400 shipwrecks, thousands of pre-colonial shell middens and large numbers of tidal fish traps, which reflect prehistoric human exploitation of marine resources since the Middle Stone Age, more than 150,000 years ago as well as pre- colonial terrestrial archaeological sites and palaeolandscapes which are now inundated by the sea.

On p144 it states that: “gaps in South Africa’s underwater cultural heritage record mean that the potential does exist for currently unknown or unrecorded wrecks to be present within the study area”.

In spite of this, the commissioned Marine Heritage Study is a desktop study undertaken in May 2018 and consists of only three pages. “Seven wrecks, of which five are World War II -Boat Casualties, are recorded as having been lost within the area covered by Block ER 236, however the bulk of the wrecks discussed in this report or modern (i.e. 20<sup>th</sup> Century) but are all older than 60 years of age and are thus protected by the Natural Heritage Resources Act.”

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<sup>81</sup> Washburn, T.W., Reuscher, M.G., Montagna, P.A., Cooksey, C. and Hyland, J.L., 2017. Macrobenthic community structure in the deep Gulf of Mexico one year after the Deepwater Horizon blowout. Deep Sea Research Part I: Oceanographic Research Papers, 127, pp.21-30.

Given the brief assessment, recommendations were made for the Area of Interest and include using pre-drill remote sensing data and video to establish whether there are any shipwrecks on the seabed in the area of interest.

It is highly unlikely that work will be forced to cease if important findings are made after the necessary sensing and video testing have been done. Especially after the expense of getting the drill rigs to the sites. It is also highly unlikely that the public will have the opportunity to see these results and comment thereon after the EA has been issued.

It is essential that the recommendations are followed and the results thereof form part of the EIA process for the inclusion of public comment thereon.

## **2.8 Other Impacts not adequately Addressed**

### **2.8.1 Climate Change**

The impacts of climate change in the South African scenario are set out on page 68 of the draft EIA report. However, the impact of the proposed activity on climate change is not addressed.

A climate change risk assessment has not been done to assess the risks of further reliance on fossil fuels. In the Thabametsi case (Case number: 65662/16)<sup>82</sup>, the court considered the quality and form of climate change impact assessment required when a competent authority assesses an application for environmental authorisation in South Africa. Notwithstanding the lack of an express legal obligation to conduct a focused climate change impact assessment, the court ruled that climate change is a relevant consideration when granting an environmental authorisation, and a formal expert report on climate change impacts is the best evidentiary means to consider climate change impacts in their multifaceted dimensions.

The cumulative effect on the climate must be considered and not the proposed activity in isolation.

Oil facilities generate tons of methane and carbon dioxide. The production process, in addition to the energy consumed during exploration, construction, transportation, and other phases of the industrial project, will burn enormous quantities of fossil fuels. Already we are observing changes such as the spread of kelp eastward in the Cape and Spotted grunter and other fish moving south. Climate change will also exacerbate swells and rogue waves which will pose a threat to ships of all nature. Various independent observations have

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<sup>82</sup> <https://cer.org.za/wp-content/uploads/2017/03/Judgment-Earthlife-Thabametsi-Final-06-03-2017.pdf>

already been made for extreme swells<sup>83</sup> as well as storm wave focusing and steepening in the Agulhas current<sup>84</sup>.

The draft EIA report and the EMPr cannot be considered until such time as the impact and mitigatory measures are included.

### **2.8.2 Environment**

Damage from oil spills and other industrial activities could be drastic and long-lasting. New and risky industrial activities should not begin until South Africa's marine ecosystems are sufficiently protected, a comprehensive system of marine protected areas established, and careful scientific study and assessment done to produce convincing evidence that any new industrial activities pose little threat to the environment.

The draft EIA report does not adequately detail how the area's unique ocean currents and weather patterns will affect spills and their cleanup operations. Nor does it establish the impact that oil would have on the marine ecosystem, beaches, tourism, and marine protected areas.

Potential long-term and massive environmental harm is downplayed in the draft EIA report. The damage that will be caused by a large spill to the environment, and to the industries that depend on it, was made clear by the Exxon Valdez accident of 1989, which killed an estimated 100,000 to 250,000 seabirds, at least 2,800 sea otters, 300 harbour seals, 247 bald eagles, and 22 orcas, and destroyed billions of salmon and herring eggs. In subsequent years, sea otters and harlequin ducks suffered higher death rates, in part because they ate prey from contaminated soil and ingested oil residues on their bodies while grooming.<sup>85</sup>

Under the heading of "Marine Mammals" (on page 92) the report states: "The offshore areas have been particularly poorly studied in which case almost all available information from deeper waters (>200 m) is based on historic whaling records, and information on smaller deep water species is particularly poor".

Phytoplankton, zooplankton, other invertebrates, and their consumers, such as larger zooplankton and fish, can be destroyed immediately on contact by oil and are especially vulnerable during extended periods of exposure. Even when oil does not quickly kill an animal, it can damage its eyes or cause skin irritations. Such

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<sup>83</sup> Mallory, J.K., 2015. Abnormal waves on the south east coast of South Africa. The International Hydrographic Review, 51(2).

<sup>84</sup> Quilfen, Y., Yurovskaya, M., Chapron, B. and Ardhuin, F., 2018. Storm waves focusing and steepening in the Agulhas current: Satellite observations and modelling. Remote sensing of environment, 216, pp.561-571.

<sup>85</sup> Exxon Valdez Oil Spill Trustee Council, "Facts," <http://www.evostc.state.ak.us/facts/qanda.cfm>.

problems can compromise the animal's ability to reproduce, avoid predators, and find food and shelter. Survival becomes more of a challenge.<sup>86</sup> The impact of a spill is likely to be magnified by ocean currents which can move oil and chemicals substantial distances.

The potential impact on the marine life and ecology, particularly on threatened or endangered species, is not adequately addressed in the draft EIA report.

The occurrence of deep water corals in Block ER 236 and the areas of interest are confirmed in the draft EIA report as "unknown" and it further admits that "[d]ue to **limited opportunities for sampling**, information on the pelagic and demersal communities of the shelf edge, continental slope and upper and lower bathyal are largely unknown. Consequently, much of the information on the baseline environment provided relates to the inshore (shallow waters prior to where the shelf of the Thukela Bank starts dropping off, on average less than 50 m water depth) and continental shelf (water depths less than 200 m1) regions, which fall within the Natal Bioregion" [our emphasis].

The ERM Peer review states on pg 4 that; "The ocean currents, water temperature and salinity used in the oil spill modelling were obtained from the HYCOM (HYbrid Coordinate Ocean Model) global circulation model. Although this is a well-established model, **no validation of the results in the study area was presented**, e.g. a comparison to local current meter measurements would be expected. Further, only a single snapshot in time of the current field was provided. Current roses or time-series would have provided evidence that the temporal characteristics of the currents applied in the model were realistic."

In light of the above, the draft EIA report has failed to show an in-depth study of the area and adequate understanding of the ecosystem. This is not only a legal requirement of the EIA report but should be a high priority given that the draft EIA report itself identifies: "[a] large proportion of the Estuaries along the East Coast (particularly those found along the 'Wild Coast' (1)) have been identified nationally as being of high biodiversity and ecological importance (i.e. the Mngazana and Mbashe estuaries). This relates to the pristine nature of many of the estuaries found along this coastline. In particular, Mngazama estuary (found along the 'Wild Coast') has been rated in the top 20 estuaries in South Africa, while another nine have been rated within the top 50 estuaries in South Africa (Reyers & Ginsburg, 2005)".

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<sup>86</sup> C.H. Peterson et al., "Long Term ecosystem Response to the Exxon Valdez Oil Spill," *Science* 302 No. 5653 (2003): 2082-2086.

There is not enough detail given on the nature of the Indian Ocean, its currents, the narrow continental shelf, the 15 metre waves often recorded off the Transkei Coast (aptly termed the “Wild Coast”) to adequately address the risks of drilling off this coast. The draft EIA report states at p4-142 that: “South Africa’s rugged and dangerous coastline has witnessed more than its fair share of shipwrecks and maritime dramas in the last 500 years. At least 2,400 vessels are known to have sunk, grounded, or been wrecked, abandoned or scuttled in South African waters since the early 1500s.”

Nowhere on Earth has oil development occurred without spills and other incidents. Even if there were no such calamities, vessel traffic and other commercial activity generated by oil development would take a toll on the environment. For every 1,000 wells in state and federal waters, there’s an average of 20 uncontrolled releases of oil — or blowouts — every year. A fire erupts offshore every three days, on average, and hundreds of workers are injured annually.<sup>87</sup>

The draft EIA report fails to adequately address these issues and fails to adequately address the potential environmental impacts of this project.

The National Environmental Management Act (NEMA) requires that development be socially, environmentally and economically sustainable<sup>88</sup> and the Brundtland Commission defined sustainable development as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.<sup>89</sup> With the limited knowledge of the impacts of seabed exploration alongside limited knowledge of the ecological importance of the seabed ecosystems, and the social-economic impacts thereof, there is a strong need to establish baseline information prior to environmental authorisation been given.

In 2013, the DEA, the DMR, the South African Mining and Biodiversity Forum, The South African Biodiversity Institute and the Chamber of Mines published the South African Mining and Biodiversity Guideline.<sup>90</sup> This offers guidance on how to include biodiversity issues into the operational phases of mining. Page 49 of the document states:

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<sup>87</sup> [https://www.washingtonpost.com/national/health-science/a-14-year-long-oil-spill-in-the-gulf-of-mexico-verges-on-becoming-one-of-the-worst-in-us-history/2018/10/20/f9a66fd0-9045-11e8-bcd5-9d911c784c38\\_story.html?utm\\_term=.4ae8769c12c3](https://www.washingtonpost.com/national/health-science/a-14-year-long-oil-spill-in-the-gulf-of-mexico-verges-on-becoming-one-of-the-worst-in-us-history/2018/10/20/f9a66fd0-9045-11e8-bcd5-9d911c784c38_story.html?utm_term=.4ae8769c12c3)

<sup>88</sup> Section 2(3)

<sup>89</sup> <http://www.un-documents.net/our-common-future.pdf>

<sup>90</sup> Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013. Mining and Biodiversity Guideline: Mainstreaming biodiversity into the mining sector. Pretoria. See: [https://www.environment.gov.za/sites/default/files/legislations/miningbiodiversity\\_guidelines2013.pdf](https://www.environment.gov.za/sites/default/files/legislations/miningbiodiversity_guidelines2013.pdf)

The EIA is a fundamental input into the EMP, which becomes the main tool for managing environmental impacts. It is important that the applicant integrates biodiversity information into the three broad requirements for the EIA and development of the EMP<sup>91</sup>:

- a. **Establish baseline information** on the affected environment to determine protection, remedial measures and environmental management objectives.
- b. **Investigate, assess and** evaluate the impact of mining on the environment, socio-economic conditions and national heritage.
- c. Describe how actions/activities/ processes which **cause pollution** or environmental degradation and migration of pollutants are to be **mitigated** (modified, remedied, controlled or stopped).

*“Baseline information must be sufficient to enable the reliable identification of biodiversity priority areas, as described above, that might be impacted during the mining life cycle. Baseline information records the ‘pre-mining’ environmental condition. In order to assess and evaluate the potential significance of impacts on biodiversity and ecosystem services, it is also important to consider any background trends that may be affecting their conservation status or integrity. In some areas, such as in marine ecosystems,<sup>92</sup> extensive baseline information is not available. Biodiversity specialists will play an important role in these cases... the cumulative impacts of mining may be highly significant when viewed against these trends.*

Outcomes of a baseline survey of the area must form part of the draft EIA report and EMP to be made available for public comment. This is a vital aspect of the report in order to properly assess the potential impact of the operations on the area. In this instance it is particularly important given that the ecological assessment does not adequately cover the area in question and therefore the impact has not been properly assessed.

NEMA requires that a risk-averse and cautious approach is applied, which must consider the limits of current knowledge about the consequences of decisions and actions, as well ensuring that global and international responsibilities relating to the environment are discharged in the national interest. The International Seabed Authority<sup>93</sup> discussion paper on The Implementation of the Precautionary Approach by the International

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<sup>91</sup> Section 39(3) Mineral and Petroleum Resources Development Act

<sup>92</sup> Our emphasis.

<sup>93</sup> The International Seabed Authority is an autonomous international organisation established under the 1982 United Nations Convention on the Law of the Sea and the 1994 Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea. The Authority is the organisation through which States Parties to the Convention shall, in accordance with the regime for the seabed and ocean floor and subsoil thereof beyond the limits of

Authority<sup>94</sup> finds that three dimensions should be involved in the implementation of the precautionary approach: the procedural, the institutional and the taking of protective measures. Importantly, procedural dimensions encompass assessments of the environmental risks and impacts, including cumulative and long-term impacts. It also includes assessment of the effectiveness and proportionality of potential protective measures as well as any potential counter-effects of these measures. This international policy has not been adequately considered in the draft EIA report.

Aside from the limitations of the draft EIA report mentioned above, the environmental impacts in the draft EIA report have been considered on a project basis only. Given that environmental processes, particularly in the ocean, are not confined to the 'blocks' that have been allocated to mineral rights, the implementation of the operations authorised by the rights will have a significant impact on the seascape, marine life and ecosystem functionality.

In terms of Section 2(d) of Appendix 3 of the EIA regulations (GN R982, 2017) the objective of the environmental impact assessment process is to, through a consultative process, determine *inter alia* the:-

1. Nature, significance, consequence, extent, duration and probability of the impacts occurring to prefer preferred alternatives; and
2. Degree to which these impacts-
  - a. can be reversed;
  - b. may cause irreplaceable loss of resources, and
  - c. can be avoided, managed or mitigated.

Bizarrely, on pg 64 of the draft EIA report it is stated that "some impacts will result in changes to the environment, that may be immeasurable, undetectable, or within the range of normal variation. Such changes are regarded as having no impact and characterised as having negligible magnitude". This means that immeasurable or undetectable impacts are not considered in this report and given negligible status. This is obviously untenable and the makes the whole process fatally flawed.

It is a legal requirement that the EIA process must effectively identify the nature, significance and extent of the impacts, which the current process has failed to do.

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national jurisdiction (the Area) established in Part XI and the Agreement, organise and control activities in the Area, particularly with a view to administering the resources of the Area. South Africa is a member state and became a party to the agreement on 23 December 1997. See: <https://www.isa.org.jm/authority>

<sup>94</sup> <https://www.isa.org.jm/files/documents/EN/Pubs/DPs/DP5.pdf>

In terms of Section 2(f) of Appendix 3, it is also an objective of the EIA process to identify the ideal location for the activity as contemplated in the accepted scoping report ‘based on the lowest level of environmental sensitivity identified in the assessment’.

Given that no baseline assessment has been done, and that the ecosystem and the marine heritage has not been adequately assessed, this has not been complied with and the EIA process is not complete.

## 2.9 Socio-Economic Baseline

### ANNEXURE D8

The Constitutional Court, in *Fuel Retailers Association of Southern Africa v Director-General; Environmental Management, Mpumalanga Province, and Others 2007 (6) SA 4 (CC)* held *inter alia* that: “One of the purposes of the public participation process provision in NEMA is to afford people the opportunity to express their view on the desirability of a [project] that will impact on socio-economic conditions affecting them...[Socio-economic development must be justifiable in the light of the need to protect the environment... [The applicant] must identify and predict the actual or potential impact on socio-economic conditions and consider ways of minimising negative impact while maximising benefit.”<sup>95</sup>

The draft EIA report has focused its socio-economic baseline on the local municipalities in which the logistics base may be located, namely eThekweni Metropolitan Municipality and the City of uMhlathuze Local Municipality.

Despite indicating that the it would describe ‘key... socio-economic resources... in areas potentially affected by the project’ and ‘provide data to aid the prediction and evaluation of possible impacts’,<sup>96</sup> the draft EIA report has failed to identify, predict or quantify the actual or potential impact on the socio-economic conditions of these areas nor the entire coastline that may be affected by an environmental disaster associated with the project (nor have the impacts of a catastrophic spill on the broader South African economy been described or quantified). It is dismissed in the following statements:

*“In the event of an accidental spill, effects may be felt along the East Coast through KZN and the Eastern Cape, which could affect marine and coastal- based livelihoods such as fisheries, (both commercial and subsistence) and the tourism sector”*<sup>97</sup>

and

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<sup>95</sup> Para 62 per Ngcobo J for the majority.

<sup>96</sup> Draft EIA report para 1.3.4 p6.

<sup>97</sup> Page 108 of the draft EIA report.



“Block ER236 is located from 20 km offshore and the Area of Interest is over 60 km offshore. The project will have a limited impact of tourism activities during routine operations. There is a possibility that the offshore recreational boat-based fishing activities could be affected if they travel offshore and into Block ER236. *Tourism in the Area of Direct Influence*”.

Further to this, the draft EIA report refers to 14 commercial fisheries and recreational fishing that takes place off the South African coast and simply concludes that:

- “The fishing sectors that overlap with Block ER236 or may potentially be affected by the project activities are described in this section”<sup>98</sup>;
- “The fishery operates extensively within the South African EEZ, primarily along the continental shelf break and further offshore;
- As indicated in *Figure 4.31*, the Block ER236 coincides with the spatial distribution of pelagic long-line fishing effort.
- The spatial distribution of line-fishing effort coincides with inshore areas of Block ER236.
- *Figure 4.36* indicates the location of fishing grounds in relation to the Block ER236. There is a potential overlap of the crustacean trawl fishery with the Block ER236.

The socio-economic impact study is not an impact study at all but a baseline assessment of only a few areas that will be impacted by the proposed operations and/or negative effects of the operations. There has been no attempt to quantify the socio-economic impact of the proposed project and thus the public and decision-maker is unable to balance potential benefits against potential costs (economic, social and environmental).

The draft EIA report should assess existing oil and gas social impact assessment approaches and work with local stakeholders to improve their understanding of the vulnerabilities and risks affecting potentially impacted communities. The potential impact of oil exploration on the socio-economic well-being of communities<sup>99</sup> should be addressed as well as the potential effects of an oil spill on tourism, fisheries and government coffers in the event of a huge clean-up. The draft EIA report fails to provide a meaningful expert report on any of the above and therefore fails to properly identify and assess the impact.

There is no attempt to address the impact of the operations on the fisheries nor any attempt to discuss mitigatory measures. The draft EIA report details the economic value of the subsistence fishing industry but

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<sup>98</sup> Page 125 *ibid*.

<sup>99</sup> <http://article.sciencepublishinggroup.com/pdf/10.11648.j.ajere.20170202.13.pdf>

there is no attempt to address the potential impact on the commercial, recreational or subsistence fishing industry by the proposed project.

It is estimated that the value contribution of ocean fisheries in 2010 to the South African GDP at R15.412 billion, and for the mariculture sector at R0.217 billion, whilst Operation Phakisa estimated the fisheries and aquaculture sector at R7 billion in 2010<sup>100</sup>. If the oil and gas exploration is founded on the principles of Operation Phakisa and it has undervalued the fishery sector, this should be mentioned in the fisheries report to allow for a thorough public participation process on this vital aspect.

The draft EIR report must be redone to include a substantial section on these social-economic aspects of the proposed project to allow a proper public participation process to be followed in line with the Constitutional Court decision in Fuel Retailers mentioned above.

## 2.10 The EMPr

The EMPr has failed to fulfil the requirements listed in section 24N of NEMA in, *inter alia*, the following respects:

- Lack of identification of the environmental impacts of the proposed project and resulting lack of information on any proposed management, mitigation, protection or remedial measures that will be undertaken to address the environmental impacts;
- The information in respect of the mechanisms proposed for monitoring compliance with the environmental management programme and for reporting on the compliance are set out in a simple table which states “Monitoring will include, but not limited to the following”. This cannot be seen to be adequate for a project of this nature;
- Lack of detail on the measures to rehabilitate the environment in the event of a large spill or blowout;
- No time periods within which the measures contemplated in the environmental management programme must be implemented. Vital information that should form part the EMPr are not available now. Such as:-
  - the drilling programmes will only be submitted to PASA and SEA 30 days prior to commencement of the operations.
  - Emergency plans including the Shipboard Oil Pollution Emergency Plan, the Project-specific OSCP approved by SAMSA, ENI’s approved plan and Pollution Safety Certificate, the Waste

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<sup>100</sup> Hosking, S., Du Preez, D., Kaczynsky, V., Hosking, J., Du Preez, M. and Haines, R., 2014. The economic contribution of the ocean sector in South Africa. *Studies in Economics and Econometrics*, 38(2), pp.65-82.

Management Plan, adequate protection and indemnity insurance cover for oil pollution and incidents, record of the drilling units and support vessel's seaworthiness etc. are only required "prior to commencement of operation" and thereby skipping the public participation process.

- No measures regulating responsibilities for any environmental damage, pollution, pumping and treatment of polluted or extraneous water or ecological degradation which may occur inside and outside the boundaries of the operations in question are detailed.

Given that the EMPr fails to comply with the requirements of the Act, it must be redone.

## **2.11 Determination of Financial Provision related to Plugging and Abandonment**

### **Annexure E**

A one-pager is provided budgeting US \$ 8,9 million for plugging and abandonment of the proposed exploration wells.

When an application is made for an EA relating to prospecting, explorations, mining or production operations it is compulsory that an applicant provide the necessary 'financial provision for the rehabilitation, closure and ongoing post-decommissioning management of negative environmental impacts'. Such financial provision serves as a rehabilitation guarantee and must be provided prior to the granting of the environmental authorisation.<sup>101</sup> In the event that the holder of the a right under the Mineral and Petroleum Resources Development Act 28 of 2002 fails to rehabilitate or satisfactorily manage environmental impacts, the financial provision will enable to the authorities to rehabilitate and manage the environmental impact.<sup>102</sup> Holders are placed under an obligation to annually assess their potential environmental liability and adjust the financial provision to the satisfaction of the minister responsible for mineral resources.

In the recently gazetted 2018 amendment, the Minister allows the holders of existing offshore exploration and production rights, who applied for such rights prior to 20 November 2015, an extension until February 2024 to comply with the NEMA Financial Provision Regulations. In the meantime, such holders are regarded as 'having complied with the provisions of these Regulations if such holder has complied with the provisions and arrangements regarding financial provisioning, approved as part of the right issued in terms of the [MPRDA]'.

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<sup>101</sup> Section 24P(1) of NEMA.

<sup>102</sup> Section 24P(2) of NEMA.

No proof of financial provision given for potential environmental damage from a spill or blow-out has been given in the draft EIA report and considering the estimated \$20 billion potential cost to company (or the authorities) in the event of a catastrophic spill, this is a fatal flaw in the document.

The draft EIA report indicates in Table 9.8 (section 2) in relation to preparation for any emergency that could result in an environmental impact that Eni and the drilling contractor are to ensure that there is '*adequate protection and indemnity insurance cover for oil pollution incidents*'.<sup>103</sup> However, not only have the costs (including the socio-economic costs) that could result from a catastrophic oil spill not been quantified, but no detail is provided on the level of insurance cover that Eni will be required to carry. Further to this, the draft EIA report states<sup>104</sup> that 'Section 52 of the SAMSA Act, however, delegates the responsibility for combatting pollution of the sea and shoreline by oil to the Minister of Environmental Affairs (DEA). **The implication of this is that the DEA is responsible for the protection and clean-up measures to be taken once oil has been released into the sea**, while SAMSA's responsibilities are limited to those actions required while the oil is within the confines of the ship.' (emphasis added).

When considering an application for EA, one of the aspects that the authority is legally obliged to take into account is the ability of the applicant to implement mitigation measures to prevent, control, abate or mitigate any pollution, substantially detrimental environmental impacts or environmental degradation.<sup>105</sup> This should be provided for without risking the funds having to come out of the taxpayer's coffers. Based on the content of this draft EIA report, and without adequate determination of financial provision, the authority would be remiss in authorising this application.

## 2.12 Public Participation

### ANNEXURES B1-B7

Principle 7 established by section 2(4)(f) of NEMA calls for the participation of all interested and affected parties in environmental governance. The draft EIA report must include "any responses by the EAP to comments made by interested and affected parties."<sup>106</sup> Section 22(4)(b) of the MPRDA requires an applicant for a mining right to "consult in the prescribed manner with the landowner, lawful occupier and any interested and affected party."

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<sup>103</sup> Draft EIA report, Table 9.8, at page 270.

<sup>104</sup> Draft EIA report 2.3.6 p22

<sup>105</sup> See section 24 0(1)-(3) of NEMA.

<sup>106</sup> EIA regulations, 2017 GN R982, Appendix 3, 3(1)(s)(iv)

The Mining and Biodiversity Guideline<sup>107</sup> published in 2013 states on page 47 that

“where mining is likely to affect biodiversity priority areas, there may be a greater number of stakeholders who are concerned with the proposal or activity and its consequences, as well as more local and downstream users of ecosystem goods and services who might be affected. Not only would a failure to tackle stakeholder engagement properly in such areas pose an almost certain risk to the mining company and its proposal or activity, but thorough stakeholder analysis is also the key to identifying potential conservation partners in addressing biodiversity issues, managing impacts effectively and implementing biodiversity offsets.”

While the Guideline refers to terrestrial mining, the stakeholder engagement aspects of the document must be used to guide the current process and a more robust engagement process should be undertaken. Relevant stakeholders include those individuals, groups, communities, organisations, associations or authorities whose interests may be positively or negatively affected by a proposal or activity (e.g. local and downstream users of ecosystem goods and services) and/or who are concerned with a proposal or activity and its consequences.

The preparation of Public Participation Guidelines for Stakeholders in the Mining Industry was coordinated by the Consultative Forum on Mining and the Environment (2002)<sup>108</sup> and states:

“A public participation process is not only evaluated by minimum legal requirements. As it is, current South African legislation and the NEMA principles leave the door wide open for disagreement on whether a process was adequate or not. Different players evaluate public participation by different sets of requirements, each of which must be satisfied if it is to be deemed adequate by all players. These sets of requirements are:

- Letter-of-the-law legal requirements.
- Stakeholder requirements in terms of the international good-practice guidelines for public participation
- Proponent requirements in terms of whether the public participation process resulted in an increase or decrease in the company’s social risk.”

Of relevance to the proposed project is the guideline on page 15 which states that the level of effort for technical environmental evaluation and public participation will increase with aspects such as the size of footprint of impacts, a new development in a previously undisturbed area, where aggregate and cumulative impacts are anticipated to be significant, and the number of issues expected to be raised by the authorities and other stakeholders that would need to be incorporated into the specialist assessments. By implication, the more specialist studies, the more stakeholder groups will be involved, increasing the time and cost of the public participation process. The sensitivity of public perceptions is often linked to the sensitivity of the receiving environment, also increase the level of effort needed in the public participation process.

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<sup>107</sup> Department of Environmental Affairs, Department of Mineral Resources, Chamber of Mines, South African Mining and Biodiversity Forum, and South African National Biodiversity Institute. 2013.: Mainstreaming biodiversity into the mining sector. Pretoria

<sup>108</sup> [https://commdev.org/userfiles/files/725\\_file\\_CMSA\\_PPGuide.pdf](https://commdev.org/userfiles/files/725_file_CMSA_PPGuide.pdf)

it strongly recommended that the EAP follows this Guideline to help ensure a fair, productive and thorough public and stakeholder engagement going forward given that the magnitude, novelty and complexity of the proposed project suggests that the public participation process should be more vigorous than most.

As noted in section 3.2 above, the comments put forward by the South Durban Community Environmental Alliance and Dr Chernaik have not been satisfactorily responded to by the EAP in the draft EIA report and neither are the submissions and comments made by other I&APs thereby failing to comply with the requirements of the MPRDA and NEMA.

As repeatedly mentioned throughout this document, the draft EIA report is so severely lacking in material information that the public participation process cannot be seen to be complete. Regulation 41(6) of the EIA regulations<sup>109</sup> requires that information containing all relevant facts in respect of the application be made available to I&APs. Further to this, our specific queries sent to ERM in a letter dated 3 November 2018 (Annexure WO1), were never addressed. Accordingly, the draft EIA report must be redrafted after the missing detail and relevant facts are addressed so that it can be released for further comment with appropriate time frames to allow for meaningful engagement.

### **2.13 Authority Communications**

#### **ANNEXURE C**

The authority communications are limited to letters from PASA. It is expected that the Department of Environmental Affairs (DEA) would be communicated with given that the protection of the coast, the ocean and the species within the ocean, is DEA's mandate. It is clear from Annexure B6 that the DEA registered as an Interested and Affected Party however no comments and responses are included in the draft EIA report. If DEA has been part of the consultation process, the correspondence and any comments received must be included.

If DEA has not been part of the participation process, it is submitted that they must immediately be advised to submit their comments and actively take part in the process.

### **2.14 Failure to give reasonable opportunity to make representations in respect of resubmission of approved Scoping Report after lapsing of EIA process**

It is submitted that PASA's decision to accept ENI's previously approved scoping report upon resubmission of

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<sup>109</sup> GN R982 in GG 38282 of 4 December 2014 as amended by GN R326 in GG 40772 of 7 April 2017.

the EIA application (after it had lapsed) was in breach of the mandatory provisions of s3 of the Promotion of Administrative Justice Act, 2000 (PAJA), which give effect to section 33 of the Constitution.

Section 3 of PAJA requires that administrative action which materially and adversely affects the rights or legitimate expectations of any person must be procedurally fair, while subsection 2(b)(ii) stipulates that in order in order to give effect to the right to procedurally fair administrative action, an administrator must give that person:

- (i) adequate notice of the nature and purpose of the proposed administrative action;
- (ii) **a reasonable opportunity to make representations;**
- (iii) a clear statement of the administrative action;
- (iv) adequate notice of any right of review or internal appeal, where applicable; and
- (v) adequate notice of the right to request reasons in terms of section 5.

Regulation 21 of the EIA Regulations provides as follows regarding submission of scoping report to competent authority:

- (1) If S&EIR must be applied to an application, the applicant must, within 44 days of receipt of the application by the competent authority, submit to the competent authority a scoping report which has been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority.
- (2) Subject to regulation 46, and if the findings of the scoping report is still valid and the environmental context has not changed, **the submission of a scoping report as contemplated in subregulation (1) need not be complied with:**
  - (a) in cases where a scoping report was accepted as part of a previous application for environmental authorisation and the application has lapsed or was refused because of insufficient information;
  - (b) **on condition** that regulation 16 is complied with and **that such application is accompanied by proof that registered interested and affected parties, who participated in the public participation process conducted as part of the previous application, have been notified of this intended resubmission of the application prior to submission of such application;**
  - (c) if the application contemplated in paragraph (b) is submitted by the same applicant for the same development, as applied for and lapsed or refused as contemplated in paragraph (a); and
  - (d) if an environmental impact assessment report inclusive of specialist reports and an EMPr, which must have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority, is submitted within a period of two years from the date of the acceptance of the scoping report contemplated in paragraph (a).
- (3) A scoping report must contain all information set out in Appendix 2 to these Regulations or comply with a protocol or minimum information requirements relevant to the application as identified and *gazetted* by the Minister in a government notice.

On 13 August 2018, ERM wrote to stakeholders advising as follows:

**From:** ERM South Africa Project ENI Offshore Exploration [<mailto:eni.exploration.eia@erm.com>]  
**Sent:** 13 August 2018 12:36 PM  
**Subject:** EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa: Notification of Lapse of EIA Application

*ERM Ref: 0414229*

*Exploration Right Number: 12/3/236*

**RE: EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa: Notification of Lapse of EIA Application**

Dear Stakeholder,

ERM has experienced unforeseen delays in the finalising of specialist studies for the Exploration Drilling within Block ER236, which have resulted in subsequent delays in the drafting of certain chapters of the EIA Report. Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the final EIA Report by the 03 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. As such, the current EIA Application lapsed on the 03 August 2018.

Eni intend to initiate a new EIA process for the Project. The Final Scoping Report was submitted to PASA on the 08 March and approved on the 16 April 2018. ERM are confident that the baseline environmental and social conditions described in the Scoping Report have not changed since the Scoping Report was compiled. **In line with Section 21(2)(a) and (b) of the NEMA EIA Regulations, ERM are seeking to commence the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment. All I&APs registered on the stakeholder database will receive notification when a new EIA process has been initiated.**

Please do not hesitate to contact us should you have any queries or if there are any aspects you would like to discuss.

On 29 September 2018, ERM wrote to stakeholders by email advising as follows:

*ERM Ref: 0414229*

*Exploration Right Number: 12/3/236*

**RE: EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa:  
Commencement of EIA Process and Release of Draft EIA Report for Public Comment**

Dear Stakeholder,

Eni South Africa BV (Eni), and Sasol Africa Limited (Sasol) hold an Exploration Right 12/3/236 (ER 236) off the East Coast of South Africa. Eni has the operatorship of Block ER236. Eni and Sasol



are considering the possibility of conducting an exploration drilling programme in Block ER 236 to assess the commercial viability of the hydrocarbon reservoir for future development. The project requires Environmental Authorisation (EA) from the National Department of Mineral Resources (DMR) under the National Environmental Management Act (NEMA) (Act No. 107 of 1998), as amended, through an Environmental Impact Assessment (EIA) process.

An EIA process was commenced in January 2018 with the release of a Draft Scoping Report. The Final Scoping Report was approved by PASA on 16 April 2018. ERM experienced unforeseen delays in the finalising of specialist studies which resulted in subsequent delays in the drafting of the EIA Report. Consequently, ERM was not able to finalise and release the draft report for comment and comply with the stipulated 106 day timeframe in which to submit the final EIA Report by the 03 August 2018, as prescribed in Section 23(1)(a) of the NEMA EIA Regulations. **As such, the EIA Application lapsed on the 03 August 2018. A new EIA process has commenced, which was approved by PASA on 29 August 2018, successive to the approval of the Scoping Report on 16 April 2018.**

While I&APs were advised that *‘ERM are seeking to commence the new EIA process with the submission of an amended application form and the release of the Draft EIA Report for comment’*, I&APs were merely informed that ERM was seeking to commence a new EIA process, were not clearly notified that ERM was seeking approval of the lapsed scoping report, and were not afforded a reasonable (or for that matter any) opportunity to make representations with regard to ERM’s intention to seek approval of the lapsed scoping report. PASA approved the new EIA process, without affording I&APs an opportunity to make representations regarding this proposed decision, and without providing reasons for its decision to do so.

ERM’s failure to give clear notice of its intention to seek approval of the lapsed scoping report together with its failure to give I&APs a reasonable opportunity to make representations to the administrator effectively prevented I&APs from making representations to the relevant decision-maker, and constitutes a fatal flaw in the EIA authorisation process. This failure breached I&APs rights to procedurally fair decision-making, as contemplated in the Constitution and PAJA.

### 3 CONCLUSION

The draft EIA report has failed to comply with the legal requirements of the EIA regulations as promulgated in 2014<sup>110</sup> in that the draft EIA report has (among other things) failed to:-

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<sup>110</sup> GG 40772, 4 December 2014 as amended by GN R326 in GG 40772 of 7 April 2017.

1. Adequately identify the nature, significance, consequence, extent, duration and probability of the impacts particularly with regard to baseline information and a thorough understanding of the area of interest and oil spill modelling;<sup>111</sup>
2. Identify the manner in which impacts, particularly from a spill or blowout, could be reversed;
3. Detail the irreplaceable loss of resources in the event of the impact, particularly a spill or blowout;
4. Provide details of financial provisions for the rehabilitation, closure and ongoing post decommissioning management of negative environmental impact and, more importantly, the financial security for clean-up in the event of a large spill or blow-out;
5. In addition to point 4 above, adequately determine the policy and legislative context of the financial provisions and particularly the ability of insurance being adequate enough to indemnify the South African taxpayer from having to cover the costs of clean-up;
6. Address the concerns raised during the public participation process;
7. Provide necessary information to inform the public participation process rather than stating that it will be provided “prior to start of drilling operations”;
8. Set out adequate spill response methods and technology effective for the correct predicted volumes;
9. Show that the necessary infrastructure is in place for timely spill response especially given that the infrastructure is on the opposite coastline;
10. Fully explain and substantiate the process of and methodology for assigning significance ratings so as it not to seem arbitrary and subjective;
11. Show adequate understanding of the ecosystem and how it may be affected by oil spills;
12. Ensure protection of marine and coastal wildlife populations (particularly endangered, threatened, vulnerable and protected species);
13. Ensure protection of indigenous subsistence living and in the fishing industry;
14. Prove that oil and gas activities will not result in harm to the marine life and, sensitive and marine protected areas in and around the East Coast of South Africa in the event of a spill or blow-out;
15. Analyse how the project may interact with baseline conditions in order to define, predict and evaluate the likely extent and significance of environmental, social and health impacts that may be caused by the project.

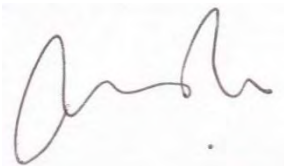
It is therefore necessary to revise the draft EIA report and make it available for further comment.

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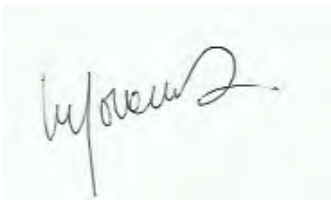
<sup>111</sup> GNR 982 of 2014, Appendix 3, Section 3(h)(v);

[https://www.researchgate.net/publication/288468395\\_The\\_environmental\\_and\\_social\\_impact\\_of\\_petroleum\\_and\\_natural\\_gas\\_exploitation\\_in\\_Nigeria](https://www.researchgate.net/publication/288468395_The_environmental_and_social_impact_of_petroleum_and_natural_gas_exploitation_in_Nigeria)

In spite of requests for an extension of time to consider the draft EIA report and submit comments, WILDOCEANS were not given the requested 30 day extension of time but only a further 14 days. It is hereby placed on record that WILDOCEANS have not been afforded a reasonable timeframe in which to comprehensively comment on the draft EIA report and that queries addressed to ERM in a letter dated 3 November 2018 (Annexure WO1) have not been answered. WILDOCEANS accordingly reserves its right to supplement these comments as and when the questions have been adequately responded to and WILDOCEANS' experts have had the opportunity to properly assess these with the content of the draft EIA report and annexures.



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Attention:  
Ms Vicky Stevens  
Per Email: [eni.offshore.eia@erm.com](mailto:eni.offshore.eia@erm.com)

3 November 2018

Dear Ms Stevens

**EIA for Exploration Drilling within Offshore Block ER236, KZN, South Africa**

1. We refer to our letter dated 11 October 2018, to your emailed response dated 26 October 2018, and to Adrian Pole's telephone conversation with PRDW's Mr S. Luger on 2 November 2018.
2. We note that the time period within which to comment on the draft EIA report was extended by two weeks to 8 November 2018. Having regard to the complexity of the EIA report and annexures, taken together with the scale of the anticipated impacts of a catastrophic oil spill, the high sensitivity of the potentially affected environment (including but not limited to sensitive open ocean, coastal and estuarine areas), and the high degree of controversy of the project, we persist with our view that the time period afforded to I&APs to review the relevant documentation, obtain necessary technical advice and input, and to draft comments/submissions is unreasonable.
3. We also note your offer to facilitate a call between ourselves and the oil spill modellers (and other specialists) to allow us an opportunity to engage with them and ask questions. We have attempted to speak directly with Mr. S. Luger of PRDW to seek clarification on some aspects of his *Peer Review of ERM Spill Report*, but were advised to submit our queries through ERM by email.
4. In the circumstances, we set out below some of our queries in respect of ERM's Oil Spill Modelling (OSM) report and PRDW's *Peer Review of ERM Spill Report*:
  - 4.1. ERM indicates at p116 of its OSM report in response to PRDW Comment #2 that the 'input data for the model run are based on lithology and preliminary reservoir assessment and interpretation starting from seismic data. During the second quarter of 2018, new data interpretation were available from 2D/3D seismic data acquired by some multi-client providers in 2016 and 2018'.
    - (a) Did ERM (or anyone else) run a modelling on the previous data (i.e. before the new data became available during the second quarter of 2018)? If so, please provide us with a copy of

these modelling results and any previous versions of the OSM report reflecting these results.

- (b) If a modelling on the previous data was run, did PRDW review this previous model? If so, please provide us with a copy of the Peer Review report/s of this previous modelling.
- (c) Did ERM review the new data and independently verify its reliability?
- (d) Did PRDW review the new data and independently verify its reliability?
- (e) Has the previous and new seismic data been included in the EIA report or annexures? If not, please provide us with same, alternatively with your explanation for not including this data in the EIA report or annexures.

4.2. ERM indicates in response to PRDW Comment #2 that 'based on analysis already finalized, the reservoir and production profiles are expected to be very similar to the same available in other subsea fields developed by Eni in Africa. For this reason the PI (productivity index), porosity, hydrocarbon properties and expected flow rate have been recalculated and optimized using real data from those similar fields'.

- (a) What does 'analysis already finalised' refer to, and who conducted this analysis? Please provide us with a copy of this analysis.
- (b) Did ERM have access to the underlying data used for this analysis? If so, what steps did ERM take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?
- (c) Did PRDW have access to the underlying data used for this analysis? If so, what steps did PRDW take to verify that the reservoir and production profiles are very similar to the same available in other subsea fields developed by Eni in Africa?
- (d) Who did the 'recalculation and optimization' of the flow rates? Please provide us with a copy of the documentation relating to the initial calculation of the flow rates (before recalculation and optimisation) and the recalculated and optimised flowrates.
- (e) Did PRDW have sight of and verify the flow rate calculations before they were recalculated and optimised?
- (f) Did PRDW have sight of any earlier version of the OSM report based on the data before recalculation and optimisation?
- (g) Did PRDW have sight of the new underlying data relied upon to recalculate and optimise the flowrates?

4.3. ERM indicates in response to PRDW Comment #2 that 'the pore pressure prediction is computed using a sophisticated technology from the velocity analysis coming from the recent (2016) 3D seismic volume'.

- (a) Who computed the pore pressure predictions? Please provide a copy of this computation.
- (b) Why was the pore pressure prediction computed using the 2016 3D seismic volume rather than data from the 2018 multicient seismic survey? Please provide us with a copy of the 2016 and 2018 seismic data referred to.

- 4.4. ERM indicates in response to PRDW Comment #2 that 'for all the wells drilled in similar deepwater environment, an analogue approach was utilised for preparing the casing design and mud density, to keep the well under control while drilling'.
- (a) Please explain what is meant by an 'analogue approach'.
  - (b) Please advise who conducted this analogue approach. If Eni, please indicate what steps were taken by ERM and PRDW to verify the suitability and reliability of this analogue approach.
  - (c) Please provide us with a copy of any documentation or report in which this analogue approach is recorded.
- 4.5. ERM indicates in response to PRDW Comment #2 that 'in the recent development of some African deepwater field, Eni has confirmed that those estimation has been confirmed during the subsequent drilling of the wells'.
- (a) Please indicate what steps were taken by ERM to verify the accuracy of these estimations indicated by Eni.
  - (b) Please indicate what steps were taken by PRDW to verify the accuracy of these estimations indicated by Eni.
- 4.6. ERM indicates in response to PRDW Comment #2 that 'during Macondo/Deepwater Horizon blowout, a very high flowrate from the reservoir occurred for different reasons: different geology (Macondo target Miocene turbidite sands as compared to the geological formation at ER236 South Africa where the reservoir rocks from the Upper Cretaceous age are thought to be slope-basin floor fans) and pore pressure, different well construction and different profile. For these reasons, the Macondo well and reservoir couldn't be used as a reference for Block ER236, as opposed to ENI's experience in similar lithology in West Africa, which has allowed for optimizing the flow rate and PI parameters that, in the unrealistic situation that no mitigation (e.g. no BOP closure) will be applied, should provide a better estimation of flow rates'.
- (a) It is noted that the reservoir rocks at ER236 are 'thought to be' slope-basin floor pans. Please advise whether Eni or ERM is the source of this assumption. If Eni is the source, what steps were taken by ERM to verify the accuracy of this statement? If ERM is the source, please explain why this level of uncertainty is stated?
  - (b) Did ERM rely on Eni's estimation of flow rates based on Eni's experience in similar lithology in West Africa? If so, did ERM have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?
  - (c) Did PRDW rely on Eni's estimation of flow rates based on Eni's experience? If so, did PRDW have access to the underlying data or information relied upon, and what steps did it take to verify the reliability of this information?
  - (d) It is noted that based on the reservoir rocks being thought to be slope-basin floors and Eni's experience in West Africa, the flow rates and PI parameters were optimised and 'should' provide for a better estimation of flow rates. Please explain the level of uncertainty associated with the use of the word 'should'.

- 4.7. ERM indicates at p117 of its OSM report that PRDW comment # 4 asks for a 'clear explanation of why the blowout scenarios result in a lower impact than the other scenarios, despite involving much larger volumes of more persistent oil, e.g. is there any empirical data to support the model prediction that only 1% of the oil from the blowout will form a surface plume?'. In response, ERM state that 'the model results may be perceived that the impacts from the blowout are worse than from the diesel spill. That is not necessarily the case...'.
- (a) This response by ERM does not make sense, and is inherently contradictory. Is ERM attempting to explain why the blowout scenarios result in a lower impact than the other scenarios, or is it disputing that the OSM modelling results show that the blowout scenarios result in a lower impact than the other scenarios? Please provide a full, clear explanation in unambiguous language.
- 4.8. ERM indicates further in response to PRDW comment #4 that the 'placement of the blowout relative to the Agulhas Currents have provided a rather unique hydrodynamic arrangement protecting the shoreline with the strong southwestern transport parallel to the shores'.
- (a) Has PRDW had access to the underlying data used in the modelling for predicting current flows?
- (b) What steps (if any) did PRDW take to verify that the data used for the current flow predictions is representative and accurate?
- (c) What steps (if any) did PRDW take to verify the statement that the 'Agulhas Currents have provided a rather unique arrangement protecting the shoreline with the strong southwestern transport parallel to the shores'?
- 4.9. In its *Peer Review of ERM Spill Report*, PRDW points out with regard to ocean currents that 'no validation of the results in the study area was presented, e.g. a comparison to local current meter measurements would be expected. Further, only a single snapshot in time of the current field was provided. Current roses or time-series would have provided evidence that the temporal characteristics of the currents applied in the model were realistic'.<sup>1</sup> PRDW also points out with regard to wind that 'no validation of the results in the study area was presented, e.g. a comparison to local wind measurements would be expected. Further, no wind roses in the study area were presented which would have provided evidence that the statistical characteristics of the winds applied to the model were realistic'.<sup>2</sup> These issues were raised as 'minor comments'. In its conclusion, PRDW state that 'A couple of minor comments are also provided the record, but do not require any actions'.
- (a) Can PRDW please provide a clear, reasoned justification for concluding that no action was required by ERM to address these deficiencies in the modelling?
- (b) If these comments were addressed by ERM, please indicate where in the EIA report or annexures these deficiencies have been addressed?

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<sup>1</sup> Paragraph 4.1, at p4.

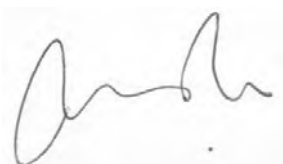
<sup>2</sup> Paragraph 4.2, at p 4.

4.10. It is noted that PRDW state in their letter to ERM dated 18 September 2018 that 'this letter confirms that all four major comments raised by PRDW have been adequately addressed'.

(a) Can PRDW please provide a clear, detailed and reasoned explanation setting out the information it relied upon in reaching this conclusion, including how such information was validated. Please also include a description of any assumptions made and any uncertainties or gaps in knowledge.<sup>3</sup>


5. We remind ERM and PRDW that in terms of the EIA Regulations, an EAP and specialist must (among other things) perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the application, and must disclose to registered I&APs all material information in the possession of the EAP and the specialist that reasonably has or may have the potential of influencing any decision on authorisation.<sup>4</sup>
6. In light of the above and given that the time period for submitting comments on the draft EIA report expires on 8 November 2018, we look forward to receiving ERM's and PRDW's detailed response to our letter by no later than close of business on 6 November 2018.

Yours sincerely



Adrian Pole

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<sup>3</sup> EIA Regulations, Appendix 6, Specialist Reports, paragraph (1)(i).

<sup>4</sup> EIA Regulations, reg 13(1)(d) and (f).



## Amishka Mothilal

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**From:** Judith Taylor <judith@softwareafrica.co.za>  
**Sent:** Monday, 15 October 2018 09:35  
**To:** ERM South Africa Project ENI Offshore Exploration  
**Subject:** eni South Africa Offshore Exploration EIA  
  
**Importance:** High

Dear Charlene

As has been proven in studies done in the USA, plankton destruction is an immediate result of this type of exploration <https://www.scientificamerican.com/article/air-guns-used-in-offshore-oil-exploration-can-kill-tiny-marine-life/> Our whales and dolphins require plankton to feed on. In addition, they are a major tourism attraction .

Please note that both oil and gas are fossil fuels, which we should be moving away from and not creating more climate change pollution. The EIA therefore should not be granted in the interests of future generations.

Regards

*Judith*

Judith Taylor

Member Board

EarthLife Africa Joburg

Cell 082 389 3481

Tel: 011 802-2685

**NB: If a landline is not answered, please try the Cell Phones!**

Skype judithnkwe Taylor

judith@softwareafrica.co.za

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## Amishka Mothilal

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**From:** Yvette Retief <yvette.med@vodamail.co.za>  
**Sent:** Thursday, 08 November 2018 12:00  
**To:** ERM South Africa Project ENI Offshore Exploration  
**Subject:** RE: Yvette Retief Objection

Good Day ERM,

Thank you. Please read this article which Prof. mentioned the oil exploration devastation already at the Durban coastal region.

Professor Francois Engelbrecht, among the world's leading specialists on African climate change, takes the largest questions facing humanity to where we rarely see them — back home.

I. Hot

The question for Professor Francois Engelbrecht, during the lunchtime rush in the most popular canteen at Pretoria's Council for Scientific and Industrial Research, was about the one thing that climate scientists are supposed to avoid — emotion.

For the past 45 minutes, Engelbrecht had been charting a course through the safe terrain of his own data. As one of the lead authors on the world-shaking Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C, endorsed by 195 countries and released in South Korea in early October, he knew better than most that the only effective weapons against climate denialists were the facts.

How, then, did he reconcile the fact that human beings have at best a dozen years to shift the planet's political and economic trajectory (or face an apocalypse of heat, thirst, famine, floods and runaway ecological collapse) with the fact that he, too, is a human being?

In other words, did Professor Engelbrecht ever succumb to anomie and despair?

"I can tell you that the official message the IPCC tried to convey was one of hope," he told Daily Maverick, "they really tried not to come in with a negative message. They said, the science tells us that with political will it's still possible to avoid global warming exceeding 1.5°C. Somewhere between 1.5°C and 2°C, the report says, we have a high likelihood of initiating an irreversible melt of the Greenland icecap and triggering the instability of the Antarctic ice-shelf.

"So we can still avoid all of this if we mitigate now. Again, the IPCC was trying to frame the message as one of hope. But of course, you know, most media houses and the public weren't fooled by that positive take on the report."

Which, aside from being an understandable evasion of the personal aspects of the question, was also a tacit admission that there may be very little reason for hope. Here was a top-tier climate scientist, a man who at the age of 42 had published 40 papers in the world's most esteemed peer-reviewed journals, talking about how people could no longer be "fooled" into believing that it was all going to be okay.

It was unclear whether Engelbrecht had read William T. Vollmann's two-volume opus *Carbon Ideologies*, and it didn't seem like the time to ask, but the analogy seemed apt. A compendium of our current global energy use back-dropped against natural landscapes ravaged by the extraction of oil, gas and coal, the text is addressed to a future reader whose world is defined by boiling oceans, methane fireballs and radioactive soil.

Vollmann, according to almost all of his reviewers, had written the most honest and unflinching book yet on the largest question facing humanity—not because he had offered a path to hope, but because, in an effort to explain to our descendants how we never really stood a chance, he had outlined the problem in its hopeless complexity.

And yet Engelbrecht, at his own insistence and per the entries in his impressive CV—with a PhD in meteorology, has led the development of the first African-based Earth system model—made no claim to philosophy or social commentary. It would therefore be unfair, not to mention unethical, to misrepresent the tenor of his work.

"The IPCC doesn't say things that are not defensible," he informed Daily Maverick, "it has been criticised over the years for being too conservative."

(He must have had in mind, among other items, a 2012 article in Scientific American that showed how the IPCC had consistently underestimated the pace and impacts of global warming.)

“But I think rather than be alarmist. As you know, there are always denialists looking for weak points in the reports. So we just don’t say things for which there is no evidence.”

Counterintuitively, among the things for which there is not yet hard evidence, according to Engelbrecht, is a rise in the frequency and intensity of tropical cyclones. There is data to support the hypothesis, he noted, but the “statistical rigour” is still lacking. What did he mean by statistical rigour?

“In this science,” he explained, “you must always be very, very careful to distinguish between what we call natural variability on the one hand and anthropogenic-induced change on the other.”

Implying that, in tropical cyclone occurrences across the globe, where there is a natural “multi-decadal variability,” one swallow doesn’t a summer make.

And neither do we get there with 20 summers, which is the time—give or take a few years—that science has been gathering reliable data on the phenomenon.

“We must decide whether what we are seeing right now is a systemic increase in the frequency and intensity of tropical cyclones or whether it is just the upward curve in a cycle.”

## II. Hotter

So here are a few of the things that the IPCC special report does have hard evidence for: the earth is on average between 0.75°C and 0.99°C warmer than it was during pre-industrial times; estimated anthropogenic global warming is currently increasing at 0.2°C per decade “due to past and ongoing emissions”; “warming greater than the global annual average is being experienced in many land regions and seasons, including two to three times higher in the Arctic”.

From the local perspective, then, once we get past the unfortunate diversions of our own ersatz science kaffeeklatsch, lies the following (somewhat urgent) question: where does South Africa stand on this last point?

Professor Engelbrecht, whose speciality is African climate change, is one of the few scientists on the planet with an answer endorsed by the majority of his PHD’d peers.

According to him — and according therefore to the IPCC special report itself, which assessed and collated the data from 6,000 peer-reviewed papers — temperatures in the interior of our country are increasing at twice the global average. A 1.5°C rise in mean global temperatures by 2030, which is the ceiling that the IPCC suggests humanity aims for in order to avert global catastrophe, is thus a 3°C rise for most of us.

To help that sink in, consider the impact of the fires that have raged across the statistically cooler southern Cape coast over the last few weeks, destroying 16,000ha of vegetation and 2,500 informal houses in the George area alone. Is it true, as some contest, that South Africa’s recent spate of wildfires have nothing to do with climate change?

“What I can tell you for a fact,” said Engelbrecht, “is that the number of days with a high fire danger — so the number of days that are associated with high temperature, low humidity and high wind speeds — those days have clearly increased, specifically over the last 50 years. And it’s particularly over the last 50 years that we see the accelerated effects of global warming.”

According to the professor, the increase in these high fire danger days against the first half of the last century amounts to “almost a doubling”.

Where there were once 15 to 20 such days a year in South Africa, now there are 30 to 40. But again holding fast to the scientific method, Engelbrecht was at pains to point out that not all of these days would result in a wildfire outbreak — he was talking, he stressed, about the potential.

That said, given that the 1°C rise in average global temperatures has already translated into a 2°C rise for the South African interior, it’s not just in the category of wildfires that this potential has now become a devastatingly apparent reality. The IPCC special report, as Engelbrecht reminded Daily Maverick, predicts with high confidence that even under 1.5°C of global warming we will continue to witness an increase in heatwave events and droughts in our own corner of the world.

“This of course is not a comforting message at all,” he said, “because the thing about southern Africa is that we are already a region that is climatologically very hot and dry. And now we’ve become hotter and drier. That leaves very little room for adaptation. Let’s say you are a wet region that becomes hotter and drier, you can still cope. If you’re a cool region that becomes wetter and hotter, you can still do something. But if you are dry and hot and you just get drier and hotter, your options are very limited. For this reason, southern Africa was formally recognised as a climate change hot spot within the IPCC special report.”

It bears repeating: climate change hot spot. A unique status that won us a unique set of mentions in the report, particularly in section B5, which looked at climate-related risks to health, livelihoods, food security, water supply, human security and economic growth.

“This report makes a very, very important statement,” explained Engelbrecht.

“It says that at 3°C of global warming, there is the potential for the total collapse of the maize crop in southern Africa. Remember, 3°C of global warming is 6°C regionally. At that number, there will also be a total collapse of the livestock industry.”

### III. Hottest

Now for some truly sobering news: most climate models show that at current rates we will hit 3°C by 2070. We learned in late October that Mpumalanga has the highest levels of air pollution in the world, a fact attributed by Greenpeace to the province’s coal mines, coal transport networks and coal-fired power stations. MEANWHILE, THE OIL AND GAS EXPLORATION THAT’S HAPPENING OFF THE KWAZULU-NATAL COAST, ASIDE FROM PROVOKING THE IRE OF LOCAL COMMUNITIES, HAS BEEN CITED AS A PROBABLE CAUSE FOR THE DECIMATION OF MARINE LIFE, INCLUDING WHALES AND DOLPHINS.

AND SO, WHEN IT COMES TO THE MOST IMPORTANT ISSUE FACING LIFE ON EARTH AT THE MOMENT, THE SOUTH AFRICAN GOVERNMENT IS RUNNING BLINDFOLDED AND AT SPEED IN THE WRONG DIRECTION.

There is, however, a way through. What we’ve always had in this country is an appetite for protest. On the back of the IPCC special report, the Co-operative and Policy Alternative Centre and the South African Food Sovereignty Campaign sent an open letter to President Cyril Ramaphosa, demanding an emergency sitting of Parliament to debate the findings. As yet, there has been no response to the demand — what’s more, the letter was inexplicably ignored by the vast majority of local media outlets — but it’s a start.

Time, of course, is not on our side.

“The frontal systems have already been displaced pole-ward,” said the professor, “and as a consequence of that, the potential for drought over the Cape Town region has already increased. In Gauteng, we already have statistical evidence of an increase in intense thunderstorms.”

Our farmlands, our coasts, our major cities — barring an act of collective will comparable in scope and power to the fight against apartheid, none will be spared. DM

8

Kind Regards  
Yvette Retief

-----Original Message-----

From: ERM South Africa Project ENI Offshore Exploration <eni.exploration.eia@erm.com>

Sent: Thursday, 08 November 2018 10:29

To: Yvette Retief <yvette.med@vodamail.co.za>; ERM South Africa Project ENI Offshore Exploration <eni.exploration.eia@erm.com>

Subject: RE: Yvette Retief Objection

Hello Sir/Madam

You have been successfully added to our stakeholders database, your comments, together with a response will be included in the Comments and Response of the Final EIA

Thank you  
Regards  
Charlene Jefferies

-----Original Message-----

From: Yvette Retief <yvette.med@vodamail.co.za>

Sent: Wednesday, November 7, 2018 7:35 PM

To: ERM South Africa Project ENI Offshore Exploration <eni.exploration.eia@erm.com>

Subject: Yvette Retief Objection

Good Day,

Please find attached my objection to Eni exploration. We entering a new era of technological advances and oil exploration is business as usual which does not fall into the new advance technological framework. SA struggle with huge amounts of waste (300 million ton per annum) which can be used as waste to energy. This Eni project is not economic justifiable and petrochemical companies must realize their time is up and creative scientific ideas needs to evolve to survive the future. Eni proclaimed that the project is an enormous risk and our NEMA legislation is not accommodative of this project.

If our government can not even manage sewerage that leaks into our rivers systems how on earth are they going to manage this environmental task. It is clear in the Maritime Zones act that they have no idea what such a project entails and the laughable matter is if such a company do not comply will be fined R2000 000.00 per day. This just shows that the disaster and pollution that may occur is far greater than what they can foreseen and understand.

Kind Regards

Yvette Retief

## Amishka Mothilal

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**From:** Alternative. Projects <bwopow@gmail.com>  
**Sent:** Wednesday, 07 November 2018 17:09  
**To:** Eni.offshore.eia@erm.com  
**Cc:** ERM South Africa Project ENI Offshore Exploration  
**Subject:** Re: Venue in Port Shepstone sitpleke vir 8 mense

Hullo Charlmaine,

Ons ook skryf vertaaling vir geld.

Olsen F.

On 07 Nov 2018, at 1:49 PM, Alternative Projects <[bwopow@gmail.com](mailto:bwopow@gmail.com)> wrote:

Hello Mense by die ERM kantoor,

ons antwoord, na die eia wat julle mense het beplan & geskryf het.

groete  
Olsen F.

On Thu, 27 Sep 2018 at 09:32, Alternative. Projects <[bwopow@gmail.com](mailto:bwopow@gmail.com)> wrote:  
Hullo Erm span,

Ons wou graag insluit by julle vergadering, op die 10 de Oct, in Port Shepstone. Kan julle ons n kart van die plek stuur as die plek is moeilik te vind!

Ook is daar werk vir Sheppie mense op die skip?

Groete  
Frans Olsen

Olso Beach

<5 Nov 2018.pdf>

## Amishka Mothilal

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**From:** PTeddy Govender <483svet@gmail.com>  
**Sent:** Sunday, 21 October 2018 02:46  
**To:** earthbryan; ERM South Africa Project ENI Offshore Exploration; Desmond D'Sa-SDCEA Co-ordinator

Dear Stakeholder. The draft EIA for the Exploration Drilling within Offshore Block ER236, KZN is available in isiZulu and the comment period has been extended to 8 November 2018. Go to [www.erm.com/eni-offshore-eia](http://www.erm.com/eni-offshore-eia). Regards, The ERM team

ITs to short a time to comment

## Amishka Mothilal

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**From:** ERM South Africa Project ENI Offshore Exploration  
**Sent:** Wednesday, 26 September 2018 09:50  
**To:** gillian.hamilton.za@climatereality.com  
**Cc:** ERM South Africa Project ENI Offshore Exploration;  
nicole.rodel.za@climatereality.com  
**Subject:** FW: ERM Ref: 0414229 Exploration Right Number: 12/3/236

Good Morning Gillian

Thank you for your email.

You have been added to the stakeholder database and will be kept informed throughout the EIA process.

Regards  
Charlene Jefferies

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**From:** Lindsey Bungartz  
**Sent:** Tuesday, September 25, 2018 11:56 AM  
**To:** ERM South Africa Project ENI Offshore Exploration <eni.exploration.eia@erm.com>; Charlene Jefferies <Charlene.Jefferies@erm.com>  
**Subject:** FW: ERM Ref: 0414229 Exploration Right Number: 12/3/236

Hi Charlene

Please add the below of the stakeholder database for Eni. Thanks.

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**From:** Gillian Hamilton <[gillian.hamilton.za@climatereality.com](mailto:gillian.hamilton.za@climatereality.com)>  
**Sent:** Tuesday, September 25, 2018 10:58 AM  
**To:** Lindsey Bungartz <[Lindsey.Bungartz@erm.com](mailto:Lindsey.Bungartz@erm.com)>  
**Cc:** Nicole Rodel <[nicole.rodel.za@climatereality.com](mailto:nicole.rodel.za@climatereality.com)>  
**Subject:** ERM Ref: 0414229 Exploration Right Number: 12/3/236

Please send me information about this EIA and add to me to the list of stakeholders.



## Amishka Mothilal

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**From:** Lindsey Bungartz  
**Sent:** Tuesday, 25 September 2018 20:46  
**To:** ERM South Africa Project ENI Offshore Exploration; Charlene Jefferies  
**Subject:** FW: ERM Ref: 0414229 Exploration Right Number: 12/3/236

Hi Charlene

Please can you add Marilyn to the stakeholder database for Eni.

Kind regards  
Lindsey

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**From:** marilyn <marilyn@rsaweb.co.za>  
**Sent:** Tuesday, September 25, 2018 8:44 AM  
**To:** Lindsey Bungartz <Lindsey.Bungartz@erm.com>; Marilyn Lilley <marilyn@rsaweb.co.za>  
**Subject:** ERM Ref: 0414229 Exploration Right Number: 12/3/236

Greetings!  
Please send me information about this EIA and add to me to the list of stakeholders.

Thank you,  
Marilyn Lilley  
0839906463

Sent from my Samsung Galaxy smartphone.

## Amishka Mothilal

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**From:** Lindsey Bungartz  
**Sent:** Thursday, 11 October 2018 14:31  
**To:** Charlene Jefferies; ERM South Africa Project ENI Offshore Exploration  
**Subject:** FW: ENI Sasol play off east coast

Hi Charlene

Please add

-----Original Message-----

From: Niall Kramer <niall.kramer@gmail.com>  
Sent: Wednesday, October 10, 2018 6:34 PM  
To: Lindsey Bungartz <Lindsey.Bungartz@erm.com>  
Cc: niall kramer <niall.kramer@gmail.com>  
Subject: ENI Sasol play off east coast

Pls register me as an IAP re the Sasol and Eni plans to explore offshore.

Niall Kramer | 27 825340296

**ERM has over 160 offices across the following countries and territories worldwide.**

Argentina	Norway
Australia	Panama
Belgium	Peru Poland
Brazil	Portugal
Canada	Puerto Rico
China	Romania
Chile	Russia
Colombia	Senegal
France	Singapore
Germany	South Africa
Hong Kong	South Korea
India	Spain
Indonesia	Sweden
Ireland	Switzerland
Italy	Taiwan
Japan	Tanzania
Kazakhstan	Thailand
Kenya	The Netherlands
Malaysia	United Arab Emirates
Mexico	United Kingdom
Mozambique	United States of America
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E: josia.moirana@erm.com