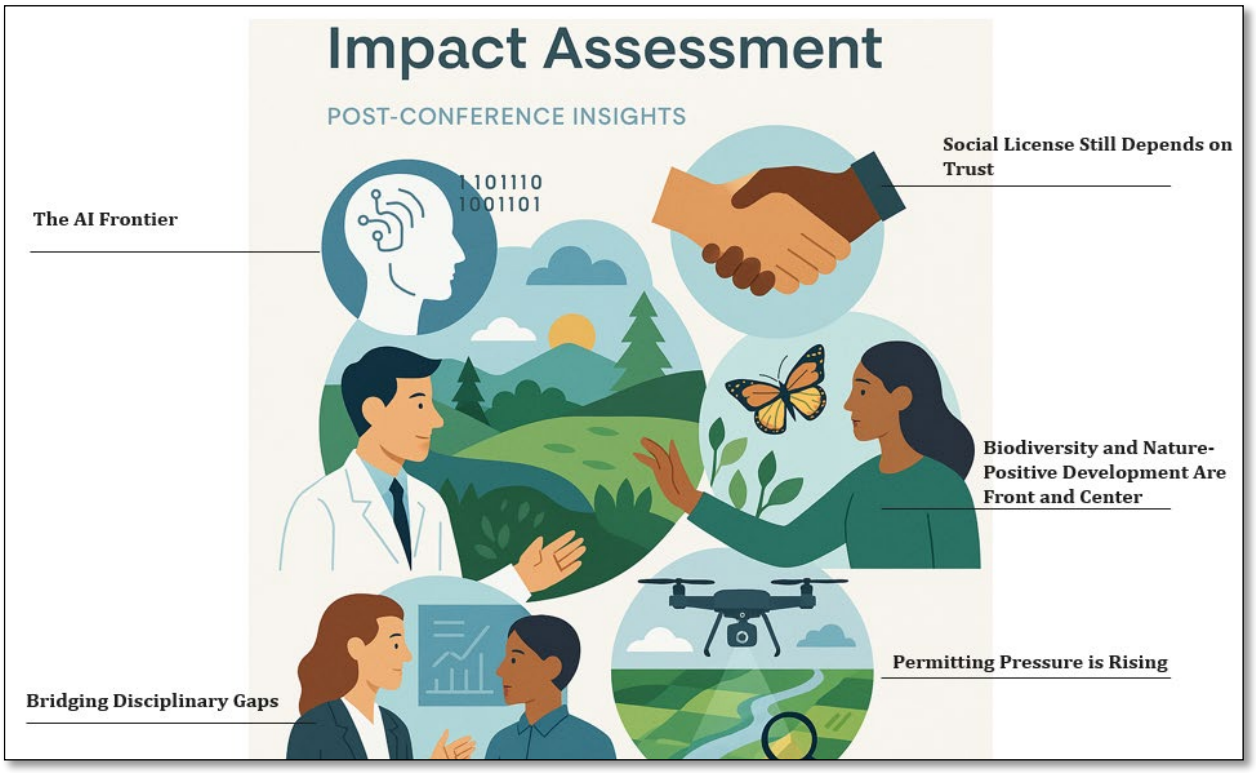
IAIA25: Leading the Conversation on Impact Assessment

1-4 May 2025, Bologna (Italy)

SHAPING THE FUTURE OF IMPACT ASSESSMENT: ERM INSIGHTS FROM IAIA25

The IAIA25 annual conference brought together global leaders in impact assessment to explore innovative approaches, policy developments, and the evolving role of environmental and social performance across sectors. With over a thousand professionals from academia, government, industry, and civil society in attendance, the event offered a powerful platform to share knowledge and shape best practices.



Source: AI Generated based on ERM's takeaways

KEY TAKEAWAYS

The discussions at IAIA25 revealed a dynamic and evolving landscape for impact assessment. From regulatory shifts to technological breakthroughs, the conference highlighted how practitioners, regulators, and stakeholders are adapting to new challenges and opportunities. The following sections summarize the most relevant insights across three key dimensions:

- **Industry Trends**: Broader shifts in regulatory expectations, stakeholder engagement, and biodiversity priorities.
- **The AI Frontier**: How artificial intelligence is transforming the tools and processes of impact assessment.
- **Emerging Innovations and Sector Developments**: New technologies and institutional updates that signal where the field is heading next.

INDUSTRY TRENDS

As the field of impact assessment evolves, several cross-cutting trends are shaping how organizations approach environmental and social performance. These trends reflect both the growing complexity of regulatory landscapes and the rapid advancement of digital technologies. Below are some of the most prominent themes that emerged from IAIA25:

1. **Permitting Pressure is Rising**
   Governments and regulatory bodies are increasingly requiring expedited, data-driven impact assessments that comply with stringent environmental standards to mitigate project risks. Artificial Intelligence presents viable solutions to support this need, particularly through the use of remote sensing and mapping technologies, drones, and advanced data collection and storage mechanisms that enhance accessibility for reporting and assessment purposes. Nonetheless, the role of professional judgment remains critical in the interpretation of this data.
2. **Social License Still Depends on Trust**
   Early and inclusive stakeholder engagement continues to be the foundation for long-term project success, especially in regions with complex political or environmental dynamics.
3. **Biodiversity and Nature-Positive Development Are Front and Center**
   Stakeholders are expecting clearer linkages between impact assessments and global goals such as the Kunming-Montreal Global Biodiversity Framework.
4. **Bridging Disciplinary Gaps**: The integration of AI into impact assessment requires professionals who are fluent in both environmental science and data science. Capacity building, especially in regions with limited digital infrastructure, will be essential to ensure equitable access to these tools and avoid exacerbating existing disparities.

THE AI FRONTIER

Artificial Intelligence is no longer a future consideration—it is actively reshaping how we approach environmental and social impact assessment. From automating baseline data collection to supporting stakeholder engagement, AI tools are enabling faster, more consistent, and more scalable approaches. However, their integration must be thoughtful, with attention to data quality, governance, and social equity.

1. **Digital Tools Are a Game-Changer**
   The use of AI, geospatial analytics, and centralized E&S data platforms is rapidly transforming how baseline information is gathered, reviewed, and implemented into impact assessments. For example, Dynamic modeling approaches are emerging to better assess resilience to climate impacts, moving beyond static indices.
2. **AI Presents a Unique Opportunity to Transform Impact Assessment**
   Large language models have the potential to streamline time-intensive tasks like drafting summaries, mitigation measures, and managing stakeholder input by leveraging industry standards, best practices, and past approvals. Furthermore, these models can assist in validating and reviewing the work of practitioners to identify biases, uncertainty and the robustness of their work. It is essential to recognize that data quality is fundamental: the effectiveness of AI applications in environmental contexts hinges on access to high-quality, domain-specific data—not just advanced sophisticated models.
3. **Cautious Implementation of AI is Required**
   The industry faces uncertainty around if, when, and how to adopt AI, particularly in terms of timing and integration into established environmental assessment frameworks, processes and consulting methodologies. Organizations must effectively manage the balance between rapid AI innovation and the need for robust risk assessment, governance, and ethical oversight.
4. **The irreplaceable value of human interaction**: Although AI can support analysis, it cannot replace the nuanced understanding and trust-building necessary for evaluating social impacts and risks. The Establishment of a social license to operate continues to depend on human engagement and the expertise of social practitioners, who are vital to the environmental and social (E&S) sectors. Furthermore, AI implementation must carefully consider social inequalities to avoid reinforcing existing disparities.

EMERGING INNOVATIONS AND SECTOR DEVELOPMENTS

In addition to the core themes of the conference, several forward-looking developments are shaping the future of impact assessment. These innovations—ranging from digital modeling tools to evolving institutional frameworks—highlight the sector's growing emphasis on agility, integration, and technological advancement.

1. **Digital Twins of Environmental Receptors**: Beyond facility modeling, digital twins are now being developed for environmental systems such as water bodies and ecosystems, enabling real-time monitoring and predictive modeling.
2. **Automated ESIA Writing Tools**: Organizations are exploring AI-driven tools to support the drafting of Environmental and Social Impact Assessments, potentially streamlining early-stage documentation.
3. **Evolving Standards and Frameworks:** Multilateral institutions are actively revising key sustainability guidance to reflect emerging environmental and social challenges. This includes the World Bank's development of updated sector-specific Environmental, Health, and Safety (EHS) guidelines (e.g., for Airports, Healthcare, and Power & Distribution), as well as the International Finance Corporation's (IFC) planned update of its Sustainability Framework. These evolving standards are expected to shape how impact assessments are designed, implemented, and evaluated across sectors.
4. **Public Sector Demand for AI Tools**: Governments and multilateral institutions are increasingly interested in AI tools not only to evaluate ESIAs but also to organize and manage them more efficiently.

ERM AT IAIA25

ERM played a prominent role at IAIA25, driving forward-thinking conversations on artificial intelligence, permitting, biodiversity, and social performance. Our global experts participated in and hosted several high-impact sessions, including:

1. **Panel: Future-Proofing AI: Governance, Sustainability, and Impact**
   Chaired by Jonathan Ward (ERM Associate Partner), this panel focused on AI's evolving role in sustainability, governance, and the environmental impact of AI.
2. **Poster Presentation: The Future Role of Artificial Intelligence in E&S Impact Assessment**
   Presented by Chiara Giacchino (ERM Principal Consultant) and Lubin Grosbuis (ERM Consulting Associate) on the role AI is performing in transforming ESIA processes.
3. **Client Reception (with NatureMetrics)**
   An exclusive gathering in Bologna to connect clients, partners, and thought leaders over canapés and engaging conversation.
4. **Special Session: Artificial Intelligence in Permitting 5.0**
   An ERM sponsored event focused on the presentation and discussion of cases studies and principles for the integration of AI into permitting frameworks.
5. **Workshop: Environmental Impact Assessment in the AI Era – The Case for AI in Baselining Biodiversity**
   Led by Julia L. Tims (ERM Technical Partner) and facilitated by Greg Sharam (ERM Associate Partner), this workshop explored AI's role in enhancing biodiversity data.
6. **Panel: Emergent Technologies in Monitoring and Measuring Biodiversity at Mine Sites**
   Co-chaired by Andy Coates (ERM Technical Director), this panel examined how innovations are reshaping biodiversity assessments.
7. **Presentation: AI and Climate Change – Social Implications**
   Delivered by Noam Raffel (ERM Principal Technical Consultant) the presentation concentrated on understanding and addressing societal impacts of AI within climate-related contexts.

LET'S CONTINUE THE CONVERSATION!

Whether you joined us in Bologna or couldn't make it this year, we would love to connect.

Reach out to request a debrief, access presentation summaries, or speak with our experts.

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