



DATA
DRIVEN
ENVIROLAB

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ENVISIONING THE FUTURE OF

NON-STATE CLIMATE ACTION DATA AND ACCOUNTABILITY

Executive Summary

This report sheds light on the pivotal but often overlooked role of non-state actors (NSAs) such as businesses, financial institutions, and civil society in driving the objectives of the Paris Agreement. While their significance is undeniable, the impact of NSAs' contributions to climate action often remains obscured due to insufficient data accounting practices. Unlike the more established reporting norms for national climate targets, NSA accounting falls behind, inviting the risk of greenwashing and eroding the authenticity of their environmental pledges. This is a critical concern given the heightened international scrutiny of NSAs' climate actions within international processes such as the UN Framework Convention on Climate Change's Recognition and Accountability Framework.

Highlighting the existing data gaps and accountability challenges NSAs face, this report aims to uncover the root causes of ineffective data accounting practices and suggest practical solutions.

Key Findings

By conducting in-depth interviews with a range of organizations and stakeholders engaged in the non-state actor data collection and accountability sphere, this report identifies four primary factors that impact quality and limitation application of NSA climate data:

- **Lack of standards to counter greenwashing:** Current reporting practices are based on voluntary self-reporting. Varied methodologies and lack of unified standards compromise credibility of supplied information and enable misleading claims. Credible reporting requires transparent, universal standards and definitions for climate actions, such as net-zero climate pledges.
- **Fragmented data exchange for climate action tracking:** Climate action data is compiled and shared inconsistently by NSAs. Different accounting tools, software platforms, and data formats make it difficult to unify and merge data to track bigger-picture progress.
- **Resource constraints impacting emissions accounting:** Capacity constraints significantly impact smaller entities, especially those in developing countries, limiting their ability to conduct thorough emissions accounting. The scarcity of unbiased third-party verifiers further complicates data verification.
- **Lack of regulatory alignment:** While setting standards is critical to improve data accountability, it is equally important to ensure that these standards are universally adopted and consistently applied by national regulatory bodies. In addition to standard setting, regulators must also address challenges related to data sharing, ownership, and accessibility.

To address these four obstacles, this report proposes a future digitally-enabled climate action accountability system

In the future, a climate accountability system should unite the NSA institutions, stakeholders, and processes outlined in this report under one umbrella. Such coordination aims to synchronize efforts and foster alignment on digitally-enabled, collaborative, open, and consistent data-driven accountability.

Digital innovations, such as Internet of Things (IoT) sensors, earth observation data from satellite remote sensing, machine learning, and distributed ledger technology, have potential to further improve existing data collection to improve future accountability systems.

To achieve this vision, the system should adopt the following four principles:

- **Openness, traceability, and machine readability:** Climate data comes from different sources, in various formats and qualities. Interoperability, which is essential, can be achieved through uniform metadata standards and open data structures. Emphasizing openness and traceability and adopting machine-readable data formats are required.
- **Clear data governance protocols:** Effective data governance is crucial for maintaining high quality data that complies with legal and ethical standards to improve its reliability for facts-driven decision-making.
- **Soft infrastructure for coordination, capacity and community engagement:** The ability of businesses and governments to collect, process and use high-quality data hinges on capacity. Active community involvement and co-creation, aided by institutions like the UNFCCC, are fundamental to facilitate continuous engagement among technology providers, governments, and end-users broadening the overall data accounting capacity.
- **Embrace of digital innovation:** New technologies can help us gather better data. Satellites and smart devices can supply real-time information about emissions, new advances in machine learning can aid data analysis and discoverability, while AI models can help process textual data like transition plans and corporate reports to unlock new insights and scale up learning and sectoral benchmarking.

In addition to creating a digitally-enabled climate action accountability system, this report proposes seven complementary actions:

- Fostering improved coordination and linkages between regulatory frameworks and voluntary standard setters, supported by the UNFCCC's facilitative role;
- Developing a comprehensive data accountability model encompassing global requirements and sector-specific expectations for data quality;
- Promoting transparent data governance principles to ensure consistency and reliability in data management;
- Advocating for standardized machine-readable data formats and metadata standards to enhance interoperability and AI utilization;
- Embracing digital approaches and innovations to expedite climate accountability practices;
- Exploring decentralized data governance models adaptable to evolving data sources and needs;
- Elevating the Global Climate Action Portal to encompass robust data, establishing standardized definitions, verification criteria, and stakeholder support for credible net-zero commitments and transition plans.

These recommendations, crucial amidst current momentum, aim to create open and scalable systems, empowering climate governance and enhanced ambition.



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