A GLOBAL PARTNERSHIP FOR TRUSTED ECOSYSTEM INTELLIGENCE

GLOBAL ECOSYSTEMS ATLAS

GEO GROUP ON EARTH OBSERVATIONS

Overview

The Global Ecosystems Atlas is an international, collaborative effort to create the world's most comprehensive, standardised, and openly accessible resource on the distribution, condition, and change of all ecosystems. Convened by the Group on Earth Observations (GEO) with the Convention on Biological Diversity (CBD) and the International Union for Conservation of Nature (IUCN), the Global Ecosystems Atlas serves as a digital public good that empowers governments, businesses, scientists, and communities to map, measure, and manage ecosystems with consistency and confidence.

The Global Ecosystems Atlas bridges local implementation with global ambition, underpinning delivery of the Kunming–Montreal Global Biodiversity Framework (GBF), the Paris Agreement, and the Sustainable Development Goals (SDGs). By 2030, it aims to provide a shared evidence base to demonstrate where progress is achieved and where global ambition must increase. The Global Ecosystems Atlas is a multi-layer, foundational information source for trusted ecosystem intelligence that stakeholders and solution providers can integrate and build on to deliver higher-quality services and make informed decisions.

Mission and Vision

The Global Ecosystems Atlas is the world's most comprehensive, standardised resource revealing where the world's ecosystems are, how they are changing and their current state, empowering decision-making for a thriving planet.

By building a shared foundation of trusted data, the Global Ecosystems Atlas mobilises a whole-of-society effort to halt and reverse biodiversity loss, safeguard ecosystem services, and support a nature-positive and sustainably managed planet.

Key Demand Drivers

- **Global Policy Demand:** Over 190 governments require robust ecosystem data to meet GBF targets and SEEA accounting.
- **Private Sector Imperatives:** Corporates and financiers need standardized spatial data for TNFD, SBTN, CSRD, and other nature-related regulations and voluntary frameworks.
- **Scientific & Community Needs:** Researchers and local stewards need validated, interoperable data for conservation, restoration, and AI model development.
- **Data Fragmentation:** The Global Ecosystems Atlas resolves current gaps - fragmented typologies, inconsistent condition indicators, and incomplete coverage - with a single, validated global reference.

Main Use Cases and Beneficiaries

The Global Ecosystems Atlas serves a diverse range of beneficiaries across sectors, creating value for decision-makers, practitioners, and innovators worldwide:

- **Countries and Governments:** Integrate national data to produce standardized ecosystem maps, support national reporting for the GBF and SEEA, and enhance transparency and accountability in natural capital management.
- **Communities and Indigenous Peoples:** Co-create and steward local datasets, ensuring local ownership and benefits through equitable access to ecosystem intelligence that supports conservation, restoration, and land-use planning.
- **Businesses and Corporates:** Leverage standardized metrics to meet nature-related disclosure requirements, manage risks and impacts, and invest responsibly in restoration and conservation initiatives across assets and supply chains.
- **Investors and Financial Institutions:** Use trusted, comparable data to design and validate nature-positive finance, including green bonds and biodiversity-linked instruments.
- **Scientists and Research Networks:** Access open, interoperable datasets and training data to advance ecosystem science, AI model development, and validation frameworks.

By connecting these user communities through a shared evidence base, the Global Ecosystems Atlas enables coordinated action toward a sustainable, nature-positive future.

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Core Principles

- **Openness & Equity:** Fully open data, methods, and tools - a true digital public good.
- **Interoperability:** Built on international standards with APIs for seamless integration.
- **Use-Case Orientation:** Co-designed with early-adopter governments, businesses, and communities.
- **Leverage, Not Duplicate:** Integrates validated ecosystem maps and only creates new maps where gaps exist or ecosystems are unmapped
- **Technology & Innovation:** Harnesses advances in Earth observation, AI, and cloud computing.
- **Partnership & Stewardship:** Built collaboratively with national custodians and expert networks.
- **Continuous Improvement:** Iterative updates ensure scientific rigour and policy relevance.

Delivery Roadmap

	STAGE	TIMELINE	CORE DELIVERABLES
1	Mapping Ecosystem Distribution	2025–2026	Global synthesis map of 110 ecosystem classes; data catalogue; AI training datasets; national mapping accelerators; open-access platform.
2	Monitoring Ecosystem Change	2027–2029	Ecosystem change alerts; finer-resolution mapping (>3,000 classes); annual change maps; historical and future projections; validated national pilots.
3	Estimating Ecosystem Condition	2029–2031	Co-designed condition indicators; “state of ecosystems” metrics; integration with IUCN Red List of Ecosystems; national and corporate pilots for scaling.

Pathway to Impact

The Global Ecosystems Atlas’ success depends on real-world adoption across public, private, and scientific sectors. Early adopters, including governments, companies, and research networks, will co-develop pilots demonstrating the Global Ecosystems Atlas’ value in national reporting, nature-related finance, and supply-chain accountability. Insights will guide standards alignment with GBF, SEEA, TNFD, and SBTN, ensuring interoperability across global frameworks. Scalability will be achieved through open APIs, national ecosystem mapping accelerators, and integration into major geospatial and corporate data platforms.

Call to Action

Delivering global ecosystem intelligence requires a whole-of-society effort. Stakeholders are invited to:

- **Contribute and steward datasets and validation resources.**
- **Support with funding or in-kind resources (technology, data access, expertise).**
- **Join the Early Adopters Cohort to co-design pilots and validate methods.**
- **Champion adoption across networks and sectors.**
- **Lead National Mapping Accelerators to strengthen national capacity and ownership.**

Get in Touch

FOR FURTHER INFORMATION AND PARTNERSHIP OPPORTUNITIES PLEASE CONTACT:

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