



MAPPING THE WORLD'S ECOSYSTEMS FOR ACTION

The Global Ecosystems Atlas is a multi-partner initiative convened by the Group on Earth Observations (GEO). The Atlas closes knowledge gaps on the state of the world's ecosystems by delivering an urgently needed global map of all ecosystems on Earth with an intuitive user interface.

The Atlas is an open, trusted source of data for harmonised and coherent monitoring, reporting and verification of conservation, sustainable management and restoration goals, and natural capital accounting at national, regional and global levels and across company value chains and investor portfolios.

THE NEED

An increasing number of public and private global frameworks and standards rely on access to affordable, accurate, and up-to-date harmonised information on ecosystem extent, condition, and risk across various scales. Key among these are the Global Biodiversity Framework (GBF), the UN System for Environmental-Economic Accounting (UN SEEA) – Ecosystem Accounting, the Science Based Targets Network (SBTN), and the Taskforce on Nature-related Financial Disclosures (TNFD). Having set measurable goals with targets and indicators, their implementation requires sustained actionable information on ecosystem extent and condition.

Yet, significant knowledge gaps persist in our understanding of ecosystems. The majority of the world's ecosystem types are in areas where current knowledge about ecosystems distribution or change is lacking. Recent advancements in remote sensing technology, Artificial Intelligence and Machine Learning (AI/ML) techniques present a substantial opportunity to expedite filling these gaps.

It's time to transform the way we monitor, value and protect nature.

THE SOLUTION

GEO has convened the world's leaders in Earth observation, data analysis, ecology and conservation science to accelerate the delivery of a global common reference for the extent and condition of all the world's ecosystems. The Atlas is implemented through a combination of global mapping efforts and country-based mapping leveraging partnerships across scales and networks.

The Atlas integrates high-quality global, regional and national ecosystem maps and aligns them to the IUCN Global Ecosystem Typology (GET), an internationally recognised, common classification system, while at the same time, retaining the original map classification as layers in the Atlas Synthesis Map. It will also accelerate the production of wall-to-wall maps of ecosystems where these do not exist, using the latest technologies. Advancements in increasingly higher spectral, spatial, and temporal resolution satellite imagery, along with the increasing sophistication of AI/ML techniques for analysing this data, have opened up new opportunities to better characterise and map ecosystems across a variety of scales.

Country-based mapping engages national institutions, local experts and stakeholders to encourage a foundation for the maps' national ownership and ongoing management embedded in national institutions.

How can the Atlas be used?

Monitoring and reporting on the ecosystem-related headline indicators of the GBF and other multilateral environmental agreements

Implementing the UN SEEA Ecosystem Accounting

Reporting on corporate disclosure requirements and Environmental, Social, Governance (ESG)

Viewing global ecosystem extent, forecasting changes and conducting research

Supporting Red List of Ecosystems assessments and identification of Key Biodiversity Areas

Designing early warning systems, nature-based solutions, and regenerative systems

Supporting biodiversity-inclusive integrated spatial planning

Planning for expansion of protected areas and Other Effective Area-based Conservation Measures (OECMs)

Planning and monitoring of local ecosystem restoration efforts

Who should use the Atlas?

-  Governments
-  Companies and private financial institutions
-  Development banks and lending institutions
-  Local and indigenous communities
-  Civil society organisations
-  Schools and Academia
-  Citizens

Find more about the
GLOBAL
ECOSYSTEMS
ATLAS



Contact us: ecosystems.atlas@geosec.org

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