



Open Earth Observation Data

for regional climate research, mitigation and adaptation decision making



What is GEOSS?

GEOSS is a global infrastructure which builds on national, regional and international observation systems and their thousands of ground, in situ, air-borne, ship-borne and space-based instruments.

Why GEOSS?

No one country has the resources needed to collect the Earth observations data required for addressing the major global environmental issues of today. A global system of systems approach leverages the existing infrastructures and resources used for Earth observations.

How to access data from GEOSS?

The GEOSS Common Infrastructure (GCI) links more than 150 different data catalogs containing more than 200 million open EO resources, accessible through the easy-to-use GEOSS Portal. There were more than 4.4 million enquiries to the GCI in 2016 alone.
www.geoportal.org

The Group on Earth Observations (GEO)

GEO engages providers and users of climate data resources through outreach, including targeted workshops and its annual international Plenary to ensure a sustained dialogue around the information needs of those seeking to integrate climate products and services into adaptation processes and decisions.

GEO's Societal Benefit Areas – Climate Change is central to all



Priority Area: Climate Change

GEO-XIII Plenary (November 2016) agreed on three priority engagement areas, including “Climate Change and Greenhouse Gas Monitoring” to support the implementation of the Paris Agreement. Following the GEO Executive Committee in March 2017 the focus will be on both mitigation and adaptation.



Regional Initiatives

Responding to Paris Agreement



GEO is building Regional Initiatives, such as AfriGEOSS (in Africa), AmeriGEOSS (in the Americas) and AOGEOSS (in Asia-Oceania) that provide cooperation frameworks at the regional level to support decision-making and regional sustainable development, as well as building institutional and individual capacity by engaging experts, stakeholders and decision makers in the region. The regional initiatives have identified data access, processing and distribution infrastructure capabilities as limiting factors for countries, in particular developing countries, for the uptake of Earth observations in decision-making.

To combat this challenge AfriGEOSS is leveraging the Africa Data Intensive Research Cloud (ADIRC), which aims to provide researchers in African countries with access to high performance computing (HPC) infrastructures, enabling them to take part in big data science projects and to build Earth observation data processing platforms.

The policy need for research, systematic observations and scientific data emerges from the Paris Agreement. GEO aims on responding to:

- National Reporting (Articles 4 and 13)
- Mitigation: Knowledge of evolution of sinks and sources (Article 5)
- Adaptation: Strengthening cooperation (Article 7.6); Scientific knowledge and systematic observations (Article 7.7)
- Technology Transfer (Article 10)
- Capacity Development (Article 11)
- Global Stocktaking (Article 14)



Towards policy-relevant global carbon cycle observation and analysis

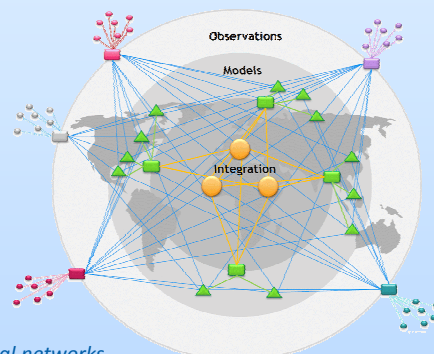


The *GEO Carbon and GHG Initiative (GEO-C)* is a global effort proposed under the framework of GEO to promote interoperability and provide integration, particularly at domain interfaces. The final users, in addition to the scientific community, are countries and decision makers that can benefit from the improved information flow and use it to address climate change policy.

Comprehensive EO data

This GEO Initiative has a long-term vision of a data-driven system to provide comprehensive knowledge on changes in the global carbon cycle and GHG emissions as a result of human activities and global change.

GEO-C builds on existing initiatives and networks, supports continuity and coherence, facilitates cooperation and interoperability and fills in gaps for a globally coordinated analysis system for carbon and GHGs.



Data integration from regional networks

Credits: ICOS

Aligned with Paris Agreement

All activities and deliverables of this Initiative will be aligned, improved and adapted to address the climate policy agenda, particularly to contribute to the successful implementation of the Paris Agreement.

Up-to-date information

Support for decision makers with timely, policy-relevant information to inform mitigation and adaptation actions.

Key partners

