



Eye on Earth Session #68

Earth observation investments for a changing world

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Earth observations

In, on and around the Earth

What is Earth observation?

Earth observation is the gathering of information about physical, chemical and biological systems in, on and around the Earth.



Group on Earth Observations

Intergovernmental partnership

What is GEO?

GEO works to improve the availability, access, understanding and use of Earth observations for the benefit of society.



GEO in numbers

Global community collaboration

7 continents



8 societal benefit areas



12 years



73 work programme activities

105 member governments



126 participating organizations



7,000 data providers



400,000,000

Earth observations



Group on Earth Observations

Research, policy and decision making

What does GEO do?

GEO's member governments and participating organizations work together to develop and implement Earth observations projects and initiatives that address global environmental challenges.



Group on Earth Observations

Open Earth observations data and information

What does GEO have to offer?

In addition to 70+ Work Programme activities, GEO is building the Global Earth Observation System of Systems (GEOSS) and has already made 400+ million open data and information resources available via www.geoportal.org

Key challenge is to collect and openly share in situ observations.



Group on Earth Observations

Our focus areas

GEO's **global engagement priorities** include supporting the UN 2030 Agenda for Sustainable Development, the Paris Agreement on Climate and the Sendai Framework for Disaster Risk Reduction. In particular, the intersection, overlap and shared monitoring and reporting requirements to achieve the respective goals and objectives.



Earth Observations for the Sustainable Development Goals (EO4SDG)

GEO Engagement Priority

EO4SDG is working to organize and realize the potential of Earth observations and geospatial information to advance the UN 2030 Agenda with UN-GGIM and custodial agencies, e.g. UNCCD, FAO and UN Environment.

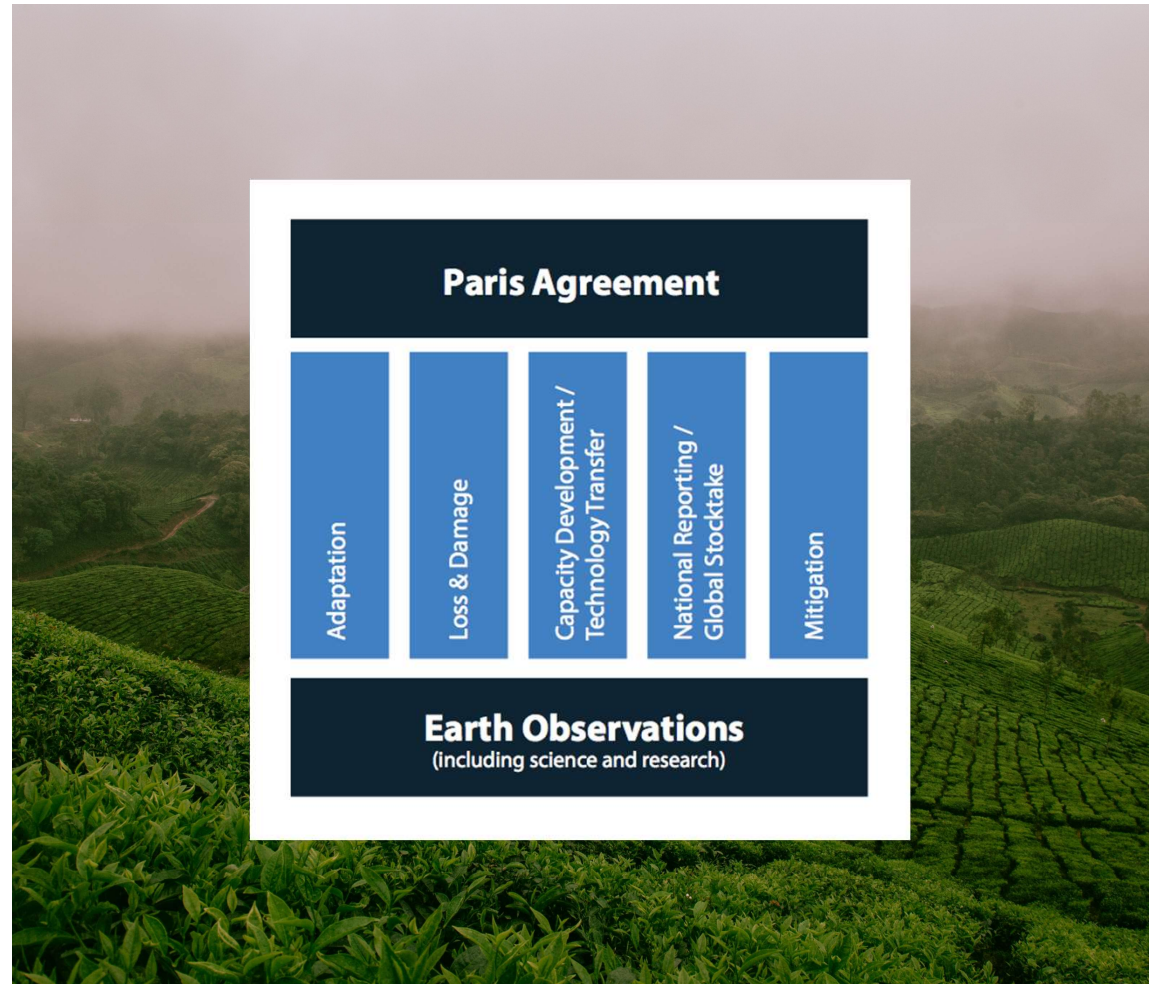
EO4SDG is demonstrating how Earth observations contribute to the SDGs, broadening awareness and interest, and increasing skills and capabilities in uses of Earth observations for SDG activities.



Earth observations in support of the Paris Agreement

GEO Engagement Priority

The Paris Agreement calls on Parties to “strengthen scientific knowledge on climate, including research, systematic observation of the climate system and early warning systems, in a manner that informs climate services and supports decision-making.” (Article 7.7c)



Earth observations in support of the Paris Agreement

GEO Engagement Priority

Earth observations enable informed and effective research, policy and decision making for climate change mitigation and adaptation.

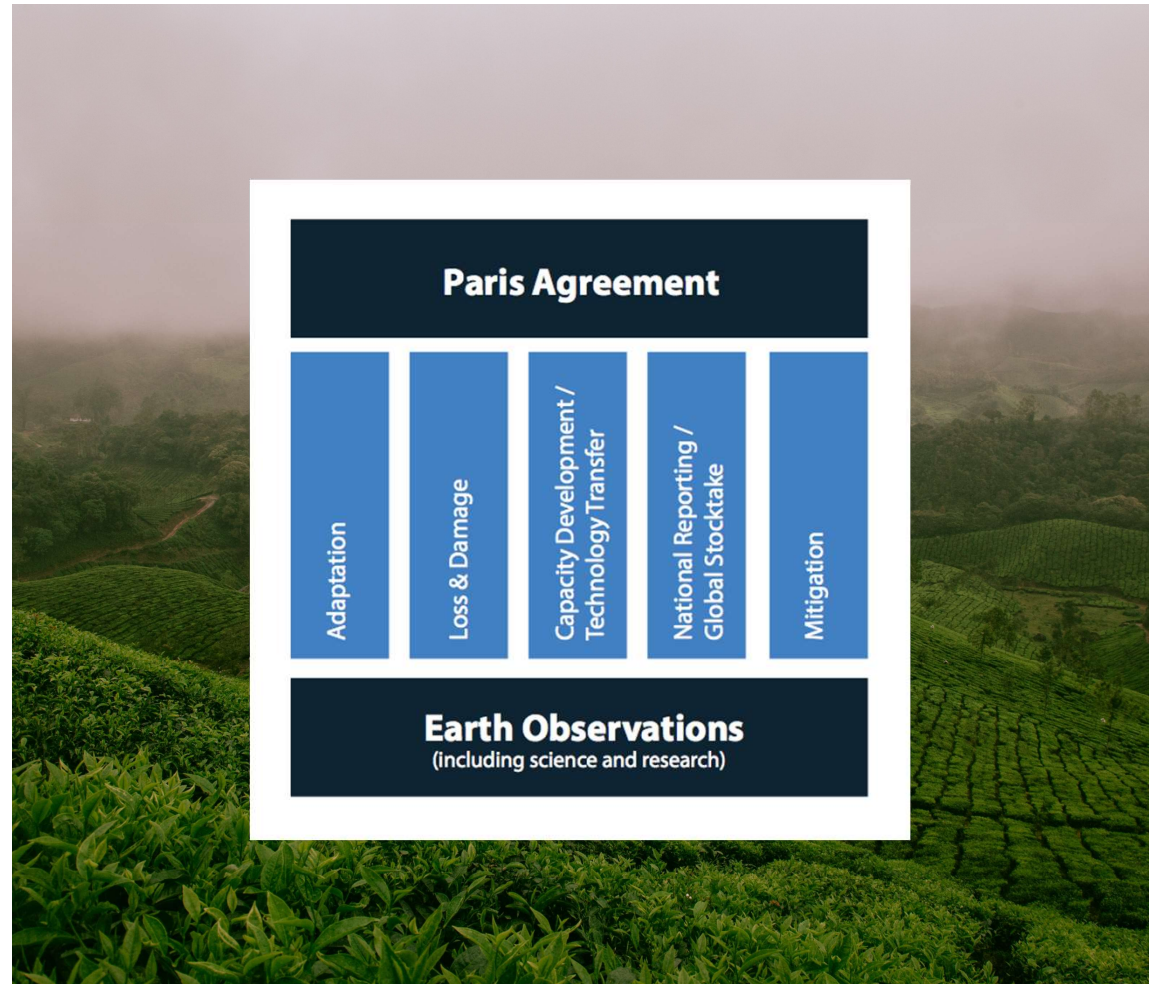
GEO is working to enhance global Earth observations systems in support of the Paris Agreement.



Earth observations in support of the Paris Agreement

GEO Engagement Priority

15 GEO activities contribute to at least one pillar of the Paris Agreement, with most contributing to more than one.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

GEO Carbon and GHG Initiative (GEO-C)

GEO-C is a global endeavour to promote interoperability and foster integration in the sector of greenhouse gas measurements.



GEO-C Initiative

Selected Flagships & Initiatives

All activities and deliverables of the GEO-C Initiative are aligned and adapted to address the global climate policy agenda, and particularly to contribute to the successful implementation of the Paris Agreement.

First draft available for comment in November 2018.

ACTION



Water Resources Management
Ocean acidification / Fresh water supplies



Energy and Mineral Resource Management
Sustainable energy sources / Energy transition



Biodiversity and Ecosystem Sustainability
Loss of species / Deforestation



Sustainable Urban Development
Air quality



Food Security and Sustainable Agriculture
Food safety / Land use change

KNOWLEDGE



Carbon Cycle



Climate Change

DATA PROVISION



GAW / TCCON / IAGOS / AnaEE / IG3IS / ARCTRIS / CEOS / JAXA / NIES / USGS
eLTER / ICOS / FLUXNET / NEON / ARGO / GOOS / GEO Blue Planet / SOCAT / + others

Paris & the GEO Work Programme

Selected Flagships & Initiatives

GEO Global Agricultural Monitoring Initiative (GEOGLAM)

GEOGLAM provides valuable Early Warning information that can help mitigate food crises, including from drought and flooding caused or exacerbated by climate change.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

Global Forest Observations Initiative (GFOI)

GFOI helps countries measure and monitor forests for REDD+. By supporting developing countries to monitor their Green House Gas (GHG) emissions from forests, GFOI facilitates reporting to UNFCCC and improves transparency in line with the Paris Agreement.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

GEO Biodiversity Observations Network (GEO BON)

GEO BON contributes to effective management of the world's biodiversity and ecosystems by organizing and improving terrestrial, freshwater and marine biodiversity observations globally. This information often intersects with crucial data needed by the climate science community.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

Blue Planet: Oceans and Society

Oceans are an important heat and carbon sink, and are also impacted heavily by climate change. Earth observations are crucial for monitoring the state of our oceans, and GEO Blue Planet is working to coordinate global ocean observations for the protection of these crucial systems.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

GEO Land Degradation Neutrality

GEO LDN will advance the collaborative development, provision and use of Earth observation datasets, quality standards, and analytical tools to achieve Land Degradation Neutrality. Help support countries to halt, and eventually reverse, current trends towards land degradation.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

GEO Human Planet Initiative

The HPI is working to produce global, free and open data on human settlements. The information produced enables analysis of the impact of human activity on the environment, the impact of natural hazards on settlements and human society, and demand for resources from settlements and society.



Paris & the GEO Work Programme

Selected Flagships & Initiatives

Global Water Sustainability (GEOGLOWS)

It provides knowledge, data, and products that help water resource managers around the world make better decisions. By bringing together global partners to improve and test much-needed tools and resources, GEOGLOWS is contributing to global water management and disaster risk reduction (DRR).



Paris & the GEO Work Programme

Selected Flagships & Initiatives

Global Observation System for Mercury (GOS4M)

GOS4M facilitates cooperation between governments and institutions tracking chemical pollutants and fosters the adoption of advanced sensors in monitoring mercury and its compounds.



4 Cs to discover, access and use geospatial data

Collaboration

Community, human interoperability & regions

Capacity building

Digital literacy, policy & technology translation,
co-design and co-production of knowledge

Communications

Awareness raising, free resources,
training schedules and venue

Commercial Engagement

Platform, pricing, Public Private Partnerships





SUPPORTING A RESILIENT
& SUSTAINABLE WORLD

GEO WEEK 2018

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#EO4Paris #EO4Sendai #EO4SDG

Collaborate and communicate with GEO:

