



EuroGEOSS Overview and NextGEOSS contribution

**EuroGEOSS: The European contribution
to GEOSS**

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The GEO Vision

The vision set out by the Group on Earth Observations (GEO) is to realize a future where **decisions** and **actions**, for the benefit of humankind, are informed by **coordinated, comprehensive** and **sustained Earth observation information and services**.



Global Earth Observation System of Systems (GEOSS)

A central part of GEO's Mission is to build the GEOSS. GEOSS is a set of **coordinated, independent Earth observation information** and **processing systems**

The aim of GEOSS is to **link** these systems together to strengthen the monitoring of the state of the Earth.



European Contribution to GEO

- GEO has divided the globe into large geographical regions such as e.g. the Americas, Asia and Africa
- Specific GEO initiatives per region have been identified; e.g. AfriGEOSS (Africa), AmeriGEOSS (Americas), AOGEOSS (Asia and Oceania).
- The aim of the EuroGEOSS initiative is to be the European contribution to GEO and to benefit from the Global Earth Observation System of Systems (GEOSS) in this geographical/regional context.

The story so far ...

- A concept paper has been drafted
- The European members (European Caucus) of the GEO High Level Working Group (HLWG) have been consulted and comments/inputs have been provided
- Two meetings so far: April 20th and June 14th
- Concept note is presently being updated to reflect latest comments
- GEO HLWG meeting 5th July 2017
- Insert EuroGEOSS language in GEO WP 2017-19

Rationale

- Demonstrate benefit of GEOSS for Europe
- Landscape is rather fragmented – Integrate efforts
- Increase European visibility
- “EuroGEOSS is envisaged to be an **'umbrella framework'** under which GEO member states and relevant European organisations can propose activities to support the promotion, definition and scaling up of applications and services”

Rationale

- Address Sustainable Development Goals (**SDG**), GEO Societal Benefit Areas (SBA) and other GEO priorities.
- Copernicus data to be utilised within EuroGEOSS shall be made available through the **Copernicus-DIAS**.

The EuroGEOSS Objective

“The EuroGEOSS initiative is an **application/service** oriented framework initiative. The aim is to focus on delivering knowledge for the achievement of the **2030 Agenda for Sustainable Development** and other **GEO engagement priorities** in a European context [to be specified GEO relevant initiatives in an European context]”

The Detailed Objectives

Strengthening European GEO coordination (at national level whilst improving access to national Earth observation data sources, focusing on in-situ datasets)

Leveraging national Earth Observation services activities (EuroGEOSS can be a pathway for national initiatives to share and use other European public and private sector data sets)

Securing sustainability and engagement (engage European member states and participating organisations at local, regional and national level)

Exploiting existing EO European Data Platforms (Use of the Copernicus-DIAS is seen as critical for access to Copernicus data. The European GEOSS Data Hub (NextGEOSS), and the European open Science Cloud (EOSC) shall also be foreseen elements within EuroGEOSS.

Branding and promotion (existing actions which support Europe's contribution to GEO by addressing e.g. SDG, SBA and GEO priorities)

The Working Principles

Addressing Agenda 2030 for Sustainable Development in Europe
EuroGEOSS shall build consensus regarding objectives, information and knowledge in support of EU policies, SDGs, GEO SBAs and GEO priorities)

Comprehensive Suite of services (The scaling up of services to address SDGs/GEO SBAs and GEO priorities in a European context)

Coordinated and Coherent EO capacity (The benefits of European GEO investment shall be demonstrated, provide a coordinated and coherent capacity for Europe within GEO for research and innovation)

Linkage with National Initiatives (Extend and leverage national capabilities beyond the scope of existing Use of the Copernicus-DIAS is seen as critical for access to Copernicus data. The European GEOSS Data Hub (NextGEOSS), and the European open Science Cloud (EOSC) shall also be critical elements within EuroGEOSS.

Use of existing infrastructure and tools no new portals or platforms are foreseen within the scope of EuroGEOSS

EuroGEOSS Actions

Proposing and showcasing existing actions

A small number of pilot actions shall be identified and agreed by the GEO HLWG EuroGEOSS shall build consensus regarding objectives, information and knowledge in support of EU policies, SDGs, GEO SBAs and GEO priorities

Copernicus-DIAS utilisation and use of Copernicus Services

Supporting the Copernicus services within a GEO context. Copernicus-DIAS shall be used to **discover** Copernicus data

NextGEOSS Utilisation

Tools and applications being developed for NextGEOSS can be used to support the pilot test cases developing greater awareness and engagement

EuroGEOSS Actions

Leverage data sets not yet integrated at European Levels Examples
geological survey, geographical data, socio-economic, statistics

Scaling up existing initiatives

Existing European initiatives can be scaled up to deliver new applications, bringing together EU, European and national level e.g. Copernicus, H2020 related to in-situ from diverse data sources, INSPIRE etc.

Introduce product commercialisation

Introduce commercial products into the framework to demonstrate the added value for domains such as e.g. insurance, transport, agriculture

Ensuring Linkage and Supporting national efforts

Ensure linkage between EuroGEOSS actions, GEO flagships, national GEO offices, coordinating structures, raising awareness of GEO in Europe

Support Efforts

Support efforts national GEO offices or coordinating structures to raise awareness of GEO within Europe and strengthen the linkages between activities undertaken in GEO initiatives, Flagships and national level -> European GEO investment has a visible return for Europe

EuroGEOSS Governance

Coordination Layer

E.g.

- European caucus of GEO High Level Working Group
- Agree on EuroGEOSS focus (SGD, GEO SBA, GEO Priorities)
- Support pilot applications/services proposals
- Reporting and oversight with implementation group
- Monitoring and documenting user uptake and engagement
- Provide Recommendations

Implementation Layer

E.g.

- Responsible for the identified actions of each selected application/service
- Responsible for scaling up pilot applications
- Liaising with GEO coordination group principals
- Definition of indicators -> addressing SDGs, GEO SBA and GEO priorities.
- Scaling up existing Initiatives (Existing European initiatives can be scaled up to deliver new applications, bringing together EU, European and national level e.g. Copernicus, H2020 integration activities related to in-situ from diverse data sources such as research, INSPIRE etc.

EuroGEOSS Resources

Most of the resources (including space, airborne, in-situ measurements and citizen data) should be already encompassed by existing resources for EO in Europe:

- Existing operational resources: Copernicus-DIAS and Copernicus data services and products.
- INSPIRE Geospatial data, European Meteorological Infrastructure data sets, ESA EO data sets, EUMETSAT EO data sets and ECMWF data sets, etc.
- Research & Innovation Earth observation resources including ESFRI projects as well as Horizon 2020 research and innovation projects including e.g. ATLANTOS, ECOPOTENTIAL, and ERA-PLANET

EuroGEOSS Resources

- European GEOSS Data Hub project NextGEOSS is due to test/pilot applications in at least 10 thematic areas which are in line with the EuroGEOSS objectives.
- The initial phase of EuroGEOSS could be supported through an Horizon 2020 (2018 call).
- In-Situ Earth observation resources: e.g. European Environment Agency data, EGDI (European Geological Data Infrastructure), EMODNET (European Marine Observation and Data Network).
- Other resources, such as data processing capacities, specific data sources, information technologies could be made available through the involvement of the Commercial sector in EuroGEOSS.
- Data and applications which have already been defined by existing activities such as Human Planet Initiative, GEO-Cradle etc shall be included



Next Steps

2017: Development and Preliminary Showcasing

Develop EuroGEOSS framework resourcing, governance and protocols
Showcase selected existing actions

2018: Scaling up and Leveraging

Launch of a Horizon2020 call to establish EuroGEOSS based on policy needs and existing resources.

Scale-up selected existing European initiatives in order to deliver new applications

Leverage national relevant EO activities not yet integrated at European level through EuroGEOSS

Link with GEOSS flagship and engagement priorities
Showcasing added value of EuroGEOSS using selected application examples

2019-2020: Demonstration and Showcasing

Longer Term Sustainability

There are a number of ways e.g.

- EU programmes can sustain EuroGEOSS applications (CAP, CFP, Climate mitigation and adaptation, EEAS etc.
- European Governments can sustain EuroGEOSS applications on a national level to support their decision making processes.
- EuroGEOSS applications can be maintained by the R&I community to support global science
- EuroGEOSS actions can be scaled up on a global level e.g. through GEO flagship initiatives and can be sustained through GEOSS.
- EuroGEOSS actions can be taken by the Commercial sector and sustained based on a commercial model
- European agencies such as EEA, EUMETSAT and ESA can sustain EuroGEOSS applications if the applications support their mandates.

NextGEOSS in EuroGEOSS

- Build NextGEOSS strategic creditability
- This is not just another H2020 activity
- Show that you understand the problem you are trying to solve and explain how NextGEOSS can help
- Acknowledge the landscape and explain the added value of NextGEOSS
- Minimize overlaps with respect to what already exists
- NextGEOSS shall not replace the GCI
 - Focus on what the user experience is now and show added value of NextGEOSS
- Perception and strategic communication are key
- Applications being developed within NextGEOSS can be used e.g. as some of the pilot applications within EuroGEOSS