

European Position Paper on GEO Post-2025 Strategy

Introduction

Earth observation (EO¹) has been a cooperative endeavour in Europe for several decades. The European Union (EU) began to develop its own programme back in the 1990s, notably through the launch of the EU Space Programme and its Copernicus component.

Driven by the major investments in EO and related policy goals formulated by the EU and its Member States, the EU takes a leading role in the global Earth Observation community. Towards this end, the Group on Earth Observations (GEO) is perfectly placed to enable international cooperation in making use of the huge number of EO assets, in terms of systems, data and knowledge, that Europe provides to address the major global challenges expressed by the GEO engagement priorities. To achieve an optimal outcome, **Europe's position in GEO must be coordinated among its various players.**

GEO has evolved since its launch in 2005. Europe has played an important role in providing and advancing the use of Earth Observation (EO) for environmental and climate goals and promoted the sharing of open data and information, enhancing coordination and integration with other data. Copernicus data and information is today widely used in the community and its services in the marine, land, atmosphere, and climate domains and are indispensable tools to address user needs around the globe. A large number of research and innovation projects funded by the EU programmes such as Horizon Europe have contributed significantly to the set-up of new EO systems, the better use and exploitation of data, and the establishment of services which are addressing issues such as food security, climate hazards, and health. However, the exploitation of the European EO assets, the level of international collaboration on building inter-operable EO systems, connecting data from various sources and building user-centric applications is below its potential.

The **GEO Mid-Term evaluation** has underlined new challenges and opportunities, calling for innovative solutions and the need to re-affirm the value proposition of GEO, its objectives and the technical and financial resources required to reach them.

The following considerations build on the recommendations issued from the GEO Mid-Term evaluation, the actions taken by the GEO Executive Committee to implement them, and the engagements GEO committed to in the [Canberra declaration](#) of 2019.

This position paper is part of the **European contribution to the preparation of the Post-2025 Strategy**. It is drafted by the European Commission services working on GEO (DG RTD, DG INTPA, DG DEFIS and the DG JRC) and integrated views expressed by the members of the GEO High Level Working Group.

¹ Please note that EO in this context refers to all sorts of environmental observations, including space and non-space based systems.

Which is the value proposition for the GEO Post-2025 Strategy?

GEO was mandated to deliver a Global Earth Observation System of Systems (GEOSS) that connects, integrates, and exploits the Earth observations for the benefit of humanity. This task, as well as its character as an intergovernmental partnership was re-affirmed by the 2019 ministerial meeting in Canberra.

We welcome the growing involvement of the private sector that is essential for providing sustained EO services in many areas. However, we like to ensure that their engagement remains within well-defined limits. In our view, **GEO needs to remain a government-driven group** and its current governance structure should not be modified or called into question. Any significant change of the value proposition of GEO, its governance structure or its mandate would require the approval by the GEO Ministerial.

The GEOSS entails a policy and a technical dimension. In its current realisation, the GEOSS platform addresses the latter in a way that has been considered unsatisfactory in a report from an expert advisory group ([EAG](#)). In response to the expert advices, we suggest that GEO puts more emphasis on the policy aspects and advocates further Open Data, namely the implementation of the GEO Data Sharing Principles, the endorsement and dissemination of good practices, open standardisation, and capacity building. In the future, a GEO platform could focus its activities on providing support to the GEO initiatives to achieve their objectives, helping them in making data and services discoverable, interoperable, accessible and actionable on a sustainable basis, which implies promoting and liaising with existing infrastructures and data portals. We believe that the requirements for long-term maintenance and sustainability of free and open data and service provision imply that the GEO technical support services be based **mainly on public funding and open software** avoiding lock-ins and ensuring equality and a level playing field for all to access and use the resources.

A renewed value proposition should be based on **the GEO overarching principle** that everybody around the globe (scientist, policy maker, business, citizen) who aims at addressing environmental challenges identified in international agreements - such as the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals - should have **free and open access to all essential Earth observation data**. GEO is in a unique position to support governments in their effort to address these challenges and should reaffirm these agreements as its engagement priorities.

In terms of the thematic orientation, the inclusion of new themes such as **biodiversity** as a possible 5th engagement priority in relation to the Convention on Biological Diversity and the global framework for biodiversity is to be examined. The **protection of water and oceans and the sustainable use of these resources** also deserve greater commitment within GEO.

We though agree with the Post-2025 Interim Report that the work programme should “focus on a limited number of prioritized areas of high strategic importance to the World and develops large-scale integrated activities based on additionality, efficiency, effectiveness and impact”. The EU and its Member State therefore stand ready to **support GEO initiatives that generate high added-value towards their policy goals**, provide long-term perspective on

integrating observing systems and sustained services for decision making on all relevant levels, building on the networks established by the regional GEOs.

Role of the GEO secretariat and the GEO work programme

The **GEO secretariat, in its role as facilitator** should focus its activities on supporting the group and its initiatives by effective communication activities, facilitating cross-fertilization across the Work Programme activities, their integration and providing space for collaboration. It is important to link the GEO activities with relevant initiatives at global and national level. The secretariat should also support the leveraging of public and private funding (in cash or in-kind).

GEO also needs to **define effective ways of** addressing its thematic priority areas and achieving real impact with its initiatives through effective implementation of its data sharing principles. In practice, this implies building an effective global culture of making all relevant Earth observation data findable, accessible, inter-operable and re-usable. Beyond the technical aspects to be considered towards this end (including data standardisation and interoperability) the focus should be on the implementation (incl. operation and evolution) approaches and the “usability” of the data and service provision, which requires a well-thought approach to co-design, as developed by EU projects such as *e-shape*, or transversal expertise integrated from large infrastructure programmes. A systemic approach for addressing the priority areas, which also includes data from a wider range of sources, beyond EO, should be in the centre of the ambition.

In doing so, GEO also needs to ensure the protection of the legitimate interests of data providers, and the GEO secretariat should find ways to combine the requirement of acknowledging EO system operators with the open data principles, e.g. by defining and ensuring the proper use of open licensing.

Relations to WMO, other UN bodies and international initiatives

As flagged in the actions in response to the GEO Mid-Term Evaluation, improving and strengthening the collaboration between GEO and its hosting institution the World Meteorological Organisation and its affiliated bodies (IPCC and GCOS) should remain at the heart of GEO engagement in their common endeavours to establish a global system for standardised, open and interoperable climate observations and to exploit them so that they become available as services to society and citizens of the world to support their actions to adapt to climate change. It is important to ensure that the global initiatives are mutually complementary and/or reinforcing rather than creating overlaps and redundancies.

Other aspects

Greater **diversity and inclusiveness** values need to be placed at the heart of GEO. As the Group is committed to cooperation between countries of the global North and South, we would like to recall and strengthen the current commitments of GEO Members and Participating Organisations. A GEO values charter could be drafted. Particular attention should be given to the inclusiveness of non-Anglo-Saxon communities. While maintaining efficiency and

pragmatism, GEO should reconsider the current approach of using only one language at GEO meetings for particular processes, which risks alienating many global stakeholders.

The GEO value charter should also provide guidelines on proper visibility and acknowledgement of data providers along the value chain, which is important to sustain funding sources for those providers.

European contribution and visibility in GEO

The visibility of current European efforts must be strengthened and reflect the substantial contributions that Europe devotes to GEO in terms of supporting its organisation and initiatives and also, more generally, by making a wide range of EO data and services available. The operational Space Programme and its Copernicus component and services are widely used by the GEO community, and represent an important contribution from Europe, which is still not sufficiently represented in GEO. The Copernicus programme, which provides the GEO community with a huge set of high-quality data and information on the globe, should be given its due value and visibility. It represents a source of inspiration for the GEO community and is one of the major in-kind contributions of Europe to GEO.

GEO needs to make better use of the opportunities to exploit the contributions of successful European initiatives such as the Copernicus programme, INSPIRE, the legal framework having contributed to setting up an advanced open data landscape and the results of the numerous EO-derived solutions funded by the EU, its Member States and European Organisations. Those contributions are nurturing or have potential to further nurture the GEO Work Programme. More and specific focus on leveraging the European assets will be crucial for GEO to achieve its ambition through an effective engagement with the European EO community. Europe also likes to take advantage of global Open data. An example of an EU initiative currently under development, which aims to extract value from EO data is Destination Earth. European EO assets are also key in several international cooperation programmes, such as GMES&Africa and ClimSA, funded by EU and implemented by African institutions, with European technical support.