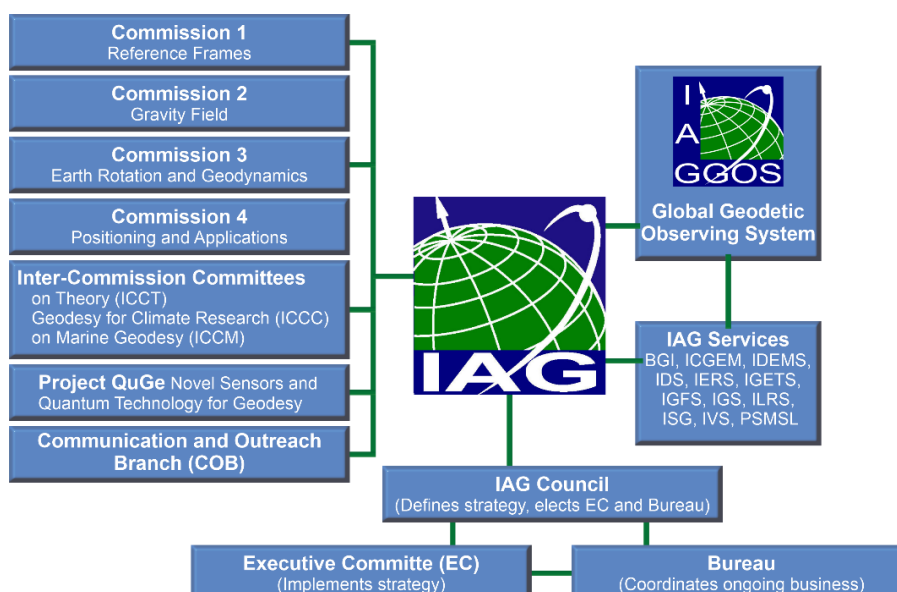


GGOS Governance and Operations: Central coordination and daily running of GGOS

The Global Geodetic Observing System (GGOS) is the response of the international geodetic community, organised under the International Association of Geodesy (IAG), to the need to continuously monitor the Earth system. GGOS observes the time-varying shape, rotation and gravity field of the Earth with respect to precise and long-term stable geodetic reference frames. Changes to these characteristics are inherently related to changes occurring within and between the Earth's components: the geosphere, atmosphere, hydrosphere, cryosphere and biosphere. Geodesy is therefore an essential discipline for Earth system monitoring. GGOS aims to raise awareness of this new role of geodesy and to move from the provision of usual geodetic products (station coordinates, geoid, Earth orientation parameters, satellite orbits) to a consistent modelling and interpretation of Earth system processes and interactions, ensuring an integrated observing system.

The parent organisation of the Global Geodetic Observing System (GGOS) is the International Association of Geodesy (IAG). Founded more than 160 years ago, the IAG is the organisation responsible for the advancement of geodesy. The IAG has developed a strong organisational infrastructure to address key scientific issues, to innovate methods and technologies in the various fields of geodesy,

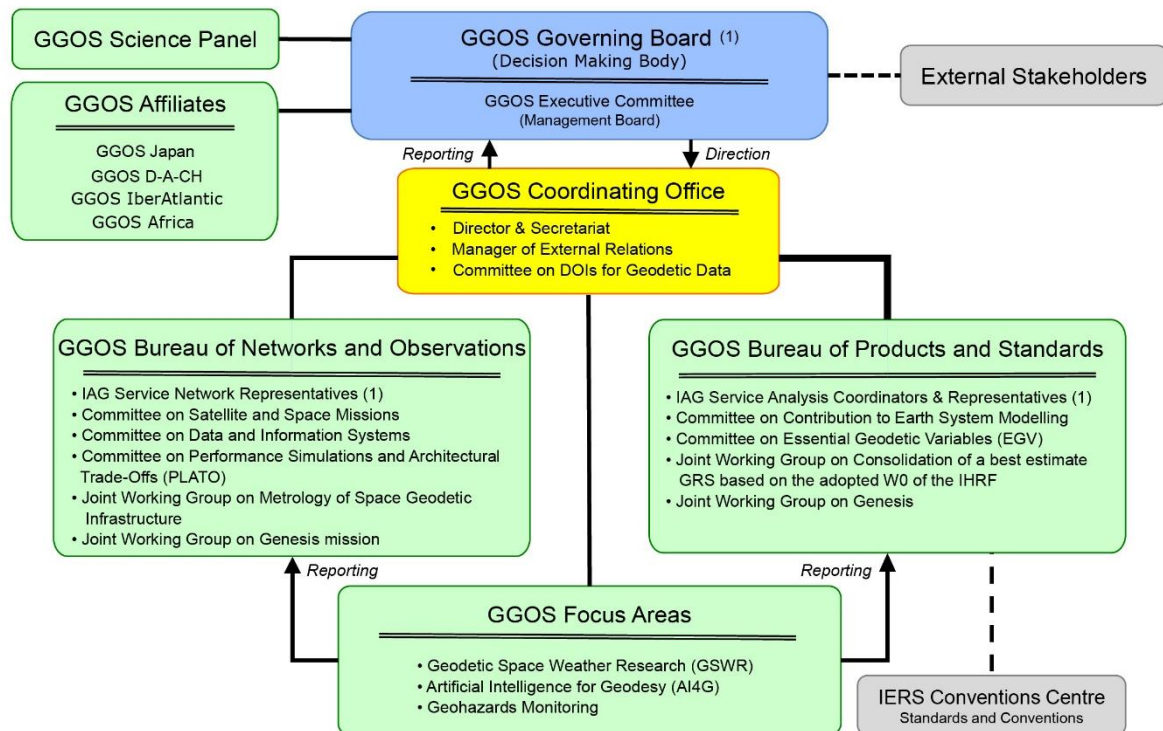
and to analyse geodetic data to the highest standards to provide highly accurate, consistent and long-term stable geodetic products. This vast operational organisation is possible thanks to a strong international voluntary commitment from national mapping authorities, space agencies, universities, institutes, and individuals, who contribute to the IAG enterprises on a best effort basis.



Organisational structure of the International Association of Geodesy - IAG

GGOS relies on the existing geodetic observing infrastructure and the IAG organisational structure. The IAG Commissions, Inter-Commission Committees and Projects address key scientific issues to innovate methods and technologies, framing the science background for GGOS. The IAG Services facilitate the global coordination of activities to collect and analyse geodetic

data and to provide geodetic reference frames and other products to geodesists, researchers of other Earth sciences, national administrations, and society in general. Additional operational elements dedicated solely to GGOS issues ensure the efficient organisation of GGOS activities and address challenges that cannot be solved by individual IAG components alone.



⁽¹⁾ GGOS is built upon the foundation provided by the IAG Services, Commissions, and Inter-Commission Committees

Operational elements of the Global Geodetic Observing System – GGOS

- The **GGOS Bureau of Networks and Observations (GGOS-BNO)** identifies and addresses key technological requirements for the global geodetic infrastructure. To this end, it assesses the status of the existing infrastructure, carries out simulation studies to optimise the observing networks, supports the development of standardised metadata communication, archiving and retrieval, and improves coordination and information exchange between ground-based networks and space segments of satellite missions relevant to geodesy.
- The **GGOS Bureau of Products and Standards (GGOS-BPS)** addresses key tasks related to the standardisation, integration and optimisation of geodetic products. On the one hand, it keeps track of the adopted geodetic standards and conventions across all IAG components as a fundamental basis for the generation of consistent geometric, gravimetric and Earth orientation products and coherent Earth system modelling. On the other hand, it identifies potential (new) geodetic products that could meet emerging scientific and societal needs.

- The **GGOS Coordinating Office (GGOS-CO)** acts as the Secretariat of GGOS, coordinates the administrative work, and is responsible for outreach and communication. It is responsible of the implementation of the GGOS Portal and hosts activities related to data-sharing mechanisms for openly accessible and citable geodetic data and products using DOI (Digital Object Identifier) and following the FAIR (Findability, Accessibility, Interoperability, Reuse) and TRUST (Transparency, Responsibility, User focus, Sustainability and Technology) principles.
- The **GGOS Focus Areas (FA)** address broader scientific issues that require the convergence of different IAG Components to be solved. They are cross-disciplinary, are meant to consider gaps and future geodetic products, and are incubators of new research topics. Current (as of 2026) GGOS FAs concentrate on *Geohazards Monitoring* (development of methods for the reliable use of GNSS techniques for Tsunami Early Warning Systems – GTEWS), *Geodetic Space Weather Research* (development of improved models of the ionosphere, plasmasphere and thermosphere, as well as their coupling processes), and *Artificial Intelligence for Geodesy* (development and evaluation of improved geodetic products based on AI for GNSS remote sensing, predicting Earth orientation parameters, and monitoring of surface deformation, gravity field and mass change).
- **GGOS Affiliates** represent regional alliances that facilitate to identify, enable and develop sustained geodetic observations, products and services following regional and national priorities, aligned with the global goals of GGOS. GGOS Affiliates are national or regional organisations that promote geodesy in their countries. Current GGOS Affiliates are *GGOS Japan*, *GGOS D-A-CH* (Germany, Austria, Switzerland), *GGOS IberAtlantic* (Spain and Portugal) and *GGOS Africa*.
- Most of the GGOS enterprises are reviewed/endorsed by the **GGOS Science Panel**. This Panel is a multidisciplinary advisory board that provides scientific support and guidance to the GGOS steering and coordination bodies. The governance, strategic policy and direction of the GGOS is provided by the **GGOS Governing Board**. It is composed of representatives of all IAG Components and the chairs of the GGOS operational elements. Day-to-day activities are carried out by the **GGOS Executive Committee**.

Find out more

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