



## **Vision, Mission, Goals and Tasks of the Global Geodetic Observing System (GGOS)**

**2011**

*(Officially adopted by the Global Geodetic Observing System Steering Committee at its 21<sup>st</sup> Meeting on July 2, 2011 at the IUGG XXV General Assembly, Melbourne, Australia)*

### **History**

A GGOS Strategy Retreat 2011, was held in Zurich, Switzerland during February 2-4, 2011. Preparation for the retreat included a survey poll on GGOS from the broader geodetic community. Response to the survey was very good and provided a great deal of information for the strategy team to consider. At the end of the retreat, the team drafted a new GGOS Vision, Mission, four Goals and tasks related to each goal.

The draft document was then discussed at 20<sup>th</sup> Steering Committee Meeting in Vienna, Austria on April 2, 2011 with some additional edits and clarifications. The second revision was distributed to the Steering Committee for comments in April 2011. The document was revised in response to comments received by the GGOS Vision Group from May 12, 2011 to June 24, 2011.

The document was discussed at the 21<sup>st</sup> Steering Committee Meeting in Melbourne, Australia on July 2, 2011. Some minor edits were included and the Steering Committee unanimously adopted this strategy document.

### **Vision**

Advancing our understanding of the dynamic Earth system by quantifying our planet's changes in space and time.

## **Mission**

We live on a dynamic planet in constant motion that requires long-term continuous quantification of its changes in a truly stable frame of reference.

The mission of GGOS is:

1. To provide the observations needed to monitor, map and understand changes in the Earth's shape, rotation and mass distribution.
2. To provide the global frame of reference that is the fundamental backbone for measuring and consistently interpreting key global change processes and for many other scientific and societal applications.
3. To benefit science and society by providing the foundation upon which advances in Earth and planetary system science and applications are built.

## **Goals**

The goals of GGOS are:

1. To be the primary source for all global geodetic information and expertise serving society and Earth system science.
2. To actively promote, sustain, improve and evolve the global geodetic infrastructure needed to meeting Earth science and societal requirements.
3. To coordinate the international geodetic Services that are the main source of key parameters needed to realize a stable global frame of reference and to observe and study changes in the dynamic Earth system.
4. To communicate and advocate the benefits of GGOS to user communities, policy makers, funding organizations, and society.

### **Tasks of Goal 1:**

To be the primary source for all global geodetic information and expertise serving society and Earth system science.

- a. Identify the components and themes of GGOS needed to plan and meeting evolving user requirements and to provide crucial data and information to the user.
- b. Define and implement internal and external interfaces needed for technical and organizational efficiency.
- c. Evaluate and review the current GGOS organization and structure.
- d. Develop mechanisms for regular review of GGOS quality and performance, including that of its data and products.

- e. Expand and broaden user communities by conducting impact studies and organizing joint workshops and symposia.
- f. Provide a unique point of access to the user community by creating and maintaining the GGOS portal.

#### Tasks of Goal 2:

To actively promote, sustain, improve and evolve the global geodetic infrastructure needed to meeting Earth science and societal requirements.

- a. Provide the scientific basis for the necessary global geodetic infrastructure, including establishing requirements for station distribution and data quality.
- b. Provide a forum for inter-Service communication and exchange of information about current activities, infrastructure performance and future plans.
- c. Identify major infrastructure deficiencies and propose remedies to the geodetic and user communities and appropriate entities including the GIAC.
- d. Support requests of stations, agencies and other organizations for resources.
- e. Advocate for the establishment of geodetic fundamental stations with potential sponsors.
- f. Advocate for relevant space-based components including operational chains of geodetic missions like gravity, altimetry, and SAR missions to provide spatial and temporal coverage of continuous and episodic changes in the dynamic Earth system.

#### Task of Goal 3:

To coordinate the international geodetic Services that are the main source of key parameters needed to realize a stable global frame of reference and to observe and study changes in the dynamic Earth system.

- a. Improve the interaction and communication amongst GGOS, and IAG Services and Commissions by defining appropriate linkages, organizing inter-Service workshops and, when appropriate, holding joint or co-located GGOS EC and Service GB/DB meetings.
- b. Reform the GGOS governance structure in order to facilitate the execution of the Science Themes, manage the relationships between the IAG Executive, GGOS EC, the Services and the Commissions, fulfill GGOS's role in outreach, represent GGOS at forums such as GEO, and other activities as may be tasked.
- c. Identify data and product gaps, integrated products, additional Service and Commission components and, if necessary, new Services and Commissions that are needed to fully address the requirements of the GGOS Science Themes.

- d. Establish and promote the use of reference frames, common standards and models, open data access, geodetic expertise and information, and even methodologies where appropriate, so as to ensure reliable, consistent and high-quality data and products for the geoscientific community.
- e. Promote combination analyses and integrated product generation across Services and Commissions, especially from co-located geodetic sites, in order to address the requirements of the GGOS Science Themes.
- f. Promote a culture of continuous quality improvement of the geodetic infrastructure, analysis center operations, effectiveness of the GGOS structural components, and of the generated GGOS data and products.

Tasks of Goal 4:

To communicate and advocate the benefits of GGOS to user communities, policy makers, funding organizations, and society.

- a. Organize meetings about GGOS activities and participate in GEO meetings, user community events, conferences, workshops, symposia, etc.
- b. Identify GGOS requirements in terms of infrastructure and workforce and interact with funding authorities, national and international and space agencies to advocate the importance of meeting these requirements.
- c. Promote the development and submittal to funding agencies of proposals that advance the goals of GGOS.
- d. Involve young scientists by means of GGOS scholarships and grants through national and international projects.
- e. Foster geodetic educational programs within universities, schools and research organizations.
- f. Strengthen outreach capabilities demonstrating GGOS benefits by means of case studies and success stories; release a short GGOS movie to be presented and distributed for educational purposes.
- g. Review the respective roles of GGOS and the GIAC.
- h. Improve the recognition and visibility of GGOS within GEO, ICSU, COPUOS, CEOS, COSPAR and other organizations.