



IHB File No. S1/5062

CIRCULAR LETTER 02/2015
6 January 2015

GEOSS DATA MANAGEMENT PRINCIPLES

Reference: IHO CL 06/2006 dated 18 January - *Intention of the International Hydrographic organization (IHO) to become a participating organization of the Group on Earth Observations (GEO).*

Dear Hydrographer,

1. GEO, the “Group on Earth Observations”; is a voluntary partnership of governments and international organizations which is coordinating efforts to build a Global Earth Observation System of Systems (GEOSS). The objective of GEOSS is to exploit the potential of Earth observations to support decision-making in an increasingly complex and environmentally stressed world.
2. GEO’s Members include 95 Governments and the European Commission. In addition, 89 intergovernmental, international, and regional organizations with a mandate in Earth observation or related issues have been recognized as Participating Organizations. The IHO was recognized as a Participating Organization in 2006 as announced in the reference.
3. The GEO Plenary, composed of representatives of the Members and Participating Organizations, is the primary decision-making body. The GEO Plenary meets at least once annually.
4. GEO has been working to facilitate data management approaches that encompass a broad perspective of the observation data life cycle. Several aspects of data management, e.g., access, documentation, data quality and interoperability, have been addressed by dedicated working teams. The GEO-X Plenary (January 2014), endorsed the establishment of a Data Management Task Force (DMP-TF) to identify Life-Cycle Data Management Principles.
5. The proposed GEOSS Data Management Principles drafted by the DMP-TF are listed in Annex A. Following deliberations at the GEO-XI Plenary (November 2014), the mandate of the DMP-TF was extended for another year, in particular to develop Implementation Guidelines for GEOSS Data Management Principles. The revised Terms of Reference of the task force are provided in Annex B. Further background documents are available on the GEO website at:
www.earthobservations.org/index.php > documents > Plenary documents > Nov 2014 GEO-XI Plenary.
6. The GEO Secretariat is now inviting GEO Members and Participating Organizations to review the draft data management principles and to provide further comments, if any, and consider additional nominations to the task force.
7. The deadline for input to the GEO Secretariat is 23 January. Noting that this date is very close, the Directing Committee intends to provide its own comments in due course directly to the GEO Secretariat and invites Member States to liaise in parallel with their national GEO Principal, as appropriate. Member States should, in particular, consider how the proposed principles would impact their contribution to national and/or regional Marine Spatial Data Infrastructures.

8. A further opportunity to comment on this issue is expected in preparation of the GEO-XII Plenary which should be convened in the second semester of 2015. In that perspective the Directing Committee would welcome any feedback from Member States by 1st June 2015.

On behalf of the Directing Committee
Yours sincerely,



Gilles BESSERO
Director

Annexes (*in English only*):

- Annex A: Proposed GEOSS Data Management Principles
- Annex B: Terms of Reference of the GEO Data Management Principles Task Force

Copy: Chair of the IHO MSDI Working Group

Proposed GEOSS Data Management Principles

Each Earth observation is unique because the observation occupies a specific location and time in an environment that is continuously changing. No two Earth environmental observations are the same, making each Earth observation an irreplaceable asset to understand the past, describe the present, and forecast the future of the global integrated Earth system.

The value of each Earth observation is maximized through data life-cycle management, including the following foundational elements:

- Discoverability;
- Accessibility;
- Usability;
- Preservation;
- Curation.

Discoverability

1. Data and all associated metadata will be discoverable through catalogues and search engines, and data access and use conditions, including licenses, will be clearly indicated.

Accessibility

2. Data will be openly accessible with minimum delay and cost.
3. Data will be accessible via online services, including, at minimum, direct download but preferably user-customizable services for visualization and computation.

Usability

4. Data should be structured using encodings that are widely accepted in the target user community and aligned with organizational needs and observing methods, with preference given to non-proprietary international standards.
5. Data will be comprehensively documented, including all elements necessary to access, use, understand, and process, preferably via formal structured metadata based on international standards.
6. Data will include provenance metadata indicating the origin and processing history of raw observations and derived products, to ensure full traceability of the product chain.
7. Data will be quality-controlled and the results of quality control shall be indicated in metadata; data made available in advance of quality control will be flagged in metadata as unchecked.

Preservation

8. Data will be protected from loss and preserved for future use; preservation planning will be for the long term and include guidelines for loss prevention, retention schedules, and disposal or transfer procedures.
9. Data and associated metadata held in data management systems will be periodically verified to ensure integrity, authenticity and readability.

Curation

10. Data will be managed to perform corrections and updates in accordance with reviews, and to enable reprocessing as appropriate; where applicable this shall follow established and agreed procedures.

11. Data will be assigned appropriate persistent, resolvable identifiers to enable documents to cite the data on which they are based and to enable data providers to receive acknowledgement of use of their data.

Terms of Reference of the GEO Data Management Principles Task Force

Purpose

The GEO Data Management Principles Task Force (hereafter referenced as “DMP TF”) will support the Group on Earth Observation (GEO) in the definition and endorsement of common GEOSS Data Management Principles.

The following principles have been initially drafted by the GEO Infrastructure Implementation Board. It will be the responsibility of the DMP TF to review the principles, assess feasibility and eventually propose a new formulation:

- Ensure long time data preservation and distribution
- Ensure the quality information of EO data
- Answer the EO user need

Objectives

The DMP TF is convened to work with GEO collectively, including the Implementation Boards, the Data Sharing Working Group (DSWG) and related Work Plan Tasks.

The work of the DMP TF will concentrate on developing Principles for:

- Ensuring that data are properly managed (including data citation), accessible, archived and long term preserved (when appropriate);
- Ensuring that data are properly documented (metadata), quality controlled and quality assessed, delivered, and updated in ways that facilitate access and re-use of information made available through the GEOSS Common Infrastructure (GCI);
- Facilitating the link between user needs and data availability, especially with regard to the needs of users from developing countries (e.g. by identifying existing sources of requirements already approved by the relevant user community);
- Facilitating interoperability of GEOSS data resources by promoting a progressive harmonisation/standardisation of content (data models, thesauri, coding list, ...) and dissemination and usage rights in order to facilitate their re-use at global or regional scales.

DMP TF will also participate in GEO relevant events and will make a recommendation to GEO-XII Plenary regarding next steps.

Membership and Working Arrangements

- The DMP TF was created by, acts on requests from, and reports to the GEO Plenary;
- The DMP TF will provide reports to, and request the guidance of, the Executive Committee, as required;
- The DMP TF shall be composed of individuals nominated by GEO Members and Participating Organisations, in particular those with relevant expertise, with administrative support provided by the GEO Secretariat;
- Co-chairs of the DMP TF shall be decided by the DMP TF. There should be a minimum of two co-chairs with representation from both GEO Members and Participating Organizations.
- The DMP TF will meet at such times and places as determined by its members and work mainly through teleconferences and e-mail;
- The DMP TF will coordinate its work with that of the Implementation Boards and Data Sharing Working Group as appropriate;
- The DMP TF will coordinate with other international and regional initiatives and organisations working on data management issues;

- Specific research work or investigations may be assigned by the DMP TF to sub-teams of individual experts to address identified issues at the appropriate level of detail and professional expertise;
- The DMP TF will develop of GEOSS Data Management Principles Implementation Guidelines.

Duration

- These Terms of Reference shall be effective from March 2014 through the GEO-XII Plenary;
- GEO-XI Plenary approved that the DMP TF Terms of Reference will be extended and modified to include a mandate to develop Implementation Guidelines for GEOSS Data Management Principles.