



Overview of Progress on GEO Data Sharing

Data Sharing Working Group 2013 Progress Report

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Data Sharing Working Group Side Event

GEO-X and 2014 Ministerial Summit

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GEOS Data Sharing Principles

The GEOS 10-Year Implementation Plan states:

“The societal benefits of Earth observations cannot be achieved without data sharing.”

And then sets out the GEOS Data Sharing Principles:

There will be full and open exchange of data, metadata and products shared within GEOS, recognizing relevant international instruments and national policies and legislation.

All shared data, metadata and products will be made available with minimum time delay and at minimum cost.

All shared data, metadata and products being free of charge or no more than cost of reproduction will be encouraged for research and education.

Please note:

There is NO GEOSS Data Policy

- **The GEOSS Data Sharing Implementation Guidelines confirm:**

“GEO welcomes all data contributions into the GEOSS.

When registering data in GEOSS, the contributor should present any restrictions arising from relevant international instruments and national policies and legislation, and the duration of each restriction, that is applicable to the exchange of the data, metadata, and products submitted”.

Implementation Guidelines for the GEOSS Data Sharing Principles (DSP)

Accepted by the GEO-VI Plenary, Washington D.C., Nov. 2009

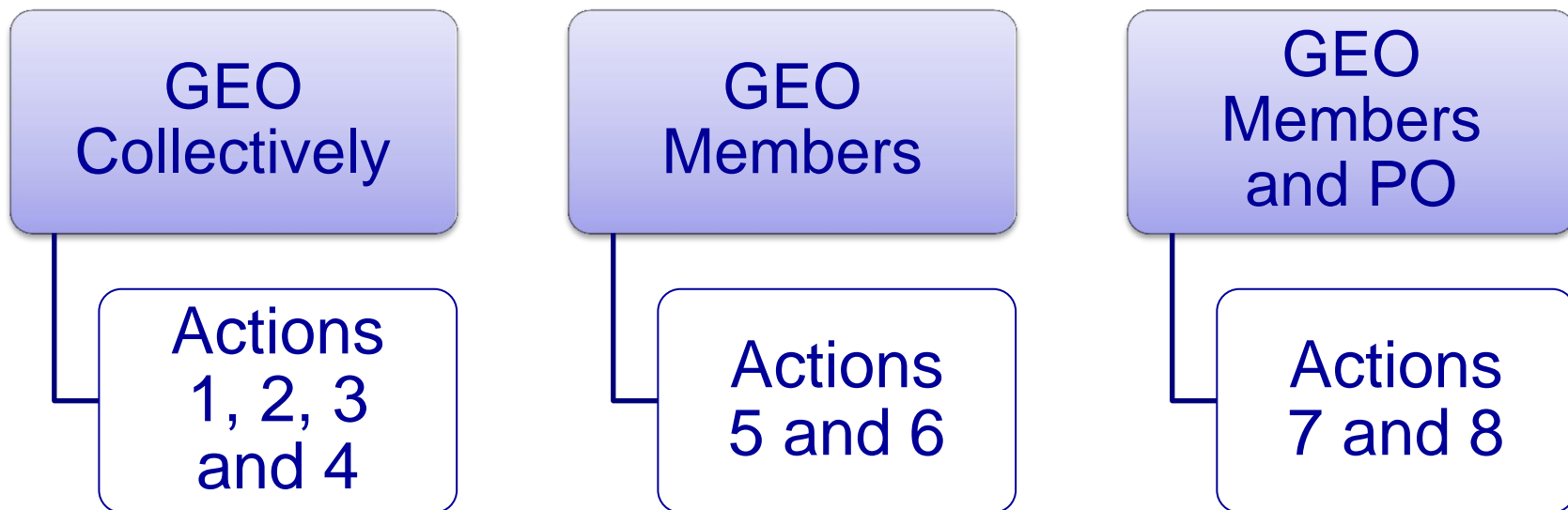
- **Promote the implementation of the principle of full and open exchange of data according to GEOSS Data Sharing Principles (DSP).**
- **Enable GEOSS users to reuse and re-disseminate shared data, metadata and products.**
- **Ensure consistency in the implementation of the GEOSS DSP with relevant international instruments and national policies and legislation.**
- **Implement pricing policies consistent with GEOSS DSP.**
- **Reduce time delays for making data available through GEOSS.**
- **Promote research & education uses of GEOSS data, metadata and products.**

GEOSS Data Sharing Action Plan for the Implementation of the GEOSS DSP

- **Builds upon the crucial concept of the full and open exchange and on the Implementation Guidelines accepted by Plenary**
- **Notes that the achievement of full and open exchange of, and access to, key datasets requires actions by:**
 - **GEO collectively**
 - **Members and Participating Organizations individually**
 - **GEOSS tasks and cross-cutting activities**

GEOSS Data Sharing Action Plan for the Implementation of the GEOSS DSP

Specifies **8 actions** to be pursued by:



Data Sharing Action 1

GEO collectively to:

- Create the **GEOSS Data Collection of Open Resources for Everyone (GEOSS Data-CORE)** to address GEO Societal Benefit Areas
- The GEOSS Data-CORE is a distributed pool of documented datasets, contributed by the GEO community on the basis of full, open and unrestricted access and at no more than the cost of reproduction and distribution
- * *It should be noted that data accessible in the GEOSS Data-CORE is a subset of all data registered in the GEOSS*

The GEOSS Data-CORE

- It should be noted that the following conditions may be placed on data registered in the GEOSS Data-CORE by data providers, but are not required:
 - (i) Attribution;
 - (ii) User registration;
 - (iii) Marginal cost recovery is permitted,
(i.e., not greater than the cost of reproduction and distribution).
- These are not considered as representing restrictions on the access to, or use and redistribution of, the data.

Data Sharing Actions 2, 3 & 4

GEO collectively to:

2. Establish a Task Force (Working Group) to:
 - Monitor the use and impact of resources made available with full and open access;
 - Promote the efficacy of the Data Sharing Principles in delivering societal benefits;
 - Evaluate the outcomes of this Action Plan.
3. Maintain the GEOSS Common Infrastructure as the architectural framework essential to implementing the Data Sharing Principles
4. Integrate implementation of the Data Sharing Principles, as appropriate, into the activities of GEO Work Plan Tasks and GEO Committees

Proposed Data Sharing Actions 5 and 6

GEO members to:

5. Take leadership to establish national coordinating mechanisms to promote and monitor engagement with the implementation of the GEOSS Data Sharing Principles and provide feedback to GEO
6. Develop flexible policy frameworks to ensure that a more open data environment is implemented

Proposed Data Sharing Action 7 & 8

GEO members and participating organizations to:

7. Maximize the number of documented datasets made available on the basis of full and open access
8. Promote with data providers within their territories the benefits of full and open access to data

The 2010 GEO Ministerial Declaration

Commit(ed GEO Members) to:

- (i) **maximize the number of documented datasets** made available on the basis of **full & open access**;
- (ii) create **the GEOSS Data Collection of Open Resources for Everyone (GEOSS Data CORE)**, a distributed pool of documented datasets with full, open and unrestricted access at no more than the cost of reproduction and distribution; and
- (iii) develop flexible national and international policy frameworks to ensure that **a more open data environment** is implemented, thus putting into practice actions for the implementation of the GEOSS Data Sharing Principles;

The GEOSS Data Sharing Working Group

- Established by GEO-VIII (Nov. 2011), the DSWG supports GEO in its goals to put into practice the GEOSS Data Sharing Principles, the Implementation Guidelines and the GEOSS Data Sharing Action Plan.
- It also has responsibility for executing the GEO 2012-2015 Work Plan Task ID-01 "Advancing the GEOSS Data Sharing Principles".
- The DSWG has established 4 formal Subgroups:
 1. **GEOSS Data-CORE and GCI Subgroup;**
 2. **Legal Interoperability Subgroup;**
 3. **Documentation and Data Quality Subgroup;**
 4. **Capacity Building Subgroup**

The GEOSS Data Sharing Working Group

- The DSWG has a broad representation **from more than 30 GEO Members and Participating Organisations.**
- **DSWG Co-Chairs:**
 - Robert Chen (**ICSU-CODATA**)
 - Michel Schouppe (**European Commission**)
 - David Halpern (**COSPAR**)
 - Paul Uhler (**ICSU-CODATA**)
 - Lerato Senoko (**ZA-DST**)
 - Greg Withee (**US-USGS**)

The GEOSS Data-CORE and GCI Subgroup

- Expand the availability of detailed metadata to facilitate data and service discovery, assessment, access, and integration for decision support;
- Promotes the continued growth in the number of datasets made available on the basis of full and open access;
- Assists in the implementation of the GEOSS Data-CORE.
- SG Co-Chairs: Steve Browdy, Jose Miguel Rubio Iglesias

The GEOSS Data-CORE and GCI Subgroup

Progress in 2013

- More than **40 organisations, initiatives and projects** contacted to consolidate and expand the GEOSS Data-CORE.
- Thanks to the collaboration with **data and GCI providers** now over **50 million GEOSS Data-CORE resources** (at different granularity level) potentially and **easily** discoverable and accessible via the GCI and the GEOSS web portal. Increase in **number of the GEOSS Data-CORE registrations** in the GEOSS Components and Services Register.
- Ongoing **coordination** with the **Architecture Implementation Pilot (AIP-6)**: a test has been launched to check whether the GCI can successfully find current licensing metadata and make it available to users and the list of use metrics information has started to be reviewed.

The Legal Interoperability* Subgroup

- Reviews and updates the legal interoperability summary white paper and background papers;
- Compiles a list of open access licenses and waivers, as well as restricted licenses, used within GEOSS and their key characteristics.
- Produce educational and training materials on open access licenses and waivers for data providers and users.
- SG Co-Chairs: Paul Uhlir, Catherine Doldirina

* Legal interoperability for data means that the legal rights, terms, and conditions of databases from two or more sources are compatible and the data may be combined by any user without compromising the legal rights of any of the data sources used.

The Legal Interoperability Subgroup

Progress in 2013

- Delivery of a short review paper "**Interpretation of the full and open (free and unrestricted) access to and use of geographic data: existing approaches**" focused on the comparison of terms used as equivalents to "full and open", analysing similarities and differences in the approaches in various jurisdictions.
- Updated and simplified version of **the white paper** and compilation of a **list of recommended open access licenses** and waivers, as well as restricted access that can be used within GEOSS for sharing data through the GEOSS Data-CORE.
- Ongoing work on a **longer paper on legal interoperability issues** that may arise when using GEOSS Data-CORE together with restricted GEOSS data - to be published in a peer-reviewed journal in 2014.

The Documentation and Data Quality Subgroup

- Promotes comprehensive documentation on data quality, including accuracy, stability, precision, spatial and temporal sampling characteristics, error characteristics, timeliness, completeness, reproducibility, calibration, accessibility, stability traceable to international standards, and reprocessing.
- SG Co-Chairs: Greg Withee, David Halpern

The Documentation and Data Quality Subgroup Progress in 2013

- Release of the **GEOSS Data Quality Guidelines** to foster understanding and the importance of data quality associated with GEO data sets.
- Exploration of how to get **feedback** from the GEO Community on the GEOSS Data Quality Guidelines.
- Coordination with other GEO and non-GEO bodies (**CEOS**)
- **Way forward** in discussion: GEO-Label, further amplification of documentation procedures for GEOSS Datasets, etc.

The Capacity Building Subgroup

- Provides support to GEO Members to enable them to establish national coordinating mechanisms and develop flexible policy frameworks;
- Promotes with data providers the benefits of full and open access to data, which will also help to maximise the number of documented datasets made available on the basis of full and open access.
- SG Co-chairs: Bob Chen, Lerato Senoko, Pierre Philippe Mathieu

The Capacity Building Subgroup Progress in 2013

- **Documentation to support the establishment of national coordinating mechanisms** and more open policy frameworks by GEO Members is being developed.
- A **questionnaire to investigate barriers** that hinders data sharing and approaches to improving data sharing is being developed.
- Preparation of this **side event** at the GEO-X and Ministerial Summit.

Ad-hoc GEOSS Data Sharing Principles Subgroup

- The DSWG has established an **ad-hoc working group** to possibly propose an **updated formulation of the GEOSS Data Sharing Principles** for the next phase of GEOSS.
- The DSWG is looking into possibilities of **rewording** or otherwise **updating** the current GEOSS Data Sharing Principles to further **encourage full and open sharing of data, products and services through GEOSS**.
- *See presentation by Catherine Doldirina*

Final Overview (I)

- Overall the implementation of the GEOSS Data Sharing Action Plan is **making progress**.
- The DSWG has elaborated **an activity plan for 2014-2015** to ensure that all actions are addressed.
- The DSWG has discussed **possible strategies to be taken into consideration in GEO Post-2015** (*See presentation by Greg Withee*).
- **Additional resources are needed** to ensure adequate levels of:
 - Participation by developing countries in DSWG activities
 - Outreach to data users and providers, especially in developing countries

Final Overview (II)

GEO Members and Participating Organisations are required to:

- Work with the GEO Sec and DSWG to **make all resources pledged to the GEOSS Data-CORE** discoverable and accessible through the GCI.
- Pledge **further contributions** to the Data-CORE.
- Establish national coordinating mechanisms to promote and monitor engagement with the implementation of GEOSS DSP and **promote the benefits of full and open access.**
- Ensure **adequate representation** from Middle East, South America and Asia-Pacific regions, especially developing countries
- Engage with **socio-economic information producers** (e.g. OECD, UN offices, national statistics agencies)



Thank you for your attention!

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