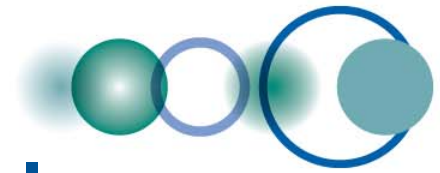


# **DA-06-01: GEOSS Data Sharing Principles and Activities of the GEO Data Sharing Task Force**

**Linda Moodie and Alan Edwards**  
**Co-chair/United States**  
**Co-chair/European Commission**  
**Data Sharing Task Force**

**GEO Work Plan Symposium 2010**  
**Pretoria, South Africa**  
**17-19 May 2010**



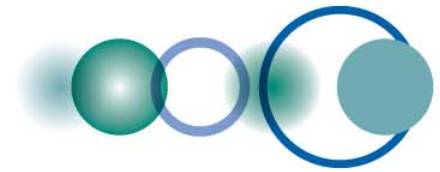


# GEOS Data Sharing Principles

The GEOS 10-Year Implementation Plan states:

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

- 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**.



# Task DA-06-01 on Data Sharing Principles

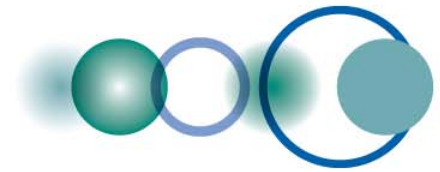
In 2006 GEO established task DA-06-01 to:

“Further the Practical Application of the Agreed GEOSS Data Sharing Principles”

The Task Team is led by the Committee on Data for Science and Technology (**CODATA**), an interdisciplinary committee of the International Council for Science (ICSU)

The team has produced the following deliverables, downloadable from [http://www.earthobservations.org/geoss\\_dsp.shtml](http://www.earthobservations.org/geoss_dsp.shtml):

- **Data Sharing Principles White Paper** – broad review of existing guidelines and data sharing barriers
- **Data Sharing Guidelines** – recommendations for data sharing implementation in GEOSS
- It also organised a Data Sharing Side Event at the 2008 GEO Plenary



## **GEOSS Data Sharing Task Force**

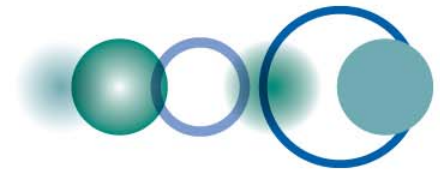
To reinforce the principle of data sharing within the GEOSS, the 2007 Cape Town Ministerial Summit recognised that:

***“The success of GEOSS will depend on a commitment by all GEO partners to work together to ensure timely, global and open access to data and products”.***

Further:

***“We support the establishment of a process with the objective to reach a consensus on the implementation of the Data Sharing Principles for GEOSS to be presented to the next GEO Ministerial Summit (2010).”***

The **2008 GEO-V Plenary** in Bucharest then **established** the GEOSS Data Sharing Task Force (DSTF).



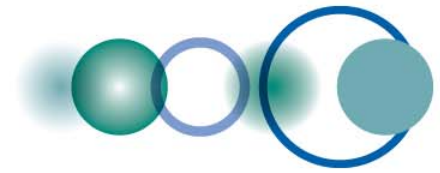
# DSTF Task Force

- Call for Participation issued in early 2009
- First meeting in Geneva end of May 2009
- Since then, it has held biweekly teleconferences

## **Task Force Co-Chairs:**

- **China** - Goufu Wang
- **European Commission** – Alan Edwards
- **India** – V. S. Hegde
- **Japan** - Chiyoshi Kawamoto
- **USA** - Linda Moodie
- **DA-06-01 Task Team** – Paul Uhlir / Robert Chen / Joanne Gabrynowicz

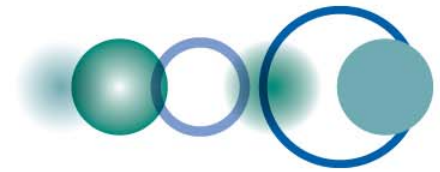
**DSTF runs from 27 May 2009 through to the 2010 Ministerial Summit**



# ***Implementation Guidelines for the GEOSS Data Sharing Principles***

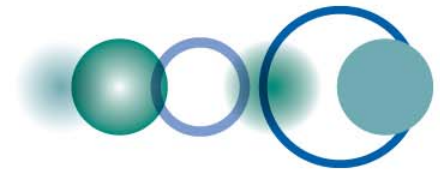
**Accepted by the GEO-VI Plenary, Washington D.C., Nov. 2009**

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



# Data Sharing Implementation Guidelines

- 1. Promoting the implementation of the principle of **full and open exchange** of data in accordance with the **GEOSS Data Sharing Principles**.*
  - Note: in the context of the GEOSS DSP, **full and open exchange means** that data and information made available through the GEOSS are made accessible with minimal time delay and as few restrictions as possible, on a nondiscriminatory basis, at minimum cost for no more than the cost of reproduction and distribution.**

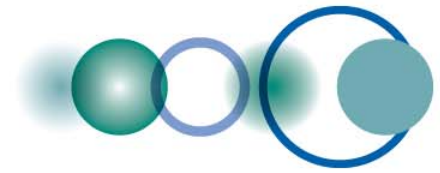


# Data Sharing Implementation Guidelines

## *2. Enabling GEOSS users to reuse and re-disseminate shared data, metadata, and products.*

- The full and open exchange of data called for in the Data Sharing Principles should apply to GEOSS data, metadata, and products even after such shared information is disseminated to users.
- Users need to be able to integrate, reuse, and re-disseminate the shared information with **minimal restrictions** in order to achieve maximum results in the GEOSS Societal Benefit Areas.



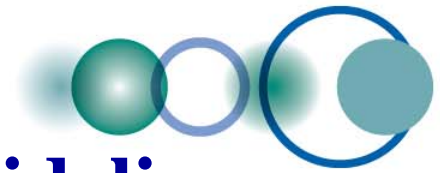


# Data Sharing Implementation Guidelines

## ***3. Ensuring consistency in the implementation of the GEOSS Data Sharing Principles with relevant international instruments and national policies and legislation.***

- **Many GEO Members and Participating Organizations have various **specific restrictions** on the dissemination and use of certain data, metadata and products based on international instruments, national policies and legislation.**

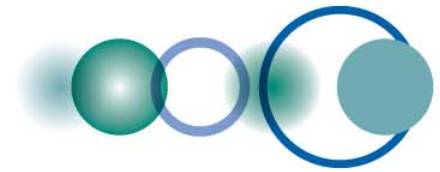
**Such restrictions pertain mainly to concerns regarding the protection of: national security, financial viability, proprietary interests, privacy, confidentiality, indigenous rights, and conservation of sensitive ecological, natural, archaeological, or cultural resources.**



# Data Sharing Implementation Guidelines

## *4. Implementing pricing policies consistent with the GEOSS Data Sharing Principles.*

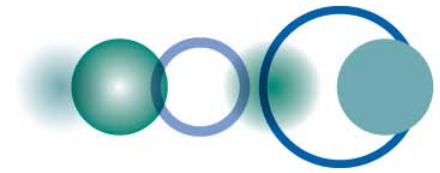
- The pricing of GEOSS data, metadata, and products should be based on the premise that **the data and information within GEOSS are a Public Good for public-interest use** in the nine Societal Benefit Areas.
- GEO, together with its GEOSS Data Providers, should work to set standards for the full and open exchange of data based on this premise, with the **only allowable cost for data being** either that of reproduction and distribution, or the marginal cost of fulfilling the user request.



# Data Sharing Implementation Guidelines

## *5. Reducing the time delays for making data available through GEOSS.*

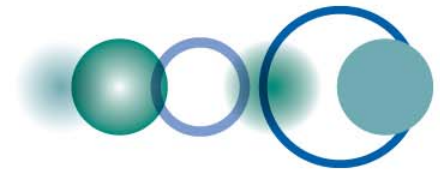
- **GEO should promote “Minimal Time Delay” to data within GEOSS, depending on the type of data and application and the need for appropriate quality control.**
- **Data should be transmitted on a real-time basis whenever necessary or practicable.**



## **DSTF Terms of Reference: Objectives (selected)**

- **Prepare an Action Plan** to implement the Data Sharing Principles and **to enable** the development of **working procedures for data sharing** within GEOSS.
- **Produce documentation** (including assessments on the actions to be taken; some representative costs and benefits; and responsibilities for the proposed data sharing processes).

**Leading to adoption of the *Implementation Guidelines* and the *Action Plan* by the 2010 GEO Ministerial Summit.**



# Action Plan - Current Framework

## Executive Summary

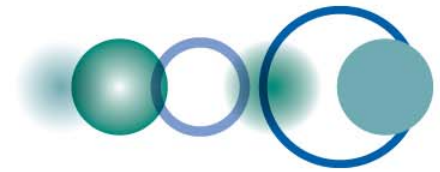
### Main body of the Action Plan

- Introduction – why share data fully and openly?
- Background – what is the status of GEOSS data sharing today?
- Vision – where do we want to be and by when?
- What are the benefits of implementing this vision?
- What are the barriers to implementing this vision?
- What actions need to be taken?
- [Issues not fully addressed]



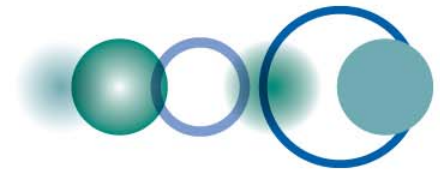
# Action Plan - Current Framework

- **Annexes: Supporting Documents**
  - **Implementation Guidelines for the GEOSS DSP (accepted at GEO-VI Plenary)**
  - **Benefits of Implementing the Data Sharing Principles**
  - **Considerations for the GEO Community**
  - **Considerations Arising from the Data Sharing Action Plan for the GEOSS Common Infrastructure**
  - **Glossary**
  - **Case Studies**
    - **ARGO Floats**
    - **ASTER Global Digital Elevation Model**
    - **CBERS Satellite Imagery**
    - **Forest Carbon Tracking**
    - **Global Biodiversity Information Facility**
    - **International Polar Year**
    - **Landsat**



# Proposed Data Sharing Action Plan for GEO

- (A) builds upon** the crucial concept of the full and open exchange and on the Implementation Guidelines accepted by the GEO Plenary,
- (B) notes** that the achievement of full and open exchange of and access to key datasets **will require actions** by GEO collectively, by Members and Participating Organizations individually, and by GEOSS tasks and cross-cutting activities;



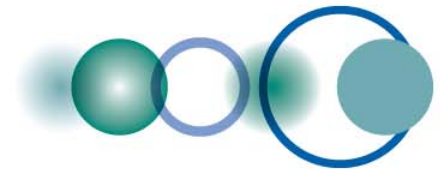
## Currently Proposed Data Sharing Actions (draft)

- **GEO collectively** to:

1. **Create the GEOSS Data Collection of (Full and) 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 and open unrestricted access and at no more than the cost of reproduction and distribution.

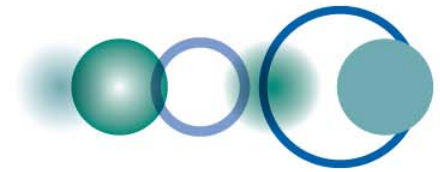




## The GEO Ministerial Summit Beijing, P.R.C., 5 November 2010

The Executive Committee agreed to include the following points in the second invitation to the Ministerial Summit:

- **To launch the GEOSS Data CORE**, the DSTF has proposed that to promote data sharing within the GEOSS, Ministers at Beijing show strong political leadership and demonstrate that they are willing to make a real difference, by taking immediate and concrete action.
- The DSTF proposes that **Ministers are invited to announce their contributions to the GEOSS Data CORE** in advance of, or **at the Beijing GEO Ministerial Summit**.



## Currently Proposed Data Sharing Actions (draft)

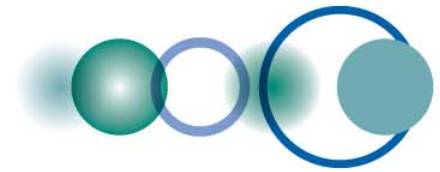
- **GEO collectively** to:

### 2. Establish a Task Force within GEO

- 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 and recommend further actions.

### 3. Maintain the GEOSS Common Infrastructure

4. Integrate implementation of the Data Sharing Principles into the responsibilities of GEO committees and activities of GEO tasks, as appropriate.



## Currently Proposed Data Sharing Actions (draft)

- **GEO Members** to:

5. Take leadership to establish national coordinating mechanisms
6. Develop flexible policy frameworks

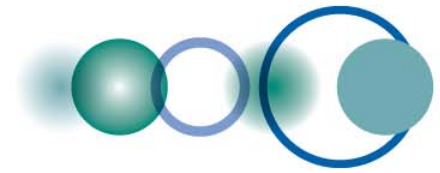
- **GEO Members & Participating Organizations** to:

7. Maximise the number of documented datasets made available on the basis of full and open access.
8. Promote the benefits of full and open access to data



# Issues Not Yet Fully Addressed

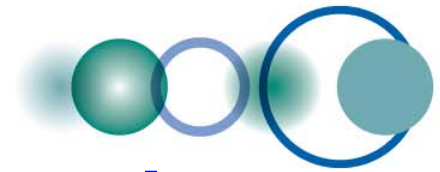
- **Handling data with restrictions and registered in the GCI**
  - The Implementation Guidelines confirm that:  
“**GEO welcomes all data contributions into the GEOSS.** When registering data in GEOSS, the contributor should present any restrictions arising from relevant international instruments and national policies and legislation, and the duration of each restriction, that is applicable to the exchange of the data, metadata, and products submitted.”
  - **GEO must endeavor to ensure that the restrictions** presented by data providers **are made known to data users.**
  - **Some GEO Members state that GEO must ensure** that any **restrictions are strictly adhered to** by users.
  - **Others state that GEO cannot** and should not be put in the position of having to ensure or **police data provider restrictions.** The GCI, however, could send a user back to the data provider to access its data and comply with any restrictions.



# Issues Not Yet Fully Addressed

- **Reuse/re-distribution and data tagging**

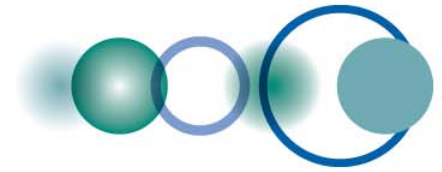
- Some restrictions on re-distribution, reuse and copying of data are legally derived from copyright.
- In order to “police” any possible infringement of a data provider’s IPR / copyrights, **should the GEO facilitate or introduce a “data tagging”** mechanism into the GCI? And if so, how far should this go and how sophisticated should it be?
- While it is the responsibility of data providers to adopt data tagging if they wish, does GEO become legally responsible if GEO facilitates it?
- Data tagging **may also impact citation and attribution of data sources**, a concept the DSTF fully endorses. How would this work?



# Issues Not Yet Fully Addressed

- **Licenses**

- There is currently **no consensus** within the DSTF on the **use of licensing**.
- There **is consensus that providing metadata information that assigns categories** to data and products **may be useful**, e.g.:
  - Full and open with no restrictions
  - Full and open with attribution requirements
  - Full and open with attribution and non-commercial use requirements
  - Access conditions, including user registration and log-in
  - Re-distribution restrictions
  - Price above the cost of reproduction and distribution (or marginal cost of fulfilling the user request)
  - Re-distribution restrictions and price above reproduction and distribution



## **Wrap-up**

**The DSTF would welcome comments and feedback from the GEO Community on the issues raised or any other matter that should be considered.**

**Due to the GEO Secretariat  
by 2 June 2010**

**THANK YOU!!!**