

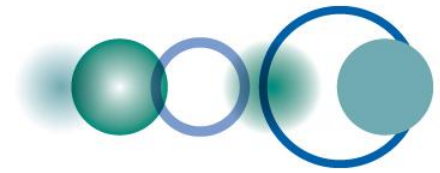


# **Implementation Guidelines for GEOSS Data Sharing Principles**

**CEOS SIT-22  
Tokyo, Japan  
September 18, 2008**

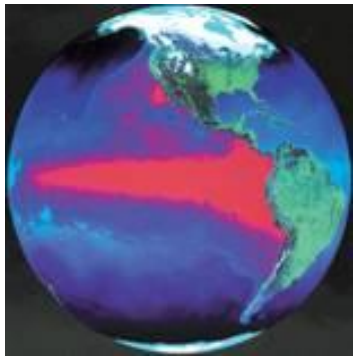
**Michael Tanner  
Senior Program Officer  
GEO Secretariat**

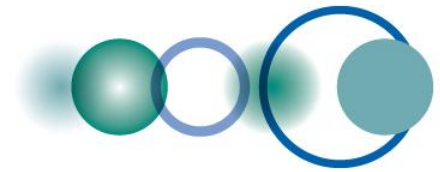




# GEOSS Imperative

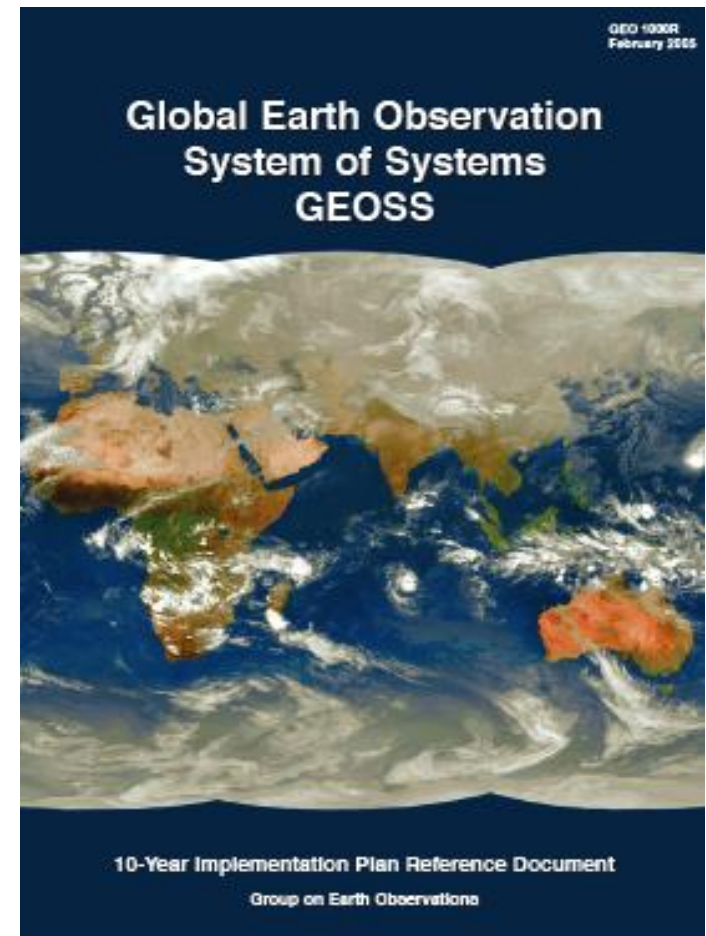
- Some 30% of our economy is tied to the environment
- Scientific understanding and ongoing knowledge of the Earth system is fundamental for well informed economic decision making
- Sustained Earth observations are critical in understanding the Earth
- A global approach to Earth observation is required

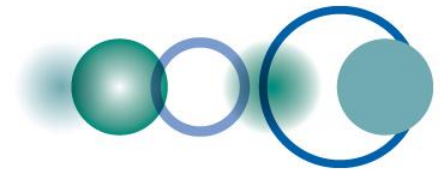




# GEOSS 10-Year Implementation Plan

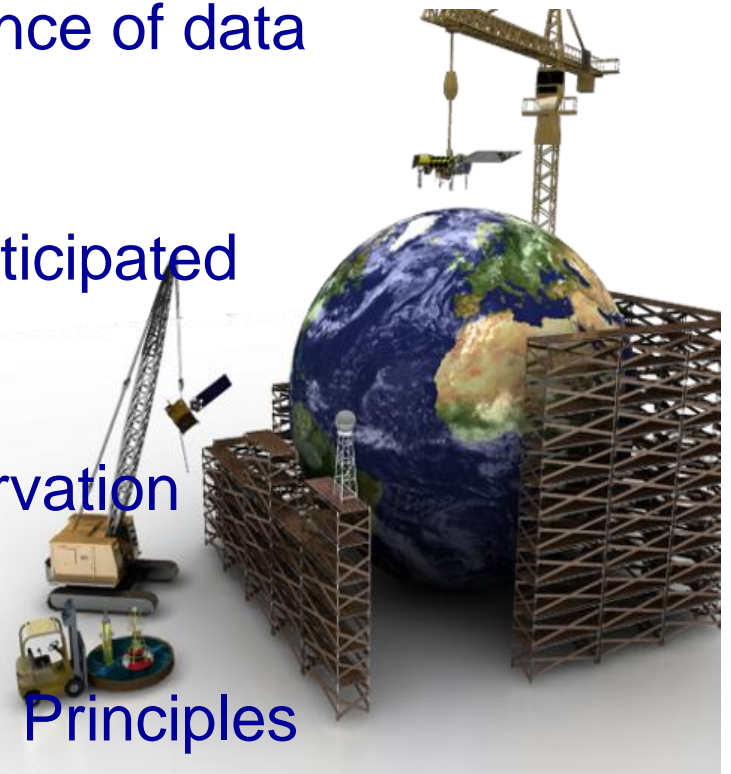
- GEOSS is “to realize a future wherein decisions and actions for the benefit of humankind are informed via coordinated, comprehensive and sustained Earth observations and information.”
- GEOSS is an important contribution to meeting the United Nations Millennium Development Goals
- Furthering the implementation of international treaty obligations.
- Encompass all areas of the Earth, with a particular emphasis on addressing the needs of developing country users
- Incorporate *in situ*, seaborne, airborne, and space-based observations
- Address the integration of observations with models to support early warning and prediction and other “societal benefit areas.”

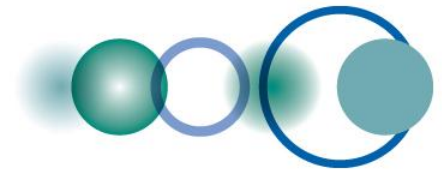




# **GEOSS 10-Year Implementation Plan: Data Sharing in Achieving GEOSS**

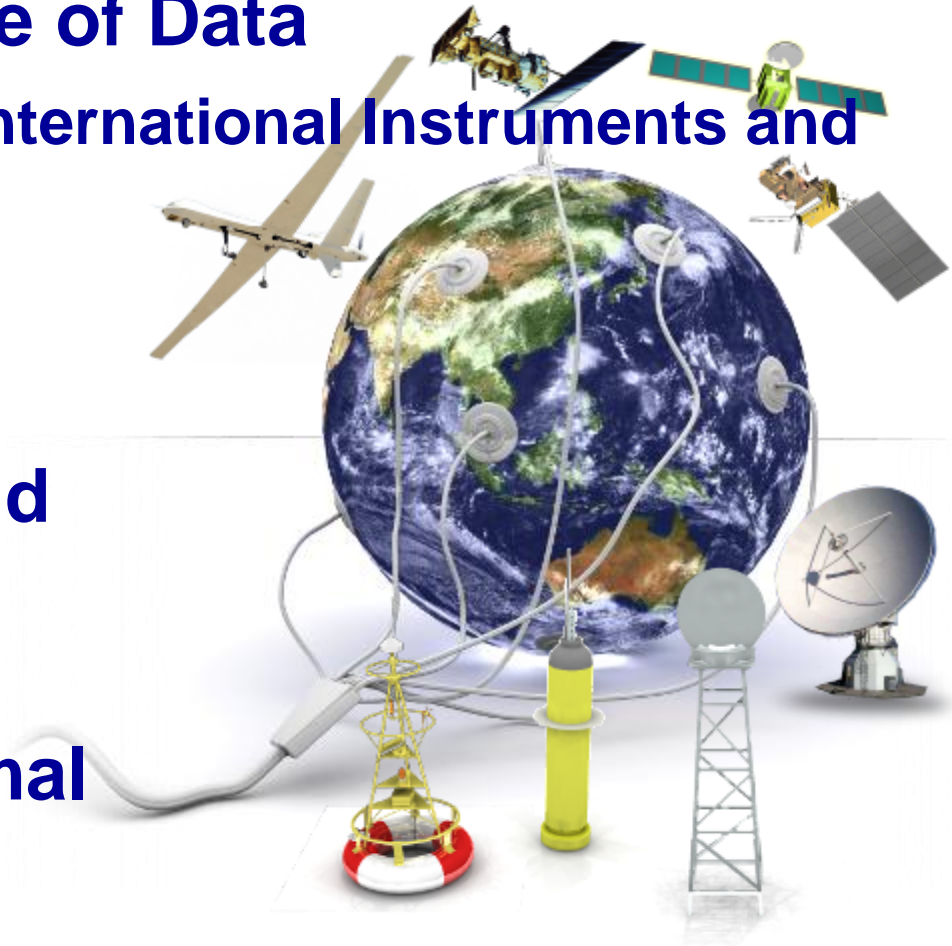
- Explicitly acknowledges the importance of data sharing
- Achieving the GEOSS vision and anticipated societal benefits
- Endorsed at 2005 Third Earth Observation Summit in Brussels
- Highlights the GEOSS Data Sharing Principles

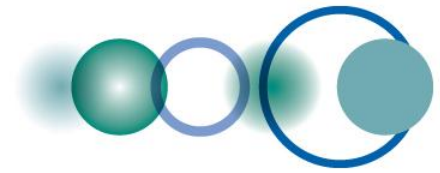




# GEOS Data Sharing Principles

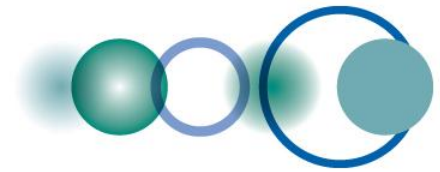
- **Full and Open Exchange of Data**
  - Recognizing Relevant International Instruments and National Policies
- **Data and Products at Minimum Time delay and Minimum Cost**
- **Free of Charge or minimal Cost for Research and Education**





# Data Sharing Implementation

- DA-06-01 lead by Committee on Data for Science and Technology (CODATA)
  - Recommend implementation guidelines and background white paper
- Guidelines proposed for further consideration by GEO
  - Based on the Task Group's analysis of the GEOSS *10-Year Implementation Plan*
  - Applicable international agreements and practice
  - Extensive consultation with experts on data policy from around the world



# Data Sharing Implementation Guidelines

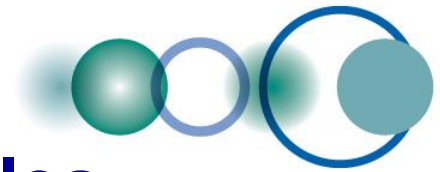
- Promote implementation of GEOSS Data Sharing Principles through the full and open exchange of data.
- Encourage GEOSS users to reuse and re-disseminate shared data.
- Ensure consistency with other national laws and policies and international agreements.
- Implement pricing policies consistent with GEOSS Data Sharing Principles.
- Reduce time delays for making data available through GEOSS.
- Promote research and education uses of GEOSS data.
- Develop metrics and indicators for GEOSS data sharing activities.
- Develop effective coordination and outreach mechanisms for implementing the GEOSS Data Sharing Principles.



# **GEOSS Data Sharing Principles Milestones**

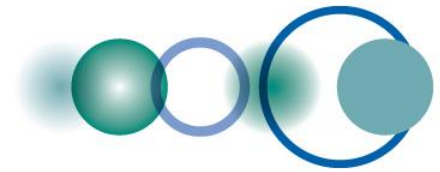
- Current GEOSS activities begin to develop working data sharing policies and procedures consistent with the GEOSS Data Sharing Principles
- Both providers and users of GEOSS data products and services need to understand responsibilities with regard to data dissemination, access, use, and reuse
- Major GEO initiatives such as GEONetcast, GEO Biodiversity Observation Network (GEO BON), Global Agricultural Monitoring (GAM), and others need to begin formalizing their data sharing policies and procedures, taking into account the proposed data sharing guidelines.
  - Ensure consistency in data sharing policies and procedures across GEOSS communities
  - Enable cross-disciplinary, cross-community data use
  - Avoid development of a confusing patchwork of inconsistent policies and procedures
- GEOSS Common Infrastructure (GCI) and Initial Operating Capability (IOC) should also begin to incorporate tools to implement data sharing policies and procedures,
  - For digital rights management, development of metrics, and acknowledgement of data provider and user rights and responsibilities
  - Early experience in these activities will provide important feedback from GEOSS elements and users on practical implementation approaches for GEOSS data sharing policies and procedures.





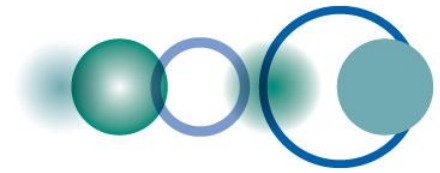
# **GEOS Data Sharing Principles Near-term Milestones**

- Architecture and Data Committee (ADC), the User Interface Committee (UIC), and the Science and Technology Committee (STC) take an active role
- Data Policy Workshop in Quebec City, Canada
  - 15 September in coordination with IEEE, OGC, OES, ISPRS
- Data Sharing session at the Architecture Implementation Pilot (AIP) Kick-off
  - 25-26 September in Boulder, CO
- Data Sharing session at the CODATA Conference
  - 7 October in Kiev, Ukraine
- Data sharing guidelines side event at the GEO-V Plenary
  - 20 November in Bucharest, Romania



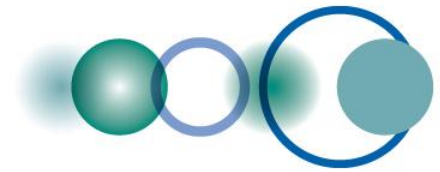
# Reality of GEOSS

- GEOSS is envisioned as a “system of systems”
  - Built upon existing observational systems
  - Incorporating new systems for Earth observation and modeling
  - Offered as GEOSS components by Member countries and Participating Organizations
- Developing technical interoperability between such diverse systems is clearly a major challenge
- Equally important challenge is the coordination and harmonization of data policies and procedures
  - Facilitate the sharing and use of GEOSS data to maximize societal benefits for the widest possible range of users
- Inconsistent or vague data policies and procedures could hamper the rapid dissemination and flexible use of data and information
  - Needed for mission-critical and/or life-threatening GEOSS applications
- Restrictive policies on data reuse and re-dissemination could significantly reduce the net return on investment of public funds in Earth observations
  - Lead to unnecessary and wasteful duplication of effort.
- Excessive charges for data would pose substantial barriers to many users
  - Especially those in developing countries
  - Who may have no or few alternative sources for data.



# GEOSS Future Directions

- Develop GEO Data Policy Principles
- Begin Global Earth Observing Systems Inventory
- Assess global observation gaps
- Implement operational tools, e.g., GEOPORTAL, GEONETCAST
- Demonstrate national, regional, global Earth observation programs in support of health, agriculture, water, capacity building
- Promote use of Earth observations in modeling, data assimilation efforts
- Explore ways to sustain successful R & D observations
- Engage academic and industrial partners



# Summary

- Success of GEOSS is contingent upon
  - Manner in which the GEOSS Data Sharing Principles are implemented
  - Both by the individual elements of GEOSS and by GEO Members
- No single set of rules will apply to all types, sources, and uses of data
  - Clear set of guidelines, definitions, and minimum expectations will help to improve the sharing of data within GEOSS
- GEOSS Data Sharing Principles
  - Facilitate the application of data by diverse users in the key societal benefit areas
  - Establish overarching strategic policy goals
  - For data access and use
- Implementation Guidelines for GEOSS Data Sharing Principles
  - Designed to facilitate the development of clear, balanced, and workable data sharing policies and procedures
  - Consistent with the GEOSS Data Sharing Principles
- Policies and procedures will be vital to the effective and efficient operation of GEOSS and its long-term sustainability

# Thank you!

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