GROUP ON EARTH OBSERVATIONS

CEOP Contribution to GEO Water Tasks

CEOP 2nd Annual Meeting
15-17 September 2008, Geneva

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GEO Secretariat

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What is GEO?

- **launched in response to calls for action by the 2002 World Summit on Sustainable Development and by the G8 (Group of Eight) leading industrialized countries**
- **voluntary partnership of governments and international organizations**
  - **74 member governments + EC**
  - **51 Participating Organizations (PO)**
    - ***CEOP contributes through WCRP/GEWEX as PO***
- **provides a framework within which these partners can develop new projects and coordinate their strategies and investments**
- **charged with developing GEOSS**

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What is GEOSS?

- **the Global Earth Observation System of Systems**
- **an integrating framework for Earth observing and information systems to support informed decision making for society**
- **10-year implementation plan**
- **2015: Global, Coordinated, Comprehensive and Sustained System of Observing Systems**

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GEOSS: main objectives

- Improve and Coordinate Observation Systems
- Provide Easier & More Open Data Access
- Foster Use (Science, Applications)
- Building Capacity

… to answer Society's need for informed decision making

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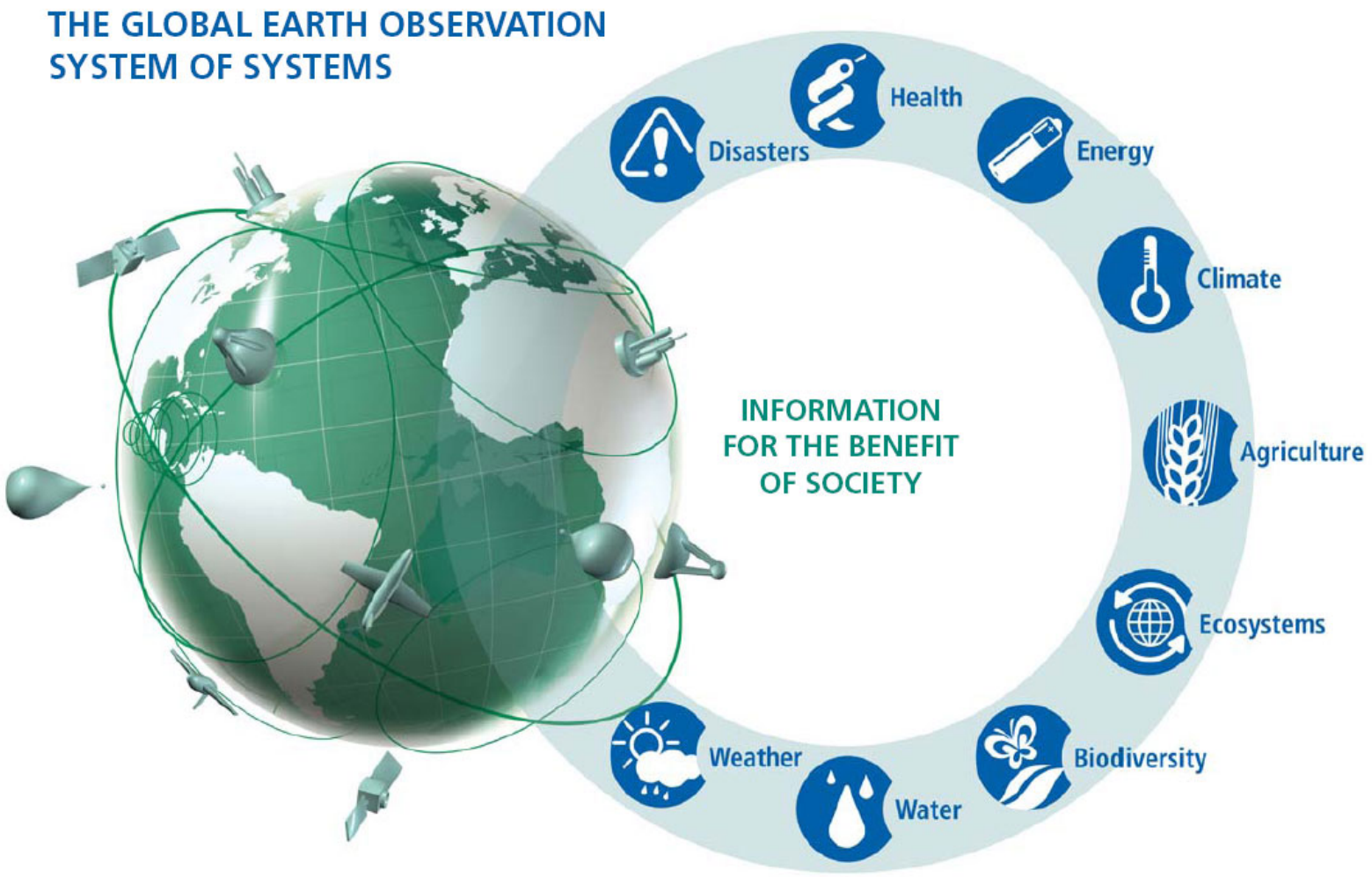
GEOSS: A Global, Coordinated, Comprehensive and Sustained System of Observing Systems



GEOSS: 10-Year Targets for Water (10-yr IP)

GEOSS implementation will:

- **improve integrated water resource management through better understanding of the water cycle, by:**
  - **bringing together observations, prediction, and decision support systems**
  - **creating better linkages to climate and other data**
  - **improving measurement of precipitation; soil moisture; streamflow; lake and reservoir levels; snow cover, glaciers and ice; evaporation and transpiration; groundwater; water quality and use**

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GEO 2009-2011 WP: Water Task WA-06-02
Droughts, Floods and Water Resource Management

Address decision-making challenges related to management of hydro-meteorological extremes and the sustainable use of water.

- **Forecasting and early warning systems for droughts and floods**
- **Impacts from drought**
- **High altitude impacts**

CEOP contribution:

- ***Improvement in ability to make hydroclimate predictions related to land surface processes, high temporal resolution features associated with diurnal to annual cycles, aerosol-water cycle interactions, droughts, and floods.***
- ***Improvement of seasonal hydrological forecasts and assessments of water resources by later in this century.***

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GEO 2009-2011 WP: Water Task WA-08-01 Integrated Products for Water Resource Management and Research

Improvement/expansion of in-situ networks, combined with new satellite missions and emerging assimilation and prediction capabilities to produce integrated products for efficient WRM.

- **Soil moisture, runoff, groundwater, precipitation, water quality**
- **Water Cycle Data Integration**

CEOP contribution:

- ***Multi-year integrated prototype hydroclimate data sets that allow a user to get model output data, satellite data, and in situ measurements of various hydrometeorological data, including its isotopes.***
- ***Improvement in understanding how large-scale circulation anomalies interact with the regional energy and water cycle.***

GEO Portal

- **Provides web-based interface for searching and accessing the data, information, imagery, services and applications available through GEOSS.**
- **Connects users to data bases, services and portals that provide reliable, up-to-date, integrated and user-friendly information – vital for the work of decision-makers, managers and other users of Earth observations.**

CEOP contribution:

- ***GEO Portal ready for registration of data and services (earthobservations.org)***

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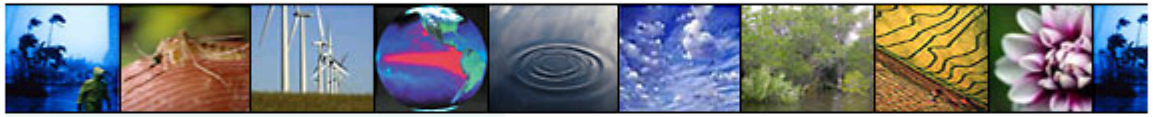
Home

The Global Earth Observation System of Systems (GEOSS)

GEOSS themes:

- Disasters
- Health
- Energy
- Climate
- Water
- Weather
- Ecosystems
- Agriculture
- Biodiversity

GEOSS Common Infrastructure



Are you new to GEO and GEOSS? Find out more here!

Highlights

The GEOSS Common Infrastructure (GCI)

Evaluating the GEO Portal prototypes

Evaluate the GEO Portals

The assessment phase for the GEO Portals runs until May 2009. The Portals are updated regularly so please make repeat visits and provide your feedback.

Components registration

Register your components

The GEO community is invited to register its data bases, catalogues, services and tools in the GEOSS Components and Services Registry

Standards registration

Register your standards here

The GEO community is encouraged to register standards, protocols and other specifications for ensuring an interoperable "system of systems" in the GEOSS Registry

Brazil to host GEO Forest Monitoring Symposium

The Brazilian National Institute for Space Research (INPE) and the Group on Earth Observations (GEO) are organizing a major symposium on forest monitoring in Foz do Iguaçu, Brazil from 4 to 7

What's new?

Estonia becomes the 75TH member of GEO

The Government of Estonia has joined the Group on Earth Observations, bringing the total GEO membership to 74 countries plus the EC. Estonia's Minister of the Environment informed the Secretariat of his government's decision on 17 July. The Head of the Remote Sensing and Marine Optics Department, Estonian Ministry of Education and Research will serve as GEO Principal and the Counsellor on Monitoring o the Ministry of the Environment will serve as GEO Alternate. See the updated GEO membership list.

Registration open for 2008 GEOSS in the Americas Symposium

The second annual Symposium

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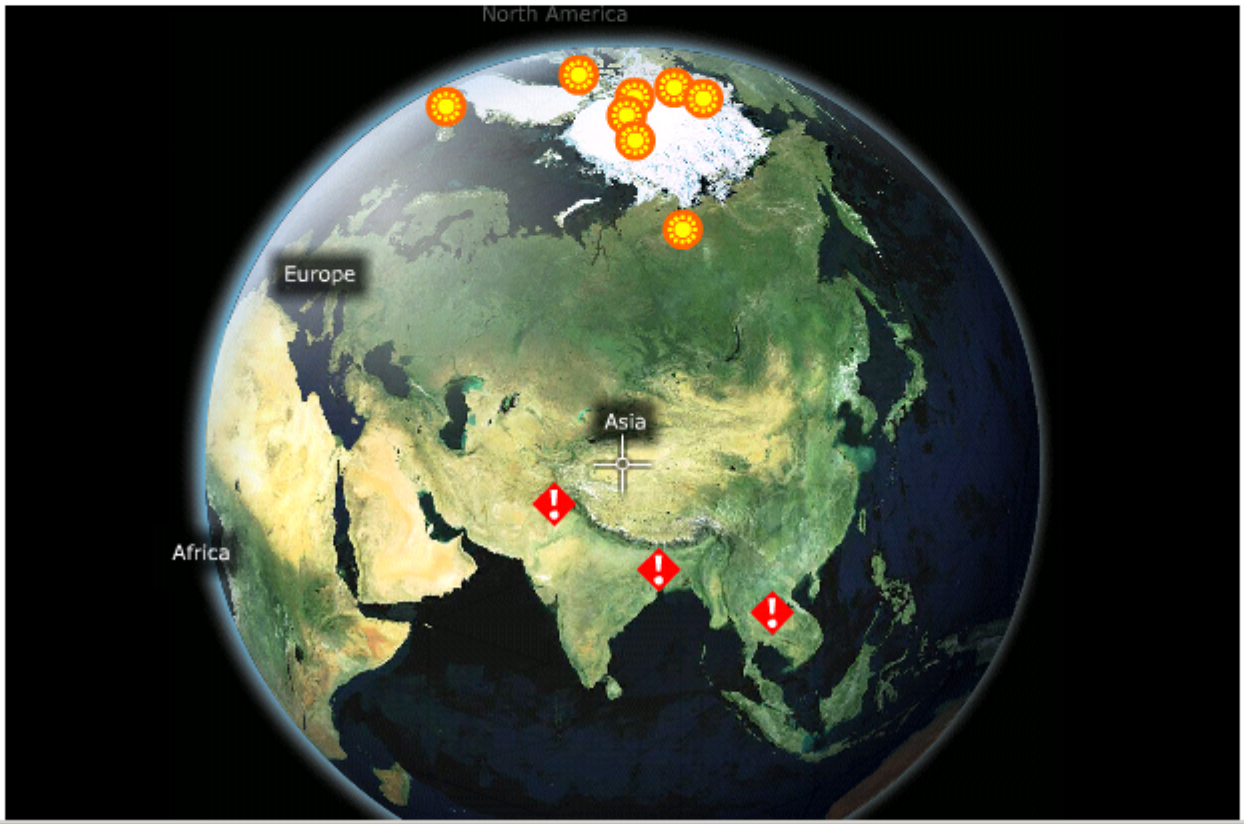
Provide Feedback to GEO

BROWSE RESOURCES BY SOCIAL BENEFIT AREAS

- DISASTERS
- HEALTH
- ENERGY
- CLIMATE
- WATER
- WEATHER
- ECOSYSTEMS
- AGRICULTURE
- BIODIVERSITY



BREAKING NEWS

HURRICANES IN HAITI, EXTENSION OF CALL

On 11 September charter activation 220 was extended for a third time to cover the area hit successively by Hurricane Gustav, Hurricane Hanna, and Hurricane Ike, as the city of Gonaives remained under water and media reported about 500 dead.

More...

WELCOME TO GEOPORTAL

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SELECT A COUNTRY/CONTINENT

Select a Region

BROWSE RESOURCES BY SOCIAL BENEFIT AREAS

- DISASTERS
- HEALTH
- ENERGY
- CLIMATE
- WATER
  - Water Cycle
  - Resource Management
  - Impacts of

Browsing for: Water

WATER

Information Services (118)

View All

- Early warning (5)
- Monitoring services (14)
- Analysing services (7)
- Mapping services (12)
- Assessment services (5)
- Alert systems (1)
- Geospatial web services (12)
- Data processing (2)
- Data Provision (61)

International Initiatives (12)

View All

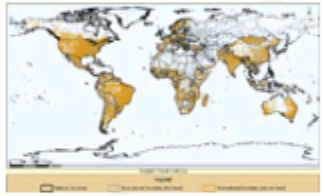
Asian Water Cycle Initiative
The Asian Water Cycle Initiative's goal is to better understand the mechanism of Asian water cycle variability and to improve its predictability, and ...
more ...

DIVERSITAS
DIVERSITAS was established in 1991, with the goal of developing an international, non-governmental umbrella programme that would address the complex s ...
more ...

EGY - Electronic Geophysical Year

Service Providers (75)

IMAGES



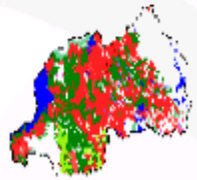


IMAGE GALLERY

MAPS

Data Provision (61)

ADDS - African Data Dissemination Service

The African Data Dissemination Service (ADDS) provides Internet access to the data collected for the FEWS NET activity.

The Goal of the Fa ...

more ...

Atlas of the Cryosphere

The National Snow and Ice Data Center (NSIDC) Atlas of the Cryosphere is a map server that provides data and information pertinent to the frozen regio ...

more ...

CEOS IDN - CEOS International Directory Network

The CEOS International Directory Network (CEOS IDN) is an international effort developed to assist researchers in locating information on available da ...

more ...

Demonstration EO application profile WMS server

The WMS application profile for EO products specifies how a WMS may be used to interactively browse and evaluate the spatial metadata (bitmasks) assoc ...

more ...

Earthnet OnLine

Earthnet Online is the entry point for scientific-technical information on Earth Observation activities by the European Space Agency (ESA).

Th ...

more ...

ECHO - Earth Observations System ClearingHOuse

The Earth Observations System ClearingHOuse (ECHO) is a clearinghouse of spatial and temporal metadata enabling the science community to exchange data ...

more ...

EEA Data service

The data service provides almost all data sets and applications which have been used in European Environment Agency's periodical environmental reports ...

more ...

Envisat Data Dissemination System - DDS

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Community of Practice

"A group of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly." ***Etienne Wenger***

- **Domain**
- **Community**
- **Practice**

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GEO: Water Cycle Community of Practice

- **"…composed of wide variety of actual and potential users of some technology or service (in this case Earth Observations) in order to discuss options for the application of information during the decision-making process."** ***Rick Lawford***
- **Within GEO framework, the Water Cycle CoP will provide a unique perspective on the information needs of the water community by bringing together representatives who have knowledge of the decision processes in the water sector with those who have an interest in seeing Earth Observations being used more effectively to address those questions.**
- **Interface with GEO is through the User Interface Committee (UIC).**

- ***CEOP a vital component of the Water Cycle CoP***

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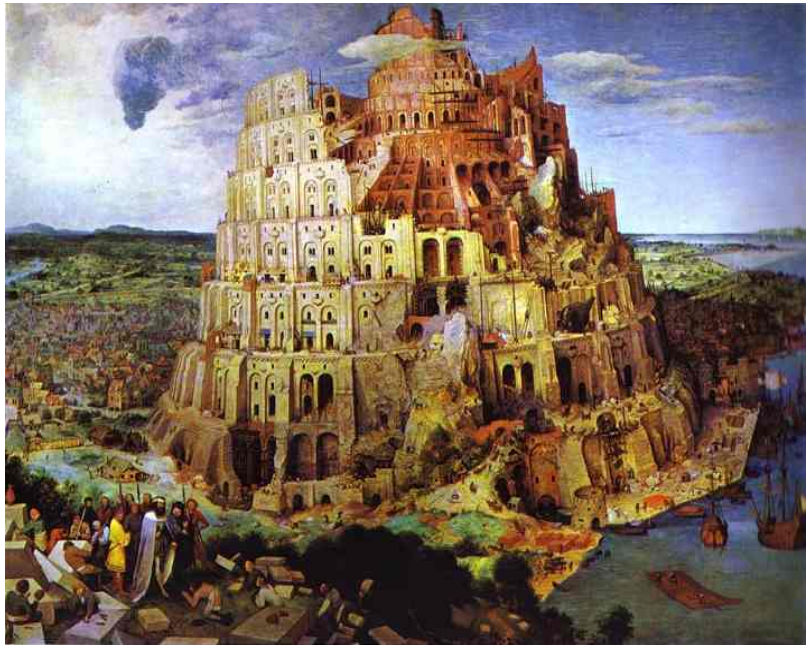
GEO Data Sharing Principles

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



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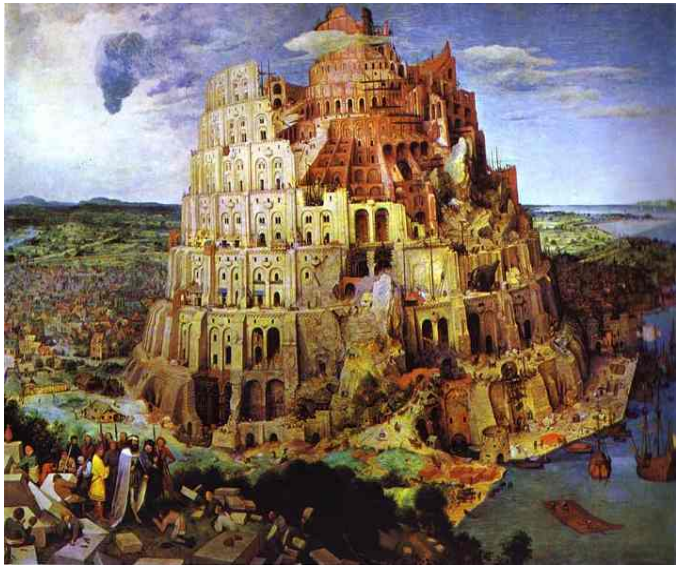
GEOSS Implementation Requires Interoperability of Systems

Need for an Interoperable Architecture and Standard Formats to benefit fully from Earth Observation Systems

- **Technical Specifications for Collecting, Processing, Storing, and Disseminating Data and Products**
- **Based on Non-proprietary Standards**
- **Defining System Compliance for Contribution to GEOSS**



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GEO V Plenary

- **Bucharest, Romania 17-21 November 2008**
- **GEO Portal Virtual Exhibition**

- ***CEOP invited to participate…***

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Thank you!

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earthobservations.org