GEO 2009-2011 Work Plan
2009 Progress Highlights

(see GEO-VI Plenary Document 5)
2009 Contributions from Members & Participating Organizations to GEOSS Implementation
3 Main “TRENDS”

* New Products, Information & Services
* Africa
* User Engagement Communities of Practice
New Products, Information & Services
World’s Largest Collection of Land Surface Imagery

- LANDSAT (USA)
- CBERS (China, Brazil)
- SPOT (France)
- ALOS (Japan)
- THEOS (Thailand)
- EO-1 (USA)
- IRS (India)
- SAC-C (Argentina)
Easy Access via new LSI Portal (CEOS, GOFC-GOLD, USA)

Impact on

– Water management
– Climate modeling
– Disaster management
– Crop forecasting
– Pollution monitoring
– Land surface change
– Forests monitoring

Landsat Urban Mapping for Philadelphia, USA
New Digital Topographic Map of Earth
Global DEM 30m resolution
(Japan, USA)

Comparison courtesy of V. Gorokhovich, CIESIN
Freely available online since 29 June
Mt. EVEREST

ASTER GDEM (METI and NASA, 2009)
Access to Long-Records of Global Precipitation (Germany, Japan, USA, CGMS, WCRP)

Section Through Typhoon Paka, 0443Z, 16th December 1997
New Fishery and Aquaculture Applications - SAFARI (Canada)

Landed annual value of fish at scale of North Atlantic Basin: US $ 0.5 Billion

Koeller et al. (2009)
Ocean Ecosystem products available in near-real time for Africa, South America, and India (POGO)
GEO Forest Carbon Tracking

(Australia, Canada, Japan, Norway, CEOS)
Universal Access to “Charter on Space and Disasters” (Algeria, Argentina, Canada, China, France, India, Japan, Nigeria, Turkey, UK, USA, ESA)
World Seismic Information Freely Available at Minimum Time Delay
(EC, USA, FDSN, ISC)

GLOBAL SEISMOGRAPHIC NETWORK

IRIS / IDA Stations  IRIS / USGS Stations  Affiliate Stations
Planned Stations
Easy Access to Geological Map Data
175 Datasets from 40 Countries (EC, UK)
New Reanalysis Data for Climate Change Detection (Japan, USA, ECMWF, WCRP)
Global Weather Forecasts for Early Warning Research (WMO)
Prototype Multi-Model Applications for Extreme Event Prediction (WMO)
New High-Resolution Experiments for Weather/Climate Prediction *(WCRP, WMO)*
2 May

Organized Tropical Convection

Madden-Julian Oscillation (MJO)
Direct Contribution to Earth-System Prediction Initiative
Cape Town Plenary/Summit 07 & WCC-3 09
(WMO, WCRP, IGBP, ICSU)

New and Improved Climate, Weather, Water Services
(Work Plan Task CL-09-01)
Weather Prediction (T1279, ~15 km) Compared with Satellite Observations

*Satellite Observations*
Meteosat 9 IR10.8 20080525 0 UTC

*Numerical Forecast*
ECMWF Fc 20080525 00 UTC+0h

(courtesy of ECMWF)
Africa
New Health Decision-support Tools to Mitigate Meningitis Outbreaks in Niger & Ethiopia (USA, France, WMO, WHO)

- Meningitis Environmental Risk Information Technologies (MERIT) project ~30 organizations
- Forecasts of Dust and Rainfall used to Plan Vaccination Campaigns
- Decision-support Tools currently tested. Modeling framework under dvpt
New Energy Service for Siting Solar Plants (France, Germany, EC)
GEOSS Renewable Energy Scenario

Solar Power Plant Sitting

To start creating an AoI (Area of Interest) click on the button and build your polygons on the map.
Free & Easy Access to Water Data

TIGER 2nd Phase (CEOS, ESA)

Available Data: ESA (more than 2000 scenes); Radarsat (CSA); ESA 3rd party missions (SPOT 1-4, ALOS)

More Dedicated Datasets for Africa: MERIS Mosaic; Vegetation data; Radarsat Mosaic

Capacity Building: 200 African experts, universities, technical centers, water authorities
First GEO BON Product Identifies Threats to Biodiversity in Africa
Information from 740 Protected Areas
(Diversitas, EC, Switzerland, USA, GBIF, UNEP)
BIOTA AFRICA

A Contribution to GEOBON

Biodiversity monitoring Transect analysis in Africa
GEONETCast Now Fully Operational

New Product Navigator and
Training & Alert Channels

Contributors

EUMETSAT
CMA
NOAA
ROSHYDROMET

Global Broadcast of Environmental Information
The ITC GEONETCast Toolbox Approach using Open Source and Freeware

- Geonetcast Data Manager
- AVHRR/3
- EPS METOP
- MPE Direct
- Modis fire product
- Other Geostationary Services
- Meteosat Meteorological Products
- MSG 8 RSS MSG 9
- Meteosat Second Generation Data Retriever
- OSTM JASON2
- ILWIS 3.6
- BRAT
- VEGETATION Programme
- BUFR DecoderView
- GRIB/GRIB2 Decoder
- GDAL Translation Library
- UNSECO-Bilko
- Web Mapping Services
CBERS Receiving Station Operational in South Africa (*Brazil, China, CEOS*)

End-user Training to Improve Disasters, Climate and Health management
User Engagement

New Communities of Practice (CoP)
Carbon CoP

Australia, Canada, France, Germany, Japan, Netherlands, Norway, South Africa, UK, USA, CEOS, ESA, GCOS, WCRP & WMO
Integrated Global Water Cycle CoP

Argentina, Australia, Canada, China, Finland, France, Germany, Japan, Netherlands, Panama, Portugal, Switzerland, UK, USA, UNESCO & WMO
Health and Environment CoP

Brazil, EC, France, Senegal, USA, IEEE, UNOOSA, WHO & WMO

Global Emerging Diseases (Morens et al.)
Global Agricultural Monitoring CoP

Argentina, Australia, Austria, Belgium, Brazil, China, EC, France, India, Italy, Netherlands, South Africa, USA, ESA, FAO & WMO
(GEO-VI Plenary Document 5)
http://www.earthobservations.org