GEO Priorities for 2009-2011

- GEO Common Infrastructure
  - GEO Web Portals, GEOSS Clearinghouses and GEOSS Registries
- Data Sharing Principles
- Water Resource Management
- Climate Change
- Coordination of the GEO activities in Africa

- Forest Carbon Tracking
- Global Monitoring of Greenhouse Gases
- LSI constellation
- Production of a 30m Global DEM
- GEONetCast
- Biodiversity Network (GEO BON)

Forest Carbon Tracking

(Australia, JAXA, Norway)

1) *Agreement among CEOS Member agencies with supporting systems to ensure availability of current and future data supply on a basis adequate for the implementation and operation of continuous services;*

2) *Documented procedures to secure interoperability of optical and SAR sensors based on case study results;*

3) *Documented procedures on linking wall-to-wall, time series satellite data coverage to (1) ecosystem models and (2) traditional forest inventories, to consistently estimate carbon stocks at project and national scales;*

4) *Validation procedures for satellite applications in forest monitoring;*

5) *Visualisations of progress and demonstration results for GEO-VI and COP-15 – making clear the capacity of these initiatives to support policy objectives.*

Outputs of CL-09-03c: Greenhouse Gas Monitoring

a) Facilitate calibrated and validated GOSAT standard products in line with its data policy through the CEOS portal as a part of GEOSS outcomes which contribute to climate change studies. (JAXA, end November 2009)

b) Compare and explore integration of GOSAT products with mid tropospheric AIRS and IASA GHG products. (NOAA, date tbd)

c) Develop a CEOS strategy to harmonise and secure future GHG data supply from space - reflecting updated science status and user requirements as defined by the update of the IGOS Carbon Theme Report via task CL-09-03a.
(GEO Task A team, date tbd)

d) As required, support to the CEOS periodic reports to UNFCCC SBSTA informing of progress by space agencies towards the requirements of the GCOS Implementation Plan. (INPE, December 2009)

e) As required, compelling demonstrations and communications in support of key GEO meetings in 2009 and 2010 – including the GEO Ministerial – noting the science and policy implications of the new technical capabilities supplied by space systems. (JAXA and others, ongoing)

f) The first step is to develop and communicate an overall CL-09-03 'CEOS Carbon Implementation Plan' reflecting the key milestones of GEO. (JAXA, end of April 2009)

Constellation: Atmospheric Composition

- The Atmospheric Composition Constellation will publish by April 2009 a report on "The Impact of Data Gaps on Climate Modeling Validation and Forecasts," which includes a set of prioritized recommendations based on expected data gaps of future missions.

- Establish a portal for atmospheric composition data in collaboration with the WMO and hosted by DLR. The portal will provide data access and user-friendly tools for the chemistry climate community.

Constellation: Land Surface Imaging

- The 2009 LSI Constellation Work Plan focuses on completing and sustaining current and ongoing activities.
  - *LSI Constellation Portal for Mid-Resolution Optical LSI Satellite System Information and Enhanced Data Access* will be released by March 31.
  - In cooperation with WGISS, the LSI Portal will be enhanced to include other LSI satellite system data, as well as increased functionality.
  - Definition of standards for future mid-resolution, optical satellite systems is scheduled for completion of a draft final report in September.
  - The WGR likely will focus on facilitating application of CEOS agency radar data to the GEO task on Forest Carbon Tracking and on promotion of operational polarimetric SAR systems.
  - INPE will complete development of the web-based services or freeware.
  - The WGRDSC will continue to compile regional data sets and plan for its contributions to GLS2010.

Constellation: Ocean Colour

- Final Phase 1 Implementation Plan to be ready for review/appoval at SIT-24

- Related to our Objective 5, the EU's Joint Research Centre and IES, with participation from IOCCG , CSIR and University of Capetown, and in cooperation with the Institute of Marine Sciences of the University of Dar-es-Salaam, are sponsoring a training course entitled, "Methods and applications of ocean colour remote sensing in African coastal and regional seas" in Zanzibar, Tanzania, 12-23 October, 2009.

Constellation: Ocean Surface Topography

July 09 – The CEOS OST Constellation will publish an upper-level Mission Requirements Document to guide future programme planning for the oceanographic community over the next 15-years.

- Precise altimetry (eg, the Jason series)
- Complementary high-inclination altimetry (eg, Sentinel-3, GFO-2, AltiKa & beyond)
- Wide-swath altimetry

Constellation: Ocean Surface Vector Wind

- May 09 – Organize a meeting to agree on a centralized service and its development of:
  - SVW-SWH product & format
  - Global product file & means for sub-setting
  - Distribution options
- Dec 09 – Organize a one- to two-week training course in Oostend to use of this product
- Sep 09 – Invite the Chinese National Space Agency & State Oceanic Administration to SIT-24

Constellation: Precipitation

- CEOS Action: AR-09-02a_20
  - Category #: 1
  - Primary SBA Area: Transverse
  - NASA Point of Contact: Steven Neeck
  - Participating Organizations: NASA, JAXA, CNES, ISRO, INPE, ESA, CAST/NRSCC, NOAA, NRL, EUMETSAT, DLR, CSA, Universities from the U.S. and Asia (Korea)

Action Description

- Improved PC radiometer intercalibration through new methodologies developed by the Precipitation Measurement Missions (PMM) Science Team intercalibration working group in coordination with the CGMS/GSICS.

Deliverable

- Implement improved correction algorithm developed in initial phase of the first intercalibration study (see DA-07-03_1) for TRMM Level 1B brightness temperature product (May 30, 2009)

Energy

- CEOS task EN-07-01_3, led by USGS, to enhance the UNEP Solar and Wind Energy Resource Assessment (SWERA) website to include additional spaceborne Earth observation products.
- Participation from NASA, DLR, INPE, and others.
- CEOS is a co-lead of GEO task EN-07-01.
- The website is located at http://swera.unep.net .
  - Excellent example of providing specialized data products on solar and wind energy resource availability to non-specialists.
  - Concrete example of how space-based products have "real-world" impacts, in this case for the planning of renewable energy resources at any point on the globe through a nicely constructed, visually appealing website.
  - Relevance to resource planning in the developing world (potential connections with GEO activities in Africa).