

Sub-task Number: US-09-01b

Sub-task Title: Communities of Practice and Partnership Development

Overarching Task: User Engagement

Area: USER ENGAGEMENT

Relevant Committee: UIC

Related Targets: (to be included in 2009)

Sub-task Definition (as given in the 2009-2011 Work Plan):

Develop GEO Communities of Practice (CoPs) to identify and refine user needs and contribute to the achievement of Societal Benefits, in particular for cross-cutting areas – building upon GEO’s initial experience of Communities of Practice (US-06-02), information provided by national, regional and project-level surveys, the extensive work of the Integrated Global Observing Strategy Partnership (IGOS-P), now transitioned into GEO, and the activities on the Virtual Constellations and on Geodetic Observing System. The following Communities of Practice have been recognized by the User Interface Committee: Air Quality and Health, Biodiversity, Coastal Zone, Energy, Forest, Geohazards, Global Agriculture Monitoring, and the Water Cycle.

Leads (GEO Member or PO, Entity carrying out the work, Contact: e-mail):

USA (EPA): Point of Contact: Gary Foley, Co-Chair of the User Interface Committee, Foley.gary@epa.gov
IAG

Motivation/Background

A Community of Practice is “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*

In GEO, there is a “concern, interest or passion” that brings a CoP or IGOS Theme team together that is related to both earth observations and some aspect of potential societal benefits. The “community” draws people that value interactions and who are often practitioners. The “practice” involves sharing familiar experiences, building a shared knowledge and learning.

Outputs (e.g. products and services which result from the activities of the Task/sub-task; outlined in the form of deliverables with timelines)

The GEO UIC at its three-day meetings devotes a full day to three parallel breakout sessions with up to 12 presentations per session to listen to progress reports on the CoPs, the IGOS themes, GEO Work Plan tasks and other related activities. At the 8th Meeting of the GEO UIC – Boulder, CO, USA (September 2008), these parallel sessions were held and all of the presentations are available at http://www.earthobservations.org/com_uic_docs_8.shtml. The outputs and activities sections have been produced from selected material in these presentations and in the meeting report.

Planned:

Four CoPs (Air Quality, Disaster, Energy and Biodiversity) are active in the Phase 2 Architecture Implementation Pilots which are taking user-driven approaches. These pilots will also be testing the GEOSS Common Infrastructure from the user perspective.

Produced (current status): ...

The Energy Community of Practice has produced an Energy Strategic Plan and is now implementing it.

From the presentations on IGOS-P themes, the produced and planned outputs on water cycle (Rick Lawford); coastal zone and geohazards (Hans Peter Plag); land (Michael Brady); global agriculture monitoring (Jinlong Fan, Chris Justice) can be found:

http://www.earthobservations.org/com_uic_docs_8.shtml

From the presentations on the Forest CoP (Michael Brady); Energy CoP (Thierry Ranchin); Geohazards CoP (Hans Peter Plag); Coastal Zone CoP (Hans Peter Plag), the produced and planned outputs can also be found: http://www.earthobservations.org/com_uic_docs_8.shtml

At Boulder, CO, USA, in September 2008, there was a joint meeting of two Committees and IGOS leaders with presentations and discussion on opportunities for three-way coordination/collaboration among GEO UIC- GEO CBC- IGOS.

Activities (operations or work processes through which resources are mobilized to produce specific outputs; outlined in the form of milestones including timelines)

Planned and Progress (current status):

The Integrated Global Water Cycle Observing Theme (IGWCO) group conducted a review of what user needs were and the gaps in regards to the hydrological cycle. For water quality, there is a need for new sensors; both satellite and in-situ observations. In the WMO report on global water quality monitoring, a number of gaps was identified. The crucial target is can water managers get reliable forecasts 5, 10, 20 years ahead to determine where the water supply will come from? Short term information, in a real time sense, is needed on water supply and water quality to deal with variability. One of the challenges is language of available documents. The other problem is having insufficient resources to conduct good pilot projects. The water cycle committee meets remotely every 2 months.

The IGOS Geohazards Theme group held three workshops which led to the Frascati declaration. The Geohazards CoP is trying to get all of the relevant CoPs together, to federate the community to build bridges between providers, data processors, and end users. The concept paper provides a road map for the international initiative: facilitate data access to supersites within 3 years; criteria to choose supersites. The plan involves funding agencies, national, regional and local representatives, and private companies. There are a number of regional workshops in the works, and they include CoPs involved in Capacity Building. See workshop information at IGOS website.

The transition of the IGOS Coastal Zone theme to GEO involves a strategy focusing on the land-sea interface. <http://www.czCoP.org>

The IGOS Cryosphere theme interfaces with several SBAs (especially climate and water). A theme report was published toward the end of last year (by the plenary in Cape-town); it is currently being translated into Chinese. IGOS is being migrated into GEO. There are 3 implementation phases. The SOAN workshops, among other events, was an effort to define user needs specific to the arctic.

The Integrated Global Observation for Land theme (IGOL) is well integrated into GEO, contributing to at least 2 tasks, across multiple SBAs. There is particular interest related to the agriculture SBA.

A GEO Workshop on “Developing and Agricultural Monitoring System of Systems” will contribute to a number of tasks, bringing Agriculture and Forest CoPs together. There is a concept of land surface imaging constellation – related to data required on daily basis. There is a need to knit together land data in 2010 from constellation to deal with Landsat data gaps. IGOL will bring in land use with its focus on agriculture.

The Forest Community of Practice group has identified a variety of user community types (e.g., global change science, recreation and tourism, sustainable forest management) and contacted key forest organizations for involvement, including UN Org, FAO Forestry Program, Forest Resource Assessment, UNFCCC, CBD; Regional processes, MCPFE, Montreal process; National Forest Inventories, ENFIN, NAFC, COST E43; Regional (EC/ESA GMES, i.e. GSE forest monitoring); National agencies, CFS, USFS; and NGOs. The Forest CoP’s initial focus has been to integrate in-situ and space based forest observations and planning for upcoming global forest assessment (FRA 2010). It is populating the GEO registry with data from the CFS-Safaroh land cover and CWFIS fire. The Forest CoP is leading the Initiation of an Advisory Group and has also identified an Analyst for the forest portion of the Agriculture SBA to assist with identifying user needs for EOs as part of the GEO UIC Task. Future activities include expanding participation in CoP and the Advisory Group to assist the UIC; and, increased promotion of forest data registration. Presentation at GEO UIC 8th meeting at

http://www.earthobservations.org/documents/committees/uic/200809_8thUIC/20-Lan-Brady-Forest-CoP.pdf

The Biodiversity CoP is a network of networks of Biodiversity Information data providers and users involving many countries, UN organizations, and NGOs. A CoP structure has been conceived, with data and networks linked to GEO through GEOBON (Task BI-07-01). The CoP provides an ecoregion-based framework for global planning and management applications. The GEO Portal will provide direct access to data and services provided by CoP partners. An Interim GEO BON Committee was formed in January 2008. A draft GEO BON concept document produced at the 2nd International workshop (Potsdam/Berlin 8-10 April) was amended and an Implementation Plan for GEO BON produced. Presentation at GEO UIC 8th meeting at http://www.earthobservations.org/documents/committees/uic/200809_8thUIC/07-Health-Montira-Pongsiri-GEO-BON.pdf

The Global Agricultural Monitoring CoP (Task AG-07-03) activities include several workshops: agriculture monitoring workshop in Feb 09 in Beijing.

The Coastal Zone Community of Practice (CZCP) works to identify coastal users, organizations and needs are being identified. A GEO CZCP list server (CP-COASTAL@LIST.GEOSEC.ORG), an FTP site, and a CZCP Web Page (<http://www.czcp.org>) have been established. The first Workshop in a series of regional GEO/CZCP Workshops was successfully held on June 9th to 13th, 2008 in Athens, Greece, with more than 35 participants representing global and regional organizations with interest in the Mediterranean coastal zone. A report on the workshop is now available. Subsequent regional workshops will be held in 2) Africa, 3) Asia and 4) the Americas in the 2009-2010 timeframe. CZCP will also help support the “Inland and Coastal Water Remote Sensing *Algorithm* Workshop”, tentatively planned for April 2009 in Washington, D.C.

The Energy Community of Practice includes 3 Tasks in the actual and future Work Plan (EN-07-01, EN-07-02, EN-07-03). The group has initiated the EnerGEO project on Earth Observation for Monitoring and Assessment of the Environmental Impact of Energy Use; this project is under negotiation with the EC under Framework Programme 7. Start date early 2009; duration of 48 months. The community participated in the Advisory Group for US-06-01 activity (first phone call meeting Oct 10, 2008); requirements for solar and wind energies were provided. Answered ADC AIP call and provided information on renewable energy sources (RES) for electricity production; the exploitation of these energies requires accurate knowledge of the resources and of their availability (in space and time) as well as accurate forecasts in the different phases of an energy system life cycle. The community is working to build membership and engagement and is working to help implement the Energy Strategic Plan.

The Air and Health Community or Practice delivered a status report of its work on the AIP. In addition, they reported on Work Plan activities that were addressing hemispheric transport of air pollutants, international atmospheric model evaluation and global monitoring for atmospheric mercury. There also was a report on the CEOS Atmospheric Chemistry Constellation (ACC) and its relationship to the CoP. ACC will be providing time of day NO₂ which is important for addressing photochemical oxidant air quality and its health impacts. It also will be providing aerosol/smoke forecasts for addressing fine particulate air quality health effects

Resources (indication of resources – e.g. financial, human – contributed by GEO Members or Participating Organizations to produce outputs)

To be determined at the next UIC meeting.

Architecture and Data Component

1) Please briefly describe any task-related Earth observation resources (data set, system, website/portal) and any related Web Service interfaces that are contributed to GEOSS. State whether these items are or will be registered with the GEOSS Component and Service Registry for access via the GEO Web Portals, and whether any associated standards or other interoperability arrangements will be registered in the Standards and Interoperability Registry.

2) Please also describe what data and information your activity/system needs that you would request to be accessible through the GEOSS Common Infrastructure.

Capacity Building Component

(capacity building is defined to include the development of capacity related to: (i) Infrastructure and technology transfer (Hardware, Software and other technology required to develop, access and use EO); (ii) Individuals (education and training of individuals to be aware of, access, use and develop EO) and (iii) Institutions – building policies, programs & organizational structures to enhance the value of EO data and products).

1) In accordance with the above definition does this Task have a capacity-building component? If so, please provide a short description of this component including a description of end users.

The CoPs, IGOS themes and other related activities under this task have members that understand capacity building issues related to their work and in addition to identifying user needs also may identify the capacity building needs for GEOSS that are required to achieve Societal Benefits.

A module for user testing of the GEO Portals and GEOSS Common Infrastructure is being developed. In addition, the ADC AIPs (Air Quality, Disaster, Energy and Biodiversity SBA) are also a good test. Members of the CBC should be involved in these activities. The module will be available at the GEO Committee meetings at Stresa, Italy in May 2009 for use by CBC members and other concerned with capacity building.

2) Have any additional CB needs for this Task been identified? Please provide a short description.

To be determined at the next UIC Meeting.

User Engagement Component

(please briefly describe to what extent end users are engaged in this Task and influence the nature of the outputs produced)

CoPs serve as a vehicle for the UIC (and the other Committees) to get in contact with users. Enabling new CoPs could involve:

- Teams proposing projects are self-identified as interested on specific topics
- Call for Participation (CFP) process could help to identify new COPs around a specific issue (e.g. Malaria, Water Quality)
- Furthermore, the proposal project teams could be sources for user needs/observational requirements.

Science and Technology (S&T) Component

1) Please briefly describe the elements of scientific research or technological development contained in this Task.

2) In relation to the S&T component(s) of this task, please describe gaps, priorities, continuity needs, barriers, scientific expertise and additional resource needs (this information will be used for developing a gaps and needs assessment in Task ST-09-01)

The CoPs, IGOS themes and other related activities under this task have members from the science and technology communities and in addition to identifying user needs also may identify the science and technology needs for GEOSS that are required to achieve Societal Benefits.

Members and POs' Contributions to Outputs and Activities above:

(Input is optional. This section gives the chance to Members and POs to provide more details (3-5 lines) on their individual activities, making a clear connection with the Outputs and Activities outlined above).

Germany

- www.geobusinessmaps.org; - www.georohstoff.org; - Study on privacy aspects of EO data policy.

USA

NOAA: Serves as Co-Chair for the GEO Coastal Zone Community of Practice (CZCP) - helping to coordinate/spin-up efforts and activities in that context.

Participation (Table to be filled in 2009):

Type	Member or PO	Representing	Contact Name	EmailAddress
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Lead	IAG			
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