The GEO User Requirements Approach to Achieving Societal Benefits

The 8th UIC Meeting
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Terms of Reference - GEO User Interface Committee

Goal

- To engage users in the development and implementation of a sustained GEOSS that provides the data and information required within and among the nine societal benefit areas as specified by user groups on national, regional and global scales.

Also a specific goal to address cross-cutting issues and oversee the Communities of Practice (CPs), ensuring continuity & avoiding duplication.
The GEOSS Architecture

Users and Scientific Communities Served By
GEOSS Common Approaches

Systems within their Mandates

UIC Goal

Organize this side of the GEOSS Architecture
UI C Objectives

• Enable GEO to address in a systematic, targeted, focused and comprehensive way the needs and concerns of a broad range of user communities in developing and developed countries, across issues and trans-disciplinary needs, with a particular focus on fostering new or less organized communities.

• Enable GEO, in the implementation of GEOSS, to engage a continuum of users, from producers to the final beneficiaries of the data and information.

• Facilitate linkages and partnerships between established CPs and new user groups or organizations interested in collaborating.

• Incorporate the IGOS themes (Integrated Global Observing Strategy)
THE SPECTRUM OF USERS

From observations

Earth observations & earth system models
Data-to-Information archiving & services
Decision support tool development
Decision making
Assessment of benefits

To societal benefits

Requirements well known

Earth system scientists and modelers
Earth system service providers
Environmental process modelers & researchers
Policy Makers & Environmental managers
Public officials, advocacy groups and the Public

Not aware that observational Requirements are even needed
Establish a GEO process for identifying critical Earth observation priorities common to many GEOSS societal benefit areas, involving scientific and technical experts, taking account of socio-economic factors, and building on the results of existing systems’ requirements development processes.
The US-06-01

The User Requirements Gathering Processes

• Presentation by Dr. Lawrence Friedl

User Needs and System Performance Utility (UNSPU) Proposed Functional Specifications

• Presentation by Dr. Hans-Peter Plag
The User Requirements Gathering Processes

- A 2-year (+) timeline of US-06-01 activities.
- How an “Advisory Group” and an “Analyst” will work together to develop the priorities within each SBA. The analyst will be the primary coordinator and organizer of the activity to meet the schedules, and will interact with and utilize the Advisory Group for each SBA.
- UIC’s Refined Process in nine steps.
- The process “harvests” observation needs expressed in existing documents.
• Facilitate the development, availability and harmonization of data, metadata, and products commonly required across diverse societal benefit areas, including base maps, land-cover data sets, and common socio-economic data.

• ADC and UIC
A user-led community of stakeholders, from providers to the final beneficiaries of Earth observation data and information, with a common interest in specific aspects of societal benefits to be realized by GEOSS implementation.

The Communities of Practice will be self organized and will include stakeholders required to achieve benefits.
An Example Community of Practice
Air Quality & Health

The Public
### Local Air Quality Conditions and Forecasts

**Today's Highest AQI Forecasts**

<table>
<thead>
<tr>
<th>Location</th>
<th>AQI Category</th>
<th>PM2.5 Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Youngstown, OH</td>
<td>PM2.5</td>
<td>1</td>
</tr>
<tr>
<td>Bakersfield, CA</td>
<td>OZONE</td>
<td>8</td>
</tr>
<tr>
<td>Cleveland-Akron-Lorain, OH</td>
<td>PM2.5</td>
<td>3</td>
</tr>
<tr>
<td>Dallas-Fort Worth, TX</td>
<td>OZONE</td>
<td>2</td>
</tr>
</tbody>
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**Note:** EPA established a tighter fine particle standard in the fall of 2006 to better protect public health. [More Information](#)
• Reaffirm our goal to “To engage users in the development and implementation of a sustained GEOSS that provides the data and information required within and among the nine societal benefit areas as specified by user groups on national, regional and global scales”.

• The Major UIC Work Plan task, US-06-01, is proceeding on two fronts under the leadership of Dr. Lawrence Friedl and Dr. Hans-Peter Plag.
• The UIC web site must be developed and include definition of the concept of the ‘Community of Practice’, titles and contact persons for each approved ‘Community of Practice’, and specification of the process of submission and adoption of new ‘Community of Practices’.

• We will participate in the ‘Best Practices’ WIKI being developed by the ADC and solicit submissions by the User Community. We should also consider the legal liabilities of the Best Practices.
The ‘Data Sharing Principles’ Document was reviewed.

- Issues identified include:
  - Liability on data and services
  - Liability on Wiki Best Practices
  - Protection of metadata
  - Restrictions: prior arrangements
  - How do you encourage compliance with principles
  - PPP: want to engage commercial sector, register their data and services even though it is not free, open, possibly to standard. Private company metadata in the system
  - There is a need for special arrangements on sensitive data
  - Clear standards on data use classes: free / unrestricted, restricted…
  - Not just data and metadata
• Air Quality Community of Practice Scenario Workshop – UIC/ADC collaboration on Call for Participation
• Feed into US-06-01
• UIC Management:
  – There was a thread of ongoing discussion throughout the meeting about workplan development, identification of milestones, how to measure success, and need to integrate activities with other GEO committees.
  – ADC Sherpa Model: Milestones and record of achievement
  – UIC CoP model with co-chair working with each CoP ‘owners’
    • Users different than software engineering
    • The users are a process driven group rather than an activity driven group.
• New Management Model adopted in Washington, 2007
  – Breakout sessions for CoP
  – Plenary for discussion of common themes
  – Participatory vs highly structured

Our Assessment is that it is working and we need to allow evolution before dramatic adjustment.
Are you new to GEO and GEOSS? Find out more [here](#)!

## Highlights

<table>
<thead>
<tr>
<th>The GEOSS Common Infrastructure (GCI)</th>
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<tbody>
<tr>
<td><strong>Evaluating the GEO Portal prototypes</strong></td>
</tr>
<tr>
<td>Evaluate the GEO Portals</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>Components registration</strong></td>
</tr>
<tr>
<td>Register your components</td>
</tr>
<tr>
<td>The GEO community is invited to register its data bases, catalogues, services and tools in the GEOSS Components and Services Registry</td>
</tr>
<tr>
<td><strong>Standards registration</strong></td>
</tr>
<tr>
<td>Register your standards here</td>
</tr>
<tr>
<td>The GEO community is encouraged to register standards, protocols and other specifications for ensuring an interoperable “system of systems” in the GEOSS Registry</td>
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</tbody>
</table>
Objectives of Boulder Meeting

- Issue of US-06-01 – Determine role in new work plan and define new task for 2009
- Develop a Call for Participation
- Include IGOS members in UIC
- One new initiative with CBC
- Determine Activities of UIC in ISRSE, May 09