

**GEO User Interface Committee**  
**15<sup>th</sup> UIC Meeting (UIC) Summary**  
Pretoria, South Africa  
20 May 2010

**Objectives**

- Share and incorporate what was learned through the Work Plan Symposium
- Prepare for the Ministerial and Plenary meetings in Beijing
- Develop draft UIC report for the next Executive Committee meeting
- Determine next steps for the UIC based on user-related information gathered during the week
- Determine next steps for Beijing Ministerial meetings
- Begin planning for next UIC Activity Plan

**Participants**

Jan Connery, ERG (contractor)

Gary Foley, U.S. Environmental Protection Agency (EPA), USA

Kathy Fontaine, National Aeronautics and Space Administration (NASA), USA

Rick Lawford, University of Manitoba

Øystein Nesje, Ministry of the Environment, Norway

Jai Singh Parihar (Space Applications Center [ISRO] Indian Space Research Organization)

Francesco Pignatelli, European Commission

Bradley Reed, GEO Secretariat

Lerato Senoko, Department of Science and Technology, Republic of S. Africa

Jimmy Weir-Smith, Department of Agriculture, Republic of S. Africa

Bruno Meyer, Satellite Application Center, Council of Scientific and Industrial Research, Republic of S. Africa

**Welcome – Lerato Senoko**

L Senoko, Deputy Director of Space Technologies in the S. Africa Department of Science and Technology, welcomed participants to Pretoria, S. Africa, on behalf of her organization. She emphasized the importance of user engagement, noting that the user component of S. Africa's space program is driving the country's space policy. The space program is scheduled to be launched in a few months, and hopefully will be in full force by the time of the 2010 GEO Ministerial Summit.

**Introductions and Agenda (Moderator – G. Foley)**

G. Foley welcomed participants and asked them to introduce themselves. The group welcomed J. Weir-Smith and B. Meyer, from the S. Africa Department of Agriculture and the Satellite Application Center, respectively, and B. Reed from the GEO Secretariat, to their first UIC meeting. G. Foley reviewed the agenda, noting that a half hour was being added to provide an update on the User Requirements Registry (URR) project. The agenda was approved without further changes. G. Foley also encouraged all participants to participate in the GEO portal testing taking place at the meeting venue.

## **Action Item Review – J. Connery**

Jan Connery briefly reviewed the status of key action items and asked participants to provide updates to other items to her by the end of the week.

## **Lessons on User Interface from the Week (Moderator – K. Fontaine)**

During the GEO Work Plan Symposium, which took place the prior three days, each UIC member in Pretoria was asked to report to the UIC on user engagement aspects of the Task presentations in one or two GEO Societal Benefit Areas (SBAs) and/or GEO committee areas.

Also, all GEO Task leads in Pretoria were asked to provide a response to three questions:

- What are the users for your Task?
- How have they been engaged in the past two years?
- How will they be engaged in the next two years?

Responses to these questions were compiled on a spreadsheet.

K. Fontaine asked each UIC participant in Pretoria to report what they had noted or learned about users, user engagement, and opportunities for UIC support in their assigned area(s). She hoped the group could identify a handful of priority areas the UIC should start focusing on now to support user engagement.

She explained that the User Task Analysis she and Lawrence Friedl had conducted did not cover all Tasks, since information for some of them was not available at the time. Reports on those Tasks would be particularly helpful.

She noted that the User Task Analysis categorizes each Task as something the UIC should either lead, actively support, or track. “Tracking” means the UIC is following the Task to make sure the Task team is connecting with the user community to learn what their users need rather than simply assuming they know what users need. She hoped that Task leads could explicitly describe their connection with users.

### **Disasters SBA**

- Ø. Nesje reported on the four Tasks presented in the Disasters SBA (DI-06-09, DI-09-01, DI-09-02, and DI-09-03). User engagement appears to be working well in this SBA. The users are mainly technical, and the infrastructure already exists within the Tasks to allow connection with users. However, the SBA is somewhat weak in defining who the users are. The User Task Analysis document labels the disaster Tasks as ones the UIC should track. Ø. Nesje recommended that this status be maintained.

### **Climate SBA**

- Ø. Nesje reported that Tasks in the Climate SBA tended to focus on making better models; therefore, their end users were generally limited to technical users, such as the research community and modelers.
- G. Foley said he had observed that the U.S. climate community tended to focus on delivering products without much concern for how they were used. Work in the climate area should provide outputs that will help forecast and deal with climate change consequences. J. Weir-Smith noted there was a similar disconnect between researchers and users in S. Africa. B. Meyer noted that this raises the question whether a mechanism exists to connect

scientists and end users. K. Fontaine said the UIC is trying to use the GEO Communities of Practice (CoPs) for that.

- Ø. Nesje questioned whether GEO should be a central player in climate. K. Fontaine responded that, due to large uncertainties, it likely will be many years before a reliable Global Carbon Observing System can be developed. G. Foley noted that determining why carbon dioxide levels are rising requires a mass balance to four significant figures—a virtually impossible task. However, this would be necessary to support a carbon trading system. In any case, a trading scheme would ignore carbon exchange between the ocean and atmosphere, which comprises the vast majority of the carbon that would need to be tracked. J.S. Parihar suggested that GEO could come out with better science protocols to develop the science answers.
- Participants agreed the UIC should closely track the climate Tasks.

### **Agriculture SBA**

- J. S. Parihar reported on the two Tasks, AG-06-02 and AG-07-03, in the Agricultural SBA and confirmed that the UIC should continue to track them.
  - AG-06-02 (Data Utilization in Fisheries and Aquaculture) is a mature case of user engagement, with widespread community involvement. In India, for example, forecasts are disseminated through the media to fishermen, the ultimate end users, so they can know the best locations to fish. The Indian Space Agency provides data to anyone who wants to use it.
  - AG-07-03 (Global Agricultural Monitoring) has three Subtasks. They did define users, but their presentations did not convey a sense of serious user engagement. J. S. Parihar noted that he has been personally involved in some of these Subtasks and it has been difficult to get involvement of the Food and Agriculture Organization (FAO). He is concerned there is not a sufficiently strong connection to users; however, some donor institutions have shown an interest in this activity. He would welcome the UIC's or anyone's support in encouraging institutions such as the FAO to participate.
- J. Weir-Smith noted that FAO has been willing to work with his organization, the S. Africa Department of Agriculture, but this does require that they pay a fee to FAO. FAO's support has been valuable. It has included providing trained people and useful software, and even taking over one of his Department's projects in S. Africa in order to take the project to a more local level. He has found FAO to be good, willing, and available and that they have a great deal of intellectual capital with which to engage farmers.
- K. Fontaine noted that food security will be a topic at the 2010 Ministerial Summit; the UIC may need to think about that.
- J. S. Parihar noted that timeliness and objectivity are two major concerns in agriculture. He was concerned that information reaches decision-makers too late and hoped that Ministers could be convinced to conduct an objective assessment of agriculture.

### **Capacity-Building SBA**

- L. Senoko reported on Tasks under the Capacity-Building SBA, many of which did not exist when the User Task Analysis was conducted. Several of the Tasks are just starting or in the early phases, so information may not yet be sufficient for the UIC to understand who the users are and what gaps exist.
- Most Tasks seem to be doing their best to reach people in Regional areas to promote awareness and build the case for capacity building. Symposiums and workshops were mentioned as methods to connect with users. The S. Africa Department of Science and

Technology is pushing mentorship programs, in which university students work on programs. This helps to eliminate the brain drain.

- L. Senoko noted that there are different levels of Capacity Building—from practitioners to training people in the field. She asked whether, with respect to GEONETCast, more work was needed to close the digital divide. She also wondered what standards were applied to materials used for training and capacity building, and how adherence to those standards was monitored.
- G. Foley recommended that the UIC hold a teleconference, and possibly a larger session with GEO's Capacity-Building Committee (CBC), similar to that held two years ago in Boulder, Colorado, to explore synergies and collaboration on common tasks. He suggested sending presentations on capacity-building Tasks to UIC members who could not attend the Pretoria Work Plan Symposium.

### **Health SBA**

- G. Foley presented his observations on the Health Tasks. He noted that there was no presentation for Task HE-09-01 (Information Systems for Health). This Task is very important, yet the UIC does not know much about it. The Health and Ecosystem CoP could be a good vehicle for bringing this together.
- The Health and Ecosystem CoP will hold its third meeting in July 2010, in Paris, France.
- G. Foley noted that there is reasonable (though not complete) coverage of air quality and infectious diseases issues. It is possible that the subset being tracked under GEO comprises those that are most amenable to Earth observation. He noted, however, that there are no Tasks covering waterborne diseases, a potentially major gap. It is unclear whether such Tasks would fall under the Water or Health SBA.
- J. Weir-Smith noted that malaria, fire worm, and some other diseases in S. Africa are waterborne or water-enabled (spread by insects such as mosquitoes that need water to propagate). R. Lawford responded that the Water CoP members had discussed a possible task on waterborne diseases. They were also unsure under which SBA it should fall, and they did not have a volunteer to lead such a task. He thought this was an important gap.
- K. Fontaine recommended that the UIC start groundwork to initiate a task for waterborne diseases in health. G. Foley noted that there is a proposal, currently in the hands of the Health and Environment CoP, to have a side event on waterborne diseases at the 2010 Ministerial Summit. A key issue is who would host and organize such an event. K. Fontaine recommended the UIC follow up on this.
- R. Lawford said that the Water CoP would be very interested in discussing data requirements to develop and launch a system for monitoring water and health. He could help make a connection to the Global Water System Project.
- G. Foley said he might recommend changing the status of HE-09-02a and HE-09-02d from "active support" to "tracking" in the UIC Activity Plan.

### **Water SBA**

- Reporting for the water Tasks, R. Lawford noted that complementarities associated with Task WA-06-07 are being exploited. Specifically, complementarities with drought are being exploited through US-Canada GEO activities, and Global Energy and Water Cycle Experiment (GEWEX) and the European Space Agency (ESA) have plans to promote synergies between elements of WA-08-01, but in a research mode. A workshop was held the week of 10 May 2010, which included a few users (water managers). This was followed by a "dry" meeting with representatives from the agricultural community to talk about test beds. The JCOM initiative in the agriculture Tasks is setting up a supersite.

- A number of platforms are developing to address the global water cycle. These range from 1) activities in GEWEX and NASA (focusing on satellite data) to 2) the Coordinated Energy and Water Cycle Observation Project (CEWOP) (WA-08-01E) (which is looking at different types of data) to 3) the World Meteorological Organization (WMO) Hydrological Applications and Run-Off Network (HARON) project (which is looking at connecting, advancing, and enriching systems for ground water). These initiatives share common objectives, although they follow significantly different approaches.
- G. Foley asked about topics covered at a meeting under Task WA-08-01d in New York City earlier in 2010. R. Lawford explained that a water assessment meeting was held just prior to the annual Water Cycle CoP planning meeting, to discuss issues that are not being addressed within the WA-08-01 Task. Presentations included water accounts, as well as U.S. Environmental Protection Agency and U.S. Geological Survey talking about the SPARROW model and the environmental quality data needed for this model.
- Linkages between the Water SBA and other SBAs will be a focus of actions in the coming year. Likely, the first area of focus will be linking to the agricultural area, which would also provide an opportunity to pursue discussions about water and health.
- The water cycle community is lagging in registering existing products, tools, systems, and services in the GCI, despite frequent encouragement, because the research community already has well-established distribution networks and has the perception that GEO is just another layer. As GEO adds value, the community will have an incentive to register datasets.
- Generally, water cycle data are shared (with some exceptions for groundwater and water quality data), but through channels other than those provided by GEO. The community is working toward a global archive of soil moisture data, but there are issues, including the standardization of some types of data (soil moisture and groundwater), data quality, variations in how data are stored, and the availability of data from some regions/ countries (the Asian Water Cycle Initiative and China). Some in the community fear that sharing will lead to inappropriate uses.
- The Water Cycle CoP is a member of the UIC; is involved with the GEO Architecture and Data Committee's (ADC's) third Architecture Implementation Pilot project (AIP-3); and benefits from interacting with the ADC. It is also undergoing a review by GEO's Science and Technology Committee (STC) and has links with GEO's Capacity-Building Committee (CBC) activities.
- The survey of water cycle data centers under one of the water Tasks has provided a good knowledge base regarding where water cycle data are. UIC help for this Task would be appreciated. The Task team wants to take other SBAs and find out where data centers are for other SBAs. Water has 150 data centers.
- R. Lawford asked whether the UIC had a listing of people in other SBAs who could be approached to assemble documentation on what defines a data center. Fundamentally, a center should serve a number of people and distribute data. On one hand, these could be defined simply as operational-type centers with large data sets, but the definition could be expanded to also include research data systems and centers, like the Coordinated Energy and Water Cycle Observations Project Center, and centers being set up to support a research project and user community, like the National Climatic Data Center (NCDC) in the United States. R. Lawford agreed to provide a written definition of a "data center".
- G. Foley mentioned that the U.S. EPA is currently funding development of a portal that will allow users to access both USGS and EPA water quality data in an interoperable way. This is a data access tool, but not a delivery center. It is being created because users provided feedback that a single access point for both data sets would be useful. R. Lawford said that water CoP work had focused on providing access to data sources rather than portals. He

thought might be useful to add a question about the value of portals in a questionnaire currently under development and to identify areas where consolidating data access would be helpful to users.

- R. Lawford noted that the STC had reviewed water Tasks at its March 2010 meeting in Ankara, Turkey. The Water CoP was also linking with the CBC and hoped to better tap into funding opportunities.
- Descriptions for a few of the water subtasks are out of date, and suggestions have been made to the GEO Secretariat for changes, including merging some of them. For example:
  - More synergies could be developed if Subtask WA-08-01f were part of WA-06-07; its focus on capacity building could supplement what is being done for capacity building in specific regions.
  - The description for WA-06-07A needs the most updating as it was written before the Asian water cycle work got underway.
  - Subtask WA-06-02a fits with the weather Task that relates to ensembles.
- GPCP products are the most mature integrated data product that has been produced from satellite data with products going back approx. 30 years. Progress has been registered in all areas of data integration and success has been validated by use statistics. It would make an excellent End to end story on data processing and product development for the Ministerial.
- The Asian Water Cycle is preparing for a Ministerial Summit presentation. Other activities such as drought monitoring could possibly be included in an exhibit as well. R. Lawford hoped that the exhibitors would include recognize critical resources from other parts of the world.
- Task WA-06- 02A is making contributions to capacity building: Testbed projects are developing the scientific and engineering capacity to produce accurate and reliable hydrologic ensemble forecasts and examples that use them in practical applications. Users are actively involved in most testbed projects. A user workshop is planned to demonstrate how hydrologic ensemble forecasts can be used in practical applications and to discuss user-applications issues.

### **User Engagement**

- G. Foley expressed disappointment that so few of the user engagement Tasks/Subtask leads were presented at the symposium. He had hoped all user engagement leads would be together to talk about how they were supporting users.
- He noted that users for Subtask US-09-02c appeared to be GEO member countries, as well as others who will be asked to review and maintain the maps being produced under the Subtask.
- K. Fontaine reported for Task US-09-01a. She noted that the status was the same as presented at the March 2010 UIC meeting.
  - Seven of the reports have been completed; however, disasters and ecosystems are being expanded to include more disaster types and ecosystems, respectively.
  - Agriculture is being split into agricultural and forests.
  - Biodiversity lacks a prioritization scheme.
- After some discussion, the group agreed that B. Reed should check the Biodiversity report and references to determine whether they contain information on parameters and whether there is potential for creating a prioritization scheme. This would enable a decision to be made about whether the report could be completed soon, or whether it would need to be dropped from the project. If dropped, the UIC could note biodiversity as a gap area. F.

Pignatelli stressed that it would be important to check with GEOBON before making this statement.

- K. Fontaine noted that any reports intended for highlighting and distribution at GEO Plenary VII will need to be completed in mid-September.

### **Weather SBA**

- F. Pignatelli reported on the two Tasks presented in the Weather SBA.
  - The TIGGE Task (WE-06-03) is well established, with excellent user involvement, but is limited to meteorological agencies and other members of the weather community, with a possible extension to the agricultural community.
  - Task WE-09-01 focuses on improved prediction of high-impact weather in Africa. They seem to have a good link with users in Africa through training and dissemination. Their website may provide more information about what they are doing to involve developing countries.

### **Energy SBA**

- F. Pignatelli reported on the three Tasks in the Energy SBA, all of which are managed by the European community and have similar goals and data-related models. EnerGEO (EN-07-02) is a very large 4-year project, funded with 8 million Euro, which provides substantial resources dissemination. The other two Tasks likely will be integrated within EnerGEO to improve coordination with stakeholders.
- One limiting factor is that these Tasks are Euro-focused. They need to be globalized by integrating other regions of the world.
- He noted that one idea under discussion was to propose an energy management research program be created and chaired by UNESCO.

### **Data Management**

- K. Fontaine reported on the Data Management Tasks. She noted that it was unclear from the presentations who the users for these Tasks were. The users for DA-09-02 appear to be technical users, such as the modeling and geodetic reference frame communities. She suggested that the most obvious role for the UIC in the data Tasks was through the GEOSS Common Infrastructure (GCI)—i.e., the role the UIC is currently playing to help ensure that the portals are usable and that users can find data in the GCI. She suggested that the UIC track these Tasks and clarify how users are characterized.
- F. Pignatelli noted that many data sets mentioned in the Task presentations are not yet in the GCI and asked whether the UIC could do anything to encourage registering. Participants agreed this was an important issue and noted several fundamental aspects:
  - All useful products generated by the Tasks, including products that are not data sets, should be accessible through the GCI.
  - Task leads need to be clear about what user information (data, products, reports, applications, etc.) will be generated by the Task. Task sheets, for example, could have a concluding section where leads can specify what products they will generate and how they will be used.
  - There should be a registry in the GCI that fits every type of output – not just Earth observation data.
  - Products such as reports may belong on the front page of GEO website, with links to the GCI.
  - The GEO Architecture and Data Committee (ADC) should provide guidelines about what the metadata for these outputs should contain to ensure they can be discovered during searches of the GCI.

- There may need to be a mechanism to ensure the quality of Task-generated products registered in the GCI.
- Meeting participants agreed this was an important issue to raise with the ADC. It may also have relevance to the Monitoring and Evaluation Work Group.

### **Architecture**

- Reporting on the architecture Tasks, K. Fontaine noted that all these Tasks, except GEONETCast, seem have a very different definition of what a “user” is. These Task teams seem to ask “What role do you play?” rather than “How do you use the data?” She suggested the UIC’s job for these Tasks is to join these two perspectives.
- J. Weir-Smith noted that GEO would need to build user trust in GEOSS for the system to be effective. If users can find information more readily on Google, they will be unlikely to use GEOSS. He suggested that the GCI portals should have a two-layered search, consisting of the current search mechanism enhanced with a parallel Google layer. This would help build trust that the GEO portal is an efficient and effective search mechanism. He suggested GEO could benefit from knowledge management expertise—for example, using the “people, processes, technologies, and partnerships” framework—to better understand the knowledge context of its work and how to convert knowledge into useful products. He also stressed that a taxonomy and ontology will be critical to an effective GEOSS. K. Fontaine suggested that J. Weir-Smith join the GCI Coordinating Team to bring this perspective to the GCI work and that it would be useful if the fourth Architecture Implementation Pilot (AIP-4) provide a map of the GCI.

### **Science and Technology**

- K. Fontaine reported that Task ST-09-01 has a broad user set. ST-09-02 users depend on the Subtasks. Users for the first Subtask range from scientific users all the way to IEEE to the general public.

### **Ecosystems SBA**

- B. Reed reported on the two Ecosystems Tasks:
  - Task EC-09-01, GEOEcoNet, includes five Subtasks, three of which are active. Subtasks EC-09-01c (Regional Networks for Ecosystems) and EC-09-01e (Forest Mapping and Change Monitoring) are doing a good job with users. Subtask EC-09-01a (Eco Classification and Mapping) is also doing a good job, but could do more user engagement. B. Reed reported that Subtask EC-09-01b (Ecosystem Function and Services) is effectively inactive; however, since this Subtask is important, he hoped GEO could work to reactive it.
  - Regarding EC-09-02 (Ecosystem Vulnerability to Global Change), he was unsure about the status of Subtask EC-09-02a, (Impact of Tourism on Environmental and Socioeconomic Activities). K. Fontaine explained that she had classified this as “Needing Support” based on the information in the Task sheet. Both of the other Subtasks (EC-09-02c, Vulnerability of Sea Basins, and EC-09-02d, Vulnerability of Mountain Regions) have good user engagement.
- K. Fontaine noted that the Tasks with successful user engagement are generally those that involve the users from the beginning.

### **Biodiversity SBA**

- B. Reed reported that all Biodiversity SBA Subtasks under the one Biodiversity Task (BI-07-01, Developing a Biodiversity Observation Network) are in good shape from a user engagement standpoint. Subtask BI-07-01a (GEOBON) has involved users intimately from

beginning, as has Subtask BI-07-01b (Invasive Species Monitoring System) and BI-07-01c (Capturing Historical and New Biodiversity Data).

### **Wrap Up**

- K. Fontaine said she hoped the GEO Secretariat could add to the Task sheets the information Task leads have provided during the Symposium in response to the UIC's three user questions.
- She asked that each UIC member, for each area they reported on, review the Task lead input, along with their detailed notes, and check that new input against Appendix B (Table Activities) in the User Task Analysis. They should then select the top two Tasks/Subtasks they felt needed user engagement support right away, or the top user engagement issues cutting across all or many Tasks/Subtasks that need to be addressed. These issues will be discussed at the next UIC meeting.
- G. Foley pointed out that, Doug Nebert has suggested, in his presentation at the Symposium, that each Task lead should be asked to describe their user requirements. G. Foley suggested the UIC obtain a copy of that presentation to better understand what D. Nebert was suggesting.

### **Action Items**

- By 4 June 2010, B. Reed will initiate contact with the JRC, using the contact provided by F. Pignatelli, to get support for finalizing the US-09-01a Biodiversity report. He will also contact Wim Hugo (CEOS).
- By 4 June 2010, L. Senoko will recommend what action the UIC should take on the capacity-building Tasks that were not in existence when the User Task Analysis was done.
- By 29 May 2010, J. Connery will work with F. Ramos via a Doodle poll, etc., to schedule a time (between 8:00 and 12:00 Eastern U.S. time) for the co-chairs groups of the UIC and CBC, and L. Senoko, to have a teleconference of up to 2 hours. The UIC co-chairs and L. Senoko will have a teleconference with the CBC to discuss how the two committees can better interact.
- By 11 June 2010, J. Weir-smith and B. Meyer will talk to Heim about the possibility of a new GEO task on waterborne diseases and health.
- By 1 June 2010, G. Foley will investigate and report back to the UIC whether HE-09-02a and HE-09-02d should be elevated from a status of "track" to "active support" in the User Task Analysis document.
- By 11 June 2010, R. Lawford will prepare and submit to the UIC co-chairs a description of what a "data center" is.
- Using the definition of a "data center" supplied by R. Lawford, the UIC will develop a list of who to approach in the eight SBAs other than water to determine what data centers there are in those SBAs. The first step will be for B. Reed to see whether the GEO Secretariat has contact lists.
- R. Lawford will raise to T. Koike whether the water cycle booth will focus solely on the Asian water cycle or present a broader display that may be able to include other relevant material.
- G. Foley and K. Fontaine will track the ADC's work to develop an approach to integrate Task products that are not data sets (e.g., reports) into the GCI.
- J. Connery will e-mail the following document to all UIC participants at the UIC Pretoria meeting: May 2010 Excel spreadsheet that provides Task lead responses to the three user questions; the table in the User Task Analysis; and an electronic copy of the J. Achache letter to GEO principals. Within two weeks of receiving the draft summary report from J. Connery, all UIC members at the Pretoria meeting should:

- For each symposium area they reported on, review 1) the 20 May 2010 Excel sheet that provide Task lead responses to the three user questions, and 2) their own notes.
- Double check this input against the table in the back of the User Task Analysis.
- Pick either 1) the top two Tasks that need user engagement support right away, or 2) the top two issues that go across the Tasks that need to be addressed.
- Note: This input will be brought back for discussion at the next UIC meeting (in Oslo).

## **User Requirements Registry – Hans-Peter Plag**

- H.-P. Plag described the status of the User Requirements Registry (URR) project.
  - One of three GEOSS registries, the URR will be a tool where users can register Earth observation users and the applications and requirements they need to apply Earth observation data for societal benefit. A key goal is to capture users' observational and information requirements at both a general (e.g., "I need information about a tsunami 10 minutes before it hits") and specific levels.
  - The system will include a "Lexicon" (i.e., a vocabulary of relevant terms). Any term that is an Earth observation parameter, is also a candidate for the GEO ontology.
  - Analysis of URR output will enable people to determine priorities.
  - The current version of the URR can be viewed at <http://scgcrop.com/urr>.
- H.-P. Plag reviewed the project schedule. The project has four phases: Phase 1, Initial URR Prototype Development and Population (April-May 2010); Phase 2, URR Prototype Usability Testing and Feedback (June-August 2010); Part 3, Revise the URR Prototype (September-October 2010), and Part 4, Demonstrate URR Prototype (November 2010).
- As of 17 May 2010, the URR prototype is partially developed and populated.
- The URR team will meet in Washington, DC, on 27 May 2010, and hold teleconferences over the next few months. During Phase 2, the team will collect user feedback at several international scientific meetings (including IGARSS, ISPRS and the Ninth International Conference on Aerobiology). The team will also continue to publish requirements in the disasters, aeroallergens, and infectious diseases areas and begin to develop the analysis algorithms.
- Part 3 will start in September, with the goal of having version 2.0 available on 10 September 2010. This version will allow interested users to publish, look up, and analyze data. The project team hopes to have the analysis functions implemented by 24 September 2010. There will be a workshop on 7 October 2010, and version 3.0 will be available by 20 October 2010, in time for presentation at the GEO meetings in Beijing. The team hopes to have a comprehensive prototype available by 30 November 2010.
- The project needs UIC input and support in key areas:
  - Domain lists (i.e., pick lists) need to be developed for several fields: societal sectors, SBA subareas, status of an entry, requirement type, term type, categories, domains, link types. H.-P. Plag hoped the UIC could develop these lists.
  - Guidance is needed from the UIC on whether entries should be formally reviewed and accepted, or whether a more informal wiki approach should be used.
- H.-P. Plag noted that the URR team included Doug Nebert from the ADC. The URR team would be coordinating with the GCI team.

- H.-P. Plag emphasized that developing pick lists is an urgent need, as users cannot make meaningful entries until these lists are included in the system. In particular, subareas for SBAs are critical for entries. J. Weir-Smith stressed the need to base terms on a referenced organized framework, and cautioned that the UIC may be too close to the work to be objective. He suggested that FAO ontologies might be a useful starting point for the pick lists. F. Pignatelli suggested that the US-09-01a reports could be helpful for developing pick lists. B. Reed cautioned that developing pick lists would be challenging, given that there are “full-scale wars” among scientists about how to subdivide ecosystems.
- K. Fontaine cautioned that the UIC should not rush this work. She suggested, and G. Foley agreed, that it would be best to focus on one or two SBAs prior to the Ministerial Summit. G. Foley said the project would initially focus on just two SBAs: Disasters and Health. The goal for the Beijing meetings should be an initial prototype that people can provide feedback on. J. Weir-Smith supported this view, stressing the importance of taking time early in the project to develop the right process based on thoughtful consideration of the whole context.
- G. Ondich suggested that late summer 2010 would be a good time to touch base again with the UIC about the URR project, since a great deal would be learned by then.

## **Ministerial and Plenary Preparation (Moderator – F. Pignatelli)**

### **Health Showcase**

- G. Foley described the context for the Health Showcase, which has been selected as one of the six GEO showcases at the 2010 Ministerial Summit. He noted that GEO has struggled in the health area, because the World Health Organization (WHO), which already has a tremendous network within all GEO member countries and other countries, has not been involved, though developing a global health information system (Task HE-09-01) could be one area where GEO could add value to WHO.
- Several GEO members worked in 2009 to engage the health community and improve the flow of environmental health data:
  - The Health and Ecosystems CoP formed last year and met twice (in Geneva in the summer and in Washington, DC, in November). WHO participated in the Geneva workshop. The CoP will meet again in July 2010 in Paris.
  - GEO’s Science and Technology Committee (STC) devoted a portion of its November 2009 meeting to the eight health Tasks and prepared a brochure describing these Tasks for the GEO Plenary VI meeting. This led to an interest in doing a showcase on health.
- G. Foley presented slides on the health showcase, which is based on several key messages to Ministers:
  - GEO is working with the health community to improve the flow of user-friendly environmental data.
  - Comprehensive data sets support prevention, early warning, research, health-care planning and delivery, and timely public alerts.
  - The risk of disease outbreaks can be greatly reduced by incorporating Earth observation data into decisions about global, regional, local, and personal health.
  - GEO, in the next few years, will be providing you with data and tools that your country can use to improve health in several areas.
  - Proactive political support for existing projects and initiating new projects that use environmental observations to improve public health, especially water-health projects (currently under-represented in GEO), would be invaluable.
  - You, Mr./Ms. Minister can help.

- The health showcase consists of a booth that will include a poster for each health Task and a short video. The video will start with the key messages and then present the eight health Tasks in terms of how they can benefit member countries. The video will end with two or three short examples of successful projects to date, such as MERIT and AIRNow. The goal is to help Ministers and Plenary delegates understand the health implications these data have and challenge them to take ownership of solutions.
- There is some interest in organizing a 2-hour side meeting on water health issues, which the public would be encouraged to attend.
- G. Foley said he welcomed UIC member help designing messages for Ministers.

### **Ministerial Declaration**

- G. Foley reviewed the draft language of the Ministerial Declaration and said he did not feel the text was sufficiently proactive. He would like the Declaration to emphasize the importance of proactively connecting decision makers and other end users with data they need to take actions that benefit society. He hoped Ministers could be persuaded to use the Declaration to encourage GEO to put more emphasis on data dissemination and end user capacity building over the next 5 years, so that the data accessible through GEOSS can be put to use to benefit society. He hoped GEO would add more capacity-building tasks to the Work Plan.
- K. Fontaine pointed out that the language of the Ministerial Declaration was not open for large-scale edit. The UIC could only suggest changes or improvements if there were compelling reasons to do so.
- F. Pignatelli said it would be best to have member countries propose changes and suggested the UIC members interested in proposing changes work through their country's GEO.
- G. Foley showed the 20 May 2010 letter J. Achache had sent to GEO principals encouraging them to engage their Ministers in supporting the continuing momentum of GEO and success of the Ministerial Summit.
- UIC meeting participants resolved that the 2010 Ministerial Summit Declaration should put more emphasis on societal benefits. G. Foley encouraged UIC members to work with their member countries to get this message across and said he would convey to principals on the Ministerial Task Force the recommendation to have stronger language on users and benefits. K. Fontaine suggested this message should also be conveyed in the UIC booth.

### **Booths and Materials at the 2010 Beijing Ministerial Meeting**

- K. Fontaine noted that exhibit registration information will be available on line on 1<sup>st</sup> June 2010. G. Foley said his organization would sponsor a booth for the UIC in Beijing and asked for input regarding content. Suggestions included:
  - Agricultural exhibit (J.S. Parihar to provide content).
  - CoPs (content to be drawn from CoP Accomplishments publication being developed by the UIC), including user engagement work by CoPs and, if possible, by Tasks.
  - URR project and testing (though it probably would be best to conduct the testing in a quiet area away from the booth)
  - Final projects selected under the CBC-UIC Call for Proposals (K. Fontaine will check with L. Friedl whether NASA could sponsor a second booth on this topic).
  - US-09-01a reports (optional topic—include if there is space)
- G. Foley suggested that European user material be added to the European booth.
- K. Fontaine pointed out that all documents for official distribution to participants at GEO Plenary VII and the 2010 Ministerial Summit must be completed by 20 September 2010.

This deadline applies to the GEO Committees' report to the GEO Executive Committee; UIC's report to GEO Plenary VII; and the US-09-01a reports. She suggested that the UIC co-chairs consider including the user type analysis work in their report to GEO Plenary VII.

- The UIC needs to clarify whether the CoP Accomplishments publication that E. LeDrew is developing is an official document, or will simply be distributed by the UIC. In either case, a deadline needs to be established such that the document can be printed by the European Centre for Medium-Range Weather Forecasts in time to meet the 20 September 2010 deadline or whatever deadline is necessary to ship to Beijing in time for the Ministerial. Most likely, development and review of the CoP Accomplishments document will need to take place in June/early summer since many people are on vacation in July and August.
- G. Foley suggested that the UIC co-chairs contact CoP leads and co-leads to request input for the UIC exhibit and for anything that the UIC should highlight in its report to GEO Plenary VII. K. Fontaine suggested that leads of Tasks with user engagement components also be contacted.

### **Action Items**

- By 1 June 2010, K. Fontaine will check with L. Friedl whether he can sponsor a second booth in Beijing.
- Call for information for UIC Report to Ministerial: C. Dettmann and G. Foley will draft questions to ask 1) the leads of GEO Tasks that have prominent user engagement components, and 2) CoP members (to the extent these are not already covered by the CoP Accomplishments publication) to provide (maximum of three sentences) what accomplishments they would like to the UIC to include in its report to GEO Plenary VII.
- UIC members should take to their delegates the recommendation that the Ministerial Declaration put more emphasis on delivery of data to end users who are close to societal benefits.

### **Update to the UIC Activity Plan (Moderator – Gary Foley)**

- K. Fontaine reminded participants that the UIC Activity Plan was a tool to provide the UIC with:
  - A structured way to look to and from the GEO Work Plan, committees, and activities.
  - Internal management mechanisms.
  - A tool to organize UIC activities and assign clear deadlines and owners.
- Her goal for this part of the meeting was to work with members to update the UIC Activity Plan, including deciding what to do with activities that have not yet started. These could 1) either be put into next year's plan, or 2) a white paper could be developed this year, with follow up next year. She then reviewed specific activities most in need of update and decision.

### **1. Support of GEO Work Plan, Targets and Events**

- **Activity 2009.1.4: Documentation Analysis.** This activity involves reviewing all GEO documents for additional areas the UIC could/should/must contribute (an activity that could help with future Activity Plans). K. Fontaine suggested this round of review should focus on the GEO Work Plan, Strategic Targets document, and GEO 10-Year Implementation Plan (including its reference documents), and not the Task documents.
- K. Fontaine agreed to review the Implementation Plan, and Ø. Nesje agreed to review the Strategic Targets document. K. Fontaine asked each UIC member to review the sections of the Work Plan that corresponded to the areas they had been assigned to report on at Pretoria.

- G. Foley noted that future reviews could include the GCI Requirements Document (which was sent to committees for review early in 2010) and GEOSS Concept of Operations document (which has been evolving and may be close to final).

## 2. Communities of Practice

- **2009.2.1, CoP Analysis.** This activity involves harvesting messages about CoPs that came through numerous Task presentations—for example, when a Task wants to become active in an existing CoP or has established its own CoP. The group assigned E. LeDrew and C. Dettmann the role of leading this activity and preparing a white paper. G. Foley agreed to analyze presentations from Pretoria Work Plan Symposium for information relevant to CoPs.
- **2009.2.2, CoP Development.** This activity, which has not yet started, involves examining how CoPs form and providing guidance on how to encourage CoP formation. G. Foley agreed to take the lead on this activity.
- **2009.2.3, CoP Team.** This involves managing a cross-committee team to enhance CoP engagement in GEO Tasks, activities, and events. K. Fontaine recommended either deferring or removing the task altogether as the formal structure proposed may be overkill at this point since the UIC already has a process to communicate and work with the GEO Tasks and CoPs.

## 3. User Needs and Requirements

- **2009.3.3, User Perspectives Project.** K. Fontaine noted that the UIC has started on part (a) (to identify user components of other committees' and working groups' high-priority efforts), and has also started on (b) because the UIC sent L. Friedl to the Monitoring & Evaluation Working Group meeting in January 2010 to discuss what role the UIC could play in that group. K. Fontaine will revise the Activity Plan to indicate this.
- **2009.3.4, Visualization and Analysis Tool Needs.** G. Foley emphasized that this was a very important activity, since most member countries have some system that makes it easy for users to visualize certain data sets. Work should be done to research these tools and make users aware of them. He suggested the UIC propose this as an official GEO Task. This proposal will be discussed further at the UIC's next business meeting (in Oslo late summer 2010, see below).
- **2009.3.5, User Forum: Health and Environment.** This forum is done.
- **2009.3.6, User Handbook.** This handbook would cover best practices and lessons learned. G. Foley said that the Global Monitoring for Environment and Security, Global Network of Users (GMES GNU) had recently published an impressive document on this topic and may have other documents in the pipeline. K. Fontaine made a note that the UIC should look at that document.

## 4. GEOSS Applications and Societal Benefits

- **2009.4.2, Applications Best Practices Study.** This activity does not yet have a lead. G. Foley mentioned that the GNU has assembled best practices information and the CoP presentations have many best practices that should be in the best practices registry, but there has been no incentive to participate in this registry.
- **2009.4.3, Applications Examples Project.** K. Fontaine noted that this activity may be complete, as GEOBene has agreed to trade off holding annual workshops on this topic, with GEOBene taking the lead every other year.
- **2009.4.4, User Engagement Handbook.** K. Fontaine noted that the UIC has a start on this with 1) the user engagement methodology document that L. Friedl sent earlier in the week and that had been distributed to all Symposium participants, and 2) the 2004 UIC communication plan that Maria Dalla Costa had sent after the UIC's meeting in March 2010. K. Fontaine thought the UIC could complete this activity by the end of 2010.

## 5. Key Cross-Committee Actions

- **2009.5.1, GEO Common Infrastructure Evaluation.** K. Fontaine noted that portal usability testing would be complete as of 12 May 2010. G. Foley pointed out that the UIC could do usability testing of the best practices wiki, so this activity might not be complete.

## 6. Engagement Strategies

- **2009.6.1, User Engagement Materials.** K. Fontaine asked if the UIC would like to consider this activity complete, since L. Friedl had prepared a document on "*User Engagement Tools and Techniques: Suggestions on Activities to Improve User Engagement in GEO Workplan Tasks*," which was distributed to participants at the Pretoria Symposium. G. Foley recommended adding the GMES GNU document.
- **2009.6.2, Participating Organizations Project.** This activity depends on completing the user type activity that is currently underway. The updated UIC Activity Plan will note that 2009.6.2 is deferred to 2011.

## 7. UIC Internal Management

- K. Fontaine noted that activities in this category can likely be closed with the development of a User Engagement Committee Handbook under Activity 2009.7.6, which she volunteered to complete by the end of 2010.

## Wrap Up

- K. Fontaine suggested that all further Tier II activities be taken up at the UIC's next business meeting.
- She also pointed out that a future activity for the UIC would be development of the next version of Activity Plan.

## Action Items

- By 30 June 2010, the following individuals will review the following documents for any material relevant to the UIC: 1) Each UIC participant at Pretoria will review the Work Plan in the areas they reported on during the symposium. 2) K. Fontaine -- Implementation Plan; 3) Ø. Nesje -- Strategic Targets Document.
- By mid-June 2010, for Activity 2009.2.1, CoP Analysis, G. Foley will analyze presentations from the Pretoria Work Plan Symposium for information relevant to CoPs. E. LeDrew and C. Dettmann will lead this activity and prepare a white paper.
- For Activity 2009.2.2, by 30 June 2010, G. Foley will develop a draft paper on "CoP Development."
- For Activity 2009.2.6, K. Fontaine will develop UIC Committee Handbook by end of 2010.
- K. Fontaine will revise the UIC Activity Plan based on input from the UIC Pretoria meeting.

## Next Meetings (Moderator – J. S. Parihar)

- Participants agreed that the next UIC meeting will be in Oslo, Norway, hosted by Norway's Ministry of the Environment. The meeting will run for two days, from the afternoon of Tuesday, 31 August, to the morning of Thursday, 2 September 2010. The UIC will send a message to members notifying them of the meeting and asking who will participate. Teleconference can be set up to accommodate remote participants.
- G. Foley suggested that the UIC sponsor a meeting in Beijing on the afternoon of 1<sup>st</sup> November and/or morning of 2<sup>nd</sup> November 2010, right before the Plenary VII and Ministerial meetings. This would not be a business meeting, but rather a user engagement meeting involving a series of presentations by CoPs. The goal would be to raise awareness about CoPs among Asian-Pacific members and encourage their participation. B. Reed said he had heard that it would be challenging to hold committee meetings that week.

- The first UIC meeting in 2011 will be in January, hosted by Germany. The next UIC meeting in 2011 likely will be in April or May 2011. J. S. Parihar said his organization might be able to sponsor a meeting in India, perhaps in Bangalore. The third meeting in 2011 may take place in late August. F. Pignatelli said that the European Commission's Joint Research Centre may host this meeting in Ispra, Italy.

#### **Action Items**

- B. Reed will send a message to the UIC to notify them about the dates of the Norway meeting and ask members to respond whether they will participate.
- By the UIC Oslo meeting in 2010, J.S. Parihar will check with his organization about hosting a UIC meeting in India in May 2011 or a subsequent time in 2011.

#### **Action Item Review – J. Connery**

Participants reviewed the meeting action items and assigned deadlines.

#### **Wrap Up – F. Pignatelli**

F. Pignatelli thanked members for their valuable participation and expressed his hope that the new members would continue their involvement.