

GEO User Interface Committee

14th UIC Meeting (UIC) Summary

**European Centre for Medium-Range Weather Forecasts, Reading, United Kingdom
2 – 4 March 2010**

Objectives

- Determine next steps for UIC involvement in the Ministerial Showcases, the Call for Proposals (CFP), and various Community of Practice (CoP) and Task initiatives.
- Further develop guidance for the CoPs.
- Define next steps for the Work Plan Action Items and the CFP.

Participants

Jan Connery, ERG (contractor)

Maria Dalla Costa, Institute for Environmental Protection and Research (ISPRA), Italy

Carsten Dettmann, Federal Ministry of Transport, Germany

Gary Foley, U.S. Environmental Protection Agency, USA

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

Lawrence Friedl, NASA, USA

Herbert Haubold, Austrian Federal Environment Agency, Austria

Manfred Kloeppe, European Centre for Medium-Range Weather Forecasts, United Kingdom

Ellsworth LeDrew, IEEE (Canada)

Michael Nyenhuis, University of Bonn, Germany

Greg Ondich, SCG (contractor)

Masami Onoda, GEO Secretariat

Øystein Nesje, Ministry of the Environment, Norway

Francesco Pignatelli, European Commission

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

Gerhard Wotawa, Austrian Meteorological Office, Austria

Via Webex:

Michael Brady, Canadian Forest Service

John Adamec, National Oceanic and Atmospheric Administration, (NOAA) USA

Roger Dargaville, University of Melbourne, Australia

Steffen Fritz, International Institute for Applied Systems Analysis (IIASA)

Yana Gevorgyan, Monitoring and Evaluation Work Group and NOAA, USA

Rudy Husar, Washington University, USA

Jeff Key, NOAA, USA

Stuart Marsh, British Geological Survey, United Kingdom

Carol Meyer, Earth Science Information Partnerships (ESIP) Foundation for Earth Science, USA

Jai Singh Parihar, Space Applications Centre (ISRO) Indian Space Research Organization

George Percivall, Open Geospatial Consortium

Hans-Peter Plag, Nevada Bureau of Mines and Geology and University of Nevada, Reno, USA

Erin Robinson, Washington University/ESIP, USA

Welcome – Manfred Kloeppel

Manfred Kloeppel welcomed participants on behalf of the European Centre for Medium-Range Weather Forecasts (ECMWF) and said his organization was honored to host this meeting. He explained that Dominique Marbouty, the Centre's Director, had been called away on a business trip, but he would present to the UIC on March 3.

ECMWF has been a participating organization in GEO since 2003. The ECMWF Director has attended all plenary meetings and Ministerial summits, and ECMWF has contributed to many activities, several of which were mentioned in the report to GEO Plenary VI by Alexia Massacand in November 2009. ECMWF support to GEO has included contributions based on re-analyses and experience in numerical weather prediction and observation system experiments. M. Kloeppel wished the UIC a fruitful discussion and successful meeting.

Introductions and Agenda – Gary Foley

G. Foley thanked the ECMWF for hosting the meeting and welcomed all participants. Participants introduced themselves. G. Foley reviewed the meeting purpose and agenda.

Masami Onoda expressed the GEO Secretariat's thanks to ECMWF for hosting the meeting and reminded participants that several people would be connecting via Webex. She reviewed ongoing work at the GEO Secretariat (GEO Sec):

- The GEO Executive Committee meeting will be held on 22-23 March 2010; all four GEO committees will report to this meeting and have already developed a joint report. K. Fontaine had volunteered to represent the UIC at the GEO Executive Committee meeting, pending approval by the U.S. lead delegate.
- The Ministerial Task Force has selected six showcases to highlight GEO accomplishments at the Ministerial Summit in Beijing.
- GEO will hold a Work Plan Symposium in S. Africa on 17-19 May 2010. All tasks will be represented at this meeting, and several co-located meetings will be held during the week. M. Onoda encouraged all participants at the Reading meeting to attend.

Action Item Review – Jan Connery

Jan Connery reviewed the action items. Many ongoing items were updated, and several others were closed.

Regarding Action Item M-8, L. Friedl reported that the Task US-09-02 workshop will be held in Washington, DC, during the last week in June 2010 and will not be collocated with the 2010 INSPIRE conference. This workshop location will alternate between the U.S. and Europe each year. A participant responded that the European Space Agency will hold an important meeting that same week on the "Living Planet." L. Friedl will discuss this potential conflict with Molly Macauley, the event coordinator.

The UIC co-chairs agreed to make progress on Action Item L-6 (policy for acceptance of documents prepared by a Community of Practice [CoP] or by UIC members in conjunction with a CoP), if possible by meeting the afternoon of 4 March 2010, and to discuss this on their April 2010 telecon. They will develop a preliminary version of the policy and send it to the UIC co-chairs list for review.

Action Items

- J. Connery will draft text for an email to the CoP cochairs about the UIC interest spreadsheet. She will send this and the final spreadsheet to F. Pignatelli, who will send the draft for review by the UIC co-chairs. Upon finalizing the email text, F. Pignatelli will send the email and spreadsheet to the CoP contacts as soon as the contact information is available. This action item will be completed by March 31.

GEOSS Mid-term Evaluation – John Adamec

John Adamec, a member of the GEOSS Evaluation Team, provided an overview of the GEOSS Mid-term Evaluation and requested the UIC's support for this effort (see slides for details):

- This evaluation was mentioned in the GEO 10-year Implementation Plan and reaffirmed by the Ministers in the 2007 Cape Town declaration. It is the first of a series of evaluations to report on GEOSS implementation progress and will cover the full spectrum of GEOSS activity, including nine SBA and five transverse areas. Deeper evaluations covering fewer topics will be conducted in subsequent years.
- The evaluation is being conducted by an Evaluation Team established by the GEO Monitoring & Evaluation (M&E) Working Group based on nominations submitted at GEO Plenary VI. The team has ten members, including three co-chairs (Charles Hutchinson, ISPRS; Michelle Budak, Canadian Department of Fisheries and Oceans; and Yana Gevorgyan, NOAA), all serving on a voluntary basis.
- The team has developed a detailed evaluation plan, which the M&E Working Group has approved. Evaluation methods will include analysis of key GEO documents, analysis of other documents and reports, individual interviews, and a broad survey.
- The first draft report will be completed in time to allow for GEO Executive Committee review and response in May, with the goal of finalizing the evaluation before the Ministerial Summit. This is a very aggressive schedule, and community participation and feedback are vital.
- J. Adamec emphasized that the team needs help from the UIC in four ways:
 - **Survey:** All UIC members are asked to participate in the online survey at <http://www.zoomerang.com/Survey/WEB22A7JHFECU4/?source=cmmtg>. Members will probably receive an invitation in their email. Questions will vary by level of involvement with GEOSS, and the survey will probably take about 20 minutes, on average, to complete. All responses must be submitted by 30 March 2010.
 - **Interviews:** Some UIC members who have been more intimately involved with GEOSS will be approached for individual telephone or in-person interviews. Interviewees will be notified via email by GEO Sec and receive a follow email to set up a time.
 - **Documents:** The Evaluation Team is interested in reports or evaluations of GEOSS activities, as well as journal articles or other literature about GEOSS. UIC members should email pdfs of any relevant materials to the team at GEOSSEvaluation@datasurvey.org.
 - **Networking:** The team is seeking feedback from all parts of the GEOSS community, including users, contributors, supporters and critics. UIC members can help by networking via mailing lists, meetings and conferences, co-workers, colleagues, and professional societies to encourage participation.

Discussion

- The UIC had several suggestions for people to invite to participate in online survey, including CoP members; the analysts and Advisory Group members under US-09-01a; the

people who submitted proposals in response to the CFP; the GMES Global Network of Users; and attendees from IEEE workshops.

- G. Foley encouraged the Evaluation Team to be sure to survey people with a capacity-building perspective, as well as novice users (i.e., who are not familiar with GEOSS but would love to use it). Y. Gevorgyan noted that the team had good representation from S. American and African countries, where capacity-building is relevant. In general, the team has good representation from all the Americas and Europe, and has some representation from Africa and Japan. They particularly hope to receive suggestions to get better representation from Asia, Australia, the S. Pacific, and Africa.
- All UIC members are encouraged to participate in the M&E online survey, send pdfs or hard copy of relevant documents to the M&E Evaluation Team, and spread the word about this survey by distributing the url for the online survey and encouraging others to participate.
- S. Fritz, said he is currently working under the EuroGEOSS project to survey (via a questionnaire) task leads and others on the challenges in GEO/SS (see “US-09-02a, Socioeconomic Benefits of GEO and GEOSS,” below, for more details). He asked whether he could coordinate this work with the M&E team. J. Adamec welcomed coordination on content and said the team would gladly provide data from its survey, after protecting privacy. F. Pignatelli will participate in this coordination.

Action Items

- K. Fontaine will forward to the UIC member list the M&E Task Force’s request to complete its survey.
- Any UIC members with suggestions about priority interview candidates should send them to the evaluation team by 5 March 2010.
- Individual UIC members should participate in evaluation interviews as requested. By 4 March 2010, M. Onoda will invite CoP members to participate in the online survey.
- H. Haubold will distribute information about the GEOSS Mid-Term Evaluation to the GNU partners and the stakeholder groups associated with the GNU and encourage them to take part.
- E. LeDrew will contact IEEE to release the mailing list of IEEE workshop participants to the Evaluation Team.

Call for Proposal (CFP) Status – Lawrence Friedl

Lawrence Friedl presented the status of the joint UIC-Capacity-Building Committee (CBC) Call for Proposals for projects in applying Earth observations to decision making (see slides and http://www.earthobservations.org/geoss_call_dsp.shtml for details). He said he now has less time for this project than before due to a change in his work situation and asked for support leading this activity.

- The CBC has appointed Ana Casals Carro as the CBC lead for this project.
- Stage 1 (Concept Proposals) is complete, with 136 proposals received and reviewed; most were Type I proposals (new applications) or Type II proposals (applications improvements).
- The project is now moving to Stage 2 (Full Proposals) and Stage 3 (Project Initiation). Proposers have received instructions on how to design a full proposal, with a submission deadline of 1 May 2010. They have been encouraged to focus on what would be appealing to donors.
- The project team is now identifying a UIC or CBC coordinator to work in tandem with a GEO Sec staff member to organize a review panel and define a common evaluation procedure in each of the four societal benefit areas (SBAs) of focus: water, agriculture, health, and

energy. Coordinators are not expected to evaluate the proposals by themselves but rather coordinate the review process, ensure its fairness and that it remains on schedule.

- Coordinators currently comprise K. Fontaine (UIC) for water; Thierry Ranchin (UIC) for energy; and Andiswa Mlisi (CBC) for agriculture. A UIC or CBC coordinator is still needed for health. Review panels will be cross-disciplinary, composed of experts with a variety of relevant expertise and perspectives.
- L. Friedl reminded UIC members that:
 - Proposal teams can submit a full proposal under Stage 2 without having submitted a concept proposal under Stage 1.
 - GEO will attempt to arrange funding for the selected projects.
 - Proposals for advisors can be accepted at any time but are encouraged to meet the 1 May 2010 deadline for full proposals. UIC and CBC are looking for people to arrange funding and serve as advisors (e.g., CoPs, organizations, retirees).
 - More reviewers are needed for full proposals, particularly reviewers from Europe.
- L. Friedl particularly requested UIC member help in:
 - Distributing and circulating the CFP to GEO organizations and interested parties for their broader distribution (especially for energy projects).
 - Proposing and/or participating in projects.
 - Encouraging experts to serve as reviewers of full proposals. Nominations should be submitted to CFPreview@geosec.org.
 - Encouraging people and organizations to be project advisors (CFP Section 4.4 describes how to nominate an advisor). He noted that organizations and CoPs can adopt and nurture projects by working directly with a proposal team to develop a project that aligns with their objectives and funding criteria.
 - Providing contacts for people in resource-providing organizations and support for brokering relationships between projects and Earth observation experts.
- Full proposals will be evaluated on a 7-point scale. Since time and resources are limited, the UIC/CBC will likely have to set priorities for which projects to pursue. L. Friedl proposed two schemes for deciding which proposals would receive priority for efforts to identify funding. He said that the UIC could offer an opinion about the evaluation methodology or delegate this decision to the CFP management team.
- L. Friedl asked whether the UIC would want to feature the projects described in successful Type III proposals (demonstrating successful applications as models for others), either at the UIC booth or a separate exhibit space in Beijing. He noted that the UIC had earlier offered to provide space.
- L. Friedl also proposed that the UIC and CBC jointly identify and fund one or more persons to focus full time, for 1 to 2 years, on the fund-raising for projects identified via the CFP. He noted that Jay Pearlman has already started to talk with potential resource-providing organizations.

Discussion

- L. Friedl requested suggestions for people who could serve on the panels to review the CFP proposals, so he can pass them to the SBA coordinators. Several participants asked for more information about how much time would be required of reviewers and on what schedule. L. Friedl agreed to provide this information and to analyze the current reviewer pool and let the UIC know where there are gaps.
- Participants discussed various ideas for networking, including 1) having the co-chairs commit to contacting a few people and encouraging them to contact others; 2) using the IEEE workshop participant contact list; 3) distributing the information to GEO organizations

in each country; and 4) having GEO Sec resend the request for recommendations for reviewers.

- K. Fontaine volunteered to review proposals for which expertise in either 1) project management and Earth observations applications, or 2) management and policy issues related to the SBA would be helpful.
- C. Meyer suggested that proposals would be stronger if full project teams were in place before the proposals were reviewed. She noted that the work of matching project advisors with teams would need a one-on-one approach and offered to provide feedback on how ESIP could help with this task.
- The UIC agreed to delegate to the UIC/CBC CFP management team the decision about how to bundle accepted projects for pitching to donor organizations.
- L. Friedl raised the issue of fundraising. He noted that the CFP team had tried to be clear to all parties that not every proposal would be funded, but there is also an expectation that the committees will work to find funds for successful proposals. G. Foley suggested that funding efforts should focus first on proposals that receive a high evaluation score.
- L. Friedl said he views fundraising as a joint UIC-CBC responsibility, but did not think it realistic to imagine that committee members would have the time to do this work themselves. He reiterated his recommendation that the UIC propose to the CBC that the two committees jointly hire and fund an individual to focus on arranging resources and funding for acceptable projects, and asked for UIC input on this proposal. Participants had no objections to this concept, but agreed that several issues needed to be considered, including:
 - Would this person work at the GEO Secretariat? Participants noted the importance of ensuring this individual was dedicated to fundraising and not co-opted into other work for GEO.
 - Who will fund this? G. Foley agreed to contribute funding if others would; he was most comfortable funding a secondment to GEO. L. Friedl was also willing to provide funding, assuming other countries also contributed to show international support for this proposal within the UIC and GEO. Some expressed concern that creating such a position in the Secretariat may complicate the process and therefore it might be easier to fund a person to work from outside, as has been the case for other tasks such as the US-09-01a.
 - Could this position be combined with work to develop GEO's outreach plan, such that one person seconded to GEO would do both? L. Friedl noted that outreach and fundraising require different skill sets, therefore likely could not be combined.
 - Assuming CBC is interested in the idea of a jointly funded position, to what extent does the GEO Secretariat need to be notified or involved in this proposal? M. Onoda said the Secretariat Director views the CFP activities as a committee function and has been comfortable thus far with the UIC and CBC work on this. G. Foley suggested that it would nevertheless be important to coordinate with the GEO Secretariat.
- C. Dettmann recommended that the UIC contact the CBC as soon as possible about this proposal.
- G. Foley noted that the UIC and CBC could showcase CFP project proposals in Beijing to raise awareness among the Ministers about important work they might be interested in funding. Participants agreed to discuss this later in the meeting during showcase discussion, together with showcasing of the Type III Projects.

Action Items

- By 11 March 2010, M. Onoda and G. Foley will contact the Health CoP to see if someone could serve as a coordinator for review of full proposals in the health area.
- UIC members should continue to distribute and circulate the CFP to GEO organizations and encourage people to serve as advisors.
- L. Friedl will compile information about current reviewers to reveal gaps and will provide this information, as well as information about the level of effort and schedule for reviewers, to the UIC co-chairs, who will use it to network to identify reviewers.
- E. LeDrew will check whether IEEE's mailing list can be used to solicit reviewers for full proposals.
- C. Meyer will provide feedback to the UIC on how ESIP can help match project advisors with teams.
- By 12 March 2010, L. Friedl will coordinate with CBC to find out what they think of the idea of having a dedicated fund raiser for selected projects.
- By 4 March 2010, L. Friedl will forward the CFP management plan to C. Dettmann and respond to any further questions he may have about communication with proposers.

Summit Preparation and Showcase Discussion – Carsten Dettmann

Carsten Dettmann reported on the status of preparations for the Ministerial Summit and associated showcases:

- The Summit and Plenary VII will take place during the first week of November 2010 in the press center of the Olympic Village on Beijing. The Chinese hosts will handle the reservations.
- GEO Sec will visit the venue in April and then provide the GEO community with further information on the exhibition space, etc. The area seems to be as large or larger than was used for GEO Plenary VI.
- The Ministerial Task Force, consisting of GEO members and others, has regular meetings and teleconferences. The Task Force is a coordinating and recommending body with respect to the Ministerial meeting; GEO Executive Committee is the decision-making body. The Task Force met most recently at the beginning of February 2010 in Geneva and has prepared an invitation letter for the Ministerial.
- A first, very rough draft has been prepared of the declaration that will ultimately be adopted in Beijing. About two pages in length, the draft covers GEO/SS status, challenges, and outlook.
- The Ministerial Task Force is responsible for recommending to GEO Executive Committee which showcases should be featured at the Ministerial. In this context, a showcase is a GEO benefit that will be given about 5-10 minutes of time at the Ministerial meeting. How this time is used has not been fixed. It could be a presentation video, etc. There likely will be time for Ministers to speak after each showcase presentation.
- The Task Force received over 19 showcase proposals and was particularly interested in broader proposals that highlight the cross-disciplinary work of GEO and those that could be combined to create a more cross-cutting showcase. See Annex II of Task Force minutes, available at: http://earthobservations.org/meetings/20100202_03_ministerial_tf_02_draft_summary.pdf, for details. The Task Force has recommended that GEO Executive Committee select the following six showcases:
 - Capacity Building End-to-End
 - GEO Carbon Monitoring and Tracking for Informed Decisions

- GEO Geohazards Supersites (after Haiti EQ, GEO launched a supersite to provide information)
- Water showcase (much work in this area has been done in Asia)
- GEO Biodiversity Observation Network (GEO BON)
- From Science to Decisions in the Health SBA
- Leads for these six showcases have been asked to provide more detailed information. Anyone whose proposal is not among those recommended by the Task Force can still ask GEO Executive Committee to consider their proposal. GEO Executive Committee will make a final decision at its March 2010 meeting about which showcases to feature. Such requests should be sent to Michael Williams at the GEO Secretariat. J. Achache and M. Williams are coordinating logistics for showcases.
- The role of committees in the showcases will be clarified after the March GEO Executive Committee meeting. The UIC will be responsible for developing the health showcase, assuming it is selected.
- The Annex I table (see link to Task Force minutes above) lists the Task Force's next steps. GEO Secretariat's April visit to Beijing will be critical to providing more information about the format for showcases. The Pretoria collocated meeting is another opportunity for GEO Secretariat to provide more information.

Discussion

- UIC members were interested in leveraging the showcases to promote UIC objectives such as fostering a user perspective. They noted the need to revisit how to do this once GEO Executive Committee has decided which projects will be featured as showcases. C. Dettmann felt sure that the UIC would have these opportunities and noted that the Task Force still needed to clarify the committees' role in the showcases.
- Participants noted that the showcases were one among many avenues for outreach at the Ministerial, including exhibits, videos, printed materials, presentations, Websites, etc. They recognized the importance of coordinating UIC-related outreach, including all avenues, and the need to coordinate with CoPs and Task Leads about how to feature their achievements and progress.
- C. Dettmann noted that CFP Projects were thought not to be mature enough to be featured as showcases, but the UIC could promote them during the plenary via exhibits, leaflets, etc.
- G. Foley described initial ideas for the health showcase, including a narrated video (about four minutes long) supported by posters and a brochure in the exhibition. The materials, which would be developed by the UIC and STC, will highlight key information on the seven health tasks under GEO, as well as work on key international health issues (e.g., mercury and persistent organic pollutants), and how interested countries can participate in these projects.
- K. Fontaine suggested that the UIC consider recommending to GEO Executive Committee that each committee provide a representative to work with each showcase to make sure they take into account the GEO objectives of all committees. The co-chairs agreed to talk about this further offline.
- M. Dalla Costa suggested that the UIC review the six showcases, once they have been selected, to see if they can make a strong case for users. C. Dettmann suggested the group talk about this, toward the end of the meeting, during their discussion of the UIC report to GEO Executive Committee.

Work Plan Action Items – Ellsworth LeDrew

Ellsworth LeDrew reviewed the status of the discussion about the UIC Work Plan action items as of the November 2009 UIC meeting and emphasized that the main purpose of this part of the Reading meeting was to move this work forward (see slides for details):

- He noted that K. Fontaine and L. Friedl had reviewed all the task sheets for the 42 overarching tasks (including 114 subtasks) in GEO's Work Plan to identify user engagement aspects, consider the roles the UIC might play in these activities, and judge the overall interest of tasks to the UIC. This analysis revealed significant need within GEO regarding user engagement and significant opportunities for the UIC to support GEO task teams. The UIC included in its 2009 report to GEO Plenary VI the need to improve user awareness of other groups within GEO. The CoPs might be appropriate groups to follow up on some of the recommendations.
- Some current opportunities include:
 - Herbert Haubold is coordinating the GMES network of users. The GNU is working to transfer user engagement practices among GMES projects. Most of the results were extracted from workshops with users, and many outcomes of the GMES work are likely very relevant to GEO. Individuals active in CoPs and/or GEO Tasks may download all GNU results at the project website.
 - Roger Dargaville said that the Carbon CoP lacks both good end user contacts and a strategy for connecting the results of its work with end users.
- Task leads who provided good user engagement descriptions on the task sheets could possibly be tapped to serve as mentors for others. If they agree, the UIC could distribute their names.
- G. Foley urged that the UIC identify and incorporate into its Activity Plan specific actions to follow up on the recommendations from K. Fontaine's and L. Friedl's Work Plan Analysis. These actions could include contacting task leads to assess their needs and interests regarding user engagement and determining whether there are upcoming workshops where the UIC could present on user engagement.
- E. LeDrew urged the UIC to identify specific tasks in which it wants to engage and develop materials on user engagement (ideally in time for the Ministerial). The UIC could also:
 - Utilize its User Type Analysis to help task teams understand, design, and implement user engagement approaches.
 - Analyze its members to assess skills and resources needed to support and enhance user engagement in the GEO tasks.
 - Develop methods to track and report on progress in the tasks' user engagement.
- He suggested the following issues for discussion:
 - How can we provide support to tasks?
 - How should the UIC support users?
 - What are high priority tasks for the first phase of this work?
 - Do we have UIC volunteers to do the work?
- He emphasized his concern that the UIC is supported by a consistent core of individuals but lacks sufficient volunteers to accomplish important activities such as these.

Discussion

- F. Pignatelli agreed that the UIC currently lacks sufficient volunteers for the amount of work needed, and said the work was becoming increasingly urgent. He hoped to work with M. Dalla Costa to see whether funding might be available from the European Commission (EC), which spends about 20 million Euros each year on GEO. This should be done very soon as time would be needed for the EC to review and approve any application.

- H. Haubold said that the 3-year EC-sponsored GMES GNU project, which ends in September 2010, has investigated how service providers can most effectively connect with users. The project has generated a wealth of information, much of it relevant to GEO. This work is documented on the project Website, which will be up for 5 years. Some GNU results are also published via the GEOSS Best Practices Wiki. H. Haubold said he could ask the GEO Secretariat to distribute these results to the GEO task leads so they can be aware of those materials. The UIC could also use the results to develop guidance materials. L. Friedl pointed out that the May 2009 co-located meeting in Pretoria could serve as a deadline for draft materials or an opportunity for input and development.
- M. Onoda mentioned that she spoke with Michael Berger of the European Space Agency's (ESA's) European Space Research Institute (ESRIN). ESA is considering developing the scientific exploitation of GMES/Sentinel satellites and are hoping that the CoPs can help them identify what services, data sets, and products would be useful to the scientific community. They are thinking of starting by working collaboratively with the Carbon and Water Cycle CoPs to do this.
- C. Meyer said that she still has an action to describe the ten tasks that are most significant for user engagement.
- The co-chairs noted the importance of finding a way to make progress on the action items. M. Dalla Costa suggested being careful not to overreach by taking on more than can be achieved. She urged the UIC to leverage other work, such as GMES GNU project, whenever possible.
- E. LeDrew suggested the UIC should focus on the most important priorities, and K. Fontaine emphasized that the UIC tasks in GEO's Work Plan should have the highest priority.
- G. Foley suggested that this topic be discussed again at the UIC meeting in Pretoria.

GEO Work Plan Symposium and Joint Meeting Discussion – Gary Foley

Gary Foley reviewed opportunities and presented ideas for leveraging the collocated meetings in Pretoria to help raise awareness among CoPs and Task Leads about the importance of user engagement:

- According to the current draft agenda, parallel sessions will be held the afternoon of 17 May and morning of 18 May 2010. He recommended that the UIC plan to have, if possible, a representative in every session.
- K. Fontaine's and L. Friedl's task analysis is an important resource documenting the relevance of the GEO tasks to the UIC and user engagement. UIC representatives can use it to familiarize themselves with the tasks that will be covered in the sessions they will attend.
- The UIC may be able to use this document to develop concrete suggestions for user engagement and how to improve synergies that can be offered during the sessions at Pretoria.
- The UIC can show leadership by volunteering to do a presentation to summarize the results of the parallel sessions that UIC representatives have attended.
- The UIC can discuss the results of the parallel sessions at their meeting in Pretoria, which will be held after those sessions.

Discussion

- M. Onoda said the UIC could contribute to the charge for the Pretoria breakout groups. Participants agreed this would be a good thing to do, and a small group formed to do this. M. Onoda will provide charge suggestions to Alexia Massacand at GEO Sec.
- Several members signed up to represent the UIC during the breakout sessions: G. Foley will be involved in “Health, Ecosystems and Biodiversity.” K. Fontaine will take either “Architecture and Data Management” or “Capacity Building, Science and Technology, User Engagement”. M. Kloeppeel would like to cover “Weather, Climate, and Energy,” but needs to check whether he will be coming to Pretoria. L. Senoko volunteered to cover “Capacity Building.” E. LeDrew will not be in Pretoria. F. Pignatelli will cover “Disasters, Water and Agriculture” if he is in Pretoria. Thierry Ranchin or Lionel Menard can cover “Energy” if they go. O. Nesje will cover either “Weather, Climate, and Energy” or “Health, Ecosystems, and Biodiversity.” Other volunteers can hopefully be recruited from UIC members who participate in Pretoria.
- E. LeDrew recommended that the UIC develop materials based on the user task analysis. He noted that the task leads will already have defined their tasks, therefore the UIC will need to be very proactive in suggesting what they should be doing to build in user engagement and why this would be worth doing. Breakout group questions (e.g., How can you bring in lessons from GMES user engagement?) would require the tasks to address this issue.

Action Items

- Starting 4 March 2010, E. LeDrew, G. Foley, and K. Fontaine will develop charge questions for the Pretoria working group sessions.

Wednesday, 3 March 2010

Reiteration of Work Plan Symposium and Joint Meeting Dates and Issues

The Work Plan Symposium and joint meetings will be held 17-19 May 2010. These meetings provide a great opportunity for UIC members to raise awareness among Task leads about the user components of tasks, and for the CoPs to network.

Carbon CoP – Roger Dargaville

R. Dargaville presented the status of the Carbon CoP (see slides for details):

- The Carbon CoP's three objectives are to: improve understanding of the global carbon cycle; monitor and assess the effectiveness of carbon sequestration and/or emission reduction activities on global atmospheric carbon dioxide (CO₂) levels; and build and improve the infrastructure and interoperability of the carbon observing system.
- Recent activities include:
 - Development of Draft 1.0 of the GEO Carbon Strategy Report (see http://www.igco.org/GEO-Report-Nov_final_13_Nov.pdf). A final glossy publication will soon be available.
 - A carbon presentation and GEO Carbon Side Meeting at GEO Plenary VI, as well as a presentation at the GEO Integrated Global Observing Strategy Partnership (IGOSP) Symposium on 19 November 2009.
 - A carbon presentation and widely circulated brochure at a Copenhagen CoP 15 GEO side event.
- The Carbon CoP is responsible for GEO Task CL-09-03, which has three subtasks:
 - **Integrated Global Carbon Observations:** This subtask is still struggling to accomplish its task of integrating carbon observations from all platforms, reservoirs and time and space scales. The Integrated Carbon Observation System (ICOS) project to build a new Infrastructure for quantifying and understanding the greenhouse balance of the European continent and adjacent regions is one of the first projects associated with this subtask; it will finish by the end of 2011. They now have six new partners. The Global Carbon Project recently released a major report on the 2008 carbon budget (see <http://www.globalcarbonproject.org/carbonbudget>).
 - **Forest Carbon Tracking:** This subtask is well resourced, with tracking sites worldwide. The task has a live portal at www.geo-fct.org and recently released a second draft implementation strategy.
 - **Global Monitoring Greenhouse Gases from Space:** GOSAT continues to monitor CO₂ and CH₄. Level 1 (radiance) data are freely available via application to JAXA. The community is working to improve the product quality.
- Upcoming activities include participation at the March 2010 GEO Asia-Pacific Symposium in Bali; input into the Committee on Earth Observation Satellites (CEOS) Task Force on Carbon from Space Strategy; and a Carbon from Space workshop to be held at ESA in the United Kingdom in September 2010.
- The CoP would like to make more progress on improving end user engagement and would appreciate any feedback on what the CoP's target audience should be and how to engage them.
- Work is currently done by a few dedicated volunteers. The CoP would like to establish a carbon office housed at an international organization to provide support, e.g., for

coordination and outreach (Website, newsletters, conferences, etc.) to the hundreds of scientists and dozens of projects connected with Carbon CoP.

- The GEO Summit Task Force has recommended the “GEO Carbon Monitoring and Tracking for More Informed Decisions” as one of the showcases for the Ministerial Summit. This covers all aspects of carbon monitoring in the atmosphere, ocean, and land, and includes forest carbon tracking. The CoP is working to merge work under all three subtasks into a single presentation. Options include an oral presentation with video support, posters, brochures, and a booth staffed with experts.
- One concern is that the showcase does not yet have a coordinator. The Carbon CoP will need to form a committee to coordinate efforts between the Integrated Global Carbon Observations Task and Forest Carbon Tracking Task; however, getting scientists to coordinate their efforts is a huge challenge. R. Dargaville will work with subtask leads to develop a plan for the Ministerial showcase and will send someone to present the plan in Pretoria (since he cannot attend himself).

Discussion

- M. Dalla Costa asked if the Carbon CoP includes anyone who could report on CO2 mitigation, adaptation, or forest tracking. R. Dargaville responded that the CoP includes representatives from the Forest Carbon Tracking Task but not from the target audience (e.g., United Nations Framework Convention on Climate Change [UNFCCC] and people closest to the Kyoto protocol). He will try to get UNFCCC representatives involved in the CoP, but noted that the Forest Carbon Tracking Subtask is doing a good job of engaging policymakers, so the UNFCCC is involved in their subtask.
- C. Dettmann encouraged the UIC and the Carbon CoP to send a message to decision makers at the Ministerial that a carbon office staffed by one or two people should be formed to support the work of the Carbon CoP.
- R. Dargaville agreed and noted that the Forest Carbon Tracking and Greenhouse Gases from Space Subtasks will soon generate products that will be used internationally. This development makes it particularly important that carbon tasks are seen as clearly international in their focus so that all countries can feel comfortable with the products developed. An office hosted at UNESCO (the United Nations Educational, Scientific and Cultural Organization) and run by two full-time project officers currently does similar work to the carbon task. Such an office would require donations from several countries. The Carbon CoP will pitch in to promote the idea of this office within GEO.

Action Items

- R Dargaville will contact colleagues in the Carbon CoP to involve members of the UNFCCC more directly in the Carbon CoP.

Energy CoP – Ellsworth LeDrew (for Marion Schroedter-Homscheidt, Lionel Menard, and Thierry Ranchin)

Ellsworth LeDrew presented the status of the Energy CoP on behalf of Marion Schroedter-homscheidt, of the German Aerospace Center (DLR), German Remote Sensing Data Center and Lionel Menard, Mines ParisTech, Center for Energy and Processing (see slides for details): M. Schroedter-homscheidt leads GEO Task EN-07-01 (Management of Energy Sources). This task has two active components funded by the European Commission as a dedicated GEOSS contribution:

- MACC (Monitoring Atmospheric Composition and Climate) includes a radiation activity to prepare existing solar irradiance services Solemi and SoDa as a GMES service component.
- EnerGEO seeks to quantify the environmental impacts of energy use (see GEO Task EN-07-02).
- All the solar activities are very much related to the Desertec initiative (<http://www.desertec.org/>), which describes the perspective of a sustainable supply of electricity for Europe, the Middle East, and North Africa up to the year 2050. It shows that a transition to a competitive, secure, and compatible supply is possible using renewable energy sources and efficiency gains, with fossil fuels as a backup for balancing power. This is also related to work in Australia (see <http://www.desertec-australia.org/>).
- EnerGEO's main objective is to develop a strategy for a global assessment of the current and future impact of the exploitation of energy resources on the environment and ecosystems and to demonstrate this strategy for a variety of energy resources worldwide. The initial focus was a solar energy photovoltaic scenario; subsequent energy-related datasets and scenarios may be provided under the third phase (AIP-3) of the GEO Architecture and Implementation Pilot project. Work includes providing datasets (e.g., biomass, wind, fossil fuel, and solar energy) in a GEOSS standard compatible format.
- Also under AIP-3, the GENESIS project is working to provide those involved in environment management and health services in Europe with an efficient, Web-based framework that makes environmental databases or services for monitoring air quality, fresh and coastal water quality, and their impacts on health available at regional, national, and European levels.
- This CoP got off to a rapid start in Stresa, Italy, in May 2009 and has developed a strategic plan. A key challenge has been involving developing countries; the DesertTech component offers one avenue for doing this.

Discussion

- F. Pignatelli noted that the Energy CoP is one of the most active CoPs and that T. Ranchin has prepared a concept paper for Ministerial Summit.
- Meeting participants thought the UIC should promote the work of all CoPs at the Ministerial and agreed to discuss this later.
- F. Pignatelli noted that various initiatives within the European Commission were relevant to the Energy CoP, including a 15 January 2010 workshop to see how space technology can help energy management plan for Europe. The consolidated paper from this workshop might be helpful for the Energy CoP.

Action Items

- F. Pignatelli will send to E. LeDrew the paper from the workshop on 15 January 2010 to see how space technology can help the energy management plan in Europe for use by the Energy CoP.

US-09-01a (Identifying Synergies between Societal Benefit Areas) – Lawrence Friedl

L. Friedl reported on the status of the US-09-01a work (see slides for details):

- Final reports are available for climate, energy, health, water, and weather, although minor edits may be needed for health, water, and weather.
- The disasters report covers earthquakes, landslides, and floods; NASA is sponsoring more work ("Disasters II") to include requirements for wildfires, volcanoes, and tropical cyclones.

- The ecosystems report covers forest health, coastal ecosystems, and watersheds. NASA is sponsoring work (“Ecosystems II”) to add requirements for deserts, grasslands, tundra, ocean islands, and inland waters.
- NASA is also sponsoring work to develop an agriculture/forest report.
- The draft Biodiversity SBA report does not cover Earth observations. Unless the UIC wants to sponsor additional work, the project will go forward without it and the cross-SBA analysis will not include this SBA.

Collectively, the documents identify 187 unique parameters, though some, like poverty distribution, are not Earth observation parameters. Work on the cross-SBA analysis to identify priority parameters across SBAs has begun, with the intent to have 1) a preliminary report in April-May 2010, which L. Friedl will share with the UIC for comment, and 2) an initial final report by July/August 2010. Results of the Ecosystems II, Disasters II, and Agriculture SBA reports will be added as soon as they are done to produce a final cross-SBA report in September 2010. The next step after that will be a gap analysis, which the UIC needs to discuss. L. Friedl asked for input on the following topics:

- Should the UIC perform a gap analysis about the current/future availability of the “priority Earth observation parameters” that the cross-SBA report will identify? This was not an explicit part of US-09-01a, but would be the next logical step. A “gap” exists if there are no plans to make a critical Earth observation parameter available or if current monitoring may be discontinued in the future. The UIC could also check the extent to which GEOSS information about critical parameters.
- Could the Advisory Group members be potential CoP members? Do they represent countries or organizations that GEO can recruit?
- How should the UIC roll out the US-09-01a results? What should the UIC include for Plenary VII?
- How can the US-09-01a results be imported into the User Requirements Registry?

Discussion

- The group noted that 2010 is the year of biodiversity and that new biodiversity targets will be appointed by the Convention on Biological Diversity (<http://www.cbd.int/>). They agreed it was worth checking with the GEO Secretariat and GEO’s Biodiversity Observation Network (GEO BON) to see whether support could be provided to develop a report for the biodiversity SBA. If not, then US-09-01a should be completed without this report.
- L. Friedl noted that the time to comment on individual SBA reports has passed and they are now final (except for disasters, ecosystems, and agriculture); however, he would like active UIC members to review the draft cross-SBA report.
- The group noted that the upcoming Pretoria meeting offered a good opportunity for comment. They suggested that L. Friedl distribute the cross-SBA report for review as soon as it is drafted. Comments received before Pretoria can be discussed at Pretoria. The UIC can also plan to discuss the cross-SBA report at Pretoria, and UIC members can be given a short time (e.g., a week) after Pretoria for comment further, with the goal of revising the report shortly after Pretoria. The individual SBA reports can be made available on the project Website now, but not officially announced until the cross-SBA report is released.
- F. Pignatelli asked why it was necessary to write a cross-SBA report. He stressed that some parameters might be critical, but just to one SBA; a frequency analysis would not identify those as important. L. Friedl responded that a cross-SBA analysis was part of the US-09-01a mandate, which asks the UIC to identify parameters common to many GEO SBAs. He said he would make sure that the cross-SBA report did not refer to the priority Earth observation requirements as the “overall GEO priorities.” While some parameters are

essential to just one SBA, knowing that user groups in many different communities all view certain parameters as critical is also important and makes a very strong argument for why widely used Earth Observations are needed.

- F. Pignatelli noted that the US-09-01a project should be featured at the Ministerial Summit. The individual SBA reports could serve as a back up if the cross-SBA analysis is not ready in time. M. Kloeppel suggested producing a poster or leaflet to present this work.
- C. Dettmann and M. Dalla Costa asked if the individual reports could be distributed now, since several people have expressed an interest in them. L. Friedl responded that he planned to hold releasing the individual reports until the cross-SBA report was released, since the main deliverable needs to be the cross-SBA analysis. This more formal publication will call attention to individual reports, which will be issued as Word documents. He does not want the individual reports to draw attention from the cross-SBA analysis. However, the individual reports could be posted on the US-09-01a Task Website when they are final, but not formally announced until the cross-SBA report is done. M. Dalla Costa asked if she could receive an email notification when the individual reports are available on the Website.
- G. Foley asked whether the UIC would include a report on this project in its May 2010 report to GEO Executive Committee and whether the final report would be a plenary document. L. Friedl will compare the task schedule with the Ministerial schedule to be in a better position to respond to this question.
- M. Dalla Costa suggested that the individual reports be publicized via a synthesis in the GEO newsletter. She hoped the results would go up to Ministerial level. L. Friedl said he would be happy to call attention to individual reports once the cross-SBA analysis is complete, but requested help with a rollout plan. M. Nyenhuis encouraged free availability of the individual SBA reports (e.g. on the Task website) and noted that the Advisory Group members should be informed when the individual reports were made available.
- L. Friedl, M. Dalla Costa, C. Dettmann, and M. Kloeppel agreed to talk during a break about a rollout plan for the US-09-01a project.
- L. Friedl noted that the group had not yet talked about the gaps analysis.

G. Foley briefly presented the relationship of US-09-01a to the User Requirements Registry (see slides for details):

- The URR consists of three interlocked databases: user types (who they are and what they do); applications (what they use to do what they do); and requirements needed by the applications so they can do their work. Visitors can register their own type, application, and requirements and view information others have registered.
- The URR will have a user engagement entry point for novice users (i.e., those new to GEO) and will initially be populated by US-09-01a reports.
- The URR will feature a standard vocabulary/ontology for use in registration. The project will use the US-09-01a reports to develop key words, synonyms, and definitions. G. Foley hopes that the US-09-01a analysts might be able to help develop the standard vocabulary.
- He will sponsor an initial comparison between the requirements in US-09-01a and the GEO Components and Services Registry and hopefully report on this at Pretoria meeting.

Action Items

- By 12 March 2010, M. Onoda will check with GEO Sec, and L. Friedl will check with GEO BON colleagues to see if resources could be used to support US-09-01a work in the biodiversity area.
- By 5 March 2010, M. Onoda will provide the Ministerial schedule to L. Friedl for purposes of coordinating the readiness and availability of the US-09-01a task documents for the Ministerial.

- L. Friedl will notify UIC co-chairs via email when individual reports are posted.
- L. Friedl will deliver the draft cross-SBA report to the UIC for review a week prior to the Pretoria meeting. UIC members will review that report and provide comments at Pretoria and/or in writing within a week after Pretoria.
- By 30 April 2010, L. Friedl and K. Fontaine develop a proposed rollout plan for the US-09-01a reports.

US-09-02a (Socioeconomic Benefits of GEO and GEOSS) – Steffen Fritz and Lawrence Friedl

Steffen Fritz provided an update of the “Global Earth Observation – Benefit Estimation: Now, Next and Emerging” (GEOBENE) activity under Task US-09-02a (see slides for details):

- This was a project sponsored by the European Commission to develop methodologies and analytical tools to assess the societal benefits of GEO. The GEOBENE element is completed, but some follow on work will continue under the EuroGEOSS project. Work will include a literature review with a focus on data interoperability issues and the value of data access. Some of the literature review work has involved defining GEOSS as a public good, and then looking for literature that could provide information about public good in general.
- Under the EuroGEOSS project, a questionnaire will be distributed to all task leads and others (e.g., international organizations with potentially large stakes in GEO/SS who are not yet engaged) to get input on the challenges in GEO/SS. S. Fritz had earlier provided a draft of this questionnaire to the UIC co-chairs for comment from the UIC/user perspective. He encouraged further comments via email to him up to the deadline of 31 March 2010. Through this mechanism, the project hopes to identify real-world examples of the challenges GEO is facing in being a public good.

Lawrence Friedl spoke about work, under US-09-02a, that NASA has been supporting to calculate the value and socioeconomic benefits of Earth observations.

- A literature search has been conducted and a report produced to support a workshop (currently scheduled for late June 2010) to review techniques for calculating socioeconomic benefits. This follows on from a related workshop at the GEO Initial Operating Capability (IOC) conference in May 2009 and will be the first in a series of annual workshop to take stock of work and needs in this area.
- The first workshop will focus on the health area, where innovative work is being done, and consider how to apply these techniques to other areas. The workshop will consider eight case studies described in invitational papers. A key goal of the workshop is to define research priorities for calculating the socioeconomic value and benefits of Earth observations. Participation is by invitation: contact L. Friedl if you are interested or if you have documents or other information that would be helpful. The workshop will be co-branded by GEO, with the idea that GEO may take over these workshops in the future.

Action Items

- By 31 March 2010, L. Friedl will e-mail a description of the US-09-02a workshop to the UIC.
- UIC members should contact L. Friedl as soon as possible if they can provide any information (e.g., documents, contacts) that would be helpful to the US-09-02a work.

Agriculture CoP/GEO Task AG-07-03a (Developing a Global Agricultural Monitoring System of Systems -- GLAMSS) – Jai Singh Parihar

Jai Singh Parihar presented the status of GEO Task AG-07-03a (Developing a Global Agricultural Monitoring System of Systems -- GLAMSS) and the Agricultural CoP (see slides for details):

- Task AG-07-03a is led by Chris Justice, Olivier Leo, Wu Bingfang, and Jai Singh Parihar.
- The approach is to:
 - Develop a common vision for the system amongst Agriculture CoP members.
 - Establish, with GEO partners, the conditions under which such a system can develop.
 - Raise awareness of the importance of Earth Observations for agricultural monitoring and the level of national commitments for the Task Activities.
 - Identify near-term practical steps (task activities and initiatives) that would contribute to achieving the vision.
- The task has five initiatives:
 - A centralized Multi-source Production, Acreage and Yield (PAY) database to get data on common platforms so the community can access and harmonize them to enable objective assessment of food security and risk management planning.
 - Coordinated Data Initiatives for Global Agricultural Monitoring (CDIGAM). This involves working with space agencies to establish coordinated, timely acquisition and improved accessibility of satellite data, and work to evolve a free and open data policy to support agricultural monitoring.
 - Joint Experiments on Crop Assessment and Monitoring (JECAM). Led by Canada GEO, this aims to facilitate the inter-comparison of monitoring and modeling methods, product accuracy assessments, data fusion, and product integration for agricultural monitoring.
 - GLAMSS Thematic Workshop Series (GTWS) to improve communication among the CoP on priority topics, develop best practices and standards, and encourage international cooperation and coordination.
 - Agricultural Land Use and Climate Change.
- J. S. Parihar strongly recommended that the UIC ask GEO Executive Committee to select this work as one of the six Ministerial showcases in Beijing. The work could be featured in a written report and an exhibit, as well as a 3- to 5-minute presentation that could show global participation of space agencies with the agricultural monitoring community.

Discussion

- J. S. Parihar clarified that the Agricultural CoP is keen to partner with the Food and Agriculture Organization (FAO) and has made several attempts to do so. For example, they would like the FAO to contribute to the PAY database.
- M. Dalla Costa asked how the activities were funded. J. S. Parihar responded that activities to date have been funded by voluntary contributions from host organizations, including the European Commission's Joint Research Centre, Beijing Chinese Institute of Remote Sensing, University of Maryland, European Space Agency, and so on. Some members of the CoP may require assistance to get to Beijing.
- The suggestion was made that the agricultural work could be featured as part of the water showcase. J. S. Parihar recommended that agriculture have its own showcase.
- J. S. Parihar said he would like to come to the Pretoria meeting and hoped some funding might be available from GEO Sec to make this possible.

Action Items

- By 31 March 2010, M. Onoda will speak with GEO Sec (Jose Achache and Jinlong Fan) to find out whether GEO Sec could provide support to Jai Singh Parihar's participation in the Pretoria meeting.

Coastal Zone CoP – Hans-Peter Plag

Hans-Peter Plag described work of the Coastal Zone CoP (CZCP) since the November 2010 UIC meeting (see slides for details):

- The CZCP met at the Canadian embassy on 20 November 2009 in Washington, DC. About 20 people participated.
- A Webpage, titled "You & the CZCP," was added to the CZCP Website (<http://www.czcp.org>) in November 2009. The page invites people to express their interest in the CZCP, suggest activities, and join.
- In cooperation with UNESCO (IOC/GOOS and IHP), the CZCP sponsored a regional Workshop in Cotonou, Benin, in February 2010, with a focus on Africa. There was excellent participation. Key points included:
 - There is increasing dissatisfaction and limited success with the term "capacity building," since capacity exists and there is a need to capitalize on it. Preferred terms include: capacity retention, capacity sustainability, or capacity empowerment.
 - There is a great need to connect politicians with information.
 - Governance is not sufficiently informed by science. There is a disconnect between science and governance (decision makers) that needs to be bridged. Until there is a mechanism for interplay between science, policy, and governance, GEO is very far from the reality it proposes.
 - There is a lack of coordination platforms; a need for improved monitoring systems for key climate indicators; a need for funds (though receiving funds raises the question of independence); and a need to focus on regional processes and solutions.
 - Participation in CoPs is essential for communicating user needs and requirements.
 - Could the water cycle initiative be a model for the CZCP?
 - GEONETCast is one of the GEO success stories.
- The CZCP held a teleconference on 22 February 2010. Members plan to respond to everyone who has expressed interest in the CoP via the Website. They agreed the CZCP needs to be more than "just" a workshop series and are considering activities to network and motivate people to contribute to the product Webpage. They will start a quarterly, Web-based newsletter and invite contributions from new "members" (CoP membership is not really defined) and interested persons. They are considering organizing a global report (a kind of millennium assessment) of coastal zones, in coordination with other organizations.
- A third regional workshop will be held in Puerto Rico, with a focus on the Caribbean/Gulf of Mexico region. The Arctic community has expressed clear interest in a workshop. This is a possibility for 2011.

Discussion

- H-P. Plag said he will come to the Pretoria meeting if he can find funds.
- The UIC encouraged the CZCP to contribute to the UIC exhibit in Beijing. H-P. Plag said he would bring this invitation to the CZCP.
- M. Dalla Costa said she was aware of many related activities in the Mediterranean. Leaders of these projects might be interested in contributing to the newsletter.

Action Items

- By 11 March 2010, M. Dalla Costa will send to H-P. Plag contact names for leaders of coastal zone-related activities in the Mediterranean.

Water Cycle CoP – Kathy Fontaine (for Rick Lawford)

Kathy Fontaine presented an update on activities of the Water Cycle CoP for Rick Lawford (see slides for details):

- The Water Cycle CoP currently is organized into deployment, development, demonstration, and dissemination, but is considering a possible new structure that would include groups focused on Regional Water Cycle, Water Cycle Capacity Building, and Water Cycle Applications.
- The CoP had several meetings in 2009, including a workshop to identify priority issues for Africa, Asia, and Latin and Central America. Many workshops are planned for 2010.
- At the Frascati meeting in November 2009, the group categorized its activities into in-situ, satellite, and integration and considered whether this work results in a product. They found that, in most cases, some barrier exists, and decided that each subtask lead should develop a plan to produce an experimental integrated data product in the next 12 months.
- Outcomes of the multi-day Water Resource Assessment and Applications Workshop in February 2010, included:
 - Recognizing the important link between water, economics, and governance, the Integrated Global Water Cycle Observation (IGWCO) theme would benefit from one or two test cases where satellite data or data products are used to drive the United Nations accounts spreadsheets for two or three countries to see how the balances would be affected.
 - IGWCO will launch a small project to assess the compatibility of economic data and indicators derived from physical data.
 - A descriptive overview of the global water cycle activities should be developed for distribution at the GEO Summit.
 - IGWCO will explore the possibility of a collaborative initiative with ESIP to help expand IGWCO's user engagement activities.
 - IGWCO will explore the feasibility of a water/health workshop.
 - Baseline information for the appropriate components of the UIC-CBC Call for Proposals will be mapped to IGWCO initiatives.
 - A small working group will be established to decide the future actions to be taken with respect to the Water Cycle User Needs survey.
- The Water Cycle CoP is also exploring the feasibility of creating a water cycle constellation within the CEOS framework.
- Key observations from the December 2009 IEEE/Water Cycle CoP Workshop included:
 - There is a need to integrate more remote sensing information into water management operations and practices.
 - Engagement of the research and operational communities by GEO is only slowly developing.
 - Uploading data from people's mobile telephones is an exciting new prospect; community portals can expand the breadth of information for decision making.
 - The WaterNet network is an example of serendipitous networking and raises the question whether networking can be better planned.
 - Progress in data handling capabilities may engender new standards and interoperability for hydrology globally.

- The NIDIS test beds would be a good environment for integrating other international drought monitoring efforts.
- There is a great deal of enthusiasm for GEO tasks, but the question remains how to build on these successes to further engage the community.

Discussion

- M. Nyenhuis pointed out that the group is quite complex. One challenge is that the GEO Water SBA is mainly considering the terrestrial component of the water cycle; whereas other groups are doing work in other aspects of global water cycle.
- L. Friedl noted that the Water Cycle CoP had been organized around science but is now refocusing on the applications dimension. UIC members might have feedback about this restructuring. UIC members interested in commenting on restructuring or other aspects of the Water Cycle CoP presentation should send their feedback to R. Lawford.
- C. Dettmann suggested that the UIC could provide feedback on best practices when it receives more information on the restructuring.

Health and Environment CoP

- No presentation on this topic was provided at the meeting.

Progress Report on US-09-02c (Global Road and Human Settlements Mapping on GEO Grid) – Masami Onoda (for Masashi Matsuoka, Advanced Industrial Science and Technology)

M. Onoda briefly presented progress on Task US-09-02c (Global Road and Human Settlements Mapping on GEO Grid) on behalf of Masashi Matsuoka (see slides for details):

- This task involves developing a global web-based tool for mapping roads and human settlements by extracting road map information from satellites. This tool would be accessible via GEOSS and promote sharing and distribution of data. The team is trying to promote this task under the user engagement component of the Work Plan.
- The task team is currently developing its own data sets and algorithms. They want to make these available to decision makers and will interact more with decision makers in the future. They hope to connect with others doing similar research.

Discussion

- H. Haubold said that the work reminded him of an urban atlas being developed in Europe. The biggest challenge was that large cities had already been mapped. He asked who would use the atlas.
- M. Dalla Costa asked what the task team was looking for from the UIC.
- M. Onoda will contact the team to get responses to these questions.

Action Items

- By 11 March 2010, M. Onoda will contact M. Matsuoka regarding UIC's request for more information about 1) the purpose and intended use of the GEO Grid, and 2) what this task team is looking for from the UIC.

ECMWF Presentation – Dominique Marbouty

Dominique Marbouty, Director of the European Centre for Medium-Range Weather Forecasts (ECMWF) provided a brief introduction to the ECMWF (see slides and www.ecmwf.int for more information):

- ECMWF is an independent intergovernmental organization supported by 18 member states and 13 cooperating states. Established by European states in 1975, the Centre in 2010 has an annual budget of almost £39 million.
- Originally established to enhance Europe's medium-range forecasting capabilities, the Centre is now able to produce seasonal forecasts up to one year ahead. The Centre's forecasts, which are among the most accurate in the world, are distributed to the meteorological services of its member and co-operating states and to weather service providers.
- ECMWF forecasts involve analyzing and assimilating continuous data from a variety of global observing systems through the sophisticated models in the Centre's supercomputing facility. ECMWF's High Performance Computing Facility is one of the largest super computer systems for meteorology worldwide, comprising two identical but independent IBM Cluster 1600 supercomputer systems. A portion of the computing capacity is made available to member states for their own needs.
- ECMWF is a world leader in global Numerical Weather Prediction (NWP, the advanced modeling technique to predict the weather). The Centre has played a pioneering role in advancing data assimilation and weather forecast systems. Over the past three decades, ECMWF, in collaboration with member/cooperating states and partners, has substantially improved the accuracy and reliability of weather forecasting.
- The Centre maintains extensive archives of data from land, sea and space-based observing systems, as well as the output and data generated from NWP models. Products and services are provided, at various levels, to the Centre's member and cooperating states, as well as WMO members. Of particular interest to the research community are the reanalysis data and the TIGGE archive.
- A number of additional products are made available via the Centre's MACC (Monitoring Atmospheric Composition and Climate) project. For example:
 - Global data products on atmospheric composition are publicly available with minimal conditions, from a reanalysis for 2003-2007 and from daily near-real-time forecasts.
 - Complementary conventional global meteorological data products from the reanalysis are similarly available.
 - A new reanalysis for 2003-2010 will be produced during MACC.
- Forecasts are applied by member countries for a variety of societal benefits. One recent example was the clear early warning that ECMWF forecasts provided about Storm Xynthia, a particularly destructive storm that hit Western Europe on 26-28 February 2010, causing dozens of casualties.

Following D. Marbouty's presentation, the ECMWF hosted a tour for meeting participants of the Centre's supercomputing facility.

Air Quality CoP – Rudy Husar

R. Husar described the Air Quality CoP activities in 2009 (see slides for details):

- This CoP has dozens of participants. A key focus of its work is to connect and enable providers and users (i.e., observations to applications).
- Highlights of this CoP's 2009 activities have included:
 - An Air Quality and GEOSS meeting in May; an ESIP Air Quality Community Infrastructure meeting in July; and an Air Quality side meeting at GEO Plenary VI in November.
 - Monthly teleconferences and information sharing, communication and coordination through a wiki.
 - Coordination of the GEO Decision Support Concept Proposal.
 - Contributions to the GEOSS Common Infrastructure through AIP-2, including an air quality community catalog, data finder, and discovery metadata for air quality.
 - Development of the "Air Quality and Health" report under US-09-01a.
- The CoP would like to support development of a functioning Air Quality System of Systems by 2015 by connecting and enabling use of air quality observations, tools, and methods that work with distributed data and sharing of practical knowledge useful for decision makers.
- Key challenges include: 1) a need for broader participation by non-U.S. members; 2) more air quality data-as-service (i.e., making data freely available); and 3) acceptance by the air quality user community.

Discussion

- L. Friedl asked what had helped the CoP be successful and what the challenges had been. R. Husar responded that several factors contributed to success, including a confluence of activities at the agency level in EPA and NASA and at an operational activity level; a platform via ESIP; multiple CoP members championing different activities; and the availability of many air quality data sets that were registered in GEOSS as contributions from various projects. A key challenge is how to involve people outside the U.S.; currently the CoP has mostly U.S. participants.
- G. Foley encouraged GEO Sec and UIC members from other countries to provide suggestions to R. Husar to enlarge the membership.

Action Items

- Through November 2010, F. Pignatelli will coordinate with G. Foley, L. Senoko, C. Dettmann, and M. Onoda to help R. Husar network to generate interest in their regions in the Air Quality CoP.

Cryosphere CoP – Jeff Key

Jeff Key presented the status of the emerging Cryosphere CoP (see slides for details):

- Cryosphere is a global issue, with many socioeconomic impacts. It includes snow, sea ice, lake and river ice, glaciers, ice caps, ice sheets, permafrost and seasonally frozen ground, and solid precipitation. It is related to all GEO SBAs, especially water and climate.
- Cryosphere was an IGOS theme. The theme team submitted a report in 2007 and started an informal CoP via the World Climate Research Programme (WCRP) Climate and Cryosphere (CliC) and Scientific Community on Arctic Research (SCAR).
- The IGOS report listed implementation actions in three different time frames. The near-term recommendations included the only GEO Task focused on the cryosphere.

- The group has had several accomplishments, including improved coverage of cryospheric elements in the GCOS Implementation Plan; contributions to the GCOS-CEOS plan for satellite-based products; influence on the satellite mission planning process to incorporate cryosphere monitoring requirements; development of new satellite products for real-time applications (e.g., sea ice concentration, thickness, and motion from MODIS); contributions to planning SCAR scientific research projects (ISMAS, ASPeCT, PPE, and AGCS); and involvement with the SAON (Sustaining Arctic Observing Networks) and the Arctic Council's SWIPA (Snow, Water, Ice, and Permafrost in the Arctic) project.
- The most important accomplishment has been providing the inspiration to create the World Meteorological Organization (WMO) Global Cryosphere Watch. In May 2007, the 15th WMO Congress asked the WMO Intercommission Task Group on the International Polar Year (IPY) to establish an ad-hoc expert group to explore the possibility of creating a Global Cryosphere Watch and prepare recommendations for its development. This system would support reliable, integrated, comprehensive observations that can be used to provide authoritative information on the current state and projected fate of the cryosphere for use by the scientific community, media, public, and decision and policy makers. The project is currently in the feasibility stage; in 2011, the WMO Congress will decide whether to make it a full-fledged program. A key question is how this fits into GEO. WMO would say that this watch would contribute to the WMO Integrated Global Observing System, which contributes to GEOSS.
- A major implementation mechanism may be through the Global Cryosphere Watch. J. Key requested comments on that statement.
- The UIC can help this emerging CoP by 1) suggesting how to better integrate this community into the GEO/SS framework, 2) helping connect the group with other GEO activities that have cryosphere components or interests, and 3) helping identify gaps and suggesting ways to fill them based on what the UIC has learned about best practices and successes of other CoPs.

Discussion

- Interest was expressed in having a Chinese translation of 2007 IGOS cryosphere report available by the Beijing summit in November 2010. J. Key agreed to check the status of the translation.

Action Items

- J. Key will check whether the Chinese translation of the 2007 IGOS cryosphere report will be available by the Beijing Ministerial and get back to the GEO Sec, copying C. Dettmann.

AIP-3 Overview (AR-09-01b) – George Percivall

George Percivall presented an overview of the work on GEO Architecture Implementation Pilot, Phase 3 (AIP-3) under GEO Task AR-09-01b (see slides and AIP Webpage at www.ogcnetwork.net/AIP for details):

- The purpose of AIP-3, which is just beginning, is to develop and pilot new processes and infrastructure components for the GCI and the broader GEOSS architecture.
- AIP-2, completed in September 2009, had three results: 1) deployment of three CoP scenarios through the service architecture; 2) development of a reusable step-by-step process that any SBA can use to apply scenarios on the GEOSS service-oriented architecture; and 3) contributions to the registration of persistent services using GEOSS

interoperability arrangements. AIP-2 reports and videos are available at www.ogcnetwork.net/AIP2ERs.

- AIP-3 will build on the AIP-2 work in several ways, including building on GCI and Community Services; promoting mash-ups in a "link-rich" environment; and engaging CoPs involved in AIP-2, as well as other CoPs (Disasters, Water, Health, Biodiversity, Climate Change, and Energy). AIP-3 will focus on data (including a goal of using licenses to allow more open data to be available for the public good) and promote content and provide results in time to support 2010 Ministerial Summit.
- The availability of Web-based services in a link-rich environment dramatically reduces the time needed to do science and get results to decision makers by shortening the time needed for discovery, access, manipulation, visualization, and analysis steps from months to minutes or days.
- Scenarios for AIP-3 include: disaster management (flooding, extreme precipitation); water (water quality, drought), health (air quality, infectious diseases), biodiversity and climate change (ecosystem evolution, Arctic SDI), and energy. Some continue from AIP-2 and some are new.
- AIP-3 has issued a call for proposals inviting GEO Members and Participating Organizations to participate in: 1) registering components and services relevant to the SBAs; 2) testing services delivered through the GCI; and 3) formulating SBA-specific scenarios for making full use of GEOSS resources, to guide the testing, demonstration, and operation of these resources. Responses to the CFP were due in early March although the CFP will remain open for the duration of AIP-3. A kickoff meeting is planned for 11-12 March 2010 in Frascati, Italy.

Discussion

- G. Foley asked if the UIC planned to have a representative at the Frascati meeting. G. Percivall responded that the project will hold several teleconferences, which will be helpful to interested groups and individuals who cannot attend the kickoff meeting.

Action Items

- By 12 March 2010, G. Foley will work with G. Percivall to figure out how the User Requirements Registry work can/should interface with AIP-3, including the March 11-12 meeting.

Forest CoP – Michael Brady

Michael Brady presented the work of the Forest CoP (see slides for details):

- He noted that forest and land observations are included in all nine GEO SBAs, and that the Forest CoP includes land cover.
- Within GEOSS, forest observations are incomplete. There are also challenges engaging user communities and networks not involved in GEO, and there is a lack of coordinated long-term plans, as well as data sharing, access, calibration.
- These challenges are addressed in the GEO Work Plan through eight main forest tasks. Task US-09-01b relates to Communities of Practice. Task CL-09-03b (Forest Carbon Tracking) is the newest, high profile, and of particular interest because of national demonstrator countries (there are seven now and others expected). All demonstrator countries are in remote or developing regions.

- The primary focus of the Forest CoP is to provide communication and coordination to the teams involved in the eight forest tasks. However, the CoP's interests are broader than that covered by the eight tasks.
- The Forest CoP has contributed to development of the US-09-01a reports. M. Brady was pleased to see that land cover seemed, at least from the very preliminary analysis, to be emerging as an important cross-cutting Earth observation priority.
- Next steps for the Forest CoP are consolidating participation among the eight forest-related tasks; encouraging registration of forest data, Earth observations, systems, and users; supporting the CFP process; and consolidating the GEO Forest CoP Web page.
- CoP members are actively participating in many workshops and meetings. At GEO Plenary VI in November 2009, there was a call to proceed with a global forest monitoring system. This is a very ambitious activity to which all eight GEO tasks would contribute.

Discussion

- L. Friedl noted that the Agriculture/Forest report being prepared under US-09-01a will not be ready in time for the initial (May 2010) cross-SBA analysis, but the results in that report would be included in the final version (September 2010). He suggested that M. Brady communicate this to members of his US-09-01a Advisory Group.

Action Items

- M. Brady will explain to members of the Forest Advisory Group for US-09-01a report why the input they provided will not be included in the SBA cross-analysis report until the second and final (September 2010) version.

Geohazards CoP – Stuart Marsh

Stuart Marsh presented the recent progress and plans of the Geohazards CoP (GHCP) (see slides for details):

- The Supersites initiative has been very active, particularly in response to the Haiti earthquake, and is being considered as one of the Ministerial showcase examples. This initiative provides access to space-borne and in-situ geophysical data of selected sites prone to earthquake, volcano or other hazards via a Website (<http://supersites.unavco.org/main.php>). Space agencies and UNAVCO want to see data made freely available to encourage further understanding of hazards. This work needs to be integrated into the CoP.
- Though there was a lot of activity related to supersites in 2009, the core geohazards group was less active than in prior years because its support office was closed when funding ended in 2008. To reinvigorate the CoP on a broader front than just supersites, the group held a workshop, hosted by UNESCO, in Paris in January 2010.
- At this first workshop of the “new” Geohazards CoP, the group developed a draft Roadmap for its work going forward. The GHCP adopted the following strategic target, which is aligned with the GEO SBA: “By 2020 put in place all building blocks for comprehensive monitoring of geohazards and the provision of timely information on spatio-temporal characteristics, risks, and occurrence of geohazards, in support of all phases of the risk management cycle (mitigation and preparedness, early warning, response, and recovery), and as a basis for increased resilience and disaster reduction.”
- The GHCP also resolved that this target would be achieved by developing a global network of a very few, carefully selected core sites.

- The Road Map is based on the four phases of the risk management cycle: mitigation and preparedness; early warning; response; and recovery.
- A key strategy for implementing the Road Map is to identify core sites that are well monitored and studied and can serve as “Regional Pillars” – ideally at least one site per continent. These core sites will provide focal points for a large geographical region, to demonstrate how all building blocks of a value chain, from observations to end users, can be linked together and applied to the phases of the risk management cycle relevant for this region. This work will support scientific studies, technological developments, and policy and decision making in the region, and will also provide the basis to develop more general tools and training useful to other regions. Core sites will be determined by a Call for Proposals in 2010 to all GEO member countries.
- Another key element of implementing the Road Map is to extend networking across the global community. Though the BRGM has been very supportive, helping the GCHP establish a Webpage (http://www.igosgeohazards.org/geo_community_of_practice.asp) in 2008 at BRGM, they cannot continue their involvement without funding. A new interactive Website (<http://www.geohazcop.org/>) has been set up for the GHCP.
- The GHCP will be iterating the Road Map, first with participants (March 2010) and invitees and subsequently (April/May 2010) with the broader GEO community.
- In parallel, the GHCP is reviewing the disasters SBA for the GEO Science and Technology Committee (STC). The Scientific and Technological Research Council of Turkey (TÜBİTAK), which is hosting the next STC meeting (on 24-26 March 2010 in Turkey) is most interested in disasters. A questionnaire has been sent to all Disaster Task points of contact to prepare for a 3-hour session at the STC meeting. Session participants will be provided with an overview of the Disasters SBA and work on the GEO Disasters Tasks, and have an opportunity for dialogue with the task points of contact.

Discussion

- M. Onoda noted that, with the earthquake in Chile, agencies were again being asked to provide data that scientists can upload from the Supersites website. She asked whether any other space agencies could provide relevant data. S. March replied that there are other datasets that would be helpful—for example, for assessing damage from the tsunami. He suggested looking more broadly at requirements rather than simply responding on the U.S. Search and Rescue (SAR) site, since that is somewhat SAR-centric. It would be good to also include ground and air-based data. S. Marsh said he would be happy to work with agencies to get broader data. Another important question is whether every large disaster will be declared a supersite, or whether this effort will focus just on core sites.

US-09-03d (Global Phenology Data) – Gerhard Wotawa (for Elisabeth Koch)

Gerhard Wotawa presented the status of GEO Task US-09-03d (Global Phenology Data) (for Elisabeth Koch (see slides for details):

- Outputs of this task include:
 - COST725 (plant phenological database of European networks).
 - COST725 box in the fourth Assessment Report of Working Group II (Chapter 1) of the Intergovernmental Panel on Climate Change (IPCC).
 - Publication on “Guidelines for Plant Phenological Observations.”
 - Plant Monitoring Protocols for ~150 species for the USA National Phenology Network

- Several activities are planned, including:
 - Development of a “Concept and Implementation Document” describing the Global Phenology Network and its initiation.
 - Participation in PEP725 (a pan-European phenological database sponsored by EUMETNET), which will be kicked off in June 2010.
 - Restructuring of the global phenology database.
 - Participation in the interdisciplinary international conference “Phenology 2010: Climate change Impacts and Adaptation” in Dublin, Ireland, on 14 -17 June 2010, and in the “International Workshop on the Validation of Satellite-based Land Surface Phenology Products” in Dublin on 18 June 2010.

Discussion

- M. Onoda noted that this work is very cross-cutting and suggested that GEO could help connect the task with SBAs and related work.

US-09-01b (Communities of Practice and Partnership Development)

- No presentation was given on this task.

CoP Guidance Development – Ellsworth LeDrew

- E. LeDrew updated participants on the status of his work to develop guidance for CoPs, per UIC action item A-14. This work is in direct response to requests from CoPs to the UIC for guidance. E. LeDrew has prepared a draft by updating the guidance currently on GEO’s Website and adding language to clarify that CoPs are not an administrative structure or working group within GEO.
- UIC participants reviewed the latest draft at the meeting and generally approved the organization and contents, with a number of specific comments and edits, including the need to update the table of CoPs with the latest information on CoP names and points of contact (as listed in a 23 February 2010 table sent by M. Onoda).
- E. LeDrew noted that the IGOS Themes for oceans and atmospheric chemistry do not yet have homes in GEO.
- The suggestion was made that CoP meetings should be listed on the UIC page of the GEO Website to enable interested people to register and participate.
- E. LeDrew volunteered to lead an activity to develop a publication for the Ministerial that would highlight CoP activities and accomplishments. The group agreed to discuss this later in the meeting (see subsequent section on “GEO Communities of Practice: Mid-Term Achievements”).

Action Items

- By 18 March 2010, each participant in the Reading meeting will review the draft CoP Guidelines document and provide comments to E. LeDrew. This includes M. Onoda updating the table with the latest information from the CoP table she sent to the UIC on 23 February 2010. E. LeDrew will consolidate the comments into a revised draft.
- By 4 March 2010, E. LeDrew will check Mark D’Orio’s presentation from a prior UIC meeting for possible changes to the definition of a CoP.
- E. LeDrew will lead an activity to develop a glossy publication for the Ministerial meeting that describes the CoPs and their accomplishments.

March 4

Executive Committee Report Review

K. Fontaine reported on decisions made by the C4 about how the four GEO communities will report to GEO Executive Committee:

- One C4 member will present a joint report on behalf of all four committees. Reporting responsibility will rotate among the committees, with STC (Stuart Minchin) responsible for reporting in March 2010.
- All committees are encouraged to have their representative (or an alternate) at each GEO Executive Committee meeting. This will be particularly helpful to address any questions relevant to particular committees.

The UIC co-chairs have submitted their portion of the report to S, Minchin, and he has compiled a draft joint report, which K. Fontaine will circulate to the UIC co-chairs list. The report will be finalized on 8 March 2010, and S. Minchin will then prepare slides for the presentation based on that version. A goal of this session is to finalize UIC input for that report so it can be included in the 8 March version. Much of the report is informational rather than for decision, as committees need GEO Executive Committee approval only for items at the highest level.

C. Dettmann noted that the GEO Secretariat is responsible for logistics associated with the Beijing Exhibition. GEO Sec will send information out about this in the future.

The UIC reviewed the UIC portion of the current draft report to GEO Executive Committee, which was submitted a month ago, therefore does not represent the work of the last few weeks. Suggestions for additions/changes included reporting on:

- Status and progress of UIC work with CoPs and any highlights of CoP work.
- UIC's work to develop guidance and a reporting structure for CoPs.
- Need for GEO Executive Committee's support in finding reviewers of full CFP proposals.
- UIC's plans to develop questions for the breakout sessions in Pretoria to help participants consider and implement a user perspective.
- Highlights of UIC progress in activities listed in the UIC Activity Plan, such as initiation of work on a user typology, results of which would benefit all of GEO.

The group discussed J. Parihar's request to recommend the work of the Agricultural CoP as a showcase and decided that it would be most appropriately included as part of the water showcase and could also be featured as a separate exhibit.

Action Items

- The afternoon of 4 March 2010, G. Foley, E. LeDrew, K. Fontaine, and L. Friedl will develop text to update/revise the UIC portion of the GEO Executive Committee report, including these areas: 1) status of UIC guidance to CoPs and CoP status; 2) reports of US-09-01a and CFP; 3) need for GEO Executive Committee members support to identify reviewers for CFP final proposals; 4) work to develop questions for breakout groups in Pretoria to promote consideration of user perspective; 5) final highlights from GEO portal usability testing; and 6) notice that UIC will be developing a CoP achievements publication for Beijing.

Results of GEO Portal Usability Testing – Greg Ondich

G. Ondich (with SCG, a contractor to G. Foley) reported on the process for and results of the GEO portal usability testing conducted during the past year (see slides for details):

- Four rounds of testing were conducted from May 2009 to January 2010, with the goal of providing user feedback on the portals. The UIC was not responsible for recommending which portal would work best
- Testing is complete, and the final report, about 50 pages long, is available on request.
- Based on the results of the first round of testing in May, the IOC developed and implemented recommendations for improving the portal usability, resulting in significant improvements.
- Results were also given to the portal providers, who have made improvements over the course of the testing period. (For example, the portals have come a long way in their help functions, though further improvement is still needed.) These improvements are reflected in higher scores by testers over time.
- Most testers were first-time users, and most tested just one portal.
- After using the portal, each tester filled out a questionnaire with 17 questions, including “Did you find what you were looking for?” and “Was the search result relevant and successful?”
- All portals had unique features appreciated by testers. Each of the three portals was successful in different ways; no single portal emerged as being clearly superior.
- Overall results included: 259 people tested the portals; 60% were scientists; there as a high (81%) revisit interest for all portals; 60% of testers had successful searches; Climate and Disasters were the most popular SBAs.

Discussion

- G. Foley noted that the testing did not initially have a numerical rating, but the approach changed over time. He agreed with G. Ondich that GEO should not accept any score below 3 (on a scale of 1-5), and should aim for usability scores in the 4-5 range. He noted that one issue that needs to be considered is why a user would choose to use a GEO portal instead of Google Earth.

GEO Communities of Practice: Mid-Term Achievements – Ellsworth LeDrew

- E. LeDrew proposed that the UIC should develop a glossy publication for the Ministerial meeting in Beijing that would highlight the accomplishments of the CoPs:
 - The publication would have an introduction that would cover, for example, what a CoP is, history of CoPs in GEO, how the UIC is working with CoPs, and relevant material from the IOC guidance document.
 - This would be followed by 2- to 3-page submissions from each CoP describing their status and accomplishments, including for example, scope, value of GEO to the CoP, partners (including international networking and enabling GEO users), user engagement and response, benefits of the CoP, results and successes, challenges, list of publications and workshops, and next steps.
- The group agreed the UIC should develop this publication and that all current CoPs and important emerging CoPs, such as the group working to form a Cryosphere CoP, should be included.
- A small group formed to develop this publication. E. LeDrew, C. Dettmann, M. Dalla Costa, F. Pignatelli will serve on the editorial board. G. Foley committed to funding production and layout, and M. Kloeppe agreed to check whether ECMWF could fund the printing.

- The group will notify CoPs by the week of 8 March 2010 about this publication and request drafts within a month. Drafts will be reviewed by the editorial board, with the goal of finalizing the publication for final editing and layout in 2-3 months.

Action Items

- The Work Group to Develop the CoP Achievements Publication will notify all CoP leads the week of 8 March 2010 about the publication, provide the outline for the CoP sections, and request a first draft of two to three pages from each CoP within a month. The group will review submissions and provide rapid feedback, aiming to have the entire publication ready for final editing, layout, and printing within three months.
- M. Kloeppel will check whether ECMWF can fund printing of the CoP publication.

Gap Analysis – L. Friedl

- L. Friedl noted that gap analysis is an important component of the US-09-01a Task and M. Dalla Costa pointed out that it is also one of the major components of the GEOSS 10-year Implementation Plan. The UIC can conduct one or both of two types of gap analyses: comparing Earth Observation priorities identified by the US-09-01a work to what is available 1) worldwide, or 2) within GEOSS. The first analysis would be a large project, which he hoped to be able to sponsor in the future.
- Participants agreed that the analysis of whether priority needs were currently met by GEOSS could be valuable to accomplish before GEO Plenary VII. They agreed, at a minimum, that this analysis should be done for the cross-SBA needs, once those were identified in a few months. They were unsure whether the analysis could be accomplished for the needs identified in the eleven individual reports, so they agreed that a pilot analysis would begin immediately for one of the eleven reports to demonstrate the value of the analysis and the time and resources to accomplish it. This will serve as a guide to whether to conduct similar analyses for some or all of the other individual reports.

Action Items

- G. Foley will sponsor an initial gap analysis (probably disasters) to compare priorities in one of the US-09-01a SBA reports to what is available in the GEOSS Component and Services Registry. This work will start in March 2010 and be provided to the UIC for feedback when available, with the goal of making a decision no later than the Pretoria meeting to decide whether to continue this analysis with other individual SBAs in order to prepare a gap report to be completed in time for the Beijing meeting.

Next UIC Meetings

- Participants affirmed, after some discussion, that the UIC should meet three times each year and that one of these meetings should include a day when Task and CoPs leads report to the UIC. This meeting requires sufficient technical support to enable people to present via Webex.
- Participants agreed that the UIC should hold its next meeting on 20-21 May 2010 in Pretoria, S. Africa, right after the joint sessions in Pretoria. UIC members will be asked to block this time. Exactly how much of those two days will be available for committee meetings will need to be determined after GEO Sec solidifies its plans for the CoP and Task meetings.

- Participants hoped that the third meeting in 2010 could be held in Beijing, perhaps on 1-2 November, since so many UIC members will be in Beijing anyway for the Ministerial and GEO Plenary VII. Participants hoped that UIC members would not need to stay longer than a week in Beijing.
- For 2011, participants noted that the next International Symposium for Remote Sensing of the Environment (ISRSE) meeting will be 11-14 April 2010 in Sydney, Australia. Options for 2011 UIC meetings include 1) meeting a few weeks before the GEO Executive Committee meeting; and/or 2) in Sydney in conjunction with the ISRSE meeting; and/or 3) in conjunction with a colocated meeting, should one be held by GEO in 2011. One idea would be for GEO to hold a co-located meeting in conjunction with ISRSE. F. Pignatelli said he would promote the idea of a co-located meeting at ISRSE.
- C. Dettmann, G. Wotowa, and O. Nesje offered to host UIC meetings in 2011.

Action Items

- G. Wotowa and C. Dettmann will deliver in May 2010 in time for the UIC Pretoria meeting a proposal for a UIC meeting during the last two weeks of January 2011.
- O. Nesje will develop a proposal for a UIC meeting in Norway in August 2011.
- By 12 March 2010, M. Dalla Costa will send UIC communication plan developed in 2004 to the UIC co-chairs list.