Objectives

- Plan UIC business for 2011
- Complete preparations for Plenary GEO VII and Ministerial Summit in November 2010

Outcomes

- Draft version of next UIC Activity Plan
- Final list of information for the GEO Ministerial Summit
- Way forward concerning next analysis cycle for US-09-01a products
- Way forward for progress on user engagement strategies

Participants

Jan Connery, ERG (contractor)
Carsten Dettmann, Federal Ministry of Transport, Germany
Gary Foley, U.S. Environmental Protection Agency (EPA), USA
Kathy Fontaine, NASA, USA
Ellsworth LeDrew, IEEE
Øystein Nesje, Ministry of the Environment, Norway
Michael Nyenhuis, University of Bonn, Germany
Greg Ondich, SCG (contractor)
Masami Onoda, GEO Secretariat
Francesco Pignatelli, European Commission
Hans-Peter Plag, Nevada Bureau of Mines and Geology and University of Nevada, Reno, USA
Lerato Senoko, Department of Science and Technology, Republic of S. Africa
Gheorghe Stancalie, National Meteorological Administration, Romania

By Phone/Webex

Michael Brady, Canadian Forest Service
Hilcea Ferreira, Capacity-Building Committee
Lawrence Friedl, NASA, USA
Rudy Husar, Washington University, USA
Jeff Key, NOAA, USA
Rick Lawford, University of Manitoba
Thierry Ranchin, Ecole des Mines de Paris – ParisTech, France
Various members of GEO’s Architecture and Data Committee

Day 1 - Tuesday, 31 August 2010

Welcome, Introductions, and Agenda (Moderator – G. Foley)

Gary Foley thanked Øystein Nesje and the Norway Ministry of the Environment for hosting the 16th User Interface Committee meeting. He welcomed participants and asked them to introduce themselves. He reviewed the meeting agenda and objectives. The agenda was approved, with action item segments for 30 August 2010 moved to the end of the day.
STC/ADC/CBC Coordination (Moderator – F. Pignatelli)

During this session, the UIC received brief presentations on three UIC-relevant GEO Tasks/activities being conducted by GEO’s other committees: Science and Technology Committee (STC), Architecture and Data Committee (ADC), and Capacity-building Committee (CBC).

**ST-09-01: Catalysing Research and Development Resources for GEOSS – K. Fontaine**

Kathy Fontaine presented Task ST-09-01: Catalysing Research and Development Resources for GEO’s System of Systems (GEOSS) (see slides for details):

- The leads for this Task are K. Fontaine, Florence Beroud (European Commission), and Jerome Bequignon (European Space Agency).
- The Task objective is to encourage national governments and international organizations to address GEOSS science and technology (S&T) needs in their R&D programmes by identifying and linking needs (continuities, gaps, resources, etc) with potential public and private sector resource providers. "Resources" include funding, data, in-kind support, personnel, and any other forms of support.
- Work will culminate in a forum where resource providers can learn what is needed and how they can support filling those gaps.
- "Users" for this Task comprise anyone who wants to know more about and/or leverage the relationship between S&T and GEOSS, at any level of expertise and discipline.
- Needs are being identified through analysis of the S&T questionnaire that all Tasks received in May 2010. This survey sought information on expertise and resources needed; S&T priorities, barriers, and gaps; and continuity issues. The team has started to analyze the responses. They will also incorporate inputs from the US-09-01a reports; the STC’s GEO Societal Benefit Area (SBA) analysis; other related studies; and possibly GEO Communities of Practice (CoPs), with the hope that this analysis will span the GEO SBAs and transverse areas. The analysis focuses on how work is being done and not on results or impact. One emerging theme in the survey responses has been that Tasks do not have sufficient resources to document their work.
- Identification of resource providers has several challenges. The team has assembled lists of organizations that fund European research programmes, but engaging the private sector in GEO work has proven politically sensitive, primarily because the GEO Secretariat lacks funds, so can only engage organizations in discussions. At the plenary level, there is no mechanism to participate with the private sector, but individual GEO Tasks can do so and some are led by a participating organization (usually a non-profit), which may have rules about participation (e.g., a Request for Proposal process). Private companies can be asked to provide support via a participating organization.
- GEO’s Executive Committee has taken this issue up over the past four meetings, with a resulting recommendation that the U.S. draft guidelines for involving the private sector in GEO work. The team hopes to receive approval of the draft guidelines from GEO Plenary VII. Once this issue is resolved, the Task team can identify resources.
- Experts are needed to support the needs analysis in each SBA and transverse area. K. Fontaine hoped that the UIC could provide support for enlisting CoPs in identifying experts.
Hans-Peter Plag presented Task ST-09-02: Promoting Awareness and Benefits of GEO in the S&T Community (see Task webpage at http://www.geo-tasks.org/st0902/ for details):

- The Committee on Space Research (COSPAR) and IEEE lead this Task. The primary focus is outreach to S&T communities to help them understand the benefits of GEO, including data sets and services, in order to motivate them to contribute to GEO.
- Activities include: 1) identifying and linking to the major S&T enterprises in each SBA; 2) developing a GEOSS citation standard and GEO label, which hopefully will motivate experts to contribute to GEOSS; 3) reaching out to S&T communities, including university programs, to make GEOSS more visible; 4) compiling a set of compelling examples; and 5) engaging S&T communities at major symposia and other meetings:
  - GEOSS Citation Standard: Task team for standards will meet in Rome, Italy, later in 2010.
  - GEO Label: The STC is advocating development of a GEO label to recognize the value of S&T contributions to GEOSS and to assist GEOSS users in assessing the scientific relevance, quality, acceptance, and societal needs associated with individual GEOSS components. Space agencies initially indicated concerns about having a GEO label on their products. In response, STC co-chairs developed a paper distinguishing between objective labeling (e.g., Was it quality controlled?), and subjective labeling (Is it valuable and usable?). The STC will develop the objective measure and requests that the UIC develop the subjective measure. The ADC will oversee technological implementation of the label in the GCI.
  - Compelling Examples: The Task team has invited more than 30 teams to submit proposals for compelling examples about what GEO does for S&T communities. After a review process, the selected examples will be linked to a website to provide visibility. Already, the team has 10 examples covering 7 SBAs. Several examples will be presented in the STC booth in at the GEO Ministerial Summit in Beijing.
  - Engaging S&T Communities at Scientific Meetings: Work in this area has tended to focus on Earth science; increased focus is needed in other SBAs, such as health and energy. The Task team is asking presenters to provide information about the event to build a library and document the work in this area.

Discussion

Meeting participants briefly discussed the GEO label:

- H.-P. Plag noted that decisions will be needed whether to develop two separate labels or one label with two components, and whether the UIC will lead development of the subjective component. If the UIC approves, the ST-09-02 team could take the lead in drafting a description of the subjective component and bringing it to the UIC for review.
- The GEO committees will need to review the concept before it can be presented to the GEO Plenary. H.-P. Plag suggested that, given the development time needed, a goal of presenting a vetted concept to GEO Plenary VIII in 2011 would be reasonable. A more fully developed concept could be ready for committee review in the spring of 2011.
M. Nyenhuis pointed out that the objective component addresses verification (Are we building the product right?), while the subjective component addresses validation (Are we building the right product?).

G. Foley suggested that a pass/fail system would be easier than a more graduated (e.g., five-star) system; K. Fontaine responded that granularity was important.

F. Pignatelli was concerned that label development would have many complexities.

Meeting participants agreed they needed more information on the GEO label concept and a more detailed vision for the subjective component.

C. Dettmann suggested that the UIC discuss this further at its spring 2011 meeting, and support a schedule that aimed to present the concept for decision by GEO Plenary VIII in 2011.

H.-P. Plag and K. Fontaine agreed to update the UIC on the results of the STC’s discussion of the GEO label concept at its September 2010 meeting. The UIC co-chairs will resume discussion of this item on their October teleconference.

CB-09-05 (Data Democracy), CFP, URR – Hilcea Ferreira, Capacity-Building Committee (CBC)

Hilcea Ferreira (participating via teleconference) reported on work under Task CB-09-05, Data Democracy. A Webex training session on the GEOSS Common Infrastructure (GCI) has been organized for 8 September 2010, with Doug Nebert as the trainer. Invitations were sent to the “GEO all” e-mail list. The session can accommodate 50 participants; 25 have signed up so far. A pdf file will be sent to all participants before the training. It would be good to check whether use of GCI has increased after the training.

K. Fontaine noted that the results of the UIC’s GEO GCI and portal usability testing might be a helpful resource for designing the training and suggested that questions arising during the Webex training might be a useful addition to the UIC’s usability testing results. H. Ferreira agreed and suggested that someone from the UIC contact D. Nebert about this and/or participate in the Webex training.

The Committee on Earth Observation Satellites (CEOS) Working Group on Education is sponsoring development of a data democracy portal where people will be able to upload data and training materials. The portal will provide a mechanism for CEOS to integrate and consolidate components they are responsible for into a single web location. The portal is being developed by Thailand using open source software and will be presented to CEOS at its October 2010 meeting in Brazil. The ADC will support connecting the data democracy portal with the GCI.

K. Fontaine offered that the UIC could test the usability of the data democracy portal once it has been developed. H. Ferreira responded that she would put the UIC in contact with Pakorn Apaphant from Thailand’s Geo-Informatics and Space Technology Agency (GISTDA) for usability testing.

The CBC will have a booth in Beijing, sponsored by S. Africa. There is a potential to feature the portal in the CBC booth or possibly in a CEOS booth.

H. Ferreira said she would check whether the CBC has comments on the User Requirements Registry (URR)—for example, how information relevant to the data democracy portal might get recorded in the URR, and she will talk to Doug Nebert about how the data democracy portal might be able to connect with the URR.
Action Items for “STC/ADC/CBC Coordination” Session

Action Item: By 30 September 2010, K. Fontaine will check with Jerome Bequignon whether there is an update of the lists of European organizations with funding for research programs and whether there would any issues with sending those lists to the Oslo attendees, then proceed in accordance with the answer. If there are no issues, she will put the lists on the UIC Oslo meeting web page. If there are issues she will send the lists to the Oslo attendees letting them know the restrictions, or notify them that she cannot send them.

Action Item: By 4 October 2010, H.-P. Plag (lead) and K. Fontaine will provide the UIC with a short report on the discussions at the next STC meeting (Rome, 28-29 September 2010) regarding the subjective GEO label task. The UIC co-chairs will take up that task on their 5 October 2010 teleconference.

Action Item: By 30 September 2010, K. Fontaine will contact H. Ferreira to obtain the contact information for the people supporting CBC’s data democracy portal in order to determine whether there are usability testing needs.

Action Item Review – J. Connery

Jan Connery briefly reviewed the status of key UIC action items assigned prior to the Oslo meeting and asked participants to provide updates to other items to her by the end of the week. This review resulted in two new action items.

Action Item: Following on from Action Item W-4, G. Foley (lead) and M. Onoda will track whether the water diseases and health task proposed by the Health and Environment CoP has been added to the GEO Work Plan and will report back to the UIC co-chairs group about this by 17 September 2010.

Action Item: Following up from Action Item W-2, by 15 September 2010, L. Senoko will contact the leads of Subtasks CB-09-02b, c, and f to get feedback on the status of those and Tasks and to request their responses to the three user engagement questions that were asked in Pretoria.

Action Item Planning (Moderator – F. Pignatelli)

Participants reviewed the process for noting and documenting action items during UIC meetings and UIC co-chair teleconferences. They agreed to the following standard processes:

- During the discussions, the session chair will note action items where possible, with the notetaker, as before, continuing to have the main responsibility for notetaking. When it is unclear whether something stated should be an action item, the notetaker will ask for clarification.
- At the end of each session, the session chair will review the action items for each session.
- Each item should have a clear lead, a deadline, and be actionable (i.e., worded such that it is clear what needs to happen for the action to be completed). For example, when the committee would like all UIC members to do something, the action will be for someone to contact UIC members about the action.
- During a UIC meeting, when an action is assigned to someone participating via teleconference or Webex, the item will be reviewed while the person is still on the line. The notetaker will remind the chair about this as necessary. If the person cannot be on the line
when the action is assigned, it will be noted as “tentative” until the lead has verified with the notetaker that he or she accepts the item.

- Items that will be completed by the end of the meeting or teleconference will not be noted as action items. (They may, as useful, be noted as actions taken during the meeting.)
- Items that are actions in the UIC Activity Plan will not be noted as action items in the meeting summary. The Activity Plan will be reviewed as standard practice at the beginning of each UIC meeting.
- Items that are recurring because they are changes in practice or process will be noted in the summary as such, and not as an action item.
- At the end of each meeting, the notetaker will aggregate all items into a single file and provide members with the file and/or a printout for review.
- As standard practice shortly after each meeting and teleconference, the notetaker will provide the action items in an email (or a file if there are a large number of items) to the meeting participants.
- As standard practice before each meeting, K. Fontaine will send the UIC Activity Plan to UIC members so they have it by the beginning of each UIC meeting.
- As standard practice before each meeting, GEO Secretariat will put the Activity Plan and other meeting documents in the meeting folder on the GEO website. This will be particularly helpful to UIC members who need to get up to speed because they are not on the co-chairs group, new to the UIC, or did not come to recent meetings.

**Action Item Review – J. Connery**

Jan Connery briefly reviewed key action items from the first day.

**Day 2 - Wednesday, 1 September 2010**

**Welcome from the Host – Øystein Nesje**

Ø. Nesje welcomed all participants and provided information about activities and logistics during the rest of the meeting.

**GEO Ministerial and Plenary VII Preparation (Moderators – C. Dettmann and F. Pignatelli)**

**Ministerial Task Force**

- C. Dettmann briefly reviewed the work of the Ministerial Task Force. The GEO Secretariat has established a Beijing meeting webpage [http://earthobservations.org/meetings/geo7.html](http://earthobservations.org/meetings/geo7.html), which provides all relevant background and logistical information for the Ministerial and GEO Plenary VII meetings.
- The Ministerial meeting will be attended by many high-level delegates and a few ministers. Numerous showcases and videos will be displayed. The Ministerial Task Force meetings have focused mainly on the Ministerial declaration, which is now under review. A progress report showing GEO achievements to date has been sent out as a draft. The UIC could comment if it would like to do so.
GEO Executive Committee Recommendation on User Engagement

- K. Fontaine noted that the draft GEO Executive Committee response to the evaluation conducted by the GEO Monitoring & Evaluation (M&E) Working Group includes a recommendation (Recommendation 6) on user engagement suggesting that more should be done to improve engagement and responsiveness to user communities and to increase opportunities for dialogue. She suggested that the UIC may want to discuss this recommendation as it will be presented at the Ministerial meeting. The M&E report found that GEO needs to put more effort into the user component, noted inconsistencies between what users need and what the GEOSS architecture provides, emphasized that inclusion of users is important for fostering buy-in and success. The Executive Committee responded that it concurs with this recommendation and believes that effective user engagement is key to long-term sustainability. K. Fontaine noted that this issue may come up in the Beijing Ministerial and Plenary VII meetings.

- H.-P. Plag agreed with the recommendation and thought the UIC needed to be more proactive in this area. He recommended that future work be consistent with GEO’s 10-year Implementation Plan.

- K. Fontaine stressed that while the UIC has made progress in user engagement the past 3 years, the UIC should be the most vocal proponent for user engagement from this point on.

- M. Onoda noted that the M&E report had a clear focus on user engagement, which she felt reflected the importance and value of the work the UIC has been doing. She suggested the UIC should be encouraged by this.

- G. Foley reminded participants that the UIC needs to assign someone to present the consolidated GEO committees report to the Executive Committee at its next meeting (on 2 November 2010 in Beijing). The consolidated report will probably be made available to GEO Plenary VII.

Beijing Exhibit Materials

The group discussed the status of and options for the UIC and CoP booths in Beijing:

- G. Ondich reported that he had sent to leads of CoPs exhibiting in the booth suggested (but not required) templates for posters, handouts, and slide presentations. He has received responses from about half the CoPs. Carbon and Energy have not responded.

- The Coastal Zone and Geohazards CoP will each have a video based on a slide show. H.-P. Plag suggested that, if several videos are shown, then a schedule should be provided so visitors could know when each video would be playing. He noted that CoPs will need to know what the presenting software will be.

- The User Requirements Registry booth will have five work stations.

- Support is needed for staffing the booths. The exhibit will be open on 3-5 November 2010. Staffing support is most important on 5 November 2010, when the Ministerial meeting takes place, and particularly during breaks of the Ministerial meeting and GEO Plenary VII meetings. There will be a separate entrance for the public, so there may be some interest in the exhibits between breaks, particularly from the scientific public.

- M. Nyenhuis and H.-P. Plag volunteered to help in the booth, and F. Pignatelli and K. Fontaine said they would help if they could. J. Connery suggested that UIC members in Beijing be reminded just prior to the exhibit about the need for volunteers. At the suggestion of meeting participants, M. Onoda contacted CoP leads during the meeting to ask them to provide support for staffing the CoP booth in Beijing.
• H.-P. Plag suggested that a schedule be displayed in the booth so that visitors could know when CoP leads would be in the booth and could return if they wanted to talk with them.

• For the UIC booth, participants agreed they wanted three large poster panels on each of the two walls of the UIC booth (rather than six half-sized panels across one wall). They also agree to:
  o Keep and update the panels on UIC accomplishments, the Call for Proposals (CFP) project, and the US-09-01a project. Revisions will include: 1) Remove one of the maps from the CFP or US-09-01a panels (since they are so similar); 2) describe UIC accomplishments from 2007 to present; 3) in the user engagement panel, add a bullet saying “Join a community of practice (see brochure for how)”; and 4) update other information as needed.
  o Keep the GEO-wiki panels, basic UIC description panel, and user engagement panel, with a few revisions to the latter. Revisions include: replace one of the people photos with a comparable Asian-focused photo.

• K. Fontaine agreed to help update the CFP panel. M. Onoda sent the CFP handout to F. Ramos to review.

• G. Ondich and J. Connery will make changes to the booth panels and handouts based on feedback at the Oslo meeting and send the revised panels and handouts to UIC committee list for comment.

• G. Foley reported that the health booth will have a “wall” of 12 LCDs, and a brochure on the eight health Tasks and the CoP.

User Engagement Meeting

• The UIC will hold a user engagement session on 1-2 November 2010 in Beijing to hear from users in Asia and Oceania what their needs and interests are in Earth observations and GEO. G. Foley reported that the Chinese Meteorological Agency (CMA) will hold a meeting the same two days to present the work of the CMA to people interested in weather observations. The UIC session will therefore include all SBAs except weather. He suggested the session start between 0900 and 1000 on the first day and end at 1500 on the second day. No UIC business will be conducted. Webex can be set up as needed.

• K. Fontaine suggested it would be good, if possible, to have M. Nyenhuis and/or Manfred Kloeppel represent the UIC at the CMA event.

• E. LeDrew recommended that a meeting description be prepared. G. Foley sent a description to M. Onoda, who sent it to J. Achache. G. Foley agreed to work with M. Onoda to draft an invitational letter that J. Achache can send out to “GEO all” regarding the user engagement meeting.

• G. Foley encouraged UIC members to provide contacts by 13 September 2010 to whom the invitational letter could be sent. M. Onoda agreed to contact organizations associated with JAXA and to ask Fan Jinlong to contact relevant Chinese organizations. M. Onoda and G. Foley will contact CoPs to encourage them to provide speakers for the user engagement session.

UIC Presentation to GEO Plenary VII

• Meeting participants agreed that K. Fontaine would make the UIC presentation to GEO Plenary VII.

• G. Foley displayed a list of nine topics he recommended be included in the UIC portion of the GEO Plenary VII report, with assignments for authors:
  o Results of GCI and GEO portal usability testing
User engagement (response to M&E Task Force report and Executive Committee comments) focusing on what the UIC is doing next year and what milestones respond to this

- US-09-01a update
- User Requirements Registry prototype
- STC/ADC/CBC coordination, including the CFP
- Communities of Practice
- GEO chair proposal
- UIC at Beijing exhibition
- UIC meeting plans for 2011

All listed by G. Foley as authors of the GEO Plenary VII report agreed to provide draft material to K. Fontaine by 8 September 2010. K. Fontaine will consolidate this input into a draft report (two pages) and send it to the UIC co-chairs for review. This report can also be used for the UIC portion of the GEO Executive Committee report.

**Action Items for “GEO Ministerial and Plenary VII Preparation” Session**

**Action Item:** M. Onoda will ask the CoP leads to provide support for staffing the CoP booth in Beijing, with any necessary information for their registration.

**Action Item:** M. Onoda will pass the draft revised CFP handout to Fernando for comment.

**Action Item:** By or before 10 September 2010, G. Ondich and J. Connery will make changes to the booth panels and handouts based on feedback at the Oslo meeting and send the revised panels and handouts to UIC members for comment by 14 September. They will send handouts for comment on 15 September with comments due by 20 September 2010. They will respond to comments and finalize the materials in time for shipment to Beijing.

**Action Item:** By 7 September 2010, G. Foley (lead) will work with M. Onoda to draft an invitational letter that J. Achache can send out to “GEO all” regarding the user engagement meeting.

**Action Item:** By 13 September 2010, UIC co-chairs will develop a list of contacts and send the invitational letter to them.

**Action Item:** By 17 September 2010, M. Onoda will arrange for the user engagement meeting invitation letter to be sent to JAXA-associated organizations and will ask Fan Jinlong to make similar arrangements with relevant Chinese organizations. She will consolidate responses and send them or a summary to the UIC co-chairs list.

**Action Item:** M. Onoda and G. Foley will contact CoPs to encourage them to provide speakers for the user engagement session.

**Action Item:** The various individuals listed on G. Foley’s slide will send bullets for their assigned items for the UIC report to GEO Plenary VII to K. Fontaine by 8 September 2010. K. Fontaine will send a complete draft of the report to the UIC co-chairs for review by 10 September, with comments due by 15 September 2010. She will send the report to M. Onoda on 17 September 2010. M. Onoda will send G. Foley’s file with assignments to the UIC co-chairs group and Oslo meeting participants.

**UIC Activity Plan (Moderator – Gary Foley)**

Kathy Fontaine displayed and reviewed the UIC Activity Plan with the goal of closing completed activities, clarifying what is still in progress, and deciding what to do with all activities that will not be completed by the end of 2010. For discussion purposes, each activity’s current status was color-coded as dark green (completed), light green (ongoing), or yellow (needs to go in UIC’s 2011-2012 Activity Plan and/or decide something about its future).
Section 1: Support of GEO Work Plan, Targets, and Events

- Activities 2009.1.1 (Work Plan Analysis), 2009.1.2 (Task Sheet Analysis), 2009.1.3 (Monitoring and Evaluation Working Group), and 2009.1.5 (Plenary Activities) are complete. Activities 2009.1.4 (Documentation Analysis) and 2009.1.6 (Summit Activities) will be done soon.
- Under Activity 2009.1.4, documents have been reviewed individually; an integrated review may be noted as a new activity for the 2011-2012 Activity Plan.

Section 2: Communities of Practice (CoPs)

- K. Fontaine noted that Activity 2.3 (CoP Team) had been marked as ‘done’ because although it involved initiating and managing a cross-committee team to oversee CoP activities, the UIC decided not to use a cross-committee approach. After a brief discussion, meeting participants confirmed this activity should be closed due to lack of interest by GEO committees in the idea of cross-committee oversight group for CoPs.
- Meeting participants agreed to close Activity 2009.2.1 (CoP Analysis). For Activity 2009.2.2 (CoP Development), G. Foley suggested organizing a CoP Symposium, if the GEO Secretariat is willing. K. Fontaine suggested that the UIC may want to close this activity, and write a new more focused experienced-based action for the 2011-2012 Activity Plan. Input from the CoPs on Day 3 of the Oslo meeting will help determine a decision about this activity.

Section 3: User Needs and Requirements

- Activity 2009.3.1 (Earth Observations Priorities, US-09-01a): K. Fontaine noted that this would be closed following L. Friedl’s presentation later in the day.
- Activity 2009.3.2 (User Type Analysis): Meeting participants decided to close this activity and redefine the user type analysis to include mapping of all existing user type terminology into a higher-level ontology or taxonomy, whichever is appropriate.
- Activity 2009.3.3 (User Perspectives Project): Meeting participants agreed to close this activity as it involves general UIC operating practice via joint meetings, liaisons, etc. K. Fontaine encouraged the UIC to adopt a standard practice of having other GEO committees dialogue with the UIC on activities they lead that are UIC-relevant. G. Foley noted that the European Union’s Global Monitoring for Environment and Security (GMES) Global Network of Users (GNU) project that Herbert Haubold and S. Marsh led is ending and has produced many documents that might be a good resource for the UIC on user perspectives. He suggested that the UIC try to get H. Haubold and S. Marsh to attend its January 2011 meeting in Vienna to learn more about project results and their potential value to the UIC.
- Activity 2009.3.4 (Visualization Analysis and Tool Needs): G. Foley noted that lack of content is a barrier to work on this activity. This is a GCI architecture issue, and the ADC needs to promote registration of GCI components in a format that supports visualization. GEONETCast has made significant progress in this area by talking to user communities in developing countries and learning that to be useful, Earth observation data needed to be GIS-ready since these users only use GIS tools. H.-P. Plag suggested that the URR could collect information on user visualization analysis and tools needs. The group decided to keep this activity as ongoing until that suggestion could be discussed. K. Fontaine noted that a lead is needed for this activity.
Activity 2009.3.5 (User Forum: Health and the Environment): This activity is closed as three Health and Environment workshops were held in 2009-2010, and a Health and Environment CoP has formed.

Activity 2009.3.6 (User Handbook): There was considerable discussion of this activity, resulting in a general agreement that the activity should be reworded to focus on developing a “Welcome to GEO”-type homepage that provided guidance to the user about getting the most out of GEO and GEOSS. Interest was expressed in working with H. Haubold to learn how the GMES GNU results might inform this activity. G. Foley pointed out that the URR would also serve as a resource to help users get the most out of GEO and GEOSS. K. Fontaine emphasized that this activity needs a lead.

Section 4: GEOSS Applications and Societal Benefits

Activity 2009.4.1 (UIC/CBC Call for Proposals): By end of 2010, the UIC and CBC will have reviewed full proposals, but may not have had a donor meeting. This activity is ongoing.

Activity 2009.4.2 (Applications Best Practices Study) and Activity 2009.4.3 (Applications Examples Project): A lead is needed for these activities. E. LeDrew volunteered to find a graduate student to harvest best practices from relevant UIC and GEO documents. K. Fontaine recommended that best practices be disseminated through the existing GEO best practices wiki.

Activity 2009.4.3 (Applications Examples Project): This activity is ongoing and needs a lead and more UIC involvement. G. Foley may have some application examples from the U.S. presentations for the 2010 Beijing Ministerial meeting and thought L. Friedl might also have examples. H.-P. Plag noted that GEO Task US-09-02 is assembling compelling examples to show how GEOSS benefits science and technology communities.

Activity 2009.4.4 (Symposium on Socioeconomic Benefit Techniques): This workshop was held. K. Fontaine will ask L. Friedl to send the meeting report to UIC members, at which point this activity will be complete.

Activity 2009.4.5 (User Engagement Handbook): Whether this activity is sufficiently important to the UIC to keep open requires further consideration. It would be useful to review an outline for the handbook, if L. Friedl has developed one.

Section 5: Key Cross-Committee Actions

Activity 2009.5.1 (GCI Evaluation) is done.

Activity 2009.5.2 (GEOSS Registry Population) can be closed. The URR fulfills this activity.

Activity 2009.5.3 (STC Task Support): This activity will be closed and a new one created for the 2011-2012 Activity Plan, with more specifics.

Section 6: User Engagement Strategies

Activity 2009.6.4 (Training: Air Quality Applications) is closed. The other five activities are open, with the most energy going to Activity 2009.6.1 (User Engagement Materials).

Activity 2009.6.3 (Workshops and Showcases): Numerous UIC-sponsored events are relevant, including the 2010 Ministerial Summit exhibition, GEO GCI and portal usability testing, and user engagement sessions in Stresa, Italy, and Beijing, China. Oslo meeting participants agreed the UIC should pursue the idea of a GEO CoP Symposium.

Activity 2009.6.5 (Potential UIC Members, POs, and Observers) and Activity 2009.6.6 (Awareness) are done for 2010, but will continue into 2011. K. Fontaine suggested any
activities that recur annually should be reworded so they can be closed. H.-P. Plag noted that GEO Task ST-09-02 overlaps with Activity 2009.6.5.

**Section 7: UIC Internal Management**

- All six activities in Section 7 will be closed by the end of 2010. K. Fontaine will develop UIC internal management activities for 2011-2012.

**General Points**

- K. Fontaine suggested that the UIC may want to consider focusing on fewer activities each year, with the goal of committing to completing them, rather than a more extensive set that it may not have the resources to complete.
- G. Foley noted that as GEO prepares its new Work Plan, it will likely provide guidance to the committees to develop more outcome-oriented activities with milestones for achieving targets. K. Fontaine responded that the UIC’s 2011-2012 Activity Plan will need to consider this guidance, as well as input from the M & E Working Group’s recommendations.

**Action Items for “UIC Activity Plan” Session**

**Action Item:** By the UIC’s Vienna meeting on 25-27 January 2011, E. LeDrew will look into getting a couple of months of coop student time to harvest UIC meeting summaries and other resources for examples of best practices. These examples will be brought back to the UIC co-chairs for further decision-making regarding Activity 2009.4.2. G. Foley will provide one example of a best practice to E. LeDrew to support the harvesting.

**Action Item:** E. LeDrew and H.-P. Plag will talk to L. Friedl about whether he can sponsor or otherwise support a CoP Symposium.

**Action Item:** All UIC meeting participants in Oslo should comment on the Word documents in K. Fontaine’s 30 August 2010 e-mail and provide comments to her by 3 September 2010.

**Action Item:** K. Fontaine will write up notes and send a revised spreadsheet to UIC Oslo meeting participants. By the 5 October 2010 UIC co-chair meeting, K. Fontaine will send out 1) a revised 2009-2010 Activity Plan spreadsheet reflecting the Oslo updates, and 2) a schedule with deadlines for the 2011-2012 UIC Activity Plan. She will provide a draft of the 2011-2012 Activity Plan for acceptance by UIC at the Vienna meeting on 25-27 January 2011.

**Usability Testing and User Requirements Registry Demonstration and Discussion (Moderator – E. LeDrew)**

Hans-Peter Plag reported on the development of the User Requirements Registry (see slides for details), and encouraged UIC members to test the system at [www.scgcorp.com/urr](http://www.scgcorp.com/urr) and provide feedback via the built-in feedback screen in the prototype. The ADC joined the UIC by teleconference for this segment of the agenda.

- One of the GEOSS registries, the URR will capture user types, requirements, and applications. It includes separate registries to register user types, applications, and requirements.
  - **User types** are generic types of users and not individuals.
  - **Applications** are activities that depend on Earth observations or derived products. Initial testing of the prototype revealed that many people testing the system did not understand what was meant by activities and applications.
- **Requirements** are the specifications for the Earth observation data or information that users need.
- Users are asked to provide references for the information or data they register.
- Testing of the initial prototype earlier in 2010 with the health analysts for the US-09-01a project revealed that users needed education to correctly understand what type of information was needed in the registry tables. The initial entries provided by the analysts were at very different levels and required substantial editing. Tutorials (e.g., on how to publish data) are being developed.
- The URR will require an ontology, or “lexicon”—i.e., the defined vocabulary or terms that URR users will use to make entries in URR. Terms denoting keywords and/or Earth observation quantities will be flagged as such.
- The URR will not “control” entries in the lexicon. Feedback to date suggests a need for discipline- or area-specific ontologies, rather than a single ontology; therefore, the project leads have decided to use an unstructured approach to populating this part of the URR and later to map the individual results into an overall lexicon. The lexicon is a point where the URR project overlaps with the work of GEO’s Architecture and Data Committee. Several ontologies have been prepared by the Japanese; that work needs to be mapped into the URR lexicon.
- The project team has been presenting the URR and inviting feedback at various workshops, conferences, and exhibitions. Based on user feedback, the project team will be adding a table to the URR where users can register research needs to enable applications that are currently not possible. The possibility of an infrastructure needs table has also been discussed.
- The URR will enable users to do look ups and searches using search strings and keywords and to link user types, applications, and requirements. These linkages will reveal the extent to which one entry depends on another. An algorithm to develop value chains and networks is currently under development, so that users will be able to receive answers to questions such as:
  - Who is using my data for what?
  - Are there data products that would meet my needs?
  - What data are my colleagues using in other disciplines?
  - What user types and applications depend on this requirement?
  - What data products are needed for this application?
- By itself, the URR cannot tell users what data or products are available to meet their needs; the URR will need to be linked to the GEOSS services and registries to do this. Interoperability is therefore very important.
- Prioritization of needs that users have registered in the URR will be done by all GEO committees and captured in the URR.
- After initial development through May 2010, Version 1 of the URR prototype was populated with test cases from May to August 2010. Version 2 will be available to the public for publishing, lookups, and analysis on 15 September 2010. Version 2 will be refined based on further usability testing, and the analysis function will be added. Version 3 will be available by 20 October 2010, and will be presented and tested at the URR exhibit in Beijing. A final project report will be provided on 30 November 2010.
Discussion

- An ADC member asked two questions: 1) Where in the process will users be asking the analysis questions? 2) How will URR components be assessed?
- H.-P. Plag responded as follows: 1) The URR was always intended as an analytical tool, in addition to documenting user requirements. Therefore, the URR will enable users to ask various questions, for example, to understand what applications a certain requirement serve, what other applications depend on those applications, and whether any relevant products are available. The ADC and broader GEOSS community are encouraged to suggest questions of interest that the URR might be able to answer. 2) No final determination has been made about who will be responsible for prioritizing user needs, developing system performance specifications, and assessing components. This is an open question.
- A member of the ADC asked several questions: 1) What is the critical mass in terms of number of entries for the URR to be useful and when do you expect to reach it? 2) What standard interfaces do you currently expose to enable interoperability and will they conform to GEOSS interoperability standards? 3) When do you plan to register the URR as a GEOSS component?
- H.-P. Plag responded as follows: 1) Starting next week, the project team will contact the World Meteorological Organization (WMO), NASA, and the National Oceanic and Atmospheric Administration to invite them to merge their databases with the URR. That would provide a critical mass; 2) we need to talk with the ADC members involved with building the GCI to determine the best way to ensure interoperability; 3) we can register the URR in GEOSS at any time.
- An ADC member noted that the GEOSS standards are referenced and encouraged the URR team to describe the system components in sufficient detail to enable people who could interface with them to get that information.
- G. Foley clarified that the key purpose of interfacing the URR with GEOSS was to enable gap analysis to determine whether GEOSS contained components that could meet the needs expressed by users. Other than that, the GCI would not be expected to draw from the URR.
- H.-P. Plag noted that Doug Nebert had been involved in an advisory capacity early in the project and had assured the team that interoperability would not be a problem. D. Nebert responded that he hoped the URR could be searched using same search interface now used in GEOSS and suggested the URR design plan specify what kind of query interface or interaction other than web user experience would be exposed by the URR. H.-P. Plag suggested that the URR team talk to D. Nebert or another appropriate person on the ADC to ensure that the systems engineer for the URR knew what was needed to ensure interoperability:
- C. Dettmann suggested editing the overall URR project goal on slide 11 to say “Would like to have users categorized and engaged…” rather than “Answer questions like…”
- An ADC member asked how answers to the analytical questions would be formulated. H.-P. Plag responded that the answers will not be provided in text form, but rather via a visual system, similar to that being developed by a Japanese group, that can display the whole value chain from requirement down to the end users. This is an intuitive system that will require little, if any, training to understand the graphical answers.
- G. Percival (ADC) suggested that the user type definition on slide 4 on the Individual URR registries did not seem broad enough and should be changed to “users of Earth observations and other GEO-referenced information…” since users may also need to know data in addition to Earth observations, such as socioeconomic and societal data that are
relevant to decision-making. H.-P. Plag questioned whether a change was needed, since everything on Earth can be regarded as an Earth system, but noted that further experience with the URR could reveal that some of the descriptions need modification.

- Barbara Ryan (ADC) thanked the UIC for the opportunity to participate in this part of the UIC meeting agenda. She said the ADC needed to return to its meeting; further questions could be discussed directly with H.-P. Plag offline. The UIC then continued discussion among its members.

- H.-P. Plag provided more details about the work:
  - A home page has been introduced into the URR. Users are strongly encouraged to take the tutorials before publishing any data to minimize the amount of editing needed to put entries in the correct form.
  - The “Link” function serves to link users to freely available components in GEOSS that meet a need and to describe any obstacles (such as purchase fee) that might restrict users from obtaining data.
  - The URR provides a wiki discussion mechanism, essentially for each entry.

- H.-P. Plag invited any interested UIC members to participate in a meeting with the URR project team and US-09-01a health analysts via teleconference or in person at the U.S. Environmental Protection Agency in early October 2010.

- G. Ondich noted that the URR may need to require users to register to obtain their e-mail address so that the project team can respond to make things more efficient. H.-P. Plag cautioned that any user concept should be thoroughly thought through before it is introduced. G. Foley suggested that this be discussed after UIC members have used the URR and noted that a URR registration element would need to be consistent with any GEO registration element.

- G. Foley supported the idea of a “research needs” component, with a few caveats. He asked whether the “research needs” component being added in response to user feedback would be asking users for input research to improve Earth observations or the scientific information needed to improve an application, because these would go to different audiences. He also suggested using “science needs” instead of “research needs” because he did not want to encourage input on open-ended research needs. He suggested the team wait to see what kind of research needs input testers provide before making a decision about this. H.-P. Plag noted that the term “research needs” was selected over “science needs” to encourage application-oriented input.

- H.-P. Plag encouraged UIC members to suggest generic types of questions for the URR’s analytical function.

- Meeting participants agreed to test the current prototype by entering data and to take the general tutorial and one other tutorial before doing so. H.-P. Plag will notify meeting participants when the tutorials are sufficiently developed for this test and assign which tutorial, in addition to the general tutorial, each person should take.

- H.-P. Plag noted that initial testing with the health analysts revealed that the requirements form could not accommodate the many different types of user requirements. The project team is currently modifying this form to accommodate a wider variety of requirements. He encouraged meeting participants to let him know any suggestions for modifying URR forms to include additional information relevant to the URR.

- H.-P. Plag stressed that he will need the UIC’s and/or STC’s feedback to refine and finalize the pick lists for societal sectors, SBA subdivisions, and geographic regions. These elements need to be carefully considered before the URR is widely used because it would be very expensive to change them later.

- H.-P. Plag asked whether entries in the URR should undergo a review and editing process and if so, how this should be organized.
G. Foley suggested that the UIC follow up with many of the issue H.-P. Plag had just raised after members had had a chance to experience the prototype. H.-P. Plag noted that he will also be asking colleagues, the STC, and GEO Task teams to publish data in the prototype and provide feedback.

H.-P. Plag asked meeting participants to send him any ideas they might have about new analytical questions for the URR.

**Action Items for “Usability Testing and User Requirements Registry Demonstration and Discussion” Session**

**Action Item:** H.-P. Plag will 1) let all participants of the UIC Oslo meeting know when URR tutorials are ready for testing; 2) ask each person to test the general tutorial and one other (which he will assign); and 3) provide a deadline for the testing.

**US-09-01a Discussions (Moderator – E. LeDrew)**

Lawrence Friedl (participating via teleconference) presented the status of the US-09-01a project and described the analytic methodology, parameters, and future considerations, including plans for rolling out the project (see slides for details).

- The goal of the US-09-01a project was to establish a GEO process for identifying critical Earth observation priorities common to many GEOSS SBAs, involving scientific and technical experts, taking account of socioeconomic factors, and building on the results of existing systems’ requirements development processes.
- Reports for the Biodiversity, Climate, Disasters (Part 1 & 2), Ecosystems (Part 1), Energy, Health, and Weather reports are complete and posted on project website at [http://sbageotask.larc.nasa.gov/](http://sbageotask.larc.nasa.gov/). Reports for Agriculture, Agriculture/Forests, and Ecosystems (Part 2) are complete; posting to the website is pending. The Water SBA report text is complete; formatting and posting to the website is pending.
- A preliminary draft of the Cross-SBA Report is complete, with observations prioritized. The Task lead is working with the contractor to develop this report into a publishable report and formal document by the end of September 2010. If the UIC agrees, the Executive Summary could be a UIC document for GEO Plenary VII—for example, in the form of the formal document and a 4- to 8-page summary handout.
- The Biodiversity report is referenced in the Cross-SBA Report. However, the Biodiversity analyst did not produce a set of Earth observations priorities. Thus, the Cross-SBA team has not included biodiversity-specific observations in the Cross-SBA meta-analysis. Since the Ecosystems SBA observations were likely similar, biodiversity is indirectly included.
- Three different methods were used for the cross-SBA analysis: 1) a frequency analysis regardless of importance; 2) a weighted frequency analysis; and 3) selection of the top 15 parameters by each analyst. The final set of priority parameters was determined by calculated mean rank and the range of ranks for all 137 parameters across the three methods. There was a natural break after the top 42 parameters.
- L. Friedl presented the top 15 parameters across all SBAs as determined by this analysis (see Slide 7). NASA will sponsor a gap analysis of Cross-SBA and SBA observation priorities relative to current and future availability (this was not noted as an action item as it will be part of the UIC Activity Plan). This analysis will be on presence or absence of the parameters because reports do not provide specific parameter characteristics (e.g., resolution, latency) of user needs. This gap analysis should be articulated in the next GEO Work Plan.
• A second gap analysis would look at SBA observation priorities relative to their availability in GEOSS. G. Foley, who has an action item (R-37) to do this analysis, noted that this analysis had been completed for the Disasters SBA.

• L. Friedl commented that, as the URR gets more developed, it can be populated with the requirements noted in the US-09-01a reports. H.-P. Plag noted that this had already been done for the Health SBA during Phase 2 of the URR development. Because the US-09-01a results were at a fairly general level, health analysts had added additional information beyond what was provided in the US-09-01a reports. He observed that the needs documented in the US-09-01a reports appear to focus more on what is available than what is required, and predicted that quite a bit of time would be needed to incorporate the US-09-01a results into the URR. He noted that the URR would prioritize requirements through value chains created via published links, which is a very different approach than that taken in US-09-01a reports, an approach about which he expressed concerns.

• L. Friedl asked UIC members whether the UIC should brief key organizations such as the CEOS and WMO. M. Nyenhuis agreed to brief WMO; L. Friedl agreed to find someone from NASA to brief CEOS at their upcoming plenary meeting; and F. Pignatelli agreed to present the results to the Joint Research Centre (JRC) committees.

• All final US-09-01a reports and a summary of final cross-SBA analysis report will posted by mid-September 2010. M. Onoda agreed to make sure the reports are posted on GEO’s website. The cross-SBA final report and a glossy handout will be ready in October 2010. A draft version of the gap analysis will be completed by early spring 2011.

• G. Foley reminded the group that one reason for the US-09-01a project was to discover new requirements. However, the Earth observation priorities identified by the project appear to confirm already known priorities rather than reveal new priorities. He recommended that additional work be done, as needed, to clarify any new findings or insights (e.g., about the breadth of observations) and felt this would be valuable input for the UIC’s report to GEO Plenary VII. He suggested expanding the Executive Summary to highlight any new findings.

• L. Friedl responded that priorities beyond the top 15 he had presented might yield some interesting results. E. LeDrew suggested contacting the analysts to ask them what they thought was particularly new and useful. C. Dettmann thought it was satisfactory that the report confirmed known priorities since it affirmed that the Earth observation community had been on the right track in recent years. F. Pignatelli noted that confirmation and highlighting of new results were both valuable. L. Friedl agreed to modify US-09-01a Executive Summary to include what was learned. UIC members confirmed that the US-09-01a Executive Summary would be a GEO Plenary VII document.

• L. Friedl requested a list of organizations who should be briefed prior to GEO Plenary VII, along with names of people to present the briefings.

• G. Foley volunteered to help L. Friedl describe how the US-09-01a health results have been integrated into the URR. C. Dettmann suggested that the Executive Summary indicate that biodiversity is partly covered within the Ecosystems SBA report.

• The group agreed that Activity 2009.3.1 (Earth Observations Priorities, US-09-01a) in the UIC Activity Plan would be complete by December 2010, and that L. Friedl would write a new US-09-01a activity for the UIC’s 2011-2012 Activity Plan to include the gap analysis, which would be completed in 2011. The UIC will also need to update the GEO US-09-01a Task Sheet during the next round of updates to reflect the revised Task status.

• L. Friedl noted that the NASA-sponsored workshop on activities to determine socioeconomic benefits from projects applying Earth observations had been held in late June 2010. Since this aligns with GEO Task US-09-02a, the UIC can post the meeting report. G. Foley suggested that the UIC co-chairs discuss this workshop and further plans under US-09-02a on their October 2010 teleconference.
L. Friedl agreed to work with E. LeDrew and H.-P. Plag on a possible CoP symposium for 2011. He noted that many members of the US-09-01a Advisory Groups were interested in staying involved.

Action Items for “US-09-01a Discussions” Session

**Action Item:** Working with L. Friedl as needed, M. Onoda will make sure all the US-09-01a reports and the link to the project site are available on the UIC page of GEO’s website by 7 October 2010.

**Action Item:** Sometime before GEO Plenary VII, M. Nyenhuis will brief WMO on the results of US-09-01a results.

**Action Item:** L. Friedl will assign someone from NASA to report the US-09-01a results to the upcoming CEOS Plenary meeting.

**Action Item:** Before GEO Plenary VII, F. Pignatelli will present the US-09-01a results to the JRC committees.

**Action Item:** CC-23. G. Ondich will send L. Friedl information on the 8 October 2010 URR meeting in DC.

**Action Item:** Working with G. Foley and E. LeDrew as needed, L. Friedl will revise the US-09-01a consolidated report Executive Summary to include additional findings as discussed at the UIC Oslo meeting. He will send the revised draft to the UIC co-chairs group for comment, respond to comments, and prepare a final version no later than 17 September 2010. He will provide text to K. Fontaine for the UIC report to GEO Plenary VII no later than 17 September 2010.

**Action Item:** By 30 September 2010, L. Friedl will draft a cover letter on NASA letterhead to explain the context of the report for the NASA-sponsored workshop on activities to determine socioeconomic benefits from projects applying Earth observations and how that project relates to GEO Task US-09-02a.

**Action Item:** By 30 September 2010, L. Friedl will ask the UIC for a list of member countries and organizations to target for the US-09-01a briefing and will prepare a briefing.

**Action Item Review – J. Connery**

Jan Connery briefly reviewed key action items for the second day.

**Day 3 - Wednesday, 2 September 2010**

At F. Pignatelli’s request, Gheorghe Stancalie presented the work of the Romanian National Meteorological Administration and Romanian Space Agency (ROSA) towards making Earth observation-derived products easier to access, use, and understand (see slides for details):

- Romania can play an important role in global and regional activities due to its geographic position. Earth observation data can be a valuable instrument for many environmental issues in Romania, including natural disasters (floods, pollution), biodiversity, and air and water quality.
- Romania strengthened its relations with the European Space Agency (ESA) in 2006 by signing the European Cooperating State Agreement, becoming the third European country to do so, and is in the advanced stage for becoming a full ESA member in 2011.
- Romania is a more active member of GEO since 2008 after hosting GEO Plenary V in Bucharest and the first summer school on Remote Sensing Image Information Mining.
In December 2010, Romania will be a full member of EUMETSAT (European Organisation for the Exploitation of Meteorological Satellites).

In recent years, Romania has integrated space and in-situ observations for enabling user-driven services to support policy making.

ROSA is involved in several international projects, including: UN SPIDER (United Nations Platform for Space-based Information for Disaster Management and Emergency Response); GMES; INSPIRE (Infrastructure for Spatial Information in the European Community): the United Nations Food and Agricultural Organization's Land Cover Classification System; and GEO.

Participation in European environmental policy implementation and efforts toward becoming a EUMETSAT and ESA member state were the main drivers of latest Romanian developments in Earth observation tools, techniques, and technology to make Earth observation data and products more accessible and useful to citizens and policy makers.

Significant work has been done in Romania in recent years to apply Earth observations to flood risk management during several floods, for example by producing thematic satellite maps. The results were very useful to end users:

- The Romanian Ministry of the Environment and Forests (MEF) needed to measure flood extent, prevent water protection elements failure, assess damages, and build flood extent historical database.
- The Ministry of Administration and Interior (MAI) by the General Inspectorate for Emergency Situations (IGSU), which coordinates emergency response in Romania, asked for detailed spatial data and satellite imagery to be used in planning actions and means deployment in the field.

Earth observations have also been applied to land monitoring, biodiversity, weather, and climate change (e.g., tracking of severe convective storms; heat waves and drought; vegetation state; fractional snow cover extent; and forest fires); air quality monitoring and forecasting through Romania’s AIR-AWARE project); seismic activity monitoring; and forest and water management.

The Ministry of the Environment has created a geoportal to facilitate discovery and publishing of geographic information system (GIS) data and maps to support nature conservation; industrial pollution control and risk management; air quality and noise; waste management; and water quality.

Romanian agencies are building Earth observation skills capacity through a variety of means, including events, training sessions, summer school, recruitment of young researchers, and application of image processing software for educational use.

As a result of these activities, user organizations are starting to understand the value of Earth observations and becoming more effective in using derived products. Most of Romania’s Earth observation projects offer web-based instruments that make it easy for users to access data and services. However, more work remains to better connect with users; understand their needs; make Earth observation data and products even more visible, accessible and usable; and train end users to make use of them. In particular, applications in health and energy still need to be developed.

The Romanian experience shows that continuous interaction with user organizations is very important to set up and develop effective Earth observation data services and related products.
Discussion

- F. Pignatelli thanked G. Stancalie for his presentation and suggested that G. Stancalie talk offline with him about potential collaborative opportunities with GMES and with G. Foley and E. LeDrew about opportunities in the health and energy areas.
- G. Foley offered to schedule a teleconference for the three US-09-01a health analysts to brief G. Stancalie on their work, and E. LeDrew offered a similar connection in the energy field.
- Meeting participants noted that flooding was not currently covered by an SBA. H.-P. Plag suggested that GEO may want to consider whether another SBA is needed for natural hazards, such as floods, that result from atmospheric or oceanic processes. This is becoming increasing important given the extent of flooding disasters worldwide. F. Pignatelli suggested that floods should be more prominent in GEO goals and objectives, and recommended that the UIC work to encourage a CoP in this field.
- C. Dettmann appreciated the value of having international colleagues present an overview of their organization’s Earth observation-related work during UIC meetings and suggested the UIC might want to make this a regular feature of its meeting agendas.
- G. Foley was familiar with the Romanian AIR-AWARE program and noted that it was mature, well-constructed, and a good model for others.

User Engagement Planning (Moderator - F. Pignatelli)

The session started with a group exercise, which was followed by a brief discussion of other topics. The session concluded with presentation and discussion of a proposal to create GEOSS “chairs” or “professorships.”

As the first activity in this session, participants broke into three groups to review the input that GEO Task leads had provided at GEO’s May 2010 Work Plan Symposium in Pretoria, S. Africa. This input comprised responses to three questions: 1) Who are the users for your Task? 2) How have they been engaged in the last 2 years? 3) How will they be engaged in the next 2 years?

Each group was asked to review responses in 22 of the 66 Tasks listed on the spreadsheet and report any patterns observed and ideas for activities that could be included in the User Engagement Handbook that will be developed under UIC Activity 2009.4.5.

Group 1 Report

- M. Nyenhuis report for Group 1, which reviewed responses from the water, weather, and energy Tasks. (The group was also assigned science and technology Tasks, but did not get to them in the time available).
- Users described for the water and weather Tasks were primarily government and scientific organizations. There was little mention of the public (e.g., fisherman, etc.). In the weather SBA, this is perhaps in large measure because weather communication outside GEO is strongly structured, and GEO work is embedded in this structure.
- Primary mechanisms for user engagement comprised workshops, training, demonstration projects, websites, and direct contact/teleconferences.
- For energy Tasks, the primary users were government and scientific organizations, as well as private sector organizations (energy companies, etc.) and a broad spectrum of nongovernmental organizations (NGOs). Expert advisory committees were the primary user
engagement mechanisms. E. LeDrew noted that the energy Tasks tend to be driven in a
top-down fashion.

- The group proposed an activity to help Tasks reach out to a broader spectrum of users,
including the public, by establishing a UIC-guided mentoring process.

**Group 2 Report**

- G. Ondich reported for the second group, which covered architecture, data, and climate
Tasks. He noted that it was sometimes unclear how the architecture and data Tasks related
to the GCI.
- GEONET and GEONETCast were mentioned as outreach mechanisms. GEONETCast is a
delivery mechanism serving developing countries (probably mostly people associated with
universities or governments), and GEONET is a communications network that seeks to tie
together various academic networks.
- Generally, the architecture and data Tasks fit a similar pattern as described by Group 1, in
that they tended to miss the public, NGOs, and decision- and policy-makers.

**Group 3 Report**

- L. Senoko reported for Group 3, which reviewed responses from leads for biodiversity,
capacity-building, disasters, ecosystems, and health. As with other areas, these Tasks
tended to focus on existing users and organizations, such as government and academia,
and not on end users. Most activities were related to capacity building—e.g., training.
- Group members suggested several user engagement activities including: 1) copy the user
information provided in these responses into the GEO Task sheets; 2) identify models or
best practices within Tasks and disseminate them to other Tasks; 3) facilitate coordination of
regional activities; and 4) develop a visual map of users for each Task.
- M. Nyenhuis noted that the GMES Global Network of Users is currently discussing a mind
map. Stuart Marsh, Herbert Haubold, and/or M. Nyenhuis could provide more information if
this is of interest.

**Discussion**

- The group noted the general theme that the users identified by Task leads tended to be
government agencies and scientific organizations and that many Tasks did not appear to be
connecting with end users.
- Ø. Nesje pointed out that it is GEO’s job to work with and through government and scientific
organizations, so it is not surprising that these organizations would be frequently cited as
users. However, the UIC could encourage organizations to evaluate new user groups.
Meeting participants generally agreed with this suggestion.
- M. Nyenhuis thought that contact with end users was important to show GEO’s value, and
E. LeDrew suggested there would be great value to fostering availability of Earth
observations to the public (e.g., via cell phone applications that could provide tsunami and
weather alerts).
- C. Dettmann responded that, since GEO is a small organization, it could highlight examples
but should not tell scientific organizations who their users are. E. LeDrew noted that, at least
in universities, there is strong movement for community-based remote sensing. K. Fontaine
agreed it is not the UIC’s job to define user communities, but rather to help Task teams
understand that additional user groups can have value outside the original intent.
• E. LeDrew suggested that a priority activity should be helping Tasks get outside of their structured communities—for example, but connecting with NGOs.

Wrap Up

K. Fontaine wrapped up by session by summarizing the engagement techniques and suggested user engagement activities:

• Engagement mechanisms generally include workshops, training, websites, direct contact, expert advisory committees, demonstration projects, and training. User engagement sessions at conferences may be a gap.

• The following activities were suggested:
  o Establish a mentoring process to help Tasks better reach public users in weather, energy, and possibly other Task areas. This is an opportunity in the GEO context for organizations to increase the value of their investment in Earth observations work.
  o Add the user descriptions provided by Task leads in response to the UIC’s questions into the GEO Task sheets.
  o Find best practice among the Tasks to develop models that can be applied to other similar Tasks.
  o Provide UIC assistance in coordinating regional engagement activities.
  o Have each Task develop a graphic that shows the spectrum of users served by the Task and how the Task work relates to these users.
  o Review GNU products that may be relevant to the UIC’s scope to see what should be adopted into the UIC’s scope.
  o Use the CFP model.
  o Establish a professional contact point for organizations in GEO on a full-time employment basis.

• Meeting participants agreed it would be valuable to do user engagement work more routinely in UIC meetings.

Other Topics

• Task Mentors: It was noted that A. Massacand had asked the GEO committees to designate a “mentor” for each overarching Task. G. Foley and K. Fontaine emphasized that they did not feel this had value and recommended the UIC not participate.

• Request for UIC Support: M. Onoda noted that she sometimes receives requests for the UIC to serve as a bridge to users, including requests to support organizations that are involved in a proposal process to bid for contract work. The Vitrociset Group had recently contacted her at the suggestion of the European Space Agency. They are currently bidding for an ESA contract to support GEONET. After some discussion, participants agreed that, as a principle, the UIC should not respond to requests from external organizations involved in a bidding process.

GEO Chair Proposal

Participating via teleconference, T. Ranchin presented a proposal for establishing GEO “chairs” or “professorships” (see slides for details):

• One full-time professor for each GEO SBA would be appointed for a 5-year position with the role of promoting GEO and use of Earth observations within the SBA field. The professorship would be hosted by a university or organization.
• Key objectives of the position are to:
  o Conduct GEOSS-based research within a specific SBA to prove the usefulness
    of the GEOSS concept. (All sets of information/projects developed must be made
    publicly available.)
  o Develop a dedicated training program to generate students with a high
    understanding of GEOSS’ potential.
  o Diffuse information about the potential and value of GEOSS to user communities
    linked with the SBA.
• Key activities would include conducting research, providing training, and diffusing
  information via publications, etc.
• Funding would be provided by companies and/or organizations via a foundation, with
  sufficient funds to sponsor a supporting team (PhD students, post-docs).
• Questions for discussion include where the professorships would reside within the GEOSS
  structure; who will host them; how their work will be reported; and how they will link to the
  GEO Secretariat, Tasks, CoPs, and Committees.
• T. Ranchin noted that he had talked to J. S. Parihar and L. Friedl about the concept, but
  wanted UIC feedback before contacting J. Achache. He has not yet spoken with the GEO
  Science and Technology Committee about it.

Discussion

• C. Dettmann suggested changing the first objective in slide 3 to say “in order to examine/or
  assess the usefulness…..” rather than “prove the usefulness.”
• H.-P. Plag was unsure whether a university would be willing to accept private donations for
  a prescribed activity; however, E. LeDrew responded that his university did allow
  organizations to fund a position dedicated to a particular purpose, as long as the funded
  individual is free to do what he or she wants within that the defined domain. H.-P. Plag
  suggested that it might be appropriate to see whether organizations, such as UNESCO, that
  already have similar programs, would be willing to add a GEO/SS chair position.
• K. Fontaine said she could see Earth observations and their applications as a research
  subject, but found it difficult to imagine GEOSS as a research subject. T. Ranchin
  responded that the focus of each professorship would be on doing research to prove to the
  communities within that SBA that Earth observations are an important part of the solution.
• F. Pignatelli noted that a process and criteria would need to be developed for selecting the
  chairs.
• T. Ranchin said his next step would be to discuss this proposal with J. Achache and then
  refine it accordingly. The program could start with one professorship.

Action Items for “User Engagement Planning” Session

Action Item: UIC participants in Oslo should contact T. Ranchin directly by 15 September 2010
with any questions, comments, or feedback on the professorship proposal.
CoP Presentations (Moderator – E. LeDrew)

Leads (or alternates) for ten existing or emerging CoPs gave a brief update of work since the UIC’s March 2010 meeting.

Energy CoP – T. Ranchin

Thierry Ranchin (joining via teleconference) presented for the Energy CoP (see slides for details):

- Since March 2010, the Energy CoP has linked with two activities under Task EN-07-03: a project called ENDORSE, an FP7 project, scheduled to start before the end of 2010, and a project to demonstrate the concept and value of solar atlases by constructing a high-resolution solar atlas of the Provence Alpes Côte d’Azur (PACA).
  - **ENDORSE**: The acronym ENDORSE derives from ENergy DOwnstReam Services, which will provide energy components for GMES. The project will focus on 1) user-driven development of new, and/or enhancement of existing, downstream services in renewable energies; 2) regional services for sun, wind, and biomass, electricity grid management, and building; and 3) development of sustainable and transferable downstream services. The ENDORSE project is based on the idea that the energy community is mature enough to exploit Earth observation data in an efficient, replicable, and sustainable manner. The project will mine GEOSS and other Earth observation resources to develop useful downstream Earth observation-derived services, assess sustainability, and stimulate the market for these services.
  - **Solar Atlas**: To develop the high-resolution solar atlas of the PACA region, two dedicated stations have been taking direct in-situ measurements in Nice and near Marseilles, France, since July 2009. The atlas will be available by the end of 2010 to all interested parties via the web.

Geohazards CoP – H.-P. Plag

Hans-Peter Plag presented for the Geohazards CoP (GHCP) (see slides for details):

- The GHCP’s 18-21 January 2010 workshop at the UNESCO building in Paris, France, produced three main outputs: a workshop report, a draft GHCP Roadmap, and a strategic target. Since then, a key activity has been implementation of core sites.
- The GHCP reviewed the Disasters SBA in February and March 2010 and presented the results to the STC at its 13th meeting on 24-26 March 2010. Common issues were: integration of different techniques; integration of observations and models; extraction of relevant information from Earth observations; real-time/low latency networks; and development of products and information relevant for end users.
- A presentation on the GHCP was delivered at the GEOSS Session of the International Society for Photogrammetry and Remote Sensing (ISPRS) Commission VIII meeting in Kyoto, Japan, in August 2010.
- The GHCP webpage (http://www.geohazcop.org/) has been extended with additional information. J. Achache was very positive about the idea that the clearinghouse would be a GEO portal; however, the GHCP needs to clarify the border Supersites and disaster response, which are currently mixed on the CoP’s webpage.
- The Supersites Initiative held a meeting in Bergen, Norway, in June 2010 and has prepared a draft white paper, which is available for comment on the GHCP webpage. Questions/issues about this initiative include: 1) ensuring consistency with GEO data-
sharing rules, 2) ensuring interoperability of the web page, 3) quality assurance of the material on web page, and 4) implications of the fact that Geohazards Supersites Consortium creates a new structural element in GEO (interested parties have to apply for membership).

• The GHCP is preparing a proposal to the European Cooperation in Science and Technology (COST) on “Reducing Geohazards-induced Disasters through Risk Management Informed by Earth Observations.” The proposal seeks 100,000 Euro annually to coordinate implementation of the GHCP Roadmap. Six implementation working groups are being proposed in: 1) capabilities and gaps; 2) standards, protocols, data exchange, and services; 3) core sites: end-to-end approach to risk management; 4) Supersites (serving disaster reduction research with Earth observations); 5) disaster clearinghouse in support of response to major disasters; and 6) demonstration pilots.

• For the Beijing exhibition, the GHCP will provide a poster; two-page handout; slide show/video; access to the GHCP web page; and copies of the Roadmap and ISPRS paper.

Forest CoP – M. Brady

Michael Brady (joining via teleconference) reported for the Forest CoP:
• Action items from the UIC’s March 2010 meeting have been completed, and a forest page has been prepared for the CoP brochure.
• A brochure has been prepared for the GEO Forest Carbon Tracking Task (CL-09-03b). As the initial part of the Task is heavily weighted toward coordinated data acquisition, CEOS took the lead in the preparing the Task report.
• A report and presentation to GEO Plenary VII have been prepared for the Global Forest Observation Initiative, which is an extension or expansion of the Forest Carbon Task. This new initiative was introduced at GEO’s 2009 Plenary VI meeting; a progress report will be presented as a featured GEO initiative.
• Under the UIC’s US-09-01a project, the Forest Advisory Group has received and reviewed the Agriculture/Forests draft report. Report analysts have received most of the Advisory Group’s comments on that report and are preparing a final draft.
• Forest CoP members have completed reviewing several forest-related CFP proposals.
• The Forest Carbon Tracking Task has been an effective tool for bringing together the Forest CoP’s eight forest-related Tasks, which is helping to fulfill the CoP’s mandate to serve as a liaison between the GEO forest-related Tasks.

Integrated Global Water Cycle Observations (IGWCO) CoP – R. Lawford

Rick Lawford (joining via teleconference) reported for the IGWCO CoP:
• Japan will host Japanese water cycle activities in its booth at the GEO Ministerial Summit. The IGWCO CoP needs space at the UIC-sponsored CoP booth for three posters on non-Japanese IGWCO CoP activities, and will provide a brochure on the IGWCO CoP. The CoP is looking for an organization such as NASA or ESA to print the brochure.
• R. Lawford recently provided the UIC with a definition of a data center, in fulfillment of Action Item W-6. He would appreciate UIC feedback on the definition.
• The ADC’s third Architecture Implementation Pilot (AIP-3) project has a focus on water quality and drought ontologies. A presentation on this topic is being developed in coordination with the ADC.
• The CoP’s Global Drought Monitoring Group is wrestling with the challenge of developing a drought monitoring product. This could be a global product with the ability to interpret outputs of local monitoring products or a combination of national inputs from different
centers. However, many countries with drought do not have access to data to monitor locally. Some recent IGWCO CoP activities have focused on drought monitoring information requirements. Their findings may be presented by the U.S. National Oceanic and Atmospheric Administration (NOAA) if they have a booth in Beijing.

- The Asian Water Cycle Initiative is preparing a video for the 2010 Ministerial Summit.
- The African Water Cycle Coordination Initiative is moving along, albeit more slowly. The group is planning to meet in February 2011 in Ethiopia. They have invested significant effort in developing a capacity-building paper for Africa.
- In Latin and Caribbean America, work is progressing on a website. A draft report of the 2009 GEO Water Cycle Capacity-building Workshop in Lima, Peru, has been prepared in English. The final report should be ready for the 2010 Ministerial Summit.
- With respect to integrated data products, discussions are underway about preparing a proposal, in collaboration with the Global Ocean Observing System (GOOS), in response to the Framework 7 Call for Proposals.
- Each GEO water subtask has been asked to develop an integrated data product, and this is progressing albeit slowly in some cases. Soil moisture has developed an archive center. Water quality is working on a workshop report and planning another workshop. IEEE has implemented a project in India. The precipitation group is planning a meeting in October 2010, and an evapotranspiration workshop is being planned for early 2011.
- The IGWCO CoP will meet in March 2011 in Tokyo, Japan. The CoP is strengthening its ties with the Global Network on Hydrology.
- A Canadian and United States GEO (CGEO and USGEO) Water Cycle Group is actively looking at data systems in the Great Lakes region.
- The CoP has suggested names of reviewers to review water-related proposals received in response to the UIC-CBC Call for Proposals. However, some reviewers have not received proposals to review.
- R. Lawford offered to help the UIC identify potential Asian members via networking at the Beijing Ministerial and at the IGWCO CoP’s March 2011 Tokyo meeting.

**Air Quality – R. Husar**

Rudy Husar (participating by teleconference) presented progress of the Air Quality CoP (see slides for details):

- The CoP has held monthly teleconferences. Several members have presented at various meetings, including Interoperability Virtual Workshops on Data Access and Metadata; an Air Quality – GEOSS Tutorial at the Air and Waste Management Association’s (AWMA’s) International Specialty Conference in Xian, China, in May 2010; a presentation at the June 2010 meeting of the Task Force on Hemispheric Transportation of Air Pollutants (HTAP) in Brussels, Belgium; an Air Quality Community Presentation at the IEEE’s July 2010 International Geoscience and Remote Sensing Symposium in Honolulu, USA; and a Meeting on Air Quality Community Infrastructure at the Earth Sciences Information Partnership (ESIP) in July 2010 in Knoxville, USA.
- The CoP has participated in four GEO Tasks: US-09-01b (Development of Communities of Practice); US-09-01a (Identifying Priority Earth Observations for Air Quality); AR-09-01b (GEO Architecture Implementation Pilot); and DA-09-02d (Atmospheric Model Evaluation Network).
- An open, participatory website has served as a key mechanism for CoP member interaction.
- The CoP has promoted and supported the sharing of data as services and the use of standards in the GCI in a variety of ways, and is exploring how to develop a formal best practices collection.
• Challenges to the future of the CoP include GEOSS “fatigue”; the lack of an obvious benefit from CoP involvement; and a weak response from outsiders to invitations to join the CoP.

Discussion

• M. Onoda reported that a Climate and Health Foundation project on weather forecasting and health may become a GEO Task; if so, it would need Air Quality CoP support.
• G. Foley reported that Phil Dickerson may be arranging an Air Quality side event at Beijing.

Cryosphere – J. Key

Jeff Key (joining by teleconference) presented the status of the Cryosphere CoP (see slides for details):
• This emerging CoP grew from the communities associated with the World Climate Research Programme’s Climate and Cryosphere ( CliC) project and the International Council for Science (ICSU) Scientific Committee for Antarctic Research (SCAR). It expanded with the development of the IGOS Cryosphere Theme. The IGOS Cryosphere Theme Report was first presented at the 2007 GEO Cape Town Ministerial Summit.
• Countries participating in this emerging CoP include Canada, Switzerland, USA, Norway, Sweden, Finland, Germany, United Kingdom, Australia, China, Japan, Denmark, and Russia.
• The emerging CoP has one active subtask, AR-09-03b, “Legacy of the International Polar Year 2007-08.” Another subtask, “Accelerating the Implementation of the Global Climate Observing System” (CL-09-02), includes the Global Cryosphere Watch. A few other GEO Tasks address snow and ice issues at least peripherally (e.g., CL-06-01, EC-09-01).
• The WMO Global Cryosphere Watch is a key initiative for the further development of a Cryosphere CoP. This initiative is gaining momentum and visibility in WMO and, in 2011, the WMO Congress will decide whether this initiative will become a full-fledged program. (Currently, it falls under the auspices of the recently formed WMO Executive Council Panel of Experts on Polar Observations, Research, and Services.)
• Regarding cryosphere user communities, the CoP could develop stronger connections with public emergency and health officials and with local and regional environmental managers.
• The CoP participated in the March 2010 Community Forum on Snow and Ice Climate Data Records, held at the State of the Arctic Conference, in Miami, USA, and will participate in the 2nd Meeting of the WMO Expert Panel on Polar Observations, Products, and Services (PORS) in October 2010.
• The UIC can help the emerging CoP by suggesting ways to better integrate the existing cryosphere community into the GEO/SS framework; helping to connect the group with GEO activities that have cryosphere components or interests; and helping to identify gaps and suggesting ways to fill them.

Discussion

• J. Key noted that one barrier to the group becoming an official CoP is that his colleagues do not perceive sufficient benefits for the effort involved, particularly since the group is already supported by other organizations, such as CliC and SCAR. E. LeDrew offered to send J. Key the template describing how an emerging CoP can request GEO recognition.
• H.-P. Plag noted that cryosphere melt is linked to sea level rise. Governments are increasingly requesting a sea level forecasting service, and he hoped that the Global Cryosphere Watch initiative would help convince WMO that such a service is important.
Coastal Zone CoP (CZCP) – H.-P. Plag

Hans-Peter Plag presented the progress of the CZCP CoP (see slides for details):

- The CZCP webpage, an important communication tool for the CoP, is being continually updated. The “You and the CZCP” has been successful in connecting interested parties with the CZCP.
- The CZCP has regular (usually monthly) teleconferences. Agendas and minutes are publicly available.
- The 9 June 2010 CZCP Work Plan meeting was a key event with 13 participants. They concluded that the CZCP should continue to organize regional workshops, but do better pre- and post-surveys and do more to foster post-workshop application of Earth observations.
- The next (the third) regional workshop will be on “Earth Observation Support for Sustainable Tourism in Small Island States.” It will be held 9-11 March 2010 in Puerto Rico and will focus on decision-makers, including tourism providers, tourist organizations, government agencies, ecosystem experts (to speak about how tourism is impacting ecosystems), economists (to discuss how to make tourism more sustainable), NGOs, and cruise ship operators. The CZCP will seek to understand the potential Earth observation needs of these groups.
- The CZCP is planning a newsletter, to be published soon, to facilitate sharing of information among members.
- CZCP members recognize that, to be sustainable as a CZCP, they will need to attract more members by showing member benefits and broadening their activities beyond a workshop series. Candidate activities include assessment of the state of coastal zones and development of a living website that would show developing stories for each country.
- Recognizing that the current CZCP Steering Committee is heavily provider-loaded, the CoP is reaching out to include others.
- The GEO 2010 Ministerial Summit provides an opportunity to invite representatives of Asian countries, particularly small island states, to the CoP’s steering committee and workshop. At the CoP booth in Beijing, the CZCP will provide a poster, handout, slide show/video, and access to CZCP webpage.

Discussion

- C. Dettmann expressed interest in hearing the results of the third workshop and the success of the change in focus.
- E. LeDrew noted that some cultures, for example in the South Pacific, can have difficulty interpreting satellite or aerial images. Representatives from the tourism academic community may be important to invite to the workshop.

Agricultural CoP – M. Onoda

Masami Onoda reported on the progress of the Agricultural CoP for Chris Justice, Olivier Leo, Wu Binfang, and Jai Singh Parihar (see slides for details):

- The primary target for the 2015 timeframe is development of a coordinated global agricultural monitoring system of systems to provide:
  - Global monitoring of agricultural production, facilitating reduction of risk and increased productivity at a range of scales.
  - Timely and accurate national (sub-national) agricultural statistical reporting.
  - Accurate forecasting of shortfalls in crop production and food supply.
- Effective early warning of famine, enabling timely mobilization of international response in food aid.
- Global mapping, monitoring, and modeling of changes in agricultural land use, type, and distribution in their social and ecological context (land use change / climate change)

- Progress since March 2010 among the near-term (5-year) initiatives toward this target includes:
  - Multi-source Production, Acreage and Yield (PAY) database to enable objective assessment of food security and risk management planning: The database is currently being populated with national-level estimates from participating agencies (U.S. Department of Agriculture Foreign Agriculture Service; European Commission JRC Monitoring Agricultural with Remote Sensing; Institute of Remote Sensing Applications CropWatch; and the United Nations Food and Agriculture Organization) and will later be expanded to include statistics from individual countries.
  - Joint Experiments on Crop Assessment and Monitoring (JECAM): This initiative launched a website (http://www.umanitoba.ca/outreach/aesb-jecam/) in March 2010 and submitted site descriptions and data needs for the initial five JECAM sites to CEOS in April 2010 for data access considerations.

- Four CoP-related workshops are planned over the next 6 months in Asia and Europe.
- Leads for Task Ag-07-03 request UIC support to:
  - Help interface with other GEO CoPs and Tasks that can help complete the AG-07-03 subtasks goals and vice-versa.
  - Help with collection, coordination, and provision of Earth observation data from the various international systems for the JECAM experimental sites and for capacity-building workshops.

**Discussion**

- G. Stancalie mentioned a recently published report on impact of climate change and variability on European agriculture, which he thought the CoP might be interested in and could help disseminate.

**Carbon CoP – M. Onoda**

Masami Onoda reported for Antonio Bombelli on the status of the Carbon CoP since March 2010. The GEO Carbon Report has been released (the most version is dated August 2010) and is ready to be printed and distributed at the GEO Ministerial Summit.

**Health CoP – M. Onoda**

Masami Onoda reported on activities of the Health CoP:
- The CoP held its second workshop in Paris, France, on 27-29 July 2010. The approximately 25 participants, included representatives from several new partners and all but one of the GEO Health Tasks.
- The structure of the CoP was discussed, and a restructuring will be proposed.
- As an outcome of the Paris workshop, pilot projects identified in 2009 were developed into proposals for four new GEO Tasks, which have been submitted for inclusion in GEO’s Work Plan update for Plenary VII:
- HE-09-03d: Reducing Public Health Risks from Water-borne Diseases in Marine and Freshwater Environments
- HE-09-03b: Integrating Earth Observation and Public Health Communities to Predict and Reduce Incidence of Vector-Borne and Zoonotic Diseases
- HE-09-02: End-to-end Projects for Health: Surveillance, Modeling, and Prediction of Seasonal Influenza and Early Detection of Pandemic Influenza
- HE-09-02e: Health Forecasting for Public Health

- The Health CoP will have a showcase and exhibition in Beijing, including a brochure.
- A Meningitis Environmental Risk Information Technologies (MERIT) workshop will be held in November 2010.
- The next Health CoP workshop will be in January 2011, and the CoP may meet in May 2010 in conjunction with the World Health Assembly.

**CoP Guidelines – E. LeDrew**

- Ellsworth LeDrew displayed the most recent draft of the CoP Guidelines, which he had distributed to UIC members for review in August 2010.
- Meeting participants suggested several edits to the text, including adding a section on “How Can CoPs benefit from GEO?”
- Concern was expressed about overlapping interests among different CoPs.
- Participants noted that some CoPs have requested that the guidelines avoid being overly burdensome or prescriptive. R. Husar expressed particular concern about this.
- E. LeDrew will respond to comments and send a revised draft for review, with the goal of finalizing the guidelines and having them available online by the time of the Ministerial Summit.

**Action Items for “CoP Presentations” Session**

**Action Item:** By 10 September 2010, M. Onoda will work with GEO Secretariat staff to link the Air Quality CoP to the CoP page of GEO’s website.

**Action Item:** By 2 September 2010, E. LeDrew will send J. Key the template for becoming an official GEO CoP.

**Action Item:** By 10 September 2010, Gheorghe Stancalie will contact Chris Justice to let him know about the COST activity and book that will be published relevant to use of Earth observations for agricultural monitoring in Europe.

**Action Item:** By 10 September 2010, E. LeDrew and K. Fontaine will modify the introduction of the CoP Guidance document to reflect R. Husar’s concerns and send the revised draft to him for review.

**Report to GEO Plenary VII and GEO’s Executive Committee (Moderators – C. Dettmann and F. Pignatelli)**

**User Engagement Session at 2011 ISRSE Symposium**

Participants discussed a concept for a user engagement session in association with the International Symposium on Remote Sensing of the Environment (ISRSE) symposium in Sydney, Australia, in 10-15 April 2011. They agreed to submit a proposal to ISRSE for two back-to-back sessions to take place prior to the symposium:
The first will focus on the current state of affairs (e.g., What has been accomplished?). Members of existing CoPs will be invited to submit papers, which the UIC will vet. Five to seven authors will be selected to present.

The second will focus on the future (e.g., With what we accomplished, where do we go from here?) and will involve one or two panels of Earth observation users. UIC members will attend and interact with panelists in a round-table fashion.

Both sessions are proposed as part of ISRSE’s symposium program, with the UIC responsible for organizing and running them.

Oslo meeting participants agreed to this concept, and submitted a proposal to ISRSE during the Oslo meeting. According to the ISRSE symposium planning schedule, UIC will learn in October 2010 whether ISRSE has accepted the proposal. The author registration deadline is 5 January 2011. UIC members interesting in participating should block 5-7 April 2011 on their calendars.

**UIC 2011 Meeting in Vienna**

C. Dettmann reviewed plans for the UIC’s next meeting in Vienna, Austria, on 25-27 January 2011:

- The meeting will be hosted by the Austrian Meteorological Service.
- It will start after lunch on January 25th. C. Dettmann, K. Fontaine, and Gerhard Wotawa will prepare the agenda. Participants are encouraged to plan on staying until noon on 28 January 2011, if possible.
- Dates and locations for further UIC 2011 meetings will be decided at the Vienna meeting.

**Joint Committees’ Report to GEO Executive Committee**

- G. Foley will chair the next GEO committees’ joint teleconference. E. LeDrew will lead the effort to prepare the committees’ joint report to GEO’s Executive Committee, and will present the report in Beijing. Individual committees will be asked to submit their reports by 5 October 2010, so they can be compiled by the UIC co-chairs and discussed at the joint committee co-chairs’ teleconference scheduled for 7 October 2010.

**UIC Report to GEO Plenary VII**

- K. Fontaine asked all UIC members who will be contributing to the UIC’s report to GEO Plenary VII, per G. Foley’s outline, to submit their bulleted contributions by 8 September 2010. She will compile the bullets and redistribute them for comment by 10 September 2010. Comments are requested by 15 September 2010. K. Fontaine will send the final report to M. Onoda by 17 September 2010. M. Onoda will send G. Foley’s file with writing assignments to the UIC co-chairs group and Oslo meeting participants.

**Action Items for “Report to GEO Plenary VII & GEO’s Executive Committee” Session**

**Action Item;** Working with others, E. LeDrew will prepare the GEO committees’ joint report to GEO’s Executive Committee. The report will be completed by 12 October 2010.
Action Item Review – J. Connery

J. Connery reviewed the action items from the third day. She e-mailed the complete set of action items to participants for final review.

**Action Item;** All participants in the UIC Oslo meeting will review the draft action items from the Oslo meeting and send any changes to J. Connery by 8 September 2010.