



**Tenth Meeting of the  
GEO Science and Technology Committee**

**6-7 May 2009**

**Palazzo dei Congressi di Stresa  
Piazzale Europa, 3 - 28838 Stresa (VB) Italy**

**MEETING RECORD**

Purpose of Meeting: The GEO Science and Technology Committee (STC) wished to discuss and take further action on, among other things: 1) Status of STC Roadmap and the STC tasks; 2) the interaction between STC and the other GEO Committees; 3) the organization of the next STC meeting and the organization of meetings to start implementing STC tasks ST-09-01 and ST-09-02; and 4) STC role in the Ministerial Summit preparation; 5) the promotion of GEO by the STC through participation in scientific conferences and symposia.

Annex 1: Meeting Outcomes

Annex 2: Agenda

Annex 3: List of Participants

**Wednesday, 6 May 2009**

**1. Introduction**

The Co-chair from Australia, S. Minchin, opened the meeting. He formally introduced himself, since this was the first STC meeting he was able to attend in person. Minchin thanked JRC for having made this meeting possible and stated that he was looking forward to the discussion of the coming two-day meeting.

The Co-chair representative from Germany, J. Hoffmann, welcomed and thanked all participants to the STC meeting. He thanked the host to have made this meeting possible and the other Co-chairs for their energetic preparation. Hoffmann highlighted the dynamic and active role that STC has had in 2008 in preparing the STC Roadmap. Hoffmann also stressed the importance of implementing and starting the process of initiating the ST Tasks and implementing the Roadmap as concrete steps towards furthering the STC effort.

The Co-chair representative from European Commission (EC), G. Ollier, warmly thanked Hoffmann for his words and agreed on his views. Ollier noted that 2008 has been an important and fruitful year for both STC and GEO, a year in which the 2009-2011 Work Plan was successfully produced. Ollier agreed that it is now time for implementation and the next few years following the Ministerial Summit in 2010, will be key. In particular, the Ministerial Summit will be the time for demonstrating the results of GEO.

The Co-chair representative from South Africa, B. Mehloakulu, opened the meeting by thanking all participants for attending. Mehloakulu noted that South Africa was looking forward to fruitful discussions focusing on implementing the Work Plan, STC

---



Roadmap and Tasks and the Ministerial Summit preparation. She also stressed the key role that STC needs to play in this.

S. Minchin then gave a short introduction to the agenda. Nadine Gobron from COSPAR and Pai-Yei Whung from United States Environmental Protection Agency (EPA) briefly introduced themselves and expressed their interest in playing an active role in STC.

José Achache, Director of the GEO Secretariat, welcomed the new Co-chair representatives, and all participants. He expressed his optimism in GEOSS and the integration and cooperation of projects and initiatives, as it was highlighted at the International Symposium for Remote Sensing of the Environment (ISRSE). He thanked ISRSE organizers, Ian Dowman in particular from ISPRS, for making the conference a successful event and for the recognition that was given to GEO. The STC is needed in building GEOSS, as well as the UIC which plays a key role in implementing user-friendly interfaces and scaling issues of GEOSS and the CBC. In particular the STC role is to ensure delivery of information that is relevant to GEOSS in terms of scientific and technological content, as well as being reliable and accurate.

The STC role also includes making sure that projects are being implemented at a regional scale, that these efforts are broadened at a global level, and to identify the opportunity for GEOSS to become a broker of regional initiatives on a global scale. As an example, Achache mentioned the interest for creating a global consortium on water and need for the STC to make a recommendation to make this happen. Another topic on which STC needs to focus is adaptation to climate change. Achache mentioned the ongoing discussion with the IPCC to define the possible contribution of GEO to the next IPCC report, the mitigation/adaptation chapter. The World Climate Conference would be a good occasion to see GEO receiving recognition by governments for its support.

After a quick roundtable introduction, participants approved the minutes of the 9th STC Meeting as well as the agenda. Presentations from Hans-Peter Plag (IAG) and Dr. G. Hobona (Univ. of Nottingham) were added to the agenda.

## **2. Status of actions decided at the 9th STC meeting**

The Co-chair representative S. Minchin briefed the audience on the status of actions decided at the 9th STC meeting. Referring to Annex 2 (Meeting Outcomes) of the Ninth STC Meeting Report, it was noted that items 1, 3, 10, and 12 were still in process, 11 was replaced by involving the IGOS-P theme leads in the symposium organized following GEO-VI; the remainder had been closed.

## **3. GEO Activities Reports**

The Co-chair representative from South Africa, B. Mehlomakulu reported on the Reconciliation Meeting, Committees meetings, and C4 Reports.

Mehlomakulu first presented the process and goals of the Reconciliation Meeting. The GEO V Plenary mandated the GEO Secretariat to organize a Reconciliation Meeting

---



in order to align the Strategic Targets for GEOSS implementation, the 2009-2011 Work Plan, and the Monitoring and Evaluation (M&E) process.

The Reconciliation Meeting was held in Geneva on the 30th March-1st April 2009. The Strategic Targets document was commented and updated and a revised version, which includes outputs and outcomes for each of the targets, will be presented at the 15<sup>th</sup> Executive Committee in June 2009. The GEO Secretariat presented the mapping effort to align and map the 2009-2011 Work Plan tasks with the Strategic Targets. JAXA presented its effort to map tasks with the Strategic Targets, which will be included in the GEO Secretariat effort to produce a single document for reporting on Work Plan progress. The M&E working group was mandated to define parameters to measure and assess GEOSS. The M&E working group discussed the M&E process itself, in which two options were presented: an internal or independent evaluation. The Reconciliation process in fact is mandated to make sure that tasks reach outputs and produce outcomes that match with the Strategic Targets and this is fed as an input into the M&E.

The next item to be addressed by GEO is the management of Overarching Tasks. Based on discussions at the C4 and the Reconciliation Meeting, it was decided that a formal letter ought to be drafted, outlining the guidelines and expectations of the management process, with signatures between Task Leads and GEO Principals. In the discussion following the presentation made by Mehlomakulu, the point was raised that on the one hand there is the need to officially recognize Task Leaders, while on the other it is necessary to clarify expectations on and responsibilities for task leaders. In particular, the comment was made that commitments by individuals need to be somehow formalized, and that the lack of formality is currently hampering implementation of Work Plan. However, given that GEO is a voluntary effort, an additional level of bureaucracy should be avoided and in any case, the signature itself might create issues. Though the letter itself would not be legally binding, having Task Leads sign any document may be unacceptable to certain countries world-wide. Nevertheless, it was made clear that a commitment document of some sort should be produced to provide a clear understanding of the nature of the contribution that is expected by Task Leads.

The STC agreed that a Terms of Reference (ToR) document would be useful, as an attachment to the letter, with a clear statement of expectations and commitments required. The letter would be an acknowledgement of the Task Lead and it would refer to the ToR as annex.

The STC Co-chair S. Minchin summarized the concluding remarks: no one size fits all; it was agreed that a letter of acknowledgement of the Task Lead, addressed to GEO Principal, with a ToR as annex, stating clear expectations, should be sent by the GEO Secretariat. In addition, individual countries are free to take the commitment arrangement further. The STC agreed that this would be the message to be delivered by STC to the C4.

An additional suggestion as a way of improving Task management was to nominate STC Co-chairs as “Sherpas” for select SBA Overarching Tasks. This idea will be revisited at the next STC meeting.

---



#### **4. Roadmap**

The Co-chair representative from Germany, J. Hoffmann presented the STC Roadmap by describing its history, membership of the drafting team, ST strategic targets, STC Roadmap objectives and its relation with the ST tasks.

It was agreed that the main objectives of the STC Roadmap are to structure and provide guidance to STC activities and to serve as a communication tool towards the other GEO Committees and the outside world. The STC Roadmap might in the future be included in GEO Roadmap itself. It will also be presented to the Plenary, for information.

The main point is the need to verify, define and then implement the science and technology component in GEOSS. The first step would then be to review the S&T component of the 2009-2011 Work Plan and then define a process that would address this need, making sure that resources are made available by members and POs.

The first step to keeping a close relation between STC and the 2009-2011 Work Plan activities has been the addition of the ST component box within each task sheet. This facilitates the assessment of the ST component within 2009-2011 Work Plan and the identification of tasks that may need S&T input.

The STC expressed its consensus on the Roadmap and its function as a communication document for Committees and Plenary. Consequently, the Roadmap format and graphical view will need refinement, for which the Secretariat will provide assistance. The Roadmap will also be included in the GEO webpage.

It is important to highlight the strategic nature of the Roadmap itself in that it could serve as a useful reference for assessing the progress of STC activities in a year's time. A meeting to further identify activities and responsibilities might be needed.

#### **5. Task Reviews**

##### ***5.1 TASK ST-09-02: Promoting Awareness and Benefits of GEO in the Science and Technology Community***

Hans Peter Plag (IAG) presented the Task ST-09-02, its content, goals and overview of activities (the presentation is available at: [www.iag-ggos.org/geo-st0902](http://www.iag-ggos.org/geo-st0902)).

The IEEE and ICSU expressed their interest in contributing, but cannot serve as co-leads.

The ICSU contribution gives access to Unions which are connected to and working with the ICSU. The ICSU will inform all Unions, and a good opportunity for doing this is will be the Geoscience Union Meeting. The idea of having a GEO label being supported by as many Unions as possible, as a tool for marketing and mobilization was proposed.

Several events and conferences during the year would create an opportunity for improved visibility of GEO and for increasing the involvement of the scientific

---



community, such as IGARS and the Engineering, Medicine and Biology societies conference and many others. It was agreed that to expand GEO visibility in the science community, the STC needs to be involved with the organization of the GEO-IGOS symposium in November 2009, in Washington DC.

The task seemed to be well aligned with the Roadmap but it still needs additional contributions and strong leads. The EC confirmed its interest in taking the Lead for ST-09-01 and in providing strong support for the Task. David Halpern volunteered as contributor for US on this Task, and COSPAR offered to serve as Co-Lead. Hans-Peter Plag expressed his willingness to serve as Point of Contact for the Task, and proposes that IAG serve as additional Co-Lead. P. Bauer expressed the interest of François Lefeuvre – acting president of International Union Of Radioscience (URSI) also expressed interest in contributing.

To increase the number of task participants the GEO Secretariat was mandated to send a Call For Participation letter, and provide 2 weeks to respond.

Concluding remarks: - The need for a kick-off meeting, in which the discussion on the implementation of the task would take place will be determined in the next few weeks. In the meantime, Task content has been endorsed by the STC.

### ***5.2 TASK ST-09-01: Catalyzing Research and Development (R&D) Funding for GEOSS Introduction***

Kathleen Fontaine (USA, NASA) presented Task ST-09-01 by providing an overview of activities and addressing the main aspects still to be resolved regarding task content and participation.

A discussion followed the presentation focusing on how to channel resources for GEO initiatives. The point was raised that there are not yet many examples available with a clear reference to a GEO Task. The main objective should be to raise visibility of contributions to GEO from existing programs, and how these programs may be aligned with to GEO initiatives. A mapping exercise of these programs would be extremely useful. The valuable example of the European Commission (EC) in channeling resources for GEO activities needs to be taken as a reference framework to be exported and applied in other countries. S. Marsh noted this is being explored in UK; the Natural Environment Research Council (NERC) was cited as an example.

One of the main questions raised was on how to involve the private sector in this discussion, including data sharing. This topic will need to be further elaborated. It was noted that several companies in the private sector have a philanthropic arm, which would be relevant for GEO. In addition, service provider companies, such as Google, would be interesting partners to engage with. A way to better engage additional organizations would be to show the added value that GEO can provide. Finally, at the national level, the GEO label has enabled the activation of large-scale funding, by facilitating access and monitoring which is in the national interest, for example Germany and GMES which is a European contribution to GEOSS; this might be explored in Australia, as well.

---



The EC, Germany and Australia confirmed their interest in contributing to this Task. Australia also offered to host Task meetings, perhaps in September. K. Fontaine will confirm if she will continue as PoC, and the EC offered to host the first Task meeting during the summer 2009.

Finally, to better populate the participant list of both ST Tasks, the GEO Secretariat was requested to circulate a Call for Participation letter, with a response time of 2 weeks.

Concluding remarks: - the STC endorsed the task, - need for a kick-off meeting, which will be hosted by EC – GEO Secretariat would send a Call For Participation letter. The possibility of creating a third ST Task was also proposed. This third Task would aim to clearly identify research needs in all SBAs, define more carefully these needs, and assess the associated costs and the benefits to GEOSS itself.

## **6. Keynote address**

### ***Global Observation System for Mercury by Nicola Pirrone, Director of the Institute for Atmospheric Pollution (CNR)***

The keynote speech on a major scientific issue of relevance for GEO/GEOSS was given by Nicola Pirrone.

The global monitoring network for mercury is being implemented within GEO framework, by harmonizing standard operating procedures for monitoring mercury and its compounds in air, atmospheric deposition, water, soil, sediments, vegetation and biota. In the initial phase, the sharing of data from this network will allow access to data from a wide array of locations, help understand temporal and spatial patterns of mercury transport and deposition to, and evasion from, terrestrial and aquatic ecosystems. In the subsequent phase, the data produced by the network will support the validation of regional and global atmospheric mercury models.

The initiative builds upon the contributions of many organizations and GEO members such as the UNEP Mercury Programme, the Hemispheric Transport of Air Pollutants Task Force (TF HTAP), and the European Monitoring and Evaluation Program (EMEP), the US MercNet initiative, Italy, Japan and South Africa, and others.

Global Mercury Monitoring System benefited from GEO, as commented by Pirrone. Pirrone offered to present Global Mercury Monitoring System as a showcase example at Ministerial Summit Meeting in 2010.

**Thursday, 7 May 2009**

## **7. Joint meeting with User Interface Committee**

Discussion of areas for joint efforts between UIC and STC, as well as with the S&T community as a specific user of GEOSS focused on:

- UIC participation in ST-09-01 (and/or -02)
-



- Coordinating engagement of former IGOS-P theme leads (possibly linked to a discussion of how the Communities of Practice concept applies)
- Involvement of STC in CFP

Gary Foley, Co-chair of UIC, welcomed the participants and thanked all for attending. Foley also thanked the STC for organizing the joint meeting as an opportunity to exchange ideas and define areas of collaborative work.

J. Hoffmann, STC Co-chair, welcomed the opportunity of exploring possible cooperation, which could be achieved through the STC Roadmap. J. Hoffmann then went on to present the STC Roadmap to the audience. The discussion then focused on the GEO Portal testing organized by UIC at the UIC booth at ISRSE. User feedback would in fact represent the most valuable mechanism to test user satisfaction and usefulness of the Portal itself.

The main issue from an STC point of view would be to understand if the datasets available through the Portal are easily accessible for users and if the users find the datasets and applications they need. It was highlighted that the portal evaluation process at ISRSE did not go beyond acquisition of data. It was also noted that in case users were not able to find datasets needed, GEO could eventually work with providers to make those datasets available. This would be a valuable function of the STC. One key issue to address is the increase of datasets being registered with the Portal and to identify what is key.

In the end, it is the users' feedback which defines if the service provided by GEO is valuable and scientifically sound, and this feedback may eventually serve as a citation mechanism. The UIC would be of great help to connect with users to better guide the flow of information and services to public, to feed science into society and policy. The UIC would help to facilitate this process and could provide guidance for better interactions with the science community to promote better use of GEOSS products and services. The need to have a representative from the UIC to participate in both Committees was stressed.

A review of Tasks would be needed and a review of documents would also be required to authorize documents to have a GEO logo, as IGOS had. Currently, no process is in place for the endorsement of documents.

Laurence Friedl presented to the audience the UIC-CBC Call for Proposals (CFP). The CFP projects will have great value for both STC and UIC, as highlighted by Friedl. The projects will show the S&T value of GEOSS. The UIC requested support from the STC for experts to serve on the CFP project review panel as advisors, eventually one person per SBA; distribute the Call for Proposals; and encourage organizations/individuals to participate. The projects that will respond to the Call for Proposals might also be candidates for early achievement projects to be presented at the Ministerial Summit in 2010. The tasks connected to this activity are CB-09-01, and US-09-01b, which focus on developing CoPs, and engaging them by being part of review panel. Organizations as well could volunteer if there is expertise to offer; GMES services are an example. The STC role could also be to identify data and Earth observation gaps within Work Plan tasks that could be covered by a specific project.

---



The issue of Type 3 projects was raised, as it might appear a time-consuming process to write a proposal on a project which is already operational. The issue was resolved by taking into account the option of having the Type 3 proposals go directly to a full proposal stage, with no need to submit a pre-selection proposal. A special focus would be on involvement of developing countries.

The discussion next focused on UIC involvement in the ST-09-01 and ST-09-02 tasks. The STC welcomed UIC participation in ST tasks. The UIC will explore the possibility of including some activities on the STC tasks within the UIC activity plan which is being developed. A STC-UIC telecom to discuss on this further will be organized during the summer 2009. There is common ground for activities that can be carried out jointly across the ST-09-02 and US-09-01a tasks. Gary Foley volunteered to become involved in ST tasks.

The discussion focused on the STC role in CFP.

An additional role for the STC to play in the CFP would be that the STC Co-chairs could act as Points of Contact if needed. Also, the STC Co-chairs were invited to serve as CFP panel experts; Co-chair S. Minchin offered to serve in the Water and possibly in Agriculture SBA. Pai-Yei Whung offered to review Health and Agriculture SBAs.

The discussion next focused on the coordination activities with Integrated Global Observing Strategy Partnership (IGOS-P), which is expressly referred to in US-09-01b. The IGOS-P successfully transitioned into GEO and its themes are in various stages of becoming part of GEO as Communities of Practice (CoP). For example, the Integrated Global Water Cycle Observing theme (IGWCO) is acting as the science component within the water CoP; the Coastal theme is not active anymore but it became the Coastal Zone CoP (CZCP) which is a further development of the theme and is now more user-oriented.

The IGOS-P themes, now within the GEO framework, should continue their activities within the appropriate CoPs, and these in turn should develop inclusivity by building on the communities developed within the IGOS-P themes.

Hans-Peter Plag presented the Geohazards CoP and the Supersites Initiative to provide a status update, propose a way forward to re-invigorate the CoP, and ask for advice and endorsement on the proposed approach on how to proceed.

The issue of coordination within the community was raised. In particular due to lack of coordination in response to the call opened by EC on earthquake monitoring, there has been no selection of projects. The Geohazards CoP was active for many years, starting in 2004, but the coordination mechanism is now lacking. The CoP has lost its focal point which was represented by the Geohazards Bureau led by BRGM, the French Geological Survey, when it announced to cease its activities, in December 2008. The core team still remains, the proper linkages need to be re-established, and a focal point, to serve the CoP as leader, needs to be reinstated.

The discussion focused on STC participation in US-09-01a, which aims at identifying “critical Earth Observation priorities” and the process itself to identify the priorities. The STC could play an important role in specific SBAs as well as a key support in

---



initial review of reports, to provide input to the analyst involved in the task activities. Useful input could come from National Science Foundation (NSF) and Committee on Earth Observation Satellites (CEOS) documents.

### **8. STC case studies for presentation at Ministerial Summit**

Discussion centered around the need for great case studies, capable of convincing Ministers of the value of GEOSS, including key examples of where GEO/GEOSS has added value within or through the science and technology domain (e.g. topics really rooted into science like Airnow, Global Monitoring for Carbon, Supersites for Natural Hazards, and Global Monitoring of Mercury).

Listing of high probability examples, prioritization for further development

Assign writing/material preparation duties (a task force has been /will be set up for the preparation of the ministerial – so beyond preparatory work we have to wait for the input and requirements from this TF)

Douglas Cripe presented the Ministerial Summit preparation process, including the guidelines developed by C4. Overall the STC felt the guidelines needed reworking. It feared that such a process might not produce what is expected, which is the need to show the success stories of GEOSS and to involve the whole science community to have the full picture. It was also emphasized that a broader review will be carried out, and the Ministerial presentations should not be confused with the mid-term review and evaluation being planned by the M&E Working Group.

Cripe noted that the C4 document was not intended to be complete but to provide an overview. It was highlighted that a task force will be established by the Executive Committee. If the STC is asked to provide input, it will provide an S&T point of view to propose successful GEO example as showcases for the Ministerial. These showcases might also be a result of activities that are happening out of the Work Plan activities and the STC agreed these showcases should reflect the 9 SBAs. The 100 first steps presented at the last Ministerial Summit were impressive although many were not rooted within the GEO Work Plan. The showcase examples to be presented at the 2010 Ministerial should clearly demonstrate the value added by GEOSS, such as the Mercury system presented on this occasion by Pirrone.

Siri Jodha Singh Khalsa presented to the audience the Global Land Ice Measurements from Space (GLIMS) which is a project designed to monitor the world's glaciers primarily using data from optical satellite instruments, such as ASTER (Advanced Spaceborne Thermal Emission and reflection Radiometer). GLIMS might be proposed as GEO Task which would support and facilitate data sharing between organizations and countries. The GMES Satellites systems and the ESA Climate Change Initiative were presented by Einar Herland (ESA). The Environmental Protection Agency (EPA) proposals were presented by Pai-Yei Whung, focusing on EPA AirNow International and EPA initiatives in Lyme disease, earth-visualization tools for decision making and the Meningitis Environmental Risk Information Technologies project (MERIT). Hans-Peter Plag presented the Sea level rise assessment initiative and the need for developing best practices for sea level rise projections. The need for this initiative derives from a clear need to give policy

---



makers the best estimate possible on a continuous basis. GEO could play an important role in coordinating this effort. It was suggested to explore the opportunity of creating a new task to cover this initiative. The initiative could highlight findings from gap analysis to be presented at the Ministerial Summit. An additional example of GEOSS added value is the coordination and extension of networks for marine observations. The Advanced Fire Information System (AFIS) was also presented by Terry Newby. The system uses GEONETCAST, web-services and newsletter to disseminate fire information which is used both operationally and for research, as an input to model Soil Water Indices (SWI).

The STC agreed that a list of showcase examples should be developed and provided to C4 as input. In the meantime, the STC will continue to collect ideas until taskforce is established. The document prepared by C4 was unclear and the audience agreed that gaps/priorities identification is essential and a process should be established.

## **9. Functioning of GEO STC**

A letter was sent by GEO Secretariat to the GEO principals, regarding STC membership. In response to the request sent by the GEO Secretariat, new members were added, although some GEO Principals did not respond. The goal of the letter was to confirm representatives from organizations and to increase STC membership with new nominations. It turned out, however, that the response was less than anticipated. The GEO Secretariat will take an action to re-circulate the letter to all GEO Principals and STC members.

In addition the STC membership table needs to accommodate an additional column for STC representative alternates. The call for confirmation/nomination was not meant to be exclusive.

The discussion then focused on the general Review of Tasks in WP 2009-2011 (including discussion of process for reviewing tasks of Work Plan).

The process to follow for General Review of Tasks in WP 2009-2011 was not clear to the STC. The proposed approach was to focus only on SBA Tasks. It was proposed that Co-chairs would assess the Work Plan to identify several SBAs of focus. The idea of 3-4 Overarching Task (OAT) "Sherpas" was to be further explored. Several Tasks could be selected and invite PoC to deliver a keynote speech.

The idea of a Task Leaders meeting side-to side with the Plenary was proposed. In fact the Plenary would be a good occasion for such a meeting as it would be also recognition for Task Leads' work. The meeting might be held together with the Plenary or alternatively before the Plenary. An additional idea was to assign Co-chairs as Sherpas for OATs. It was also noted that it is essential that there is some sort of active reporting. At least once per year, an OAT report should be presented, most likely either in the context of an STC meeting or at the time of GEO Plenary.

The STC presence and active role in each of the Task forces and Working Groups was confirmed. Ezio Bussoletti (Italy) offered that Susanna Zerbini could participate in the M&E working group for Italy and thus create a link to the STC.

---



### **10. Plan 2009 Activities**

Discussion and definition of Committee activities Plan for 2009 GEO Schedule for 2009 List of actions for 2009-2010 time frame:

- 1.) Initiation of the two ST-Tasks (Actions on organizing Kick-Off meetings and a call on STC-Members to consider contributing).
- 2.) Actions on the STC Roadmap: To be taken up during Melbourne Meeting following a preparation of this discussion (analyzing the open issues) by STC Co-Chairs.
- 3.) J. Hoffman to organize a Teleconference on the WP review, with invitation extended to entire STC.

### **11. Any Other Business**

At the invitation of the Australian government, the next set of co-located GEO Committee meetings will be scheduled for mid-September 2009, in Melbourne. The GEO Secretariat and the C4 will decide the details on the exact dates and venue by the end of June, 2009.

The possibility of having an STC meeting at time of GEO Plenary VI in November 2009 was raised – Co-chairs will conduct confirm a teleconference to determine a date and availability by end of May 2009. Pai-Yei Whung (USA/EPA) offered to host the STC meeting at time of Plenary.

Presentations by Hans-Peter Plag and Gobe Hobona.



## ANNEX 1: 10<sup>th</sup> STC Meeting Outcomes and Action Items

### 1. Letter of intent

- Feedback to C4 is that the STC:
  - believes one size does not fit all.
  - supports some type of acknowledgement (between GEO Secretariat and GEO Principal?).
  - supports including an annex with clarification of task expectations.
  - recognizes that some organizations may want to go to point of committing but exact nature of letter will be left up to individual cases.

**Action: Stuart Minchin and Jörn Hoffmann to convey this information to C4 in Stresa.**

### 2. STC Roadmap

- Both a tool to structure STC activities and a communication tool to explain STC activities to outside world.
- Should be presented to Plenary for information.
- GEO Secretariat to post on website; develop brochure or some other means of communication (illustrations 1-2 diagrams)
- Issue of review indicators to be discussed, with report to STC for endorsement, and GEO Secretariat. (H-P. and S. Z.)

**Action: GEO Secretariat to:**

- *post on website*
- *develop brochure or other means of communication (including 1-2 diagrams)*
- *J. Hoffmann and H.-P. Plag to liaise with Secretariat to contribute ideas for a graphical presentation of the Roadmap.*

**Action: S. Minchin to initiate action on Continuity requirements by end of July 2009, including preparation of a discussion document for a joint ADC-STC session at the next GEO Committees meeting (Melbourne, September 2009).**

### 3. ST-09-01

- K. Fontaine offers to remain PoC (TBC)
- EC offers to Co-lead
- Kickoff meeting to be organized by EC (Brussels, summer 2009)

### 4. ST-09-02

- H.-P. Plag offers to remain PoC/IAG Co-lead (TBC)
- COSPAR offers to Co-lead
- Kickoff meeting to be organized by H.-P. Plag (Rome, summer 2009)

**Action: I. Dowman to liaise with GEO unions, determine level of interaction.**

**Action: GEO Secretariat to send Call for Participation letter regarding both tasks, to both STC and UIC members (15 June to respond).**

### 5. Joint UIC-STC Session

- Request from UIC for STC members to sit on CFP review panel.
    - STC Co-chairs agree to serve as PoC for filling review panel, as needed.
    - S. Minchin offers to review Water and Agriculture proposals.
-



- P.-Y. Whung offers to review Health and Agriculture proposals.
- Request from STC for UIC contributions to ST-09-01 and ST-09-02.
  - G. Foley UIC activity plan being developed.

**Action: UIC and STC Co-chairs to conduct teleconference within a month to discuss.**

- Request from UIC for STC participation in US-09-01a, particularly with report review.
  - S. Minchin offers to help with review of water reports.

#### 6. STC Membership

- Nomination and confirmation response appears incomplete.

**Action: GEO Secretariat to inform all STC membership that letter went out, requesting members to liaise with GEO Principals for confirmation/nomination.**

#### 7. Review of S&T Roadmap elements

- After commitment of STC to the Roadmap, the STC should now make sure that all activities of the Roadmap are implemented and pursued as appropriate, e.g. through the ST-Tasks. Not all elements are currently addressed, e.g. activity 1a (“Scientific Review of the Work Plan”).

**Action: J. Hoffman to chair teleconference within a month to discuss how to approach activity 1a of the Roadmap.**

#### 8. Working Groups and Task Force

- S. Zerbini to participate in Monitoring & Evaluation WG.

**Action: STC members requested to confer within representative body, check on participation on Data Sharing membership, and report potential individual to Secretariat who can play linking role with STC.**

#### 9. Report on Ministerial Process to C4

- Time frame an issue.
- Summary of ideas that were presented at STC.
- Co-chairs to identify people to present task status, around a theme, at Melbourne meetings. (August 2009)

**Action: Stuart Minchin and Jörn Hoffmann to convey this information to C4 in Stresa.**

**Action: Co-chairs to invite individual Task(s) to present status at Melbourne meeting.**

#### 10. AOB

- STC meeting at time of Plenary – Co-chairs to confirm with GEO Secretariat by end of May 2009.

**Action: GEO Secretariat to conduct follow-up teleconference with Co-chairs.**

---



ANNEX 2: Agenda

**Tenth Meeting of the GEO Science and Technology Committee**

**6-7 May 2009**

**Palazzo dei Congressi di Stresa,  
Piazzale Europa, 3 - 28838 Stresa (VB) Italy  
Tel. +39 0323 30389, Fax +39 0323 33281**

**Wednesday, 6 May 2009 – Pacific Room**

- 10:30 -11:00**      **Arrival and Registration**
- 11:00 -11:30**      **1. Introduction** (Chair: *S. Minchin*)  
Welcoming Remarks (Host - JRC, Co-Chairs, and GEO Secretariat Director)  
Round Table of Introductions  
Approval of 9<sup>th</sup> STC Meeting Record  
Adoption of the Agenda
- 11:30- 11:45**      **2. Status of actions decided at the 9<sup>th</sup> STC meeting** (*S. Minchin*)
- 11:45 – 12:30**      **3. GEO Activities Reports**  
Report on Reconciliation meeting (*B. Mehlomakulu*)  
Overarching Task Management (*B. Mehlomakulu/A. Massacand*)
- 12:30 – 13:30**      **Lunch**
- 13:30 – 14:30**      **4. Roadmap** (Chair: *G. Ollier*)  
Introduction (*Includes summary presentation of Roadmap*)(*J. Hoffmann*)  
General discussion (opinion of S&T Committee on doc)  
STC Endorsement and Commitment to Roadmap  
Publication of the roadmap (GEO Website, leaflet etc...)  
STC actions towards implementing the Roadmap
- 14:30-15:15**      **5. Task Reviews**  
**5.1 TASK ST-09-02: Promoting Awareness and Benefits of GEO in the Science and Technology Community**  
Introduction (*Includes summary presentation of Task Sheet*) (*H.-P. Plag*)  
General discussion (opinion of S&T Committee on doc)  
STC Endorsement and Commitment to Task
- 15:15 – 15:45**      **Break**
- 15:45– 16:30**      **5.2 TASK ST-09-01: Catalyzing Research and Development (R&D) Funding for GEOSS**  
Introduction (*Includes summary presentation of Task Sheet*) (*K. Fontaine*)  
General discussion (opinion of S&T Committee on doc)  
STC Endorsement and Commitment to Task
- 16:30 – 17:30**      **6. Keynote address: “Global Observation System for Mercury”**  
**Nicola Pirrone, Director**  
**CNR Institute for Atmospheric Pollution**      (Co-chair: *E. Bussoletti*)  
new topic introduced in the GEO 2009-2011 Work Plan
- 17:30**              **Adjourn**
-



**Thursday, 7 May 2009 – Pacific Room**

- 11:00 – 13:00**    **7. Joint meeting with UIC** (*Chairs: B. Mehlomakulu and G. Foley*)  
STC - Presentation on STC Roadmap and tasks ST-09-01 and ST-09-02 (*Jörn Hoffmann*)  
UIC - Presentation on CFP (*Lawrence Friedl*)  
Discussion of areas for joint effort between UIC and STC and the S&T community as a specific user of GEOSS (*B. Mehlomakulu and G. Foley*):
- UIC participation in ST-09-01 (and/or -02)
  - STC participation in CFP
  - Coordinating engagement of former IGOS-P theme leads (possibly linked to a discussion of how the Communities of Practice concept applies)
  - STC participation in US-09-01a
- 13:00-14:00**    **Lunch**
- 14:00 – 15:30**    **8. STC case studies for presentation at Ministerial Summit**  
(*Chair: J. Hoffmann*)  
Introduction (Including “Proposed process for preparing the 2010 Ministerial Summit”) (*B. Mehlomakulu*)  
Discussion around the need for great case studies, how to convince Ministers of case for GEOSS, including key examples of where GEO/GEOSS has added value within or through the science and technology domain.  
Listing of high probability examples, prioritization for further development.
- 15:30 – 16:00**    **9. Functioning of GEO STC**  
STC Membership (result of the nomination/confirmation exercise) (GEO Secretariat)  
General Review of Tasks in WP 2009-11 (including discussion of process for reviewing tasks of Work Plan)  
Participation in Task forces and Working Groups
- 16:00-16:30**    **Break**
- 16:30– 17:30**    **10. Plan 2009 activities**  
Discussion and definition of Committee activities Plan for 2009  
GEO Schedule for 2009  
List of actions for 2009-2010 time frame.
- 17:30 – 18:00**    **11. Any Other Business**  
Date and Place of Next Meetings
- 18:00**            **Adjourn**
-



Annex 3: List of Participants

#	First Name Family Name	Representative of	Email address
1)	<b>Achache</b> , José	GEO Secretariat	<a href="mailto:jachache@geosec.org">jachache@geosec.org</a>
2)	<b>Alameh</b> , Nadine	OGC	<a href="mailto:nadinesa@mobilaps.com">nadinesa@mobilaps.com</a>
3)	<b>Baker</b> , Charles S.	NOAA	<a href="mailto:Charles.S.Baker@noaa.gov">Charles.S.Baker@noaa.gov</a>
4)	<b>Bauer</b> , Pierre	France	<a href="mailto:Pierre.Bauer@meteo.fr">Pierre.Bauer@meteo.fr</a>
5)	<b>Béroud</b> , Florence	EC	<a href="mailto:Florence.Beroud@ec.europa.eu">Florence.Beroud@ec.europa.eu</a>
6)	<b>Bozzano</b> , Roberto	EuroSITES	<a href="mailto:bozzano.roberto@libero.it">bozzano.roberto@libero.it</a>
7)	<b>Bussoletti</b> , Ezio	Italy	<a href="mailto:Bussoletti.Ezio@minambiente.it">Bussoletti.Ezio@minambiente.it</a>
8)	<b>Cardin</b> , Vanessa	EuroSITES	<a href="mailto:vcardin@ogs.trieste.it">vcardin@ogs.trieste.it</a>
9)	<b>Carter</b> , Sarah	EPA	<a href="mailto:Carter.Sarah@epamail.epa.gov">Carter.Sarah@epamail.epa.gov</a>
10)	<b>Craglia</b> , Max	EC	<a href="mailto:massimo.craglia@jrc.it">massimo.craglia@jrc.it</a>
11)	<b>Cripe</b> , Douglas	GEO Secretariat	<a href="mailto:dcripe@geosec.org">dcripe@geosec.org</a>
12)	<b>Dowell</b> , Mark	EC	<a href="mailto:mark.dowell@jrc.ec.europa.eu">mark.dowell@jrc.ec.europa.eu</a>
13)	<b>Dowman</b> , Ian	UK	<a href="mailto:idowman@cege.ucl.ac.uk">idowman@cege.ucl.ac.uk</a>
14)	<b>Foley</b> , Gary	EPA	<a href="mailto:Foley.Gary@epamail.epa.gov">Foley.Gary@epamail.epa.gov</a>
15)	<b>Fontaine</b> , Kathleen	NASA	<a href="mailto:Kathleen.S.Fontaine@nasa.gov">Kathleen.S.Fontaine@nasa.gov</a>
16)	<b>Friedl</b> , Lawrence	NASA	<a href="mailto:lfriedl@nasa.gov">lfriedl@nasa.gov</a>
17)	<b>Gobron</b> , Nadine	COSPAR	<a href="mailto:nadine.gobron@jrc.it">nadine.gobron@jrc.it</a>
18)	<b>Grasso</b> , Veronica	GEO Secretariat	<a href="mailto:vgrasso@geosec.org">vgrasso@geosec.org</a>
19)	<b>Greb</b> , Steven	State of Wisconsin	<a href="mailto:Steven.Greb@Wisconsin.gov">Steven.Greb@Wisconsin.gov</a>
20)	<b>Halpern</b> , David	NASA	<a href="mailto:david.halpern@nasa.gov">david.halpern@nasa.gov</a>
21)	<b>Herland</b> , Einar- Arne	ESA	<a href="mailto:Einar-Arne.Herland@esa.int">Einar-Arne.Herland@esa.int</a>
22)	<b>Hobona</b> , Gobe	OGC	<a href="mailto:Gobe.Hobona@nottingham.ac.uk">Gobe.Hobona@nottingham.ac.uk</a>



Science & Technology Committee

#	First Name Family Name	Representative of	Email address
23)	<b>Hoffmann, Jörn</b>	Germany	<a href="mailto:Joern.Hoffmann@dlr.de">Joern.Hoffmann@dlr.de</a>
24)	<b>Koike, Toshio</b>	Japan	<a href="mailto:tkoike@hydra.t.u-tokyo.ac.jp">tkoike@hydra.t.u-tokyo.ac.jp</a>
25)	<b>Lawford, Rick</b>	USA	<a href="mailto:Lawford@umbc.edu">Lawford@umbc.edu</a>
26)	<b>LeDrew, Ellsworth</b>	IEEE	<a href="mailto:ells@watleo.uwaterloo.ca">ells@watleo.uwaterloo.ca</a>
27)	<b>Lefevre, Russell</b>	IEEE	<a href="mailto:r.lefevre@earthlink.net">r.lefevre@earthlink.net</a>
28)	<b>Marsh, Stuart</b>	UK	<a href="mailto:shm@bgs.ac.uk">shm@bgs.ac.uk</a>
29)	<b>Mehломakulu, Boni</b>	South Africa	<a href="mailto:boni.mehломakulu@dst.gov.za">boni.mehломakulu@dst.gov.za</a>
30)	<b>Minchin, Stuart</b>	Australia	<a href="mailto:stuart.minchin@csiro.au">stuart.minchin@csiro.au</a>
31)	<b>Mokrane, Mustapha</b>	ICSU	<a href="mailto:mustapha@icsu.org">mustapha@icsu.org</a>
32)	<b>Mudau, Humbulani</b>	South Africa	<a href="mailto:Humbulani.Mudau@dst.gov.za">Humbulani.Mudau@dst.gov.za</a>
33)	<b>Nesje, Øystein</b>	Norway	<a href="mailto:Øystein.Nesje@md.dep.no">Øystein.Nesje@md.dep.no</a>
34)	<b>Newby, Terry</b>	South Africa	<a href="mailto:Terry@ARC.AGRIC.ZA">Terry@ARC.AGRIC.ZA</a>
35)	<b>Obersteiner, Michael</b>	IIASA	<a href="mailto:oberstei@iiasa.ac.at">oberstei@iiasa.ac.at</a> <a href="mailto:mobersteiner@geosec.org">mobersteiner@geosec.org</a>
36)	<b>Ollier, Gilles</b>	EC	<a href="mailto:Gilles.Ollier@ec.europa.eu">Gilles.Ollier@ec.europa.eu</a>
37)	<b>Plag, Hans-Peter</b>	IAG	<a href="mailto:hpplag@unr.edu">hpplag@unr.edu</a>
38)	<b>Rasolondraibe, Noasilalao</b>	Madagascar	<a href="mailto:noasilalao@yahoo.fr">noasilalao@yahoo.fr</a>
39)	<b>Romero, José</b>	Switzerland	<a href="mailto:Jose.Romero@bafu.admin.ch">Jose.Romero@bafu.admin.ch</a>
40)	<b>She, Jun</b>	Denmark	<a href="mailto:js@dmi.dk">js@dmi.dk</a>
41)	<b>Whung, Pai-Yei</b>	USA	<a href="mailto:Whung.Pai-Yei@epamail.epa.gov">Whung.Pai-Yei@epamail.epa.gov</a>
42)	<b>Zerbini, Susanna</b>	IAG	<a href="mailto:susanna.zerbini@unibo.it">susanna.zerbini@unibo.it</a>