

**Thirteenth Meeting of the GEO Science and Technology Committee
The Scientific and Technological Research Council of Turkey (TÜBİTAK), Ankara
24th – 26th March 2010**

Outcomes / Actions

1. Introduction

12th STC Meeting Record approved, with changes recommended by D. Halpern
Version 11 of the 13th STC meeting agenda approved.

Action: D. Cripe to make changes and post on GEO website. [31 March]

2. Status of Actions

Most items are closed. Those remaining open will be closed as a result of 13th STC meeting, with the exception of the Water SBA review, to be presented at the 14th STC meeting in Pretoria on 20 May, 2010.

3. Report on ST-09-01

Questionnaire for task leads has been developed and will be circulated to all task leads prior to the Work Plan Symposium. Questions relate to S&T components of the tasks and grew out of the observation that S&T questions on the task sheets have been largely ignored. Questionnaires could also be used to influence template for Work Plan Symposium interviews with goal of having responses form part of WP presentations at Symposium.

Essentially 3 components to task review process:

- US-09-01a activity.
- Individual task reviews (under ST-09-01 and Roadmap Activity 1a)
- ESA external panel review for IGFA

Action: Task PoC (K. Fontaine) to include Italian Space Agency as task contributors. [30 April]

Action: D. Cripe to circulate questions to full STC. [25 March]

Action: EC (F. Bérout), ESA (J. Béquignon), US (K. Fontaine) to write letter to all task leads requesting response to questions. Answers to be provided via email. [15 April]

Action: K. Fontaine responsible to set up team for processing surveys comprised of task team, GEO Secretariat, and EC volunteers. [31 March]

Action: Secretariat experts to update SBA pages. [31 March]

Action: Survey to be followed up by interviews: ST-09-01 (K. Fontaine) to prepare an interview guide and a list of interviewees, gets together with the GEO Secretariat and the ST-09-01 Task Team to assign interview partners [30 April]. Missing answers to be communicated to STC for STC members to offer to fill the residuals.

Recommendation: Secretariat Work Plan Coordinator should perform routine checks on this as part of Work Plan update.

4. Report on ST-09-02

• **Activity 2:**

Still pending a lead; also there have been problems with the GCI registration process.

• **Activity 3:**

- Good basis now to produce material for promoting GEOSS.
- Slides for GEO presentations are available from Secretariat experts on case-by-case basis.
- Need to identify appropriate outlet for compelling examples of how GEOSS serves S&T community, perhaps as publication for Ministerial summit.

• **Activity 4:**

Mechanism to promote transition from research to operational still not identified.

- **Activity 5:**

- Although attendance (60-70) was not as high as expected, feedback from AGU GEO/GEOSS Town Hall session has been largely positive.
 - This approach to promoting GEO/GEOSS in the science community may take some time, but ST-09-02 Task Team consensus is activity worth pursuing.
- GEO label concept still not clear – means many things to many people. Need to develop a workable definition in order to move forward.

Action: S. Minchin and J. Hoffmann to elaborate GEO label in a 1-page concept paper. [30 April]

To be communicated and agreed with STC via email by co-located Meetings. [20 May 2010]

Action: D. Cripe to determine why non-member contributors and Task leads are disappearing from task sheets. [31 March]

Action: STC Co-chairs should bring question of independent expert participation in Committees under Rules of Procedure 5.3 as a gray area to the Executive Committee for clarification. [30 June]

Keynote presentation

Extensive work being done in Turkey with regard to earthquake preparedness and early warning systems could form key part of seismic work being done under GEO framework. Turkey could also learn from work being done in other countries as well as share expertise, and would make good contribution to Supersites initiative. Turkish participation in GEOSS through registering data in GCI, engaging with DI-09-01b, and participating in Geohazards Community of Practice is greatly encouraged.

5. Report on STC Roadmap

- **Activity 1b: Review indicators**

Currently there is no mechanism for tracing reliability of the many different data sets contributed to GEOSS. Need to find a standardized way of describing peer-review processes associated with contributed data sets. CEOS and M&E framework may be doing some work on this, but it is not clear.

Action: ST-09-02 Task Team to address review indicators with task leads by means of questionnaire to be distributed prior to the Work Plan Symposium. [15 April]

- **Activity 1c: Assessing the requirement for continuity and long-term monitoring**

Conclusion of the Committees Co-chairs is that the GCI is not ready to implement a mechanism for this. At a higher level, it is difficult to advocate for continuity since there is some confusion over the term “continuity.” Feedback from user groups is needed to ascertain which parts of GEOSS are providing operational value to decision makers.

Action: S. Minchin and K. Fontaine to initiate process to move forward by drafting 1-page concept paper. [April 30]

- **Activity 2c: Promotion of GEO/GEOSS at major scientific symposia.**

See comments under Activity 5, ST-09-02 above. Potential upcoming symposia identified: ISRSE, IUGG, IEEE (IGARS, AEROSPACE), INSPIRE, IUGS, IAG (Wegener), ISPRS, COSPAR, and TÜBİTAK.

Action: S. Minchin to organize GEO/GEOSS session at ISRSE meeting in Sydney in April, 2011. (Note: possibility to organize STC meeting simultaneously.) [31 July]

Action: H-P. Plag to request full STC membership to identify relevant meetings and potential convener for GEO/GEOSS sessions. [15 April]

Action: D. Cripe to request Secretariat Experts to identify relevant meetings and potential convener for GEO/GEOSS sessions. [15 April]

- **Activity 2d: Showing GEOSS at work**

Collection of compelling examples is an on-going activity. Need to start thinking in terms of outlet – publications? GEO newsletter? website? Need to aim for convergence soon if aim is to present something at Ministerial.

Action: H-P. Plag to suggest process with deadline for distribution to STC membership. [15 April]

- **Activity 2f: Identify key commercial partners**

Being handled under ST-09-01, timing is fine. However, there appears to be reticence on the part of the Executive Committee to tackle this issue and provide guidance.

- **Activity 2g: Catalyze research and development funding.**

Being handled under ST-09-01, preliminary list has been assembled.

Action: J. Hoffmann to update the Annex of the Roadmap according to the decisions made. [30 April]

6. Implementing the Revolving Science Plan Review

- **Activity 1a: Work Plan review**

ESA discussed with IGFA – feeling was that ST issues were not adequately integrated in Work Plan. In response, ESA is preparing a review report in conjunction with an independent panel of people. Not yet complete, but panel should soon start looking at the Work Plan.

Recommendation: STC accepted ESA Work Plan review proposal in response to IGFA, though not perfectly aligned, as a *first step* in line with Activity 1a for the longer-term review. ST-09-01 takes responsibility for implementing this Roadmap Activity through the current ESA-panel action and the survey done by the Task.

Action: STC Members to contact J. Béquignon with more panel member suggestions. [April 30]

7. Proposal for an STC report on how GEOSS will advance S&T

Report premise is that Earth is an interconnected system and all SBA challenges can be met by GEOSS through correct science and technology in Earth observations. Identification of these challenges will be based on work done by ICSU's Earth System Visioning Process (ESVP) and other existing GEO documents, such as the GEOSS Strategic Targets. The significance of the proposed report will be integration and interpretation of this information, as shown in pyramid diagram of the by David Halpern. Complementarity between the proposed STC report and ESVP should be ensured through consultation and coordination between the two processes which will be the responsibility of D. Halpern and G. Glaser. The suggestion was made that G. Glaser sit on the STC report writing team, and D. Halpern sit on the ESVP writing team. STC agreed that the report has to build on relevant documents, including the Strategic Targets, the Report prepared under ESA-lead under ST-09-01, the Implementation Plan Reference Document and the current GEO Work Plan (all available at the GEO website). Suggested title: "How GEOSS will Advance Global Integrated Earth System Science and Technology."

Recommendation: STC thanks D. Halpern for proposal and endorses the proposal with D. Halpern as Chair of the Writing Team. The STC notes that short updates should be delivered at each STC meeting, and the report will be considered as a US contribution to ST-09-02. The STC also requests that the Writing Team composition as well as the first and final drafts of report be submitted to the STC for review.

Action: D. Halpern is requested to inform the STC of composition of Writing Team as soon as possible (via email to co-chairs, review can be done off-line). [31 August]

8. SBA Theme Session: Disasters

- **DI-06-09: Use of Satellites for Risk Management**

The PoC responded that there were no S&T issues in task.

Action: S. Marsh, as Co-chair of STC, to follow up on clarification of response from PoC. [30 April]

- **DI-09-01a: Vulnerability Mapping and Risk Assessment**

Activities are not responding to task description but rather focusing on one person's research.

Action: D. Cripe / Geohazards Community of Practice (GHCP; H-P. Plag) to review with new Secretariat Disaster expert and PoC respectively, to discuss ways of broadening task.

- **Supersites:**

Approach Amelung et al. to discuss: 1) integration of Supersites, 2) the issue of every disaster becoming a SuperSite, 3) establishing a clearinghouse (especially as a way to broaden task) in the context of Ministerial Showcase. GFZ possibly interested in contributing at the over-arching level, identify who could be task lead.

Action: GHCP (H-P. Plag) to liaise with PoC to consider how to better integrate into and broaden task (issues: handling task as a whole, establishment of clearinghouse).

Action: K. Fontaine to liaise UIC with issue of CoPs supporting tasks. [30 April]

- **DI-09-01b: Seismographic Networks Improvement and Coordination**

Task proceeding, PoC responsive.

Action: H-P. Plag to check that task dissemination systems interface with GCI. [30 April]

- **DI-09-02a: Implementation of a Multi-Risk Management Approach**

Task PoC not even aware of task, nor that she was task lead; provided no response to S&T questionnaire.

Action: S. Marsh to approach other Task Leads to get their views. Seek alternative POC from within that group. If no interest, identify new Task Lead within GHCP. [30 April]

Action: S. Marsh to provide input to STC Co-chairs for 19th Executive Committee report on issue of non-responsive Task Leads (e.g. DI-09-02a – WMO lead had no clue; DI-09-03a – negative response from IOC). [31 May]

- **DI-09-02b: Regional End-to-End Disaster Management Applications**

Task proceeding, PoC responsive.

Action: K. Fontaine to ask PoC (G. Seguin) how dissemination systems interface with those of GCI. [30 April]

- **DI-09-03a: Tsunami Early Warning System of Systems**

Task PoC negative with respect to task, deeming it duplicative and unnecessary. No response to S&T questionnaire.

Action: H-P. Plag to clarify with IOC Chairman whether PoC view reflects the IOC's position. Escalate if necessary by asking GEO Secretariat Director to speak with IOC Principal. [30 April]

- **DI-09-03b: Implementation of a Wildland Fire Warning System at Global Level**

Task proceeding, S&T questionnaire identified a technology issue: there is a need for more frequent MODIS-class observations for success of this sub-task.

Action: S. Marsh to check with PoC about links to countries not listed on Task Sheet (e.g. S. Africa). [30 April]

General:

S&T issues identified that are common to several sub-tasks:

- Integration of different observing techniques
- Integration of observations and model output
- Extraction of relevant information from observations
- Real-time low latency networks
- Product and information relevant for end users

Could be addressed through targeted workshops (integration of observing techniques) and improved coordination of efforts (enhanced real-time networks).

Action: H-P. Plag to place Disaster survey responses on local website and notify K. Fontaine when available. [30 April]

Action: H-P. Plag and S. Marsh to write summary paper based on Disaster analysis, addressing issues specific to this SBA. [30 April]

Action: GHCP (S. March) and TÜBİTAK (T. Özalp) to discuss ways to integrate TÜBİTAK activities presented into GHCP. [30 April]

Action: K. Fontaine to raise experience with Disaster review with UIC and discuss possible roles of the CoPs in reacting to such problems. [20 May]

Action: Co-Chairs to raise experience with Disaster review and the implications for the standard reporting on the Tasks in next report to Executive Committee. [30 June]

STC notes that Turkey will consider hosting a future meeting of the GHCP for this region.

9. GEOSS Evaluation Survey

J. Adamec of the GEOSS Evaluation Team, part of the GEO M&E Framework, gave a brief overview of the GEOSS Evaluation Survey. The Team has been conducting an online survey to collect feedback on the implementation of GEOSS at the mid-point of the 10-year implementation plan. The survey is open to anyone and seeks the surveyee's perspective on certain aspects of GEOSS implementation and progress. Over 200 responses have been gathered to date, with about 3 times that many hits at the website. Results are still being analysed, thus too early to provide any initial results.

Action: D. Cripe to request full STC membership to complete survey. [9 April]

10. GEO Developments

• *Improving Committee-Secretariat Relationship.*

STC notes that since this issue was identified by the Executive Committee, as far as STC is concerned, the relationship has been greatly improved and the Committee is satisfied with level of Secretariat support and responsiveness. However, the STC notes that having Secretariat experts handle administrative tasks and serve as secretary during Committee meetings is perhaps not the best use of Secretariat expertise. Note-taking, minute drafting, etc, distracts from expert participation and could be handled by interns or support staff provided by hosting agency.

Action: S. Minchin with Co-chairs to draft a position paper on STC-Secretariat interaction, with a range of strategies regarding most pertinent use of GEO Secretariat SBA experts in Committee meetings. [30 June]

• *Ministerial Preparation*

The STC noted recommendations from the 18th Executive Committee, with special emphasis to be placed on the areas of Food Security, Water, Agriculture, and Data Sharing. The STC is particularly interested in shaping the Supersites initiative into an integrated whole, as a showcase demonstration of the GEO coordination framework. With respect to suggested showcases, the STC has named members to track their progress and ensure appropriate scientific input.

- Supersites: Geohazards Community of Practice (GHCP) through S. Marsh and H-P. Plag
- Asian Water Cycle Initiative: S. Minchin
- GEOBON: G. Glaser
- End User: S. Fritz
- Carbon: R. Lefevre, G. Ollier
- Health: P-Y. Whung and M. Radtke

Feedback requested from these members to the STC in the form of periodic reports to 1) ensure no Showcase is falling through the cracks from the S&T perspective; 2) solicit expertise on particular matters, if necessary.

The STC presence at the Ministerial was also discussed. Several ideas including: 1) a booth dedicated to STC; 2) materials or posters available at a central location (i.e. GEO booth and 4 Committees booth); 3) forgoing a booth and concentrating on the S&T aspects of showcase candidates that were not selected.

With respect to this last point, some type of promotion/presence of showcase candidates not selected by the Summit Task team is needed. Suggestion is to contact Summit Task team to determine if this issue is being addressed. Also, showcase candidates not selected should be contacted to determine their input on promotional possibilities.

Action: F. Bérourd to contact G. Ollier regarding nature of exhibition for non-selected showcase candidates and inform H-P. Plag. [15 April]

Action: H-P. Plag to contact non-selected showcase candidates to determine interest and best method to present showcase under auspices of STC. [30 April]

Work Plan Symposium

Concern expressed over planning process. STC notes apparently no organizing committee has been formed to prepare WP Symposium, as was the case for IGOS-P. The organization mechanism is not transparent and feeling is Task leads are not interested because they have not been consulted in the planning. Task leads could be requested to provide responses to S&T-type questionnaire well in advance of Symposium so that

analysis can be performed during the Symposium. There is a need for a WP symposium template to guide how task analysis should be performed.

Action: D. Cripe to follow-up with Secretariat on process for Work Plan Symposium planning. [15 April]

11. Proposal for a First Assessment Report on the state of global EO

Proposal is for an Intergovernmental Panel on Earth Observations (IPEO) to produce an IPCC-type assessment report of the state of Earth observations globally. Key question is whether we really know what is in the “cockpit of planet Earth” and if we know what the warning signs of impending disaster are. For example, sea level rise is being widely recognized as a major threat. Since we cannot predict with any certainty what will happen, EOs are increasingly important to monitor this closely. Thus, the world needs EO, and the report aims to outline why. Proposal widely supported and STC notes that GEO is the right framework for this. However, concern expressed that IPCC-type report may not be the best model because 1) IPCC report is an assessment of current knowledge; what is proposed here is an assessment of the state of a scientific tool; 2) Convening a panel on Earth system observation science may be too narrowly defined; 3) do not see this as a standing panel. Thus, there is the need to discuss modalities and make sure there is an interaction with activities of current research programs.

Recommendation: STC thanks H-P. Plag and endorses proposal. However, proposal should be reworked to broaden scope in light of concerns raised above. Goal should also be to bring proposal before Ministerial to request that GEO convene a panel to perform a first assessment report. Thus report needs to stress why EO are important while informing governments where gaps are for the future.

Action: H-P. Plag to review 2010 Baseline initiative for potential overlap. [30 April]

Action: STC supports proposal, with modifications, and will work to advance through appropriate channels (e.g. Summit Task Force, Executive Committee). [30 April]

Action: Co-chairs requested by STC to help rework proposal. [30 April]

12. AOB

Actions: G. Glaser, D. Halpern, H-P. Plag requested to coordinate efforts and provide S. Marsh with global outline of their proposals. [31 July]

Action: S. Marsh to review and compile overviews into a report for STC. [31 August]

Action: Co-chairs to work with Secretariat to determine date and venue for full STC meeting during September (full STC meeting will *not* be held during the week of GEO-VII Plenary and Ministerial Summit). [30 April]

Recommendation: For the future, in line with request from the Executive Committee, the STC will plan to convene 2 full meetings per year: dedicated in the spring, co-located with other GEO Committees in the autumn. A potential third STC meeting during the week of GEO Plenary will be decided on an as-needed basis.