



GROUP ON  
EARTH OBSERVATIONS

## GEO-VII

3-4 November 2010

Report of the Science and Technology Committee

Document 15

For information.



## Report of the Science and Technology Committee (STC)

### 1 IMPLEMENTATION OF THE SCIENCE AND TECHNOLOGY ROADMAP

The STC reviews on a regular basis implementation of the Science and Technology Roadmap. Many activities have fallen behind schedule due to: (i) somewhat ambitious expectations in the initial schedule; and (ii) insufficient resources available to Tasks ST-09-01 and ST-09-02, which are implementing many of the activities. The STC has adjusted the schedule and updated the Annex of the Roadmap<sup>1</sup> accordingly. There is a good prospect that additional resources will be available for STC members to pursue many of these activities during 2011. STC also took action to advance the implementation of activities that had not yet been addressed appropriately.

The STC highlights five developments of Roadmap implementation:

#### 1.1 Scientific review of the GEO Work Plan

In contributing to Task ST-09-01, the European Space Agency has prepared a report that:

- identifies and prioritizes key science issues that need to be addressed to complete the GEOSS Implementation Plan, and,
- evaluates the benefits expected for science and technology from a fully-deployed GEOSS.

The report is expected to be finalized prior to the GEO-VII Plenary.

#### 1.2 Compiling scientific needs and priorities of the Tasks

Task ST-09-01 is currently compiling scientific resource and continuity needs of all GEO Tasks. This activity will result in a consolidated set of research and development needs that presently prevent a Task from successfully achieving its objective. An initial attempt to obtain the necessary information from the Tasks through dedicated science and technology questions embedded in the Task Sheets was unsuccessful. In response, the ST-09-01 Task Team developed a questionnaire, which was distributed to the Task Points of Contact. Of these, fewer than 10% were returned. The Task Team is now following up directly (in person) with the remaining Points of Contact to obtain answers. This activity is expected to conclude by the end of 2010.

#### 1.3 Development of a GEO Label

The STC has proposed establishing a GEO Label, which would provide: 1) valuable information to users of GEOSS (to help judging quality and reliability of GEOSS components and services); and 2) an incentive for GEOSS providers to register their services and data. Importantly, the GEO Label would indicate recognition by GEO, not attribution to GEO. Its use by contributors would be fully voluntary. Resources for this work are becoming available through the EGIDA project funded by the European Commission. The GEO Committees have agreed on a process to develop the concept further. This activity falls under ST-09-02 and will be delivered through collaboration between ADC, UIC and STC.

---

<sup>1</sup> Available at [http://www.earthobservations.org/documents/committees/stc/stc\\_roadmap\\_20100505\\_annex.pdf](http://www.earthobservations.org/documents/committees/stc/stc_roadmap_20100505_annex.pdf)

#### **1.4 Review indicators and continuity indicators**

The Science and Technology Roadmap includes activities to implement indicators on GEOSS data and services quality and continuity. The joint Committee meeting accepted a high-level implementation strategy for these indicators and assigned responsibilities for overseeing their implementation. The Committees agreed that the Architecture and Data Committee (ADC) would lead the development and implementation of these indicators with contributions from the User Interface Committee (UIC) and the STC.

#### **1.5 Outreach to scientific communities at conferences**

To better engage scientific user communities, Task ST-09-02 has been organizing GEOSS sessions at select scientific conferences. For example, this effort led to a “Union Session” at the 2009 Fall Meeting of the American Geophysical Union. A list of relevant conferences has been compiled by ST-09-02.

### **2 REVIEW OF THE SOCIETAL BENEFIT AREAS “DISASTERS”, “WATER”, “BIODIVERSITY” AND “ECOSYSTEMS”**

The STC has continued its process of reviewing sub-tasks within Over-arching Tasks of each SBA to identify and assist with scientific or technical issues. Following an overview of the SBA to provide context, the Committee received reports at the sub-task level under the “Disasters” and “Water” SBA at its 13<sup>th</sup> and 14<sup>th</sup> meetings, respectively. At the 15<sup>th</sup> meeting both the “Ecosystems” and “Biodiversity” SBAs were reviewed. The review resulted in the identification of a number of scientific issues on which actions were taken. These reviews also revealed several fundamental issues:

#### **2.1 Inactive sub-tasks**

Some sub-tasks appeared to be completely inactive. The corresponding Task sheets were either empty, had only marginal content, or had not been updated for a long time. The Task leads of these sub-tasks were either unresponsive or unaware of their role.

#### **2.2 Reporting through Task sheets ineffective**

With few exceptions, Task sheets were incomplete. Although updates are requested bi-annually by the Secretariat, many Task sheets did not contain enough information to assess current progress of the sub-task. Of particular relevance to the STC was the fact that almost none of the Science and Technology Sections of the Task sheets were completed.

#### **2.3 Lack of Management at sub-task level**

In many cases, the identified Task Leads did not feel responsible for their sub- task as a whole. Typically, the Task Leads led projects that were listed as contributions to the sub-task. While these Task Leads may be knowledgeable and report on their own projects, they almost never appeared to feel responsible for any sub-task elements beyond the scope of their project. In some cases, the SBA review identified large parts of a sub-task were not addressed at all. Furthermore, the STC had substantial difficulties to get *any* response from some Task Points of Contact.

#### **2.4 Progress reports not indicative of management issues**

The issues encountered above were not identified in the Work Plan progress reports prepared by the GEO Secretariat. For example, a number of sub-tasks were identified as having an empty Task Sheet, a non-responsive Task Lead or only addressing a very small component of the sub-task, yet the corresponding Overarching Tasks were reported as “green” or “yellow” in the Work Plan progress report. While recognizing that portrayal of Overarching Task progress comprises a blend of its

constituent sub-tasks, the STC is concerned is that the current reporting mechanisms may give false comfort to Plenary on the general progress of Overarching Tasks in the Work Plan.

Similar observations were made during the Work Plan Symposium in May 2010. These issues have now been brought to the attention of the Executive Committee. The Executive Committee has responded by tasking the GEO Secretariat to adjust its progress reporting process.

### **3 EARTH OBSERVATION CAPACITY ASSESSMENT**

The STC has developed a proposal to prepare a “Earth Observation Capacity Assessment” (EOCA) aimed at a comprehensive analysis of our global Earth observing capability to support key decisions at a global level. This proposal was discussed at the July Executive Committee and will be further developed in 2011 through cooperation between the STC and the Monitoring and Evaluation Working Group for discussion at the GEO-VIII Plenary in 2011.

### **4 SCIENCE AND TECHNOLOGY COMMITTEE PARTICIPATION**

The STC would like to encourage all GEO Members and Participating Organizations to participate actively in the meetings and activities of the Committee.