



D.3.3. Master plan for scientific sessions focusing on the GEOSS to S&T relationship

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ACRONYMS AND ABBREVIATIONS

Abbreviation	Name
AOC	Advanced Operating Capacity
APAAT	African Protected Areas Assessment Tool
APM	Area Production Model
CEN	European Committee for Standardization
CHE	Ebro River Basin Authority
CIFOR	Center for International Forestry Research
CNIG	Centro Nacional de Información Geográfica
CSW	Catalog Service for the Web
DCMSEE	Center for drought management in Southeastern Europe
DOPA	Digital Observatory of Protected Areas
EDISOFT	Empresa de Serviços e Desenvolvimento de Software, S.A. – Portugal
EDO	European Drought Observatory
EFDAC	European Forest Data Centre
EFFIS	European Forest Fire Information System
EFICP	European Forest Information and Communication Platform
ENM	Ecological Niche Model
EU	European Union
FAO	Food and Agriculture Organization
FGUA	Fundacion General de la Universidad de Alcala
FP7	Seventh Framework Programme
GBIF	Global Biodiversity Information Facility
GEO	Group on Earth Observations
GeoRM	Geo Rights Management
GeoRSS	Geospatially-enabled RSS and Atom feeds
GEOSS	Global Earth Observation System of Systems
GMES	Global Monitoring for Environment and Security
GSCB	Ground Segment Coordination Body
IBA	Important Bird Area
IDEE	Spanish Spatial Data Infrastructure, Infraestructura de Datos Espaciales de España
INSPIRE	Infrastructure for Spatial Information in Europe
IOC	Initial Operating Capacity



IR	Implementing Rules
IUCN	International Union for Conservation of Nature
ISO	International Organization for Standardization
JRC	Joint Research Centre
LUCC	Land Use and Cover Change
MARM	Ministerio de Medio ambiente Y Medio Rural Y Marino
MCPFE	Ministerial Conference on the Protection of Forests in Europe
MS	Member State
NDVI	Normalize Difference Vegetative Index
NFI	National Forest Inventory
NGO	Non-Governmental Organization
NSDI	National Spatial Data Infrastructure
O&M	Observation and Measurement
OFAC	Observatory for the Forests of Central Africa
OGC	Open Geospatial Consortium
OSE	Observatorio de la Sostenibilidad en España
OWS	OGC Web Services
RSPB	Royal Society for the Protection of Birds
SAIH	Automated Hydrology Information System
SEIS	Shared Environmental Information System
SIA	Integrated Water Information System of Spain
TREES	United Nations Environment Programme
ULBF	University of Ljubljana Biotechnical Faculty
UNEP	United Nations Environment Programme
WBDB	World Biodiversity DataBase
WCMC	World Conservation Monitoring Centre
WCS	Web Coverage Service
WCS-T	Web Coverage Service, Transactional
WDPA	World Database on Protected Areas
WFS	Web Feature Service
WFS-T	Web Feature Service, Transactional
WMS	Web Map Service
WPS	Web Processing Service
WP	Work Package



1. INTRODUCTION

In coordination with ST-09-02, this document (EGIDA D3.3) aims to establish a master plan for scientific sessions focusing on the GEOSS to S&T relationship to be convened in the time frame of the project duration. This document is envisioned as a work in progress, with updates and additions expected owing to the dynamic nature of the topic. D3.3 therefore provides a template for work over the course of the project.

In order to establish the initial plan, together with ST-09-02, EGIDA will in each SBA identify the most relevant S&T communities currently not sufficiently linked to GEO and GEOSS, and EGIDA will complement the ST-09-02 list of the major conferences organized by these communities. Besides ensuring that all SBAs receive the necessary attention, EGIDA will make an effort to close the geographical gaps particularly in developing countries. Based on this plan and in cooperation with scientific organizations involved in the organization of scientific conferences, EGIDA will work with ST-09-02 in order to facilitate sessions dedicated to the impact and benefits of GEOSS on science in the specific fields. EGIDA will engage individuals from the Stakeholder network in the organization of the sessions, either as conveners or as invited speakers. Where appropriate, EGIDA will facilitate Town hall meetings informing the conference participants about GEO and GEOSS and the relevance to their fields.

While some S&T communities are already actively contributing to GEO Work Plan Tasks, other S&T communities are not thoroughly aware of GEO and the benefits of GEOSS. A number of the major international scientific organizations are already POs. Many national scientific and research organizations are involved at Task level. But there are gaps in the participation of relevant S&T communities. These gaps in participation have not been mapped systematically and thoroughly for the nine SBAs, and no overarching plan has been developed to close these gaps. In order to close these gaps, adequate links have to be established between GEOSS and those relevant R&D and S&T communities presently not involved in GEO.

Over the past years, GEO has made significant effort to engage a larger segment of the S&T communities in GEO. A number of GEO workshops or workshops co-sponsored by GEO involving S&T communities have increased awareness of GEO in these communities and beyond. Examples are the Earth observation meetings organized by IEEE, workshops and symposia organized under the lead of the Forest, Coastal



Zone, Geohazards, and other CoPs, regional GEOSS meetings such as the Asia-Pacific and the GEOSS in the Americas symposiums. National GEO groups and CoPs have organized symposiums and Town hall meetings at major scientific conferences, for example, US-GEO at AGU meetings. Publications in scientific journals and other media have also contributed to increased knowledge of GEO. Some national and regional research funding programs have made reference to GEOSS.

However, up to now, these activities to a certain extent resemble a bottom-up approach, depending largely on the initiative of national groups and individuals. There is a lack of a comprehensive and focused outreach and engagement program, to which these necessary bottom-up activities could be linked, and on which the promotion, fostering, and facilitating of necessary top-down activities could be based.



2. INTERFACE WITH S&T COMMUNITIES (CONTRIBUTION TO STC ROADMAP ACTIVITY 2C)

To ensure continued support of S&T for GEO/GEOSS, outreach to relevant S&T communities needs dedicated effort by GEO. A sustained effort is needed to explain GEO/GEOSS to S&T communities loosely or not connected to GEO, and to demonstrate to them the connection between science, a system of systems, and GEOSS in different areas. A means of building awareness of GEO/GEOSS in different S&T communities with specific sessions convened at major scientific conferences, which highlight the relationship between GEOSS and S&T communities, is required. Currently, a number of such sessions are organized under the coordination of ST-09-02 on a more or less ad-hoc basis in a somewhat bottom-up approach. This has led to a concentration of events in some SBAs and geographical regions with large gaps in others. In cooperation with ST-09-02, EGIDA will attempt to contribute to the following tasks:

- i. Establish a plan for scientific sessions focusing on SoS and the GEOSS to S&T relationship. This will be convened in the time frame of the project duration. This plan is as a living document that can be maintained beyond the project lifetime.*
- ii. Establish the initial plan by identifying, in each SBA, the most relevant S&T communities currently not sufficiently linked to SoS and GEOSS, and establishing a list of the major conferences organized by these communities.*
- iii. Make an effort to close the geographical gaps, particularly in developing countries, and ensure that all SBAs receive the necessary attention.*
- iv. Facilitate conference sessions dedicated to the impact and benefits of SoS and GEOSS on science in specific S&T fields, based on the developed plan and in cooperation with scientific organizations involved in the organization of scientific conferences.*
- v. Engage individuals from the Stakeholder Network in the organization of the sessions, either as conveners or as invited speakers. Where appropriate, we will facilitate Town Hall meetings informing the conference participants about GEO, SoS, and GEOSS and the relevance to their fields of expertise.*



3. TASKS

3.1. Establish a plan for scientific sessions focusing on SoS and the GEOSS to S&T relationship.

This will be convened in the time frame of the project duration. This plan is as a living document that can be maintained beyond the project lifetime.

As the title suggests, this document should lead to establishing a plan for scientific sessions focusing on SoS and the GEOSS to S&T relationship. The document must remain a work in progress due to the nature of the subject, with additions and changes expected. The following tasks outlined below are all aimed at establishing and realizing such a plan. As already mentioned, a number of such sessions have been organized or are planned under the coordination of ST-09-02 on a more or less ad-hoc basis in a somewhat bottom-up approach.

This document therefore outlines initial actions towards the establishment of a plan for scientific sessions focusing on SoS and the GEOSS to S&T relationship.

Initial action already taken in Europe: Inform kick-off meetings and/or workshops of relevant FP7 programs.

3.2. Establish the initial plan by identifying, in each SBA, the most relevant S&T communities currently not sufficiently linked to SoS and GEOSS, and establishing a list of the major conferences organized by these communities.

Initial efforts have begun to identify high-level enterprises necessary for GEOSS. However what is required is an SBA gap analysis, identifying the relevant communities that are currently not linked. In an effort to help identify such communities, various types of network analysis software tools can be employed. Figure 1 shows an example of internet pages linked to the GEO web page (www.earthobservations.org).

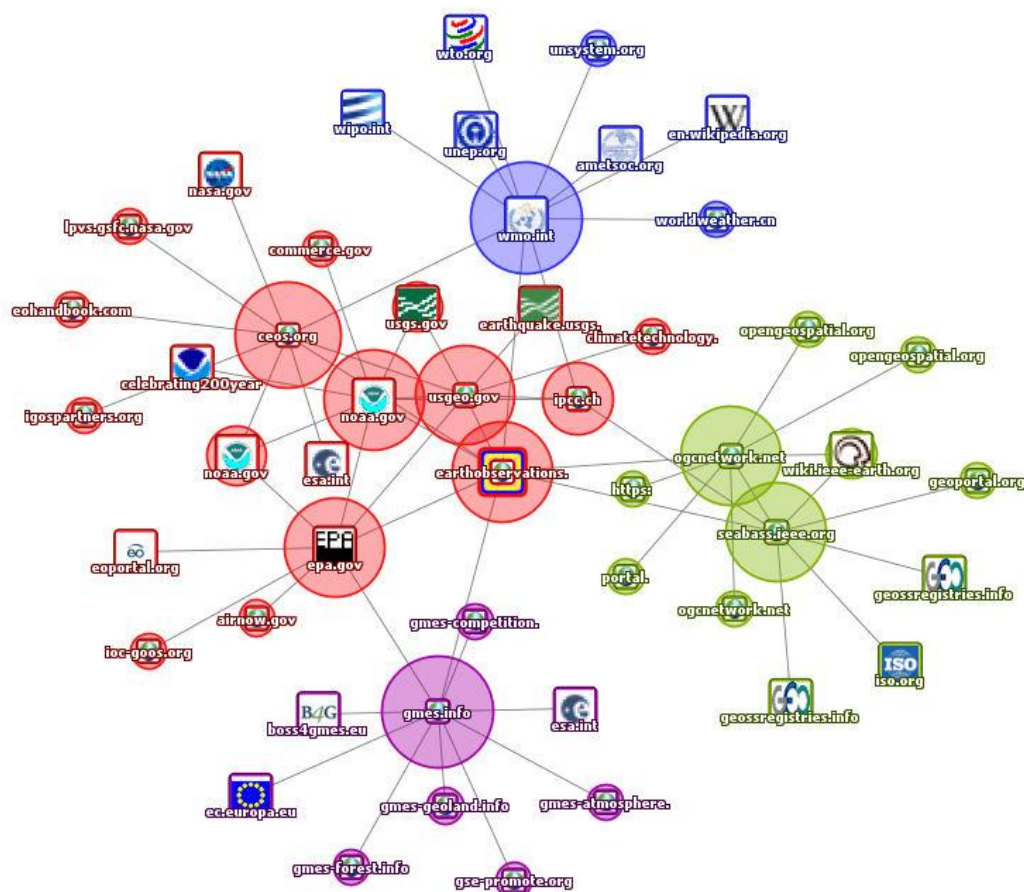


Figure 1. Internet pages linked to the GEO web page (www.earthobservations.org).

Table 1 is to contain a list of the relevant S&T communities that are currently not linked to the various SBA areas within GEOSS. This task requires a GAP analysis to be undertaken. This table will be filled over the course of the EGIDA Project. For example, an initial search identified GMES core services belonging to several SBA's not currently linked.

Table 1. Template for listing of SBAs, relevant S&T communities and major conferences.

SBA	Relevant S&T Communities currently not linked	Major Conferences
Disasters		
Climate		
Weather		



Water		
Health		
Agriculture	Cropland extent	
Biodiversity		
Ecosystems	Landcover, Biomass	
Energy		

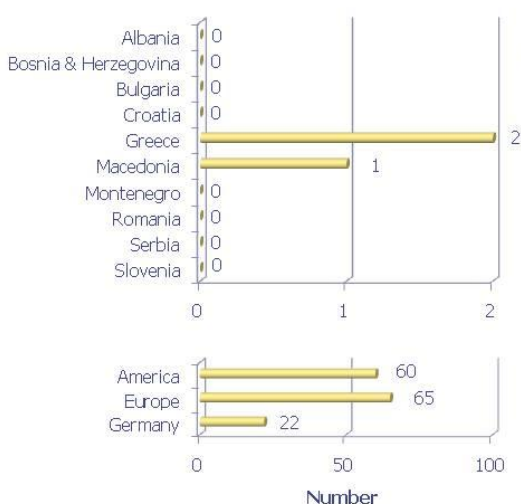
3.3. Make an effort to close the geographical gaps, particularly in developing countries, and ensure that all SBAs receive the necessary attention.

This task requires a geographical gap analysis to be undertaken. It is very likely that the majority of participation up till now is within the North American and European community. Projects such as BalkanGEONet are attempting to address the geographical gap issue. Figure 2 displays results of a search on the GEO Portal, showing the low level of participation in the GEO Portal from Balkan countries. This example illustrates how Europe as a whole is well linked to GEOSS, but as one looks more closely at regional connections, great inconsistencies appear. A global gap analysis is required in order to fulfil this task.

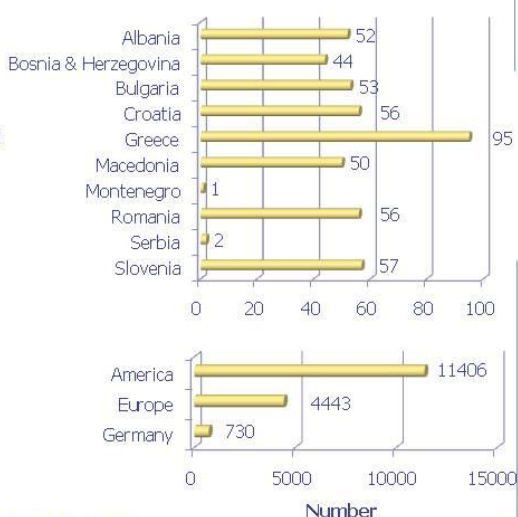
GEO Portal Search Results



GEOSS Information Services



GEOSS total Search Results



<http://www.geoportal.org> – Search performed on Nov 12, 2010

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Figure 2. Results of a search on the GEO Portal, showing the low level of participation in the GEO Portal from Balkan countries.

3.4. Facilitate conference sessions dedicated to the impact and benefits of SoS and GEOSS on science in specific S&T fields, based on the developed plan and in cooperation with scientific organizations involved in the organization of scientific conferences.

&

3.5. Engage individuals from the Stakeholder Network in the organization of the sessions, either as conveners or as invited speakers. Where appropriate, we will facilitate Town Hall meetings informing the conference participants about GEO, SoS, and GEOSS and the relevance to their fields of expertise.

Based on gaps identified in tasks 3.2 and 3.3, various forms of outreach need to be organized in an effort to further promote GEOSS. This should occur in various forms in order to be effective. Various forms of personal interaction are required, via conferences, sessions, side-events, workshops, town-hall meetings,



etc., in addition to the publication and dissemination of printed and digital materials at such events. Posters and brochures would further the impact of any scientific sessions. Furthermore, electronic medium such as webex, skype, teleconferencing should be further explored.

In particular, ST-09-02 has been diligently working on this issue for some time, albeit with limited resources. Tables have been established which document previous and future efforts: http://www.geo-tasks.org/meetings_sandt/. Relevant meeting calendars are however maintained by various organizations. It would certainly be beneficial to search for ways to consolidate/harmonize the various databases that exist.

In the course of moving to a more systematic approach to scientific sessions related to GEOSS, we are keeping track of upcoming related events in Table 2.

Table 2. Ad-hoc listing of upcoming conferences, workshops, etc. promoting GEOSS

SBA	Conferences-Workshops	Date	Where
All	National Use Cases Workshop organization	April, 2011	ISPRA, Italy
Agriculture Ecosystems	Characterizing and Validating Global Agricultural Landcover	13-15 June, 2011	IIASA, Austria
Agriculture	International Conference on Agricultural Engineering CIGR-AgEng 2012	8-12 July, 2012	Valencia, Spain International Commisson of Agricultural and Biosystems Engineering
Agriculture	International Conference on New Technology of Agricultural Engineering ICAE2011	27 – 29 May 2011	Zibo, China Shandong Univ of Technology



4. SUMMARY

As stated at the outset, EGIDA Deliverable D3.3, *the Master plan for scientific sessions focusing on the GEOSS to S&T relationship*, is envisioned as a living document. This report lays out a general approach to develop a Master Plan. Some of the work identified here will require a concerted effort from both EGIDA partners and others, in cooperation with ST-09-02. Efforts are currently underway on several fronts. This document will hopefully serve to consolidate some of these efforts.