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D.5.9. Directory of Science Networks (WP5)

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A GEO Portal for Science and Technology Meetings:
Organizing GEO and GEOSS Presence at S&T Meetings
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PREAMBLE

This draft document describes an interactive web portal for Science and Technology (S&T) meetings that has been developed by the GEO Task ST-09-02 with substantial support of the EGIDA project. The draft constitutes Deliverable 5.8 of the EGIDA Project. The draft will be iterated with the ST-09-02 Task team and may change in this process. Once the ST-09-02 Task team has agreed on the specification of the web portal's design and functionality, the EGIDA project will support the implementation and further population of the portal. It is important to mention here that the portal will not only be used for the coordination of GEO and GEOSS-related activities at major S&T meetings but also provide a unique entry point for all documentation of such meetings.

Fostering links with major scientific research enterprises in each SBA

The EGIDA Contribution to the Science and Technology Road Map Activity 2c

"Build awareness of GEO and GEOSS in the different S&T communities, within the scope of GEOSS development."

1 INTRODUCTION

In its Road Map, the GEO Science and Technology Committee (STC) included the Activity 2c, which aims at *"Building awareness of GEO and GEOSS in the different S&T communities, within the scope of the GEOSS development."*

This activity is implemented by the GEO Work Plan Task ST-09-02 through several contributions.

Originally, the ST-09-02 Task Team agreed on the following activity related to Activity 2c in the STC Road Map:



ST-09-02 Activity 1: In order to foster links with major scientific research enterprises in each SBA, the following steps are planned:

1. establish or identify a high-level list of major scientific research enterprises necessary for GEOSS;
2. identify the key organizations currently not linked to GEO and find mechanisms for effective and efficient linkage to these organizations, for example, through POs, the GEOSEC, or targeted workshops;
3. Organize, support, launch, or initiate, where necessary, workshops to network the new organizations with relevant Task Team and CoPs in the different SBA.

This activity provided some of the background for Deliverable 5.9 of the EGIDA Project. This deliverable is defined as:

D5.9 (PM6) Directory of Science Networks. The Directory will identify appropriate science networks where EGIDA results and successes can be disseminated to appropriate audiences.

Initial work has been underway at the STC.

The deliverable will serve both the EGIDA outreach activities and the ST-09-02 Activity 1. It is important to note that the ST-09-02 Activity 1 has evolved over time due to developments within GEO. Initially, the goal was to identify those major scientific enterprises that are of high relevance to GEO and GEOSS but not yet linked to GEO. It was anticipated to contact those organizations consider to correspond to crucial gaps in specific SBAs and to introduce them to GEO and GEOSS. A goal would be to consider a potential application of these organizations for the status of Participating Organization in GEO.

However, in 2010, the GEO Executive Committee and the GEO Plenary formulated a position that favored a low number of Participating Organizations in GEO and a restriction to major organizations contributing or depending on Earth observations. In the light of this development, ST-09-02 revisited the scope of Activity 1.

The revised scope of Activity 1 focuses on a linkage on scientific organizations involved in promotion of science in their specific fields. The revised Activity 1 is defined as:

ST-09-02 Activity 1: In order to foster links with major scientific organizations in each SBA, the following steps are planned:



1. establish a high-level list of major scientific organizations in the nine SBAs addressed by GEO;
2. develop a concept for co-operation with scientific organizations in terms of promoting the use of Earth observations and in particular the use of GEOSS;
3. establish contacts to major scientific organizations in all SBAs and explore options for promotion of GEOSS and Earth observations in general with these organizations.

With this new scope, emphasis has shifted from the identification of major groups, programs or enterprises involved in research to those professional organizations that promote science in their specific fields. In this document, we provide an initial list of major scientific professional organization. Here, we define as major professional organizations as those that are globally or regionally widely know to experts in their specific field. We consider as professional organizations those (usually non-profit) organizations that seek to further a particular profession, the interests of individuals engaged in that profession, and the public interest.

2 LIST OF MAJOR SCIENTIFIC ORGANIZATIONS OF RELEVANCE TO GEO AND GEOSS

NAME	ACRONYM	DESCRIPTION AND URL	SBA
International Association of Universities	IAU	Relevant for education, capacity building, research programs. URL: http://iau-aiu.net/index.html .	All
European Geosciences Union	EGU	Regional organization promoting geosciences. URL: http://www.egu.eu .	All
American Geophysical Union	AGU	National organization with global membership promoting geophysical sciences. URL: http://www.agu.org .	All
Global Earthquake Model	GEM	Public-private partnership working to create open-source tools and software for earthquake risk assessment on international, national and community levels. URL: http://globalquakemodel.org/ .	Disasters
International	IAEA	Seeks to promote the peaceful use of atomic	Energy,



Atomic Energy Agency		energy, and to inhibit its use for any military purpose, including nuclear weapons. URL: http://www.iaea.org/	Disasters
European Plate Observation System	EPOS	Research Infrastructure and E-Science for Data and Observatories on Earthquakes, Volcanoes, Surface Dynamics and Tectonics. URL: http://epos.bo.ingv.it/ , http://www.epos-eu.org/	Disasters

4. METHODOLOGY TO LINK TO IDENTIFIED ORGANIZATIONS

INTERNATIONAL ASSOCIATION OF UNIVERSITIES (IAU)– IAU, founded in 1950, is the UNESCO-based worldwide association of higher education institutions. It brings together institutions and organizations from some 120 countries for reflection and action on common concerns and collaborates with various international, regional and national bodies active in higher education. Its services are available on the priority basis to Members but also to organizations, institutions and authorities concerned with higher education, as well as to individual policy and decision-makers, specialists, administrators, teachers, researchers and students.

The Association aims at giving expression to the obligation of universities and other higher education institutions as social institutions to promote, through teaching, research and services, the principles of freedom and justice, of human dignity and solidarity, and contributes, through international cooperation, to the development of material and moral assistance for the strengthening of higher education generally. The IAU has adopted Higher Education and Sustainable Development as one of its priority themes. The latest activity is: Promotion of Sustainable Development by Sub-Saharan African Higher Education Institutions, a joint [IAU/ GUNI/ AAU Project](#).

IAU recognizes the key role higher education could and should play in the overall process of achieving sustainable development. Leaders of higher education institutions and their academic colleagues are in a key position to contribute to an equitable and ecologically sound future by making sustainable development a central academic and organizational focus. This requires the generation and dissemination of knowledge through interdisciplinary research and teaching, policy-making, capacity-building, and technology transfer. It is critical that higher education institutions understand and accept their responsibility within the broader context of social and economic development, and the building of democratic, equitable and ecologically-minded societies.

Contact: Dr. H. van't Land [h.vantland@iau-aiu.net], Director, Membership and Programme Development



Approach: Contact IAU to offer GEO support for sustainability projects. Establish linkages to assist in GEOSS related research programs.

EUROPEAN GEOSCIENCES UNION (EGU) -Dedicated to the pursuit of excellence in the geosciences and the planetary and space sciences for the benefit of humanity. It runs an outreach program, to promote the geosciences and the solar system sciences. This includes people, institutions, organizations and scientific unions engaged in fields other than geosciences both within and outside Europe. It interacts with national or international geosciences societies outside of Europe. It organizes International Conferences and Workshops on topics of geosciences with significant socio-economic impact for regions outside of Europe. It has a variety of publications including magazines, journals, books, etc.

Approach: Publish articles related to GEO and GEOSS, organize sessions and panels at EGU meetings and conferences, and approach EGU leadership to establish a partnership to promote geosciences.

Actions: EGU April 2011 EGIDA Presentation in ESSI (Earth and Space Science Informatics), Stefano Nativi

AMERICAN GEOPHYSICAL UNION (AGU) The AGU's mission is to promote discovery in Earth and space science for the benefit of humanity. It galvanizes a community of Earth and space scientists that collaboratively advance and communicate science and its power to ensure a sustainable future. The AGU publishes peer-reviewed scientific journals, a member newspaper, and books. It has conferences and workshops ranging from many 1000s of attendees e.g. the AGU Fall Meeting to several smaller specialized conferences e.g. AGU Chapman Conference on Remote Sensing of the Terrestrial Water Cycle.

Approach: Publish articles related to GEO and GEOSS, organize sessions and panels at AGU meetings and conferences, attend and participate in workshops related to GEO SBAs.

Actions: at AGU Fall Meeting

Characterizing Major Disasters Caused by Geohazards, Hans Peter Plag, Francesco Gaetani, Stuart Marsh

Global Earth Observation System of Systems (GEOSS) National Initiatives, Russell Lefevre, Stefano Nativi, Jay Pearlman

GLOBAL EARTHQUAKE MODEL (GEM)– It is GEM's mission to engage a global



community in the design, development and deployment of state-of-the-art models and tools for earthquake risk assessment worldwide.

OECD's Global Science Forum created the opportunity for an initiative to leverage (scientific) knowledge on earthquake risk for the benefit of society, worldwide. What GEM envisions and has started to work on, is the bringing together of state-of-the-art science and national, regional, international organizations as well as individuals, in a global collaborative effort that will have a lasting impact on seismic risk assessment.

GEM's goals go beyond construction of a model. They also want to ensure that the information produced is useful and can be understood by basic, advanced and expert users, so that they can start thinking about mitigating actions and the development or adaptation of policies and programs, products, projects and campaigns that support people in risk reduction. There are several ways in which EGIDA and GEO can participate in the development of GEM. For example, contributions such as rendering GEOSS data available to GEM through the Disaster SBA. GEM and GEOSS could share software codes, models and methodologies to promote the creation of an open-source, transparent and reliable model.

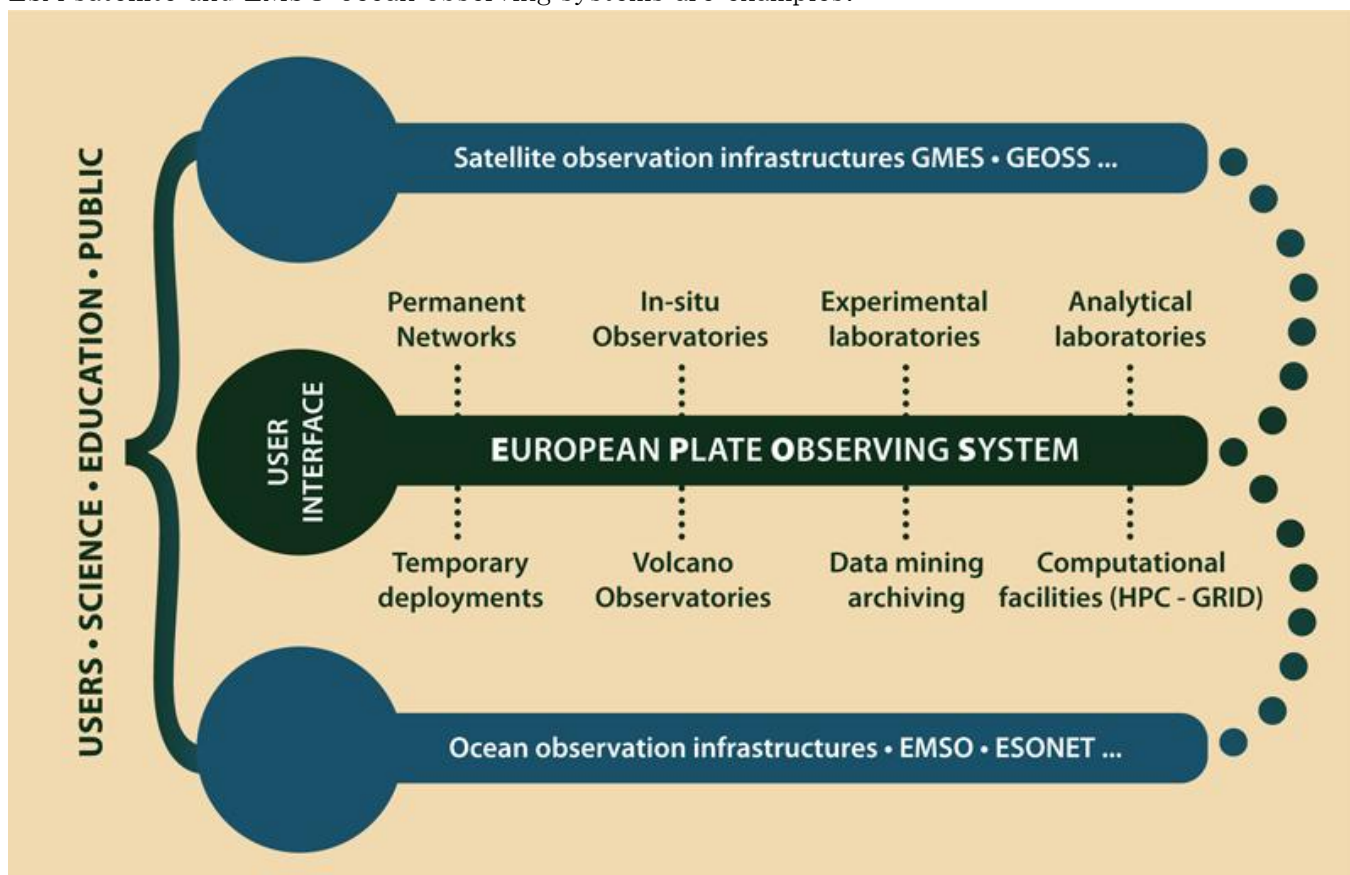
Approach: Contact GEM to open dialog that will lead to cooperation between GEM and the Disaster SBA.

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA) The IAEA is an independent intergovernmental, science and technology-based organization, in the United Nations family, that serves as the global focal point for nuclear cooperation. It assists its Member States, in the context of social and economic goals, in planning for and using nuclear science and technology for various peaceful purposes, including the generation of electricity, and facilitates the transfer of such technology and knowledge in a sustainable manner to developing Member States. It develops nuclear safety standards and, based on these standards, promotes the achievement and maintenance of high levels of safety in applications of nuclear energy, as well as the protection of human health and the environment against ionizing radiation. It verifies through its inspection system that States comply with their commitments, under the Non-Proliferation Treaty and other non-proliferation agreements, to use nuclear material and facilities only for peaceful purposes. The IAEA publishes a wide variety of scientific and technical publications, many of which could be important to the Energy and Disasters SBAs. In addition they organize conferences of interest e.g. International Conference on Managing Soils for Food Security and Climate Change Adaptation and Mitigation.

Approach: Review IAEA publications and conferences to determine applicability to EGIDA

and GEO/GEOSS.

EUROPEAN PLATE OBSERVATION SYSTEM (EPOS)– EPOS is an initiative responding to the current European need for a comprehensive and integrated solid Earth Research Infrastructure. The European solid Earth science community is well prepared for the task. EPOS will be the currently lacking solid Earth science component complementing other large scale RI studying the planet Earth in the GEO(SS) initiative (see Figure below). The ESA satellite and EMSO ocean observing systems are examples.



Although not one of the GEOSS Participating Organizations the EPOS is currently connected to the GEOSS and uses data to develop its tools and outputs. One main EPOS objective is the creation of a comprehensive, easily accessible geo-data volume for the entire European plate at resolutions appropriate to the scale (and to the socio-economic importance) of the target scientific (and non-) issues under investigation. Overall, EPOS will ensure secure storage of geophysical and geological data providing the continued commitment needed for long-term observation of the Earth.

Action: Begin the process of linking the Disasters SBA with EPOS. EPOS had several sessions and meetings scheduled at the 2011 EGU General Assembly meeting in Vienna in



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April. Meetings such as that will provide for networking with GEOSS.