



FP7 Project Nr 265124 Project start date: 01 Sep 2010  
Acronym: **EGIDA**  
Project title: **Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS**  
Theme: ENV.2010.4.1.1-1  
Theme title: Supporting the integration of European and international R&D programmes in GEO

---

## D4.6 Workshops Reports and Recommendations

|                              |                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                 | D4.6 Workshops Reports and Recommendations                                                                              |
| <b>Creator</b>               | Paolo Mazzetti                                                                                                          |
| <b>Creation date</b>         | 20/04/2012                                                                                                              |
| <b>Date of last revision</b> | 28/06/2012                                                                                                              |
| <b>Subject</b>               | Report on EGIDA Workshops                                                                                               |
| <b>Status</b>                | <input type="checkbox"/> Draft <input checked="" type="checkbox"/> Final                                                |
| <b>Publisher</b>             | EGIDA WP4                                                                                                               |
| <b>Type</b>                  | Text                                                                                                                    |
| <b>Description</b>           | Workshops Reports and Recommendations                                                                                   |
| <b>Contributor</b>           | Nico Bonora, Maria Dalla Costa, Michele Munafò, Sonja Lojen, Paolo Mazzetti, Stefano Nativi, Aasmund Vik, Markus Quante |
| <b>Format</b>                | DOC                                                                                                                     |
| <b>Source</b>                |                                                                                                                         |
| <b>Rights</b>                | <input type="checkbox"/> Restricted <input checked="" type="checkbox"/> Public<br>EGIDA-Deliverable-template.docx       |
| <b>Language</b>              | En                                                                                                                      |
| <b>Relation</b>              | WP4 –T4.4/T4.5                                                                                                          |
| <b>Coverage</b>              | Not applicable                                                                                                          |

---

These are Dublin Core metadata elements. See for more details and examples <http://www.dublincore.org/>



## **Executive Summary**

In the context of the EGIDA Work Package 4 “EGIDA Methodology and use-cases” four different use-cases were carried out in order to design, evaluate and assess the EGIDA Methodology (described as first version in the EGIDA deliverable D4.2 and in the final version in the EGIDA deliverable D4.8). The organization of workshops, or the participation in relevant meetings organized by other institutions, were means adopted by the use-cases coordinators to collect information by stakeholders, to discuss open issues and to share opinions. The present deliverable reports about the workshops and meetings organized, co-organized or participated by the use-case coordinators and partners in order to contribute to the EGIDA methodology definition, evaluation and assessment.

EGIDA organized two workshops and one webinar; it co-organized three workshops in collaboration with other FP7 projects (OBSERVE and BalkanGeoNet) and it participated in a workshop organized by a GEO Community of Practice.

All these activities are reported in the present deliverable.



## Table of Contents

|                                                                                                                                                             |           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>EXECUTIVE SUMMARY .....</b>                                                                                                                              | <b>2</b>  |
| <b>ACRONYMS AND ABBREVIATIONS .....</b>                                                                                                                     | <b>4</b>  |
| <b>INTRODUCTION .....</b>                                                                                                                                   | <b>6</b>  |
| <b>1 WORKSHOP - INFO-RAC (UNEP-MAP REGIONAL ACTIVITY CENTRE FOR INFORMATION AND COMMUNICATION) NATIONAL FOCAL POINTS MEETINGS .....</b>                     | <b>8</b>  |
| 1.1. EGIDA AGENDA WITHIN THE INFO-RAC SESSION. ....                                                                                                         | 8         |
| 1.2. OUTCOMES .....                                                                                                                                         | 9         |
| 1.3. REFERENCES .....                                                                                                                                       | 10        |
| <b>2 WORKSHOP – EGYPTIAN USE-CASE .....</b>                                                                                                                 | <b>11</b> |
| 2.1. MEETING AGENDA.....                                                                                                                                    | 11        |
| 2.2. WORKSHOP OUTPUTS.....                                                                                                                                  | 11        |
| 2.3. REFERENCES .....                                                                                                                                       | 12        |
| <b>3 INFO/RAC ACTIVITIES IN THE FRAME OF IT AND EUROPEAN SCIENTIFIC PROJECT: TOWARD FUTURE COLLABORATION IN THE MEDITERRANEAN REGION (WEBINAR) .....</b>    | <b>13</b> |
| 3.1. AGENDA .....                                                                                                                                           | 13        |
| 3.2. PARTICIPANT’S LIST .....                                                                                                                               | 14        |
| 3.3. OUTCOMES .....                                                                                                                                         | 14        |
| <b>4 WORKSHOP - COLLECTION, PROCESSING AND APPLICATION OF DATA ON ENVIRONMENT AND SPATIAL PLANNING: GEO, GMES AND NATIONAL ACTIVITIES IN SLOVENIA .....</b> | <b>16</b> |
| 4.1. WORKSHOP DESCRIPTION.....                                                                                                                              | 16        |
| <b>5 WORKSHOP - EARTH OBSERVATIONS FOR THE SOCIAL BENEFIT OF THE BALKANS .....</b>                                                                          | <b>20</b> |
| <b>6 WORKSHOP - CAPACITY BUILDING AND RESOURCES MOBILIZATION FOR THE BALKAN REGION .....</b>                                                                | <b>21</b> |



|          |                                                                                                                             |           |
|----------|-----------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>7</b> | <b>GEO AIR QUALITY COMMUNITY OF PRACTISE (AQ COP) TOPICAL WORKSHOP: NETWORKING AIR QUALITY OBSERVATIONS AND MODELS.....</b> | <b>24</b> |
| 7.1.     | ABOUT AQCoP .....                                                                                                           | 24        |
| 7.2.     | WORKSHOP DESCRIPTION.....                                                                                                   | 25        |
| 7.3.     | RELATION TO THE EGIDA USE CASE .....                                                                                        | 28        |
| 7.4.     | OUTCOMES AND NEXT TOPICAL WORKSHOP .....                                                                                    | 28        |

## Acronyms and Abbreviations

| <b>Abbreviation</b>         | <b>Name</b>                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------|
| <b>ADN</b>                  | Air quality Data Network                                                                                 |
| <b>AQ CoP</b>               | Air Quality Community of Practise                                                                        |
| <b>BP-RAC</b>               | Blue Plan Regional Activity Centre of UNEP-MAP                                                           |
| <b>CP-RAC</b>               | Cleaner production Regional Activity Centre of UNEP-MAP                                                  |
| <b>EC</b>                   | European Commission                                                                                      |
| <b>CNR</b>                  | National Research Council of Italy                                                                       |
| <b>EU</b>                   | European Union                                                                                           |
| <b>ENPI-<br/>SEIS/South</b> | European Neighbourhood Partnership Instrument – Shared Environmental System for Europe / South component |
| <b>FP7</b>                  | Seventh Framework Programme                                                                              |
| <b>GEO</b>                  | Group on Earth Observations                                                                              |
| <b>GEOSS</b>                | Global Earth Observation System of Systems                                                               |
| <b>GMES</b>                 | Global Monitoring for Environment and Security                                                           |
| <b>IGN</b>                  | National Geographic Institute of Spain                                                                   |
| <b>Info-MAP</b>             | The information system of the Barcelona Convention                                                       |



|                 |                                                                                   |
|-----------------|-----------------------------------------------------------------------------------|
| <b>Info-RAC</b> | Information and Communication Regional Activity Centre of UNEP-MAP                |
| <b>INSPIRE</b>  | Infrastructure for Spatial Information in Europe                                  |
| <b>IPR</b>      | Intellectual Property Right                                                       |
| <b>ISPRA</b>    | Italian National Institute for Environmental Protection and Research              |
| <b>IT</b>       | Information Technology                                                            |
| <b>MS</b>       | Member State                                                                      |
| <b>MED POL</b>  | The marine pollution assessment and control component of MAP                      |
| <b>PAP-RAC</b>  | Priority Action Plan Regional Activity Centre of the UNEP-MAP                     |
| <b>RAC</b>      | Regional Activity centre of the UNEP-MAP                                          |
| <b>REMPEC</b>   | The Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea |
| <b>R&amp;D</b>  | Research and Development                                                          |
| <b>SDI</b>      | Spatial Data Infrastructure                                                       |
| <b>SEIS</b>     | Shared Environmental Information System                                           |
| <b>SPA-RAC</b>  | Specially Protected Areas Regional Activity Centre of UNEP-MAP                    |
| <b>ST-09-01</b> | GEO Task ST-09-01: Catalyzing Research and Development (R&D) Funding for GEOSS    |
| <b>ST-09-02</b> | GEO Task ST-09-02: Promoting Awareness and Benefits of GEO                        |
| <b>T</b>        | Task                                                                              |
| <b>UNEP-MAP</b> | United Nations Environment Programme - Mediterranean Action Plan                  |
| <b>WCS</b>      | Web Coverage Service                                                              |
| <b>WP</b>       | Work Package                                                                      |



## **Introduction**

The present document describes the workshops organized in the context of the EGIDA Work Package 4 "EGIDA Methodology and use-cases". According to the EGIDA DoW some use-cases considered the organization of and participation in workshops relevant for their activities both as an initial contribution to the definition of the EGIDA Methodology and later as part of the EGIDA Methodology Transfer, particularly concerning networking activities.

According to the DoW, in the use-case on Mediterranean region coordinated by ISPRA, *workshops will be planned to include a specific "hands on" test case with willing developing countries from the selected regions on the development/use of an open source Spatial Data Infrastructure to improve access, exchange and utilization of existing and potential space and in situ data and information, following INSPIRE and GEOSS Data Sharing principles and facilitating the interoperability of national information systems with GEOSS.* Two workshops and one webinar were organized and are reported in this deliverable (see §1, §2 and §3).

For the use-case on Pan-European Air Quality for Health coordinated by NILU the *workshops will both provide input to the design phase of the overall EGIDA methodology (T4.4), but also (especially towards project end) a mean for transfer of the project methodologies to national and international initiatives.* The participation to the GEO Air Quality Community of Practice Topical Workshop on Networking Air Quality Observations and Models was particularly relevant for providing inputs for the EGIDA Methodology. It is reported in this deliverable (see §7) discussing its relationship with and importance for the EGIDA objectives.

In the use-case on Slovenia coordinated by IJS, workshops were not planned in the beginning. Anyway thanks to its participation in the OBSERVE project, it was possible for IJS to co-organize a workshop on GEO, GMES and national activities in Slovenia, along with OBSERVE and BalkanGeoNet FP7 projects. This was relevant not only for the Slovenian use-case, but more generally to achieve the liaison between the three projects involving the Balkan region (EGIDA, OBSERVE, BalkanGeoNet) which was one of the objectives of WP4 (*EGIDA aims to establish specific liaisons with FP7-ENV-2010 Projects*



*addressing possible contributions to GEO/GEOSS from specific regions; in particular projects funded under the call ENV.2010.4.1.4-1 "Identification and Networking of EO activities in the Balkan area" (BalkanGEONet, OBSERVE) will be considered to provide examples in the Balkan region).* The workshop is reported in this deliverable (see §4).

Together with OBSERVE and BalknGeoNet, the EGIDA project co-organized two other events: a post-GEO Plenary workshop and a post-GEPW workshop. Since they were relevant for providing inputs for the revision of the EGIDA Methodology they are briefly reported in this deliverable (see §5 and §6).



## **1 Workshop - Info-RAC (UNEP-MAP Regional Activity Centre for Information and Communication) National Focal Points meetings**

### **INTRODUCTION**

As one of the EGIDA project main goal is to promote GEO in S&T Communities, during the Plan Bleu, PAP-RAC and INFO-RAC Focal Points meeting (Nice, 11-13 May, 2010) have been presented the GEO general framework, the GEOSS GCI and SBA, the EGIDA projects and its activity related to the Mediterranean Region (T4.5.1&2).

It has been chosen to present the relevance of the GEO and GEOSS activities to UNEP/MAP representatives because 14/22 of the MAP Contracting Parties are GEO members (Algeria, Croatia, Cyprus, Egypt, France, Greece, Israel, Italy, Malta, Morocco, Slovenia, Spain, Tunisia, Turkey and the European Commission).

In particular, considering UNEP-MAP is currently dealing with the exchange of environmental data and information across the Mediterranean Region within the Ecosystem Approach Roadmap Implementation (UNEP-MAP Decision 20/4 - 2012), the GEOSS Data Sharing Guidelines and Action Plan have been presented as an example to take into account to implement a potential data sharing policy.

### ***1.1. EGIDA Agenda within the Info-RAC session.***

#### **1.11 PROMOTING RELEVANT INTERNATIONAL ACTIVITIES ON DATA & INFORMATION SHARING**

##### **Introduction (GEO and GEOSS)**

- *GEO history and governance*
- *GEOSS and the GCI*
- *data sharing documents (guidelines and action plan) relevant to the UNEP/MAP data policy implementation*
- *Data Access Condition within GEOSS, with a particular focus on the GEOSS data Core*



- *The Geoportal and SBA's*

### **1.12 EGIDA EU FP7 Projects to promote interoperability in the Mediterranean Region**

- EGIDA aims and goals in the frame of GEOSS
- EGIDA Structure
- EGIDA showcases related to the Mediterranean Region
- The EGIDA methodology

### **1.13 IT OS TOOLS FOR METADATA INTEROPERABILITY**

- Technical overview of Geonetwork SW to network environmental metadata.

## **1.2. Outcomes**

By the intervention from the floor emerged that National MAP and GEO representatives often does not know each other. Furthermore, only few of the MAP participants were aware about GEO and GEOSS.

Being GEOSS also supposed to be a source of environmental data and information derived mainly from remote sensing investigation, high interest has been demonstrated on the presentation of the GEOSS Geoportal, where the provided services could complement the in-situ monitoring activities of marine and coastal areas provided in the frame of the UNEP-MAP.

Also, considering the UNEP-MAP is facing the data sharing in the frame of the implementation of the Ecosystem Approach roadmap (ECAP - <http://195.97.36.231/acrobatfiles/Medwaves/English/MW58.pdf>), particular attention has been paid on the presentation of the GEOSS data sharing Action Plan. The result of this dissemination activity is included in the decision IG.20/4 taken at the UNEP-MAP 17th Meeting of the Contracting Parties (UNEP(DEPI)/MED IG 20/4 Annex II- Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap), that states:



*...Considering the need to establish an effective governance of the knowledge and information generated through an appropriate data sharing policy which takes fully into account the GEOSS Data Sharing Action Plan for the implementation of the GEOSS Data Sharing Principles which was adopted by the GEO-VII Plenary of 3-4 November 2010 and which have been ratified by nearly all Contracting Parties to the Barcelona Convention; ...*

Also, with the aim to benefit UNEP-MAP in the IT field to support data and metadata sharing and, indirectly, to provide the GEOSS GCI with a congruous data and metadata Mediterranean contribution, it has been promoted the adoption of free and open-source environmental catalogs (Geonetwork and GI-cat) for the management and dissemination of environmental metadata on the basis of the SoS model.

This activity is ongoing and is aligned with the Info-MAP Geoportal Implementation (The Information System of the Barcelona Convention that has been implemented by Info-RAC). A single point access for the few data and metadata collected so far at Mediterranean scale (e.g. MED POL sampling points) can be found at: <https://www.securemais.isprambiente.it> (View, and discovery services) and <http://193.206.192.214/geonetwork> and <http://193.206.192.214/gi-cat> to search and deploy metadata.

### **1.3. References**

Joint meeting of Plan Bleu/PAP/INFO RACs National Focal Points – 11-13 May 2011, Nice, France.

UNEP(DEPI)/MED IG 20/4 - Implementing MAP ecosystem approach roadmap: Mediterranean Ecological and Operational Objectives, Indicators and Timetable for implementing the ecosystem approach roadmap.



## **2 Workshop – Egyptian use-case**

### **Introduction**

The 14 March 2012 a meeting at NARSS venue (Cairo - Egypt) has been taken to discuss potential involvement of Egyptian representatives in the EGIDA Mediterranean Use Case. The meeting has been participated by ISPRA, CNR, NARSS (National Authority for Remote Sensing And Space Sciences of Egypt) and EEAA (Egyptian Environmental Affairs Agency of Egypt).

The EGIDA project has been presented with particular focus on the implementation of the EGIDA Methodology and on the Mediterranean use cases (Mediterranean Region and Hotspot Pollution).

Also, free and OS SW (Geonetwork and GI-CAT) has been showed and promoted to be used for interoperability test.

### **2.1. *meeting agenda***

#### **Meeting Agenda**

10:00 • Overview of the EGIDA FP7 project in relation to the Mediterranean Region and GEOSS and its potential follow-up (replication of processes and practices identified in the EGIDA Methodology).

10:45 • Potential FP7 link to exploit (MEDINA, PEGASO, EUROGEOSS,...).

10:15 • Inputs and suggestions.

12:30 • Planning of future activities.

### **2.2. *Workshop outputs***

After the presentation the discussion took place. Egyptian Representatives found the EGIDA project potentially helpful for their activities, especially for the coordination of



different national and sub-national activities. In this specific case the EGIDA Methodology could be applied to test its effectiveness.

It has been communicated by the Egyptian Representatives that, on the basis of their experiences on cooperation with northern African Countries, a good level of interoperability at Mediterranean scale could result feasible within 3-4 years: two years to build the partnership and to implement a SoS prototype; 1-2 years for IT tool deployment.

The Egyptian Representatives expressed their interest to coordinate the northern African Countries in future cooperation for the sustainable Mediterranean contribution to GEOSS. This activity could lead to the Mediterranean GEO development in further EU project participated also by Asian and African EU neighbors.

On the frame of the GEO Egypt development, it has been communicated that there is not an implementation at national level, and the EGIDA methodology is welcomed also in this case to support such of implementation.

Last, the Egyptian Representatives asked for personal user ID and PWD to be used in already existing environmental metadata catalog to get familiar with the tool and to furnish discovery elements related existing Egyptian or NARSS related datasets.

Please note that in the meeting it has not been faced specific constraints or IPR issues related to existing NARSS datasets.

### **Further Outcomes**

The Egyptian contact, Dr. Islam Abou El-Magd is co-author of the abstract "Networking environmental metadata: a pilot project for the Mediterranean Region" (EGU2012-5663) to be presented at EGU General Assembly (April, 2012 - Vienna).

## **2.3. References**

Meeting held at NARSS (National Authority for Remote Sensing And Space Sciences of Egypt) – 14 March, 2012.



### **3 INFO/RAC activities in the frame of IT and European Scientific Project: toward future collaboration in the Mediterranean Region (Webinar)**

The webinar aimed to present the development of the Mediterranean use case that supported the implementation of the Info-map information system (The Spatial Data Infrastructure of the Barcelona Convention developed by Info-RAC on the basis of the SW reuse model) in the frame of catalogs interoperability, and to promote the replication/transfer process (contained in the EGIDA methodology) for the creation of national nodes aimed to share environmental information.

During the event it has also been shown the potentiality of open source tools useful to equalize IT technical equipment and expertise across the Mediterranean Region on the basis of the System of Systems model.

At the end of the webinar it has been asked the participants to express their opinions and suggestions on the presented activities and also to express interest for future collaborations in the frame of the Mediterranean Region.

#### **3.1. Agenda**

1. *InfoMAP: the shared Environmental Information System of MAP (15 min.)*
  - *The vision;*
  - *The State of play.*
2. *The EU FP7 project EGIDA: presentation and dissemination of MAP relevant results (40 min.)*
3. *Use of open source SW: Geonetwork and GI-cat*
  - *on-line demonstration on the functionality of Geonetwork;*
  - *SW availability and installation.*
4. *Future collaborations and follow-up activities in the Mediterranean Region (10 min.)*
5. *Questions and Answers (25 min.)*



### **3.2. Participant's list**

| First Name  | Last Name      | Affiliation     | Email                               |
|-------------|----------------|-----------------|-------------------------------------|
| Antonio     | Arozarena      | IGN – SPAIN     | aarozarena@fomento.es               |
| Branka      | Baric          | Montenegro      | branka.baric@ppa.t-com.hr           |
| Gabino      | Gonzalez       | REMPEC          | ggonzalez@rempec.org                |
| Claudio     | Maricchiolo    | Info-RAC        | claudio.maricchiolo@isprambiente.it |
| Maria       | Carotenuto     | Info-RAC        | maria.carotenuto@isprambiente.it    |
| Jean-Pierre | Giraud         | Plan Bleu       | jpgiraud@planbleu.org               |
| Souade      | Nasseri        | REMPEC          | snasseri@rempec.org                 |
| Michail     | Papadoyannakis | EC              | michail.papadoyannakis@ec.europa.eu |
| Hugues      | Ravenel        | Plan Bleu       | hravenel@planbleu.org               |
| Atila       | Uras           | MAP Secretariat | atila.uras@unepmap.gr               |
| Nico        | Bonora         | EGIDA           | nico.bonora@isprambiente.it         |
| Paolo       | Mazzetti       | EGIDA           | paolo.mazzetti@cnr.it               |

### **3.3. Outcomes**

At the end of the meeting, some participants expressed their willingness to participate on future collaboration in the frame of data and information sharing within UNEP-MAP through system interoperability.

There was a particular interest on the EGIDA Mediterranean Use Case from REMPEC representatives, on the matter of their activities tied to MEDESS-4MS (Mediterranean decision support System for Marine Safety). Considering REMPEC is leading a sub-task aimed at the improvement of the evaluation and the monitoring of risks in the Mediterranean region to support WP goal to identify areas with high risk of oil marine pollution, they would need to gather information on maritime traffic, offshore and other oil handling facilities as potential source of oil pollution as well as other environment and socio-economic data, accident data, oil spill response equipment inventory data.

To achieve what above, it has been suggested from REMPEC to produce a list of existing datasets owned by all the Regional Activity Centres (BP-RAC, PAP-RAC SPA-RAC, Info-



RAC, CP-RAC, MED POL and REMPEC) and to promote this activity in near-future web events.

Positive comments reached by the Info-RAC Focal Point of Spain (IGN), that express the willingness to collaborate and be involved within R&D activities related the Mediterranean region.

Positive comments reached also from the European Commission, who expressed appreciation for the R&D and IT dissemination activity oriented to EU neighbors countries and MAP Components.

Considering the RAC's role on collecting environmental data and information from Contracting Parties (The UNEP-MAP Member States), it is important to strengthen the cooperation between RACs and ongoing/living projects, (e.g. GEOSS, FP7) to maximize the data and information flow between existing systems. To do that, it is also important to improve National IT capabilities to support interoperability between Mediterranean Member States, RACs, EC, regional and Global Projects and Programmes.



## **4 WORKSHOP - Collection, processing and application of data on environment and spatial planning: GEO, GMES and national activities in Slovenia**

*Workshop title:* "Collection, processing and application of data on environment and spatial planning: GEO, GMES and national activities in Slovenia"

*Date and location:* February 16, 2012, Jožef Stefan Institute, Reactor Centre Podgorica, Ljubljana, Slovenia

*Organisers:* Jožef Stefan Institute, Department of Communication Systems (BalkanGEONet), Department of Environmental Sciences (EGIDA); University of Ljubljana, Faculty of civil and geodetic engineering (OBSERVE); "Space.si" Slovenian Centre of Excellence for Space Sciences and Technologies

### **4.1. Workshop description**

The workshop was organised by Slovenian partners of the three on-going EU FP7 projects dealing with SDI status, development and national relations to GEO/GEOSS in the Balkan area: OBSERVE – Strengthening and development of Earth Observation activities for the environment in Balkan area (<http://www.observe-fp7.eu/>), BalkanGEONet – Balkans in Global Earth Observation (<http://www.balkangeo.net/>) and EGIDA. The workshop was aimed to gather Slovenian stakeholders, experts, academics and policy makers active in areas related to spatial data infrastructures and Earth observation, either as data providers, data custodians or users, and inform them about current activities related to GEO and GMES in Slovenia. In total, 68 participants (including 17 speakers) attended the workshop and round table discussion. Representatives of all national key players in the development SDI and SD management were present: Environment Agency, Surveying and Mapping Administration, Geological Survey, Faculty of Civil and Geodetic Engineering, Biotechnical Faculty, Forestry Institute, Slovenian Academy of Sciences and



Arts, Space.si Centre of Excellence and representatives national government and responsible ministries and funding agencies.

*Workshop programme* consisted of four sessions:

(1) Key note speeches on GEO and GMES – how to get involved (H. Haubold, Environment Agency Austria) and the status of GMES activities and GMES related projects in Slovenia (S. Žlebir, Environment Agency of Slovenia);

(2) Technical Development: data harvesting from satellite observation to web applications, development of microsatellites for remote sensing, presentation of “Geopedia.si” web portal from crowd sourcing application to the scientific research tool and the development and use of wireless sensor networks for *in-situ* data collection and distribution

(3) Overview of national activities: presentation of on-going activities in the development of NSDI and transposition and implementation of INSPIRE Directive, and some international GEO related projects (OBSERVE; GMOS – Global Mercury Observation System; EuroGEOSS: building of an integrated drought monitoring system in South-eastern Europe); posters representing activities within EGIDA and Space.si CoE were displayed.

(4) Round table discussion on the strategy and common activities in the framework of GEO and GMES in relation to the Horizon 2020 programme: the introductory presentation was given by the DG Research and Innovation representative (V. Bratina), presenting new possibilities for international collaboration in collaborative research projects and support actions in the 2012 FP7 call for proposals and in Horizon 2020. Other participants of the round table were representatives of the Ministry of Economic Development and Technology, Ministry of Defence, Geological Survey, J. Stefan Institute, Space.si Centre of Excellence, Ministry of Agriculture and Environment and Surveying and Mapping Authority. Present opportunities and future challenges regarding EO data and financing of national and European programmes were discussed.



*Workshop conclusions:* In spite of small size and relatively low number of key players in the NSDI development, SD users and data providers, the GEO related activities are very fragmented and suffer of lack of coordination. The representative of the Ministry of Defence underlined the need for appointment of a national coordinating body or contact point since to the moment it is not possible even to obtain any reliable information of the main stakeholders. As of beginning of 2012, the activities which were previously covered and at least partially coordinated by the designated bodies of the Ministry of Environment are now dispersed between four newly formed ministries, where the areas covered and responsibilities of each of them are still unclear. None of them has allocated funds or staff for coordination of activities at national level. As an important practical issue, the question of the quality assurance and quality control of (measured) data and data collections has been raised, in particular in crowd sourced applications, which are nevertheless commonly used in research projects because of lack or inaccessibility of approved spatial data. Nevertheless, the prevailing opinion was that the lack of applications for data presentation/visualisation and obtaining information from existing datasets is a bigger obstacle than the actual lack of data – which is rather fragmented than scarce (as an example, the Geopedia.si portal now comprises about 10.000 spatial layers containing more than 10 million of spatial entries). In Slovenia a common GEO and GMES forum for networking and application exchange would be needed, which is a good opportunity for affirmation of consortia gathered in the on-going GEO related project teams.

*Relation to the EGIDA Use Case Slovenia:* the workshop was a part of networking activities within the EGIDA Methodology replication procedure. It provided important input information and contacts for NAs.1 – 4 (Identification of stakeholders, Assessment of the awareness of GEO/GOESS, Dissemination of the GEO/GEOSS initiative, Establishment and the operation of the network). The NA.5 (addressing the sustainability of the reengineering process) will follow through further discussions with main national data custodians and providers in the process of building the use case SDI and possibilities for registration of GEOSS components gathering data from different sources. Here tight cooperation with the Sinergise Ltd. – the Geopedia.si developer – is foreseen.



*Dissemination:* Information on the workshop is available at:

- Alič, K., Lojen, S., Mohorčič, M., 2012. Organizacija delavnice Zajem, obdelava in uporaba podatkov o prostoru. Novice IJS, 159, 13-14, available on-line at [http://www.ijs.si/ijsw/Novice%20IJS/Desno?action=AttachFile&do=get&target=Novice\\_zadnje.pdf](http://www.ijs.si/ijsw/Novice%20IJS/Desno?action=AttachFile&do=get&target=Novice_zadnje.pdf) (J. Stefan Institute Gazette, in Slovene).
- Lojen, S. et al., 2012. A Workshop in Slovenia on Collecting, Processing and the Application of Environmental and Spatial Data. Earthzine, available on-line at: <http://www.earthzine.org/2012/03/06/a-workshop-in-slovenia-on-collecting-processing-and-the-application-of-environmental-and-spatial-data/>
- Workshop for Slovenian Stakeholders, "GEO, GMES and national activities in Slovenia" available on-line at: [http://www.observefp7.eu/index.php?option=com\\_content&view=article&id=160:February-12-2012-workshop-for-slovenian-stakeholders-qgeo-gmes-and-national-activities-in-slovenia&catid=56:news1&Itemid=242](http://www.observefp7.eu/index.php?option=com_content&view=article&id=160:February-12-2012-workshop-for-slovenian-stakeholders-qgeo-gmes-and-national-activities-in-slovenia&catid=56:news1&Itemid=242)



## **5 Workshop - Earth Observations for the Social Benefit of the Balkans**

*Workshop title:* Post GEO Workshop on "Earth Observations for the Social Benefit of the Balkans"

*Date and location:* 18 - 19 November 2011; Conference Center of Maçka Campus of Istanbul Technical University; Istanbul, Turkey

*Organisers:* BalkanGEONet, EGIDA, OBSERVE;

The aims of the Workshop were to inform participants on Earth Observation (EO) activities with focus on European Union and GEO, exchange views on how the above relates or can relate to EO activities in the Balkans, inform speakers and leading EO institutions on needs regarding EO in the Balkans and build-up networks and co-operations, with focus on capacity building and more extensive use of EO.

The speakers in the Workshop were all by invitation and highly esteemed experts and officials from European and international organizations.

The workshop attracted 88 experts, stakeholders, local policy makers and academics who had the opportunity to get informed on the latest developments regarding International and European Earth Observation developments and participate in vivid debates on the future of EO in the Balkans.



## EGIDA, Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS

FP7 Project nr 265124

| 18th November 2011                                                                                                                                                                                                                      | 19th November 2011                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ITU Social Facility, Conference Room</b>                                                                                                                                                                                             | <b>ITU Social Facility, Conference Room</b>                                                                                                                                                 |
| <b>8:00-9:00 Registration</b>                                                                                                                                                                                                           | <b>09:00 Fourth Session</b>                                                                                                                                                                 |
| <b>09:00 Opening and Keynote Speech</b><br>Prof. Othman Altun, ITU<br>Prof. Petrus Pattas, OBSERVE Project Coordinator<br>Prof. Vladimir Crnjakovic, BalkanGEOSS Project Coordinator<br>Prof. Stefano Nativi, EGIDA Project Coordinator | <b>09:00</b> Vasilis Tziotis<br>Greek GEOSS Office Hellenic Republic Foundation for Environment Research<br>Risks and Cost of A Possible Climate Change in Greece and Eastern Mediterranean |
| <b>09:15 Keynote Speaker, Mario Cornelis Vis</b><br>Advisor in charge of science, technology and industry, Bureau of European Policy Advisors, EC<br>Towards an EU Space Policy                                                         | <b>09:30</b> Athina Trikas<br>Director of European Service<br>Open Standards and the EO community from processes, applications and the value                                                |
| <b>10:00 Coffee Break</b>                                                                                                                                                                                                               | <b>10:00</b> ANTI Jakobsson<br>Balticgeomatics, Programme Manager<br>European Location Framework and INSPIRE                                                                                |
| <b>10:30 First Session</b>                                                                                                                                                                                                              | <b>10:30 Coffee Break</b>                                                                                                                                                                   |
| <b>10:30</b> Dimitrios Ciriak<br>GEOSS Secretariat expert staff<br>GEOSS SST roadmap and its importance for Societal Benefits of the Balkans                                                                                            | <b>11:00 Fifth Session</b>                                                                                                                                                                  |
| <b>11:00</b> Hans Peter Brink<br>Hansen Bureau of Mines and Geology<br>Towards a GEOSS Stakeholder Network                                                                                                                              | <b>11:00</b> Stefano Nativi<br>National Research Council of Italy<br>EuroGEOSS Brokering approach for the EO                                                                                |
| <b>11:30</b> Peter Zell<br>Director of GEO Capacity Building Committee<br>GEO Capacity Building Activities a platform for cooperation                                                                                                   | <b>11:30</b> Joan Mado<br>CREAF Centre de Recerca Ecològica i Aplicacions Forestals of the Universitat Autònoma de Barcelona<br>Geotitles: the quality challenges for GEOSS                 |
| <b>12:00</b> Vojko Bratina<br>Research Programme Officer, EC                                                                                                                                                                            | <b>12:00</b> Petrus Pattas, Vladimir Crnjakovic, Stefano Nativi<br>Roundtable discussion - Conclusions and Follow-up                                                                        |
| <b>12:30 Lunch</b>                                                                                                                                                                                                                      | <b>13:00 Closing of Workshop &amp; Lunch</b>                                                                                                                                                |
| <b>13:30 Second Session</b>                                                                                                                                                                                                             |                                                                                                                                                                                             |
| <b>13:30</b> Ian Oliverman<br>UNEP First Vice President<br>Prospects for mapping from Earth Observation data and the role of Joint Board Societies                                                                                      |                                                                                                                                                                                             |
| <b>14:00</b> Paolo Mazzanti<br>National Research Council of Italy -<br>The EGIDA Methodology                                                                                                                                            |                                                                                                                                                                                             |
| <b>14:30</b> Stuart March<br>Hansen Geospatial Technologies, British Geological Survey<br>GEMS and GEO for geohazard mitigation in the Balkans                                                                                          |                                                                                                                                                                                             |
| <b>15:00 Coffee Break</b>                                                                                                                                                                                                               |                                                                                                                                                                                             |
| <b>15:30 Third Session</b>                                                                                                                                                                                                              |                                                                                                                                                                                             |
| <b>15:30</b> Rando Poggia<br>Hansen Head of Geo Office Climate Division, Swiss GEOSS Office<br>The Role of Satellite Data within the National Climate Observing System (SCOS Switzerland)                                               |                                                                                                                                                                                             |
| <b>16:00</b> Jay Pearlman<br>ESA<br>Socio-economic Benefits from the Use of Earth Observation                                                                                                                                           |                                                                                                                                                                                             |
| <b>16:30</b> Francesco Sarti<br>ESA<br>Scientific Coordinator of Education and Training Activities, Directorate of Earth Observation Programme, ESA<br>ESA Education and Training EO                                                    |                                                                                                                                                                                             |
| <b>17:00 End of First Day</b>                                                                                                                                                                                                           |                                                                                                                                                                                             |
| <b>19:30 Dinner</b>                                                                                                                                                                                                                     |                                                                                                                                                                                             |

Figure 1 - The Post-GEO Workshop Programme

## 6 Workshop - Capacity Building and Resources Mobilization for the Balkan region

*Workshop title:* Post GEOW Workshop "Capacity Building and Resources Mobilization for the Balkan region"

*Date and location:* 9 May 2012; National Research Council of Italy Headquarter; Rome, Italy

*Organisers:* BalkanGEONet, EGIDA, OBSERVE;



## **EGIDA, Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS**

**FP7 Project nr 265124**

The aim of the Workshop was to share relevant outcomes from the three projects and exchange views on how to exploit such achievements especially for the benefit of Earth Observation in the Balkan region.

The three projects presented the most relevant outcomes which might be exploited in future activities. In particular the EGIDA Project presented the EGIDA Methodology as a general outcome, and activities in the Slovenia use-case as a specific contribution in the Balkan region. Opportunities for continuation of activities in the Balkans exploiting the outcomes and network established by the three projects, were explored and discussed.








**Wednesday, 09th May 2012, 09:00 - 13:30**  
 National Research Council of Italy  
 Piazzale Aldo Moro  
 (Rome, Italy)

## ***Capacity Building and Resources Mobilization for the Balkan region***

*How to integrate the outcomes of the FP7 OBSERVE, BalkanGeoNet, and  
EGIDA projects:*

### Meeting agenda

- **The OBSERVE experience (Petros Patias)**
  - OBSERVE Gap Analysis
  - A Roadmap
- **The BalkanGeoNet experience (Vladimir Crnojevic)**
  - BalkanGeoNet Gap Analysis
  - Permanent Networking Facility
- **The EGIDA experience (Sonja Lojen and Stefano Nativi)**
  - EGIDA Methodology to broker Balkan capacities for the GCI
  - Slovenia use case
- **The EC perspective (Vojko Bratina, DG Research & Innovation)**
  - Strengthening the role of national GEO in the Balkan region
  - Engagement of the Balkan region in GEO Work-Plan development
- **Final discussion: Planning the future collaborations**



THE GLOBAL EARTH OBSERVATION  
SYSTEM OF SYSTEMS

INFORMATION  
FOR THE BENEFIT  
OF SOCIETY



National Research Council of Italy, Piazzale Aldo Moro (Rome, Italy) Tel. 06 4993 2020

**Figure 2 - The Post-GEPW Workshop Programme**



## **7 GEO Air Quality Community of Practise (AQ CoP)**

### **Topical Workshop: Networking Air Quality Observations and Models**

Workshop title: Networking Air Quality Observations and Models: From Virtual to Real

Date and location: Aug 23-25, 2011, Stomorska, Solta, Croatia

Organisers: Rudolf Husar, *Washington University St. Louis, USA*; Martin Schultz, *Forschungszentrum Jülich, Jülich, D*

Workshop topics: *General* - Existing services, Integrating Initiatives, Agencies, 'End Users', GEO AQ CoP role, relationships, cross- thematic links (EGIDA, ESIP); *Data Server IT Issues* - netCDF, CF, WCS standards and conventions | Implementation for gridded and station data | Development tools | Server performance; *AQ Data Network (ADN) IT Issues* - Network components, servers, clients, catalog | Mediated access | Catalog implementation, integration | Network level data flow, statistics, performance; *Non IT networking Issues* - Purpose and scope of ADN | Providers, users, mediators | Relationship to integrating initiatives | Governance, legitimacy, impediments

EGIDA contributors: Stefano Nativi, CNR, I (FP7 - EGIDA coordination), Aasmund Vik, NILU, N (EGIDA work package leader use-case: Pan-European Air Quality for Health)

### **7.1. About AQCoP**

The GEO Air Quality Community of Practise (AQ CoP) is a self-organized voluntary group that fosters the application of Earth observations to air quality management and science. Its participants and its main beneficiaries are members of national and international science teams, data portals and decision support activities (Figure X.1). CoP activities include sharing tools and best practices and facilitation of standards-based networking of



air quality data systems using GEOSS data sharing principles. AQ CoP is organising dedicated workshops on the different structural and technical aspects on data sharing in the air quality community. The group contributes to international standardisation activities. A persistent output facilitated by the AQ CoP is a network of air quality/atmospheric composition data servers that use OGC-standard protocols and the GEOSS interoperability process. By this the AQ CoP offers an easy way into the registration of air quality data to GEOSS.

## **7.2. Workshop description**

Data portals, science teams and decisions support systems address the needs of air quality management and science communities but data exchange among these systems is impeded by a number of obstacles. The GEOSS interoperability arrangements and data sharing principles offer an opportunity to connect the existing air quality data systems into an interoperable network for seamless data access. The GEO AQ CoP invited members of these communities for the workshop to advance the networking of air quality observations and models by identifying the sharable datasets, assessing the state-of-the-art on interoperability practices with a focus to address technical and programmatic issues.

Data Portals, Decision Support Systems, Science Teams and other Initiatives have also the common need for a non-intrusive standards-based network infrastructure consisting of distributed servers, clients, catalog and governance. Therefore the technical realization and expansion of the Air quality Data Network (ADN) for sharing observations and models was in the centre of interest of the workshop. The state of ADN including key impediments; co-development of server software and tools; sharing best practices was intensively discussed.

In short the goals of the workshop were

- Get to know each other
- Identify core AQ applications and sharable data sets
- Exchange state-of-the-art, interoperability practices
- Address technical and programmatic issues

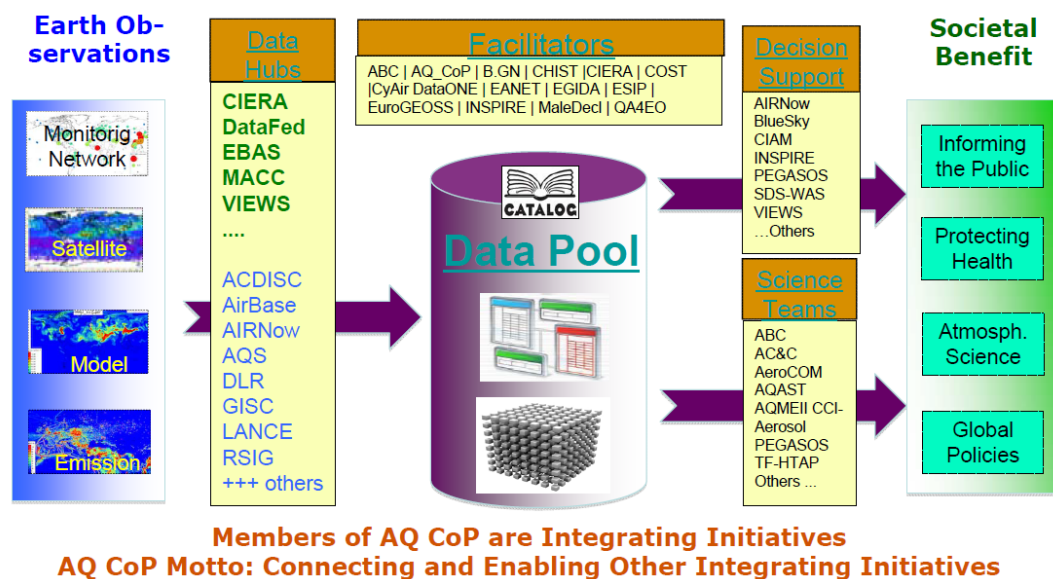


Figure 1: What is/Who are the GEO Air Quality CoP? (from Husar, Solta 2011)



## ***Workshop Agenda***

---

Tue 08.00-10.00: Self-Introduction, 5 mins/participant  
Tue 10.30-12.30: Hubs, servers, AQ Data Network (ADN), CoP  
Tue 16.00-18.00: IT: Community server software  
Tue 16.00-18.00: Scope and Type of Data to be Served  
Tue 18.00-19.00: General Discussion

---

Wed 08.00-10.00: Breakout reports, general discussion  
Wed 10.30-12.30: AQ Data Network catalog, clients  
Wed 16.00-18.00: Relationships, cooperation, governance  
Wed 18.00-19.00: General Discussion

---

## ***Participation***

The 25 participants come from several leading institutions and centres for air quality data in Europe and the United States. The participants were:

Enrico Boldrini, CNR, I; Steve Ludewig, STI, USA; Lorenzo Bigagli, CNR, ITA; Michael Decker, FZ Julich, GER; Oleg Gaussev, DLR, GER; Ed Fialkowski, NGC, USA; Peter Kjeld, EEA, EUR; Erin Robinson, ESIP, USA; Tim Dye, STI, USA; Severine Bernonville, DLR, GER; Stefano Galmarini, JRC, INT; Stefano Nativi, CNR, ITA (EGIDA); Ben Domenico, UNIDATA, USA; Martin Schultz, FZ Julich, GER; Paul Eckhardt, NILU, NOR; Rudy Husar, WUSTL, USA; Kari Hoijarvi, WUSTL, USA; Gegory Frost, NOAA, USA; Aasmund Vik, NILU, NOR (EGIDA); Kjetil Torseth, NILU, NOR; Bret Schichtel, NPS, USA; Michael Schulz, MetNO, NOR; Stefan Falke, NGC, USA; Janja Husar, WUSTL, USA; Terry Keating, EPA, USA



### **7.3. *Relation to the EGIDA use case***

EGIDA activities especially in relation to air quality aspects could be made known to the workshop participants. The discussions and findings of the workshop and the assessed attitude of the air quality community towards the registration of their data sets to GEOSS is supporting the development of recommendations towards the EGIDA methodology by the Pan European Air Quality for Health use case. The workshop provided an important platform to approach relevant technically oriented persons and issues for Technical Activities (TAs) of the EGIDA methodology (i.e. TA.3 – design of national/international resource sharing and TA.4 – implementation of the system).

### **7.4. *Outcomes and next topical workshop***

The Solta meeting was the first topical workshop of the GEO AQ CoP initiative and was able to attract the participation of the managers and programmers of the major air quality data hubs in Europe and US, as well as experts on interoperability and networking. It constituted the first in-person meeting of a core grouping within the AQ CoP. Thus the group was quite competent to handle the AQ data networking topic. The meeting allowed the participants to learn about each other's data systems and general perspectives. This was a necessary step toward a shared understanding and for building trust for future inter-dependent data networking. During the open discussion-oriented sessions, the participants were willing and able to articulate the key impediments to networked AQ data systems at their respective organizations. As an important outcome of the meeting the managers and programmers of the major data hubs made a remarkable set of commitments toward making the AQ Data Network happen. The current AQ Data Network is still fragile and incomplete; limited applicability, but demonstrates multiscale data networking with GEOSS infrastructure and process.



The meeting marked an important step forward in realising registration of air quality related data and products with GEOSS. And i.e. technical details related to deployment of data discovery and access services were discussed. The meeting was important for promoting GEOSS to the air quality community and central European data holders, such as EEA/Eionet, participated with key technical personnel. The topics addressed were of special relevance for the "Pan European Air Quality for Health"-use case and the information gathered could directly flow into the assessment of the EGIDA methodology via the analysis of the AQ community projects.

The collection, management and access to atmospheric composition and air quality data are undergoing rapid changes towards web-based, interoperable data services. Although significant efforts are presently dedicated to facilitate access to these type of information, severe limitations for linking information from different platforms, programs, data centres and research fields arise from inadequate definitions of metadata. In order to enhance the connectivity of the global network on air quality and atmospheric composition data, the community of researchers and practitioners needs to articulate their needs, identify the most relevant facets of metadata, and try to reach consensus on terminology and structure. For this reasons the AQ CoP organizes together with the preoperational GMES Atmospheric Service (MACC-II) and links to the GISC activities under the European Environment Agency a workshop on 'Air Quality and Atmospheric Composition Metadata' from 5 to 7 September, 2012, in Dublin Ireland. Among others the workshop will review the international metadata standards in terms of their applicability to air quality and atmospheric composition needs, establish a community consensus on the metadata structure and terminology for air quality and atmospheric composition, and provide recommendations on possible ways to implement the consensus metadata structure and terminology. This workshop will be an opportunity to promote the revised EGIDA methodology and here the especially the TA-parts.

*More information*



**EGIDA, Coordinating Earth and Environmental cross-disciplinary projects to promote GEOSS**

**FP7 Project nr 265124**

See the workshop wiki for additional information and presentations:  
[http://wiki.esipfed.org/index.php/Air\\_Quality\\_Data\\_Network\\_Solta\\_2011](http://wiki.esipfed.org/index.php/Air_Quality_Data_Network_Solta_2011)