



D3.3 Workshop I Report and Material

IASON: Fostering sustainability and uptake of research results through Networking activities in Black Sea & Mediterranean areas

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¹ **R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

² **PU** = Public, **PP** = Restricted to other programme participants (including the Commission Services), **RE** = Restricted to a group specified by the consortium (including the Commission Services), **CO** = Confidential, only for members of the consortium (including the Commission Services).

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ABBREVIATIONS

Term	Explanation
BSC-OS	Black Sea Catchment Observation System
CRASTE-LF	African Regional Centre for Space Science and Technology — in French Language
CSW	Catalog <i>Service</i> for the <i>Web</i>
DAT	Ministry of Urban and Land
EO	Earth Observation
GEO	group earth observation
GEOSS	Global Earth Observation System of Systems
gSWAT	hydrological model over the Grid and HPC infrastructure
ISO	International Organization for Standardization
KML	Keyhole Markup Language
OGC	Open Geospatial Consortium
PyWPS	Python Web Processing Service
SDI	Spatial Data Infrastructure
SLD	Styled Layer Descriptor
UNIGE	University of Geneva
UTCN	Technical University of Cluj-Napoca
WCS	Web Coverage Service
WFS	Web Feature Service
WMS	Web Map Service
WPS	Web Processing Service
FP7	Seventh Research Framework Programme
R&I	Research and Innovation

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EXECUTIVE SUMMARY

The document describes in details all phases of design, implementation and dissemination of results of the IASON Workshop 1, that was organized in Rabat-Morocco 30-31 January 2014, by CRASTE-LF in collaboration with UNIGE, UTC and AUTH.

1. PLANNING OF THE WORKSHOP

The **IASON** project funded by the European Union under its FP7 program, is responsible for organizing two workshops under WP3.

Within the **IASON** project, The African Regional Centre for Space Science and Technology — in French Language CRASTE-LF has been assigned to organize the first workshop, prepare all related materials. This document describes all the phases of the first workshop as Deliverable 3.3 of **IASON**.

1.1 Aim of the Workshop – I

One of the **IASON's** main activities is to foster international collaboration and to provide capacity building in the following thematic nodes:

- EO applications in Coastal Monitoring,
- EO applications in water and soil resources management,
- EO applications in Mining and Mineral exploration

The workshop had two folds objectives targeting traditional users and local policy/decision makers.

The first part was devoted to promoting integration of national administration into existing R&I results. It was targeted to policy makers, researchers, and stakeholders from the region along with European and International experts that helped local stakeholders to be informed in the current European needs and trends in EO in the thematic nodes.

The second part was devoted to capacity building along the thematic nodes through the use of standardized interfaces. The “Bringing GEOSS services into Practice” hands-on workshop taught attendees how to set up their own SDI, how to publish and share data and metadata through the use of OGC services and ISO standards and to register components into the Global Earth Observation System of Systems (GEOSS). Another training on enviroGRIDS tools was presented and explained the possibility of processing remotely, with a laptop, large amount of geospatial data. The user had remote access to high performance computation resources and spatial data models by Web applications.

Through this workshop, **IASON** project communicated the need to bring the scientific communities and programs closer to each other with regard to the three specific thematic nodes.

Knowledge gained in the workshop will allow to better cope with the regional needs for EO applications not only in the three thematic nodes but also in a broader area so that all GEO Societal Benefit Areas will be addressed.

International experts and **IASON** project members gave plenary talks, while the produced material is freely available through the **IASON** website.

1.2 Decisions Taken at Previous Meetings

IASON kick off meeting, Brussels, June 2013

During the IASON kick off meeting, the IASON consortium decided that the 1st IASON Workshop would be held at Rabat, Morocco in January of 2014. The local organizer was asked to prepare the initial plans for the workshop.

IASON 2nd Consortium Meeting, Novisad, September 2013

During the 2nd IASON consortium meeting, the consortium finalized the details regarding the Workshop details and the dates 30-31 January 2014 were set for the Workshop realization.

2. ANNOUNCEMENT OF THE WORKSHOP

The section below describes the publicity actions undertaken to maximize visibility of the workshop in Rabat. All **IASON** partners disseminated through their individual channels the workshop to academic and relevant stakeholders in the North Africa Region.

2.1 Workshop Website

A dedicated Workshop website has been created for the informational purposes of the workshop. The website is available <http://www.iason-fp7.eu/index.php/en/events-eng/iason-workshop-1-morocco-eng>

The website contains information regarding:

- Registration
- The Workshop Programme
- The Venue
- Travel and Accommodation



Figure 1 Website Workshop Announcement in the news section

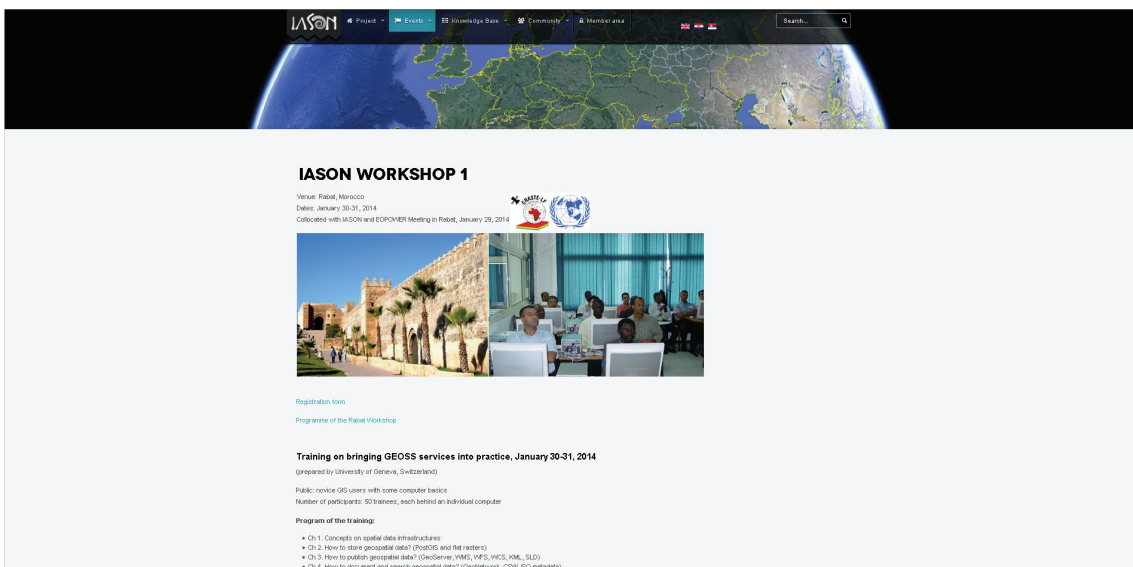


Figure 2 Dedicated Workshop page at the IASON website

Furthermore the workshop was also announced in CRASTE-LF's website

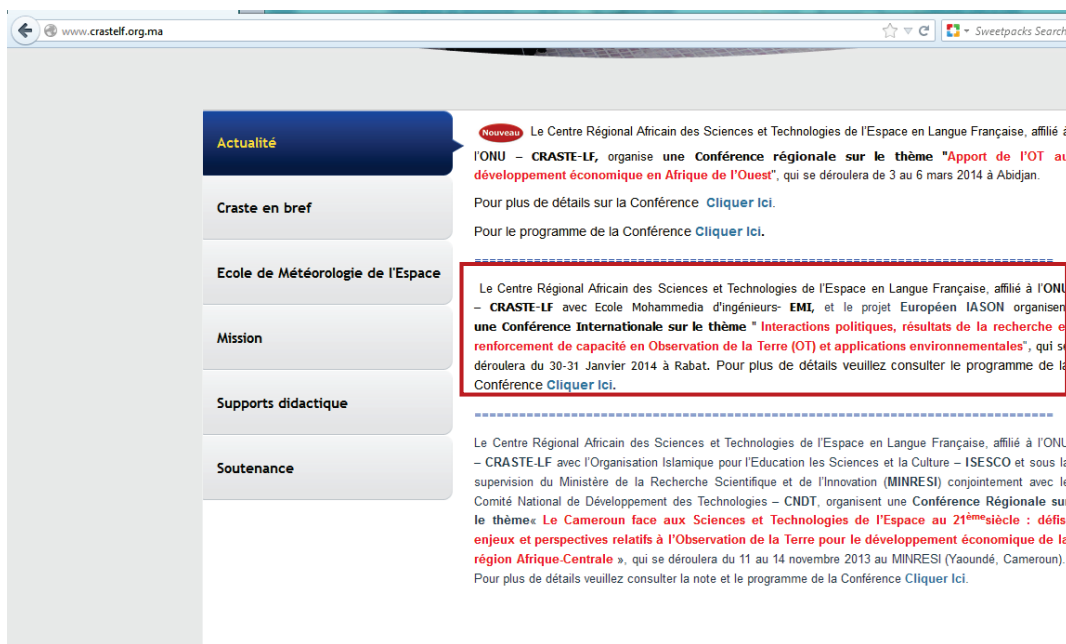


Figure 3 Announcement of the workshop in website of CRASTE-LF (www.crastelf.org.ma)

2.2 Official Invitation & Flyer of the Workshop

An official invitation was written and signed by the local organizer.



Figure 4 Official Invitation

2.3 Project Newsletter

IASON e-Newsletters are informative publications released every four months. Announcement of the workshop took place in the **IASON** 1st Newsletter. Information regarding the workshop’s objectives, program, location and agenda were included in IASON’s e-Newsletter Issue 01.



IASON Workshop (MED) & Caravan Events Rabat, Morocco January 29-31 January 2014: Training on bringing GEOSS services into practice



IASON project is launching its first international workshop tackling issues of Earth Observation & climate change, resource efficiency and raw materials focussing on the Mediterranean region (MED). This first workshop titled “Training on bringing GEOSS services into practice” launches a series of events within the IASON framework that will be called to transfer knowhow and best practices to local stakeholders regarding issues such as, concepts on spatial data infrastructures, how to store data, how to publish data, how to document and search data, how data is processed and how to view, analyze and share data.

The workshop will be hosted by the **Centre Regional Africain des Sciences et Technologie de l’Espace en Langue Francaise, affilié à l’ONU** and will be held together with the regular meetings of IASON & EOPOWER projects in Rabat, Morocco January 29-31 January 2014

More information can be obtained through the IASON project website [here](#).



Figure 5 Announcement of the 1st Workshop in IASON’s 1st e-Newsletter

3. IMPLEMENTATION OF THE WORKSHOP

3.1 Participants




The Workshop took place on 30-31 January 2014 as it was planned. In total 116 participants attended the sessions of the workshop. A detailed list of participants is presented in Annex I.

3.2 Workshop Program

Since the workshop had twofold objectives, it was split in two different parts.

3.2.1 Conference on Policy Interactions and Research Outputs in Capacity Building

The first 0.5 day part “**Conference on Policy Interactions and Research outputs in Capacity building**” was devoted to promoting integration of national administration into existing R&I results. It was targeted to policy makers, researchers, and stakeholders from the region along with European and International experts that helped local stakeholders to be informed in the current European needs and trends in EO in the thematic nodes. All speeches were limited up to 30 minutes including questions and comments from the audience. Workshop has been completed without any major delays in the program. A total of 116 participants attended the “Conference on Policy Research outputs in Capacity Building”.

Conference on Policy Interactions and Research Outputs in Capacity Building January 30 2014			
9.00 - 9.30	- IASON and EO Policy – Thematic Pillars	Petros PATIAS / IASON Coordinator	
9.30 -10.00	- Disaster management – Policies and technologies	Orhan ALTAN / IASON	
10.00 -10.30	- North African needs and priorities	Fatima BARKAN /DAT Ministry of Urban & Land Planning, Responsible of Valuation of Land Division	
10.30 - 11.00	Coffee Break		





11.00 - 11.20	- EO and GEO Societal Benefits	Anas EMRAN /IASON	
11.20 - 11.40	- Business opportunities based in EO	Mark NOORT/ IASON& EOPower	
11.40 - 12.05	- Challenge in Mediterranean Research Domain	Suzan KHOLEIF /IASON Advisory Board	
12.05 - 12.30	- The MEDINA project	Roberto PASTRES/ MEDINA Coordinator	

Figure 6 Conference Program

3.2.2 Practical Workshops

The second part was devoted to capacity building along the thematic nodes through the use of standardized interfaces. The “Bringing GEOSS services into Practice” hands-on workshop taught attendees how to set up their own SDI and how to publish and share geospatial data and metadata through the use of OGC services and ISO standards. Another training on enviroGRIDS tools was presented and explained the possibility of processing remotely, with a laptop, large amount of geospatial data. The user had remote access to high performance computation resources and spatial data models by Web applications.

3.2.2.1 Practical Workshop 1: Training on EnviroGRIDS Tools

January, 30, 2014 – afternoon

Delivered by: Dorian Gorgan, Victor Bacu, Danut Mihon (**Technical University of Cluj-Napoca, UTCN**).

Duration : 1 half day (30 January, 2014 - afternoon) -

Public: specialists in environment, remote sensing, hydrology, and e-learning.

This training explained and taught the participants how to access using their laptops the high performance computation infrastructures in order to process remotely large geospatial data. The resources of the enviroGRIDS system are accessible to the large

community of users through the BSC-OS Portal that provides Web applications for data management, hydrological model calibration and execution, satellite image processing, report generation and visualization, citizen oriented applications, and virtual training center. The portal publishes through Internet both the geospatial functionality provided by Web technologies, and high performance computation resources.

The training session exemplified three Web applications available through the BSC-OS Portal.



Figure 7 Practical Workshop I: Training on EnviroGRIDS Tools Program

3.2.2.2 Practical Workshop 2: Bringing GEOSS Services in Practice

January, 31, 2014

Delivered by: Nicolas Ray, Grégory Giuliani, Yaniss Guigoz, Pierre Lacroix (University of Geneva, UNIGE), Contribution Fatima HARA (CRASTE-LF)

Duration: all day

Public: basic GIS knowledge

Modalities: maximum 50 trainees, each trainee can practice on his own computer (*).

(*) Pre-requisites:

Laptop of participants. Some machines were available.

Operating system: Windows or MacOS or Linux

Memory (RAM): minimum 4 GB

Disk space: minimum 20 GB

Installation: Most participants installed the free software Virtual Box on their laptop before the workshop (www.virtualbox.org). This allowed using a virtual machine with all GIS software, data and tutorial already installed.

The **"Bringing GEOSS services into practice"** workshop aims at teaching how to configure, use and deploy a set of open source software to set up a spatial data infrastructure (SDI). Trainees will learn how to publish and share data and metadata using OGC and ISO standards and how to register services into the Global Earth Observation System of Systems (GEOSS). GEOSS has been created as an international voluntary effort that connects geospatial and Earth Observation and information infrastructures, acting as a gateway between producers of environmental data and end users. The aim of GEOSS is to enhance the relevance of Earth observations and to offer public access to comprehensive, near-real time data, information and analyses of the environment.

Practical Workshop 2: Bringing GEOSS Services in Practice	
31 January 2014	
Session 1: 08h30 -13h00	
Introduction: Concepts on Spatial Data Infrastructures	
How to store geospatial data? <i>PostGIS and flat rasters</i>	
How to publish geospatial data? <i>GeoServer; Web services (WMS, WFS, WCS), KML, SLD</i>	
10.30 - 11.00	Coffee Break
How to document and search geospatial data? <i>GeoNetwork, CSW, ISO metadata</i>	
How to process geospatial data? <i>PyWPS, WPS</i>	
13.00 - 14.00	Lunch
Session 2: 14h00 -18h30	
How to view geospatial data? <i>WMS, OpenLayers (web), QGIS (GIS and cartography), Google Earth (KML)</i>	
How to download geospatial data? <i>WFS, WCS, QGIS (editing geometry and attributes)</i>	
16.00 - 16.30	Coffee Break
How to analyze geospatial data? <i>Consuming a local/remote WPS from QGIS</i>	
How to share geospatial data? <i>Registration in GEOSS, Geo Discovery and Access Broker</i>	

Figure 8 Practical Workshop II: Bringing GEOSS Services into Practice Program**3.3 Photos, Presentations, and Recordings**

As indicated in the Grant Agreement of the project, Workshop Material must be public and used as informative material. Presentations of the event and relevant multimedia can be downloaded from the **IASON** Knowledge Base Repository at the dedicated section of the workshop.

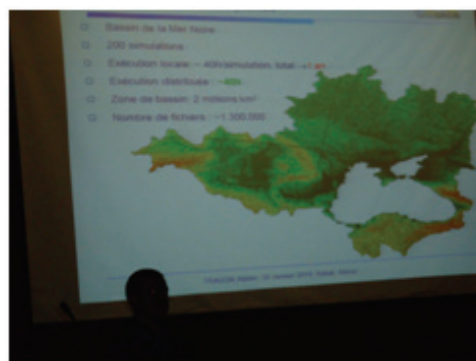




Figure 9 Workshop Photos

4. CONCLUSIONS

IASON workshop organized in Rabat in end of January 2014 was a success with an important participation of experts from 22 countries, these were:

- IASON partners
- Experts of North Africa,
- Researchers in sub-Saharan Africa.

116 participants attended the conference on Policy Interaction and Research outputs in Capacity Building open to the General Public including Policy Makers, Researchers and End Users.

42 participants attended the two training workshops.

After the success of this event, CRASTE-LF and its partners, the **ISESCO*** and the **Ministry of High Education and Scientific Research of Government of Ivory Coast** and in interaction with the European project EOPOWER decided to organize a conference similar to that held in Rabat to benefit of experts from the region of West Africa in Abidjan in early March 2014.

***ISESCO**: Islamic Educational, Scientific and Cultural Organization

REFERENCES

Giuliani G., Lacroix P., Guigoz Y., Bigagli L., Ray N., Lehmann A. (2014). Bringing GEOSS Services into Practice. *GIS Open Source Workshop Material*. University of Geneva, United Nations Environment Programme, National Research Council of Italy, 189 pages. Available from [Google Play Books](#) and from [iTunes Store](#)

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