



D3.4 Workshop II 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)

IASON CONSORTIUM



Aristotle University of Thessaloniki (AUTH) Greece



National Research Council of Italy (CNR-IIA) Italy



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University of Geneva (UNIGE) Switzerland



HCP International (HCP) The Netherlands



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Centre Regional Africain des Sciences et Technologie de l' Espace en Langue Francaise, affilié à l'ONU (CRASTE-LF) Morocco



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GeoGraphic GIS and RS Consulting Center (GEOGRAPHIC) Georgia



Technical University of Cluj-Napoca (UTC) Romania



Coastal Protection Agency (APAL) Tunisia

ABBREVIATIONS

Term	Explanation
BG, GE, RO, UA, TR	Bulgaria, Georgia, Romania, Ukraine, Turkey
GR, NL, US	Greece, The Netherlands, United States
BSC	Black Sea Commission
BSC-PS	Black Sea Commission Permanent Secretariat
BSC-OS	Black Sea Catchment Observation System
BSD	International Black Sea Day
BRTA	Burgas Regional Tourist Association, Bulgaria
BSU	Batumi Shota Rustaveli State University
CSW	Catalog Service for the Web
EO	Earth Observations
GEO	Group on Earth Observations
GEOSS	Global Earth Observation System of Systems
GeoGraphic	GIS and RS Consulting Center 'GeoGraphic'
qSWAT	SWAT Hydrological model over the Grid and HPC infrastructure
HPC	High Performance Computation
ILMM-BSE	Integrated Land-use Management Modelling of Black Sea Estuaries
ISO	International Organization for Standardization
KML	Keyhole Markup Language
MoE	Ministry of Environment & Natural Resources Protection of Georgia
NEA	National Environmental Agency of Georgia, MoE
NKU	Namık Kemal University, Tekirdağ, Turkey
OGC	Open Geospatial Consortium
PNF	Permanent Networking Facility
PvWPS	Service Web in Python
RS	Remote Sensing
SDI	Spatial Data Infrastructure
SLD	Styled Layer Descriptor
SWAT	Soil & Water Assessment Tool (freely available hydrological model)
UNIGE	University of Geneva
UTCN	Technical University of Cluj-Napoca
WCS	Web Coverage Service
WFS	Web Feature Service
WMS	Web Mapping 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 II, that was organized in Batumi, Georgia, 30-31 October 2014, by GIS and RS Consulting Center GeoGraphic, in collaboration with UNIGE, UTCN, GEO and AUTH and in synergy with European Cross-Border Cooperation [ILMM-BSE](#) Project.

The Workshop II was organized in celebration of the international Black Sea Day of 31 October and was endorsed by the Black Sea Commission Permanent Secretariat and the Ministry of Environment and Natural Resources Protection of Georgia and its National Environmental Agency.

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 GIS and RS Consulting Center 'GeoGraphic' has been assigned to organize the second regional workshop (covering the Black Sea Region) and to report on implementation of the Workshop II as Deliverable 3.4 of [IASON](#).

1.1 Aim of the Workshop II

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 Black Sea Regional Workshop was devoted to Catchment Observations, Modelling and Management as its main themes and had a twofold objective.

In particular, the two day [IASON](#) Workshop II and Caravan Events in Georgia included the capacity building part on October 30 (Day 1), dealing with hydrological modelling, data dissemination and discovery tools for the Black Sea Catchment, as well as special policy session next day devoted to International Black Sea Day (BSD) of October 31 (Day 2), with participation and presentations of local, national and international stakeholders involved in various European projects (such as [IASON](#) and [ILMM-BSE](#)) and other projects in river basin and catchment management. The workshop targeted policy makers, researchers, and stakeholders from the region along with EU project representatives, helping local stakeholders being informed on current European trends in these domains.

The Black Sea Workshop and Caravan Events in Georgia of 30-31 October 2014 were collocated with EC FP7 IASON/EOPOWER Meeting in Batumi, October 29, 2014 and Cross Border Cooperation [ILMM-BSE](#) Project Meeting in Georgia, November 01, 2014,

and were organized in synergy between these two European regional research and close coordination between two Georgian partners of the projects, GeoGraphic (IASON) and Civitas Georgica (ILMM-BSE).

The workshop was promoted as the international Black Sea Day event in Georgia by the Black Sea Commission Permanent Secretariat (BSC PS) and the Ministry of Environment & Natural Resources Protection of Georgia, represented by the Commissioner (BSC Member) from Georgia, who also announced the address of the BSC PS Executive Director to the participants of the policy workshop on the Black Sea Day of 31 October (see Annexes I and II).

The first part of the workshop – capacity building (30 October, delivered by UNIGE) 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 Spatial Data Infrastructure (SDI) and how to publish and share data and metadata through the Global Earth Observation System of Systems (GEOSS).

The second concluding part of the capacity building workshop (also 30th of October) on demonstration of enviroGRIDS tools started with the hands-on interactive ArcSWAT session (introduced by GeoGraphic) and continued with the live demonstration session of gSWAT hydrological modelling calibration with remote access to high performance computation resources (delivered by UTCN).

The second Black Sea Day Workshop (31 October) was devoted to plenary presentations promoting integrated catchment monitoring, modelling and governance principles, communicated by various project representatives, dealing with catchment monitoring and governance issues.

The meeting was targeting 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. 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 can be addressed.

International experts **IASON** project members and invited speakers gave plenary talks, while the produced material is freely available through the **IASON** and ILMM-BSE websites.

1.2 Decisions Taken at Previous Meetings

IASON kick off meeting, Brussels, Belgium, June 2013

During the IASON kick off meeting, the IASON consortium confirmed, that the 1st IASON Regional Workshop I (Mediterranean region) will be held at Rabat, Morocco in January of 2014 and 2nd IASON Regional Workshop II (Black Sea region) in Georgia. The local organizers (CRASTE-LF and GeoGraphic, respectively) were asked to prepare the initial plans for the workshops.

IASON 2nd Consortium Meeting, Novi Sad, Serbia, September 2013

During the 2nd IASON consortium meeting, the consortium finalized the details regarding the Workshop I and the dates 30-31 January 2014 were set for the Workshop realization in Rabat. Similarly, it was decided to select Batumi, Georgia, as the venue for the Workshop II and to organize it around the international Black Sea Day celebration of 31 October 2014.

IASON 1st Regional Workshop, Rabat, Morocco, January 2013

The African Regional Centre for Space Science and Technology (in French Language CRASTE-LF) organized the first regional workshop in the Mediterranean. Workshop I Report and Material is presented in the Deliverable 3.3 of **IASON**.

IASON 3rd Consortium Meeting, Thessaloniki, Greece, May 2014

During the 3rd IASON consortium meeting, the consortium finalized the details regarding the Workshop II and the dates 30-31 October 2014 were set for the Workshop realization in Batumi, Georgia. It was also agreed to hold the Workshop in synergy with Black Sea Integrated Land-use Management Modelling of Black Sea

Estuaries (ILMM-BSE) Project (<http://e-BlackSea.com>), being implemented with support of the European Union in the framework of the Joint Operational Programme 'Black Sea Basin 2007 – 2013' (<http://www.blacksea-cbc.com>). It was also decided that IASON consortium meeting would be proceeding on 29 October 2014 the workshops planned at 30-31 October 2014. GIS and RS Consulting Center 'GeoGraphic' has been requested to organize the second regional workshop in the Black Sea region and to present Workshop II Report and Material as this Deliverable 3.4 of **IASON**.

2. ANNOUNCEMENT OF THE WORKSHOP II

The section below describes the publicity actions undertaken to maximize visibility of the workshop in Batumi. All **IASON** partners disseminated through their individual channels the workshop to academic and relevant stakeholders in the Black Sea region.

2.1 Workshop Website

A dedicated Workshop II website announcement has been created, available at <http://www.iason-fp7.eu/index.php/en/events-eng/iason-workshop-2-georgia-eng> with the registration link at <http://goo.gl/MKIV7A> and the detailed Workshop II Programme at http://www.iason-fp7.eu/images/documents/ws2_batumi/IASON-Workshop-2-Georgia-PROGRAM-25.10.2014.pdf.

The websites contained information regarding (figures 1 and 2):

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

Electronic registration process assured that all requested data on all participants were collected and kept updated throughout entire event organisation. Local stakeholders, potentially interested in the event, had the possibility to apply for participation in response to the announcements distributed through regional channels (such as CENN)

and majority of participants, not directly invited by organisers, participated in the capacity building and policy discussion events through this participatory mechanism.

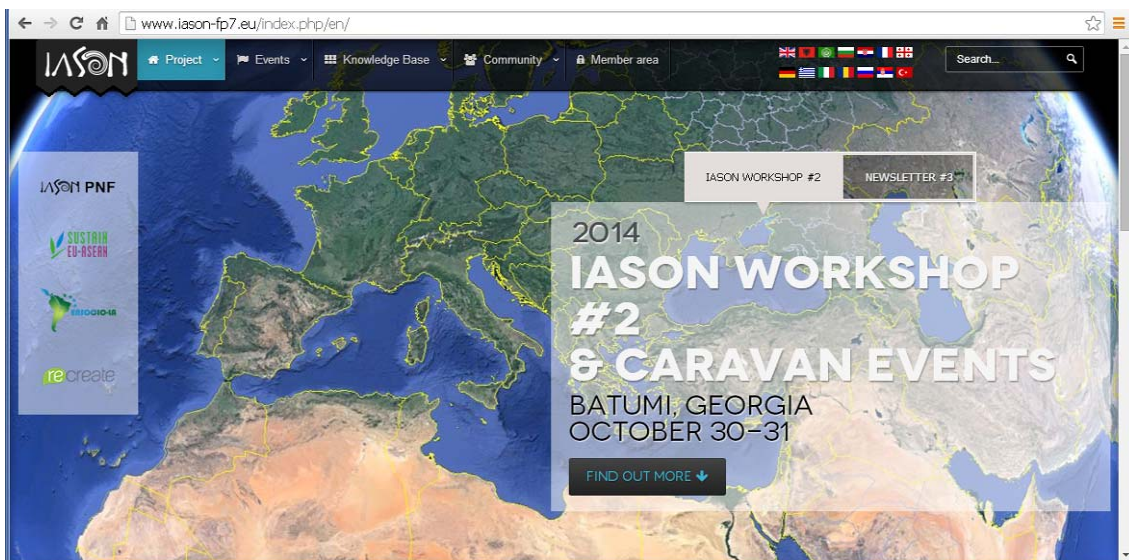


Figure 1 Website Workshop II announcement in the news section

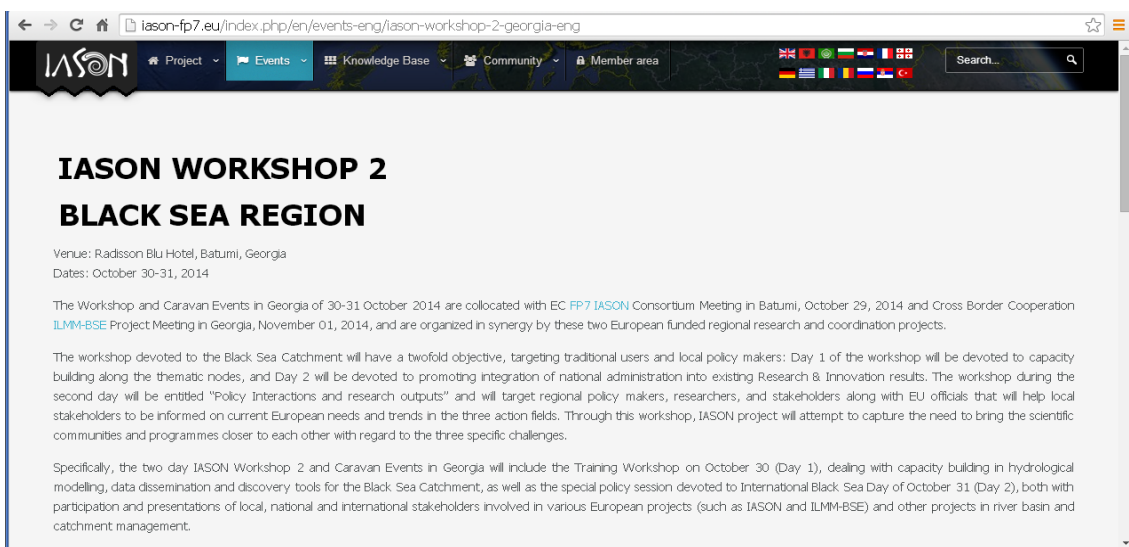


Figure 2 Dedicated Workshop II announcement page at the IASON website

Furthermore the workshop was announced at ILMM-BSE project website (figure 3).

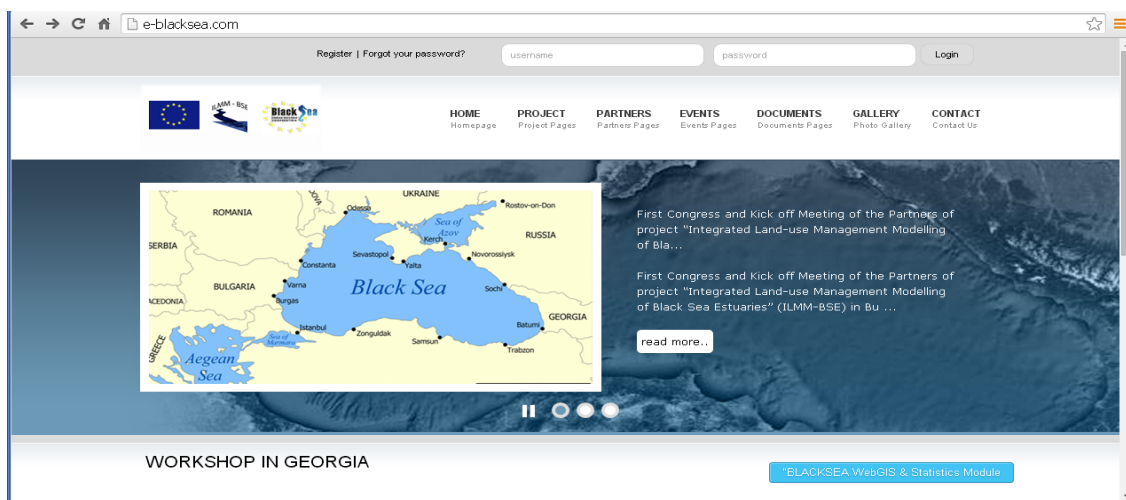


Figure 3 Workshop announcement at ILMM-BSE website (<http://e-BlackSea.com>)

2.2 Official Programme and Flyer of the Workshop

A flyer of the workshop was integrated with the official programme. In addition to the project websites, announcement and programme/flyer were distributed via popular Caucasus Environmental NGO Network (<http://www.cenn.org>) listserver (figure 4).

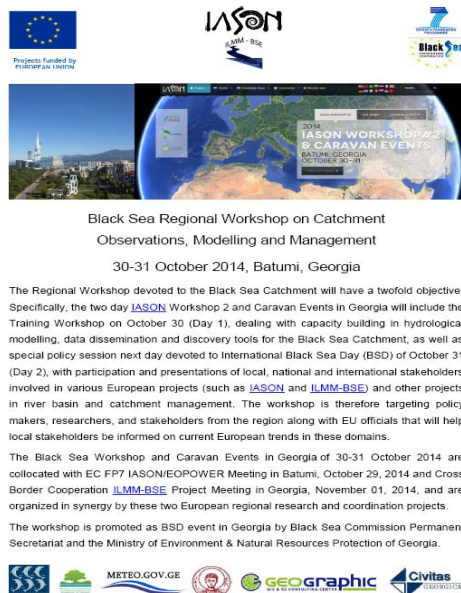


Figure 4 Workshop programme/flyer (left) and announcement via CENN (right)

2.3 Project Newsletter

Announcement of the workshop took place in the **IASON 3rd** Newsletter. Information regarding the workshop’s objectives, program, location and agenda were included in IASON’s e-Newsletter Issue 03 (figure 5).³



Figure 5 Announcement of the Workshop II in IASON’s 3rd e-Newsletter

³ IASON and ILLM-BSE posters were displayed at the workshop venue. Electronic posters were rotating at the poster size electronic screens as well. Each workshop room wall display near room entrance indicated respective slides informing the participants on each session title.

2.4 Press conference & Media Coverage

Both workshop days were extensively covered through local media (see figure 6).

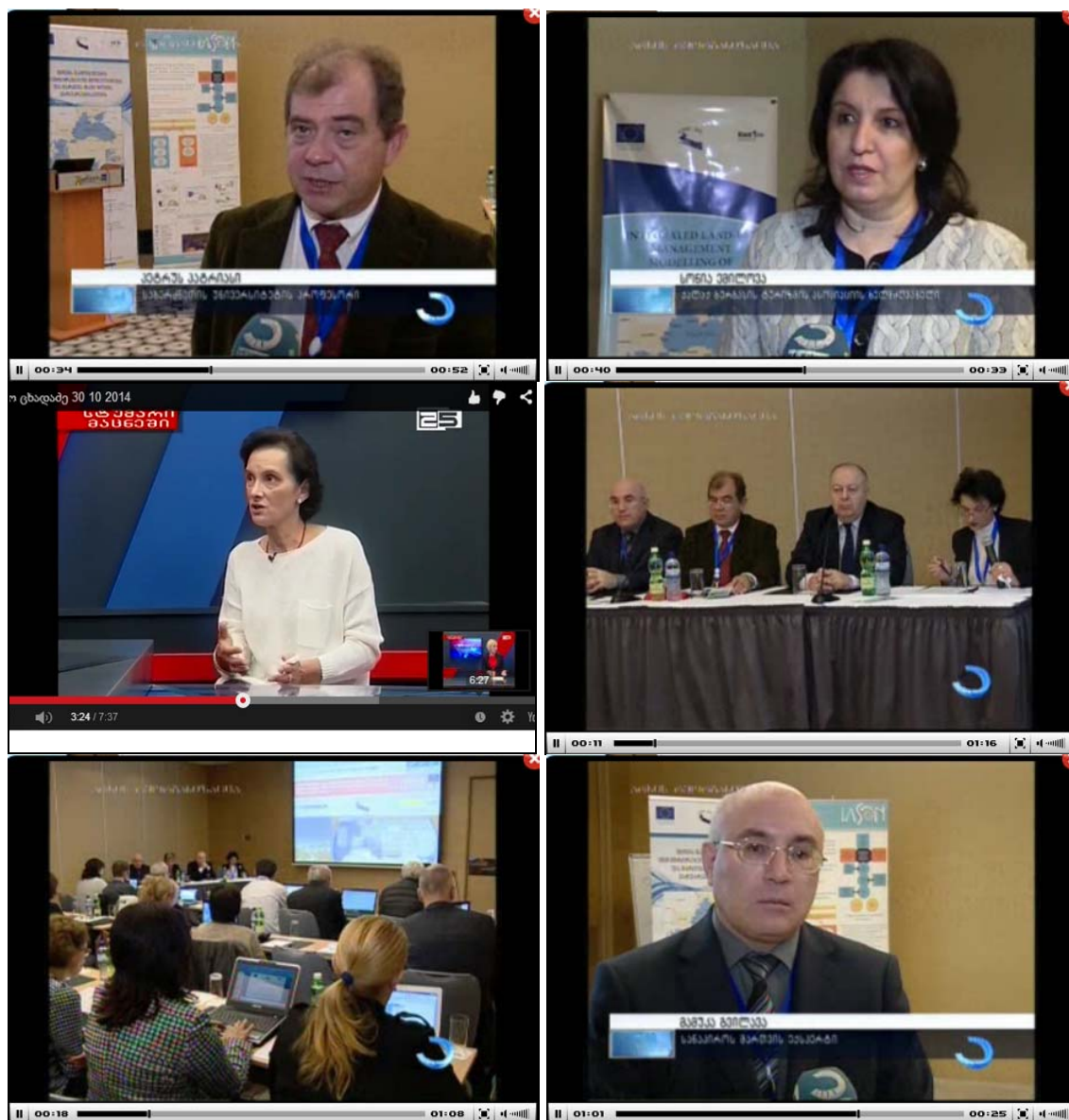


Figure 6 Screenshots of the workshop coverage through local TV channels

Informative press releases were issued for journalists. Two press conferences were organised on days 1 (capacity building) and day 2 of the workshop (policy discussion). Local television stations Adjara TV (governmental) and Channel 25 (independent), both

with national coverage in Georgia, broadcast announcements and thematic interviews with several workshop participants, including the interviews with the Black Sea Commission Representative from Georgia (she was special guest at Channel 25 news studio on , 29th of October, a day prior to the workshops), Coordinators of IASON and ILMM-BSE Projects, representatives of co-organizers, GeoGraphic and Civitas Georgica, as well as several other partners and participants of the Workshop.

Web links to video coverage by local television are provided below:

<http://www.ajaratv.ge/ge/index.php?page=shownews&id=63810>

<http://www.ajaratv.ge/ge/index.php?page=shownews&id=63831>

<http://www.ajaratv.ge/ge/index.php?page=shownews&id=63848>

http://www.tv25.ge/?page=news&news_id=14189

http://www.tv25.ge/?page=news&news_id=14182

http://www.tv25.ge/?page=news&news_id=14207

3. IMPLEMENTATION OF THE WORKSHOP

3.1 Participants

BSD Workshops (including practical training on GEOSS services) took place on 30-31 October 2014 as it was planned. In total 64 participants attended, majority both days of workshops (52 participants registered at the capacity building part and 60 participants at the plenary discussion part). A detailed list of participants is presented in Annex III.

3.2 Workshop Program

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

3.2.1 Practical Workshops

The “Bringing GEOSS services into Practice” hands-on workshop taught attendees how to set up their own SDI and how to publish and share data and metadata through the Global Earth Observation System of Systems (GEOSS). The 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.

DAY 1 – 30 October 2014

Theme: Capacity Building in Earth Observations (EO) and Environmental Applications

Duration: all day

Skills required: basic GIS knowledge

Participants: about 50 participants (including partners), each with own laptop ^(*)

Description: training workshop was composed of two interrelated parts.

First part of the workshop with the course entitled 'Bringing GEOSS services into practice' (materials were distributed as virtual machine packs) aimed at explaining to participants how to install, configure and deploy a set of open source software to publish and share data and metadata through 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.

In second part of training, after hands-on introductory session into hydrological modelling (ArcSWAT session using virtual machine packs), introduced participants how to access high performance computation (HPC) infrastructures available at the Black Sea Catchment-Observation System (BSC-OS by enviroGRIDS project) and providing hydrological model calibration and execution capacity, other web applications.



Pre-requisites ^(*): participants were required to bring their own laptops with free Virtual Box software (www.virtualbox.org), downloaded & installed prior to the workshop. This allowed use of virtual machine preloaded with all needed GIS software, data, tutorials and presentations. All virtual machine files were fully distributed prior to workshop. Operating system & specifications: Windows or MacOS or Linux; memory (RAM) minimum 4 GB; disk space minimum 30 GB.

Part 1, concepts on GEOSS & SDI delivered by University of Geneva, Switzerland
(Yaniss Guigoz, Pierre Lacroix)

09:00-09:30	Registration
09:30-11:00	Part 1: 'Bringing GEOSS services into practice'
	Introduction: Concepts on Spatial Data Infrastructures (SDI)
	How to store geospatial data? (PostGIS and flat rasters)
	How to publish geospatial data? (GeoServer; Web services)
11:00-11:15	Coffee Break
11:30-13:00	Part 1: 'Bringing GEOSS services into practice' (continued)
	How to document and search geospatial data? (GeoNetwork, metadata)
	How to process geospatial data? (PyWPS, WPS)
	How to view geospatial data? (WMS, OpenLayers, QGIS, Google Earth)
13:00-14:00	Lunch
14:00-15:30	Part 1: 'Bringing GEOSS services into practice' (continued)
	How to download geospatial data? WFS, WCS, QGIS
	How to analyze geospatial data? (consuming local/remote WPS with QGIS)
	How to share geospatial data? (registration; Discovery and Access Broker)
15:30-16:00	Coffee Break
16:00-18:00	Part 2: Hydrological modelling & Black Sea Catchment Observation System
	Introduction in hydrological modelling & hands-on demonstration (arcSWAT)
	Model application, calibration, execution over HPC infrastructure (gSWAT)

Part 2, BSC-OS modelling tools delivered by Technical University of Cluj-Napoca, Romania (Dorian Gorgan, Teodor Stefanut) & GeoGraphic, Georgia (Mamuka Gvilava)

To diversify the capacity building session and to accommodate time logistics of the invited speakers, two keynote presentations by prominent scientists and policy makers of the Black Sea region were delivered during the training day (latter one during the Black Sea Day reception organised for participants by local hosts):







11:15-11:30	EO and disaster management	O. Altan, 1stVP ISPRS , EKINOKS, TR
	Presentation with two videos. Starting with compelling evidence of climate change (global average temperature and sea level rise, northern hemisphere snow cover), hazard & vulnerability to CC, increased occurrence & victims of natural disasters, opportunities for EO & RS, http://www.un-spider.org portal.	
19:30-19:45	Black Sea research challenges	A. Kıdeyş, IASON Board, IMS , TR
	About IMS/METU. Black Sea environmental challenges: habitat destruction, unsustainable fishing, eutrophication, invasive species, pollution, marine litter, global warming. Black Sea Environmental Programme. Legal and institutional framework (Convention/Black Sea Commission). Need for wider engagement.	



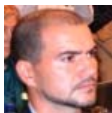
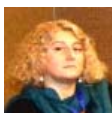

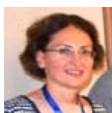

3.2.2 Black Sea Catchment Observations, Modelling, Management Workshop



















The second day (31 October) was devoted to international Black Sea Day and was concerned with promoting integration of national and international initiatives in the Black Sea catchment observations, modelling and management. 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, such as the coastal monitoring and water and land resources management.

Workshop has been completed without major changes in the program. The first half of the workshop was facilitated by IASON and the second half by ILMM-BSE Project Coordinators. As the Workshop was held in celebration of the international Black Sea Day of October 31, after the official opening speech by the Rector of the Batumi Shota Rustaveli State University the participants were addressed by the Black Sea Commission Member of Georgia Mrs. Nino Tskhadadze, after delivering the official address of the BSC-PS Executive Director Prof. Dr. Halil Ibrahim Sur, Istanbul, Turkey.

DAY 2 – 31 October 2014 – INTERNATIONAL BLACK SEA DAY

09:30-11:00		Black Sea Day - Plenary Session	
	Opening addresses by the Rector of the Batumi State University; on behalf of the Black Sea Commission Permanent Secretariat Executive Director; and the Ministry of Environment and Natural Resources Protection of Georgia.		
	EO thematic pillars of IASON project	P. Patias, IASON Coordinator, GR	
	IASON project: objectives, partners, countries, meetings, timeline, deliverables (planned, prepared), Med/BS stakeholders/activities PNF & its analysis, EO capacity building, global partner projects.		
	CBC ILMM-BSE project & research	S. Enilova, BG & F. Konukcu, TR	
 	ILMM-BSE project: objectives, partners & beneficiaries, countries, meetings, timeline, deliverables (planned, prepared), activities and target groups, joint research activities and preliminary results.		
	enviroGRIDS and BSC-OS	D. Gorgan, IASON, UTCN, RO	
	'enviroGRIDS Black Sea Catchment Observation System portal' (BSC-OS): Specific objectives & motivation, uptaking its HPC applications, tools & platforms (gSWAT, BASHYT, GreenLand).		
	EO toolkit & business opportunities	M. Noort, IASON & EOPower , NL	
	'EO toolkits & business opportunities': EO market size, marketing needs, EO costs/benefits step-by-step guidance, EO contribution into green economy, application examples, EO marketing tools.		
	Marine Climate Remote Sensing	N. Meskhidze, NCSU , US	
	'Sea spray aerosol and climate assessments: model results and remotely sensed data': aerosols, radiative forcing uncertainty, sea spray organic emissions, effect on clouds/climate, RS vs. Model.		
11:00-11:30		Black Sea Day - Press Conference	
11:00-11:30	Coffee break		

11:30-14:00 Black Sea Day - Plenary Session (Continued)	
	CBC Black Sea REPAIR project A. Margebadze, ABC Group , GE
	'Regional cooperation for Black Sea river basins environmental protection from agricultural polluters' (REPAIR): project objectives, partners & countries, activities, river basins covered, action plans.
	CBC HOT BLACK SEA project M. Devidze, Partner FCE, GE
	'Integrated hotspots management & saving the living Black Sea ecosystem' (HOT Black Sea): objectives, partners and countries, activities, hot spots map, Black Sea algal blooms & eutrophication.
	MIS ETC 171 (Spatial) project V. Vassilev, RESAC , BG
	'Use of Copernicus & LPIS data in the elaboration of trans-border reference land cover datasets for the Danube Countries': BG-RO land cover data validation per INSPIRE, stakeholder feedback.
	USAID INRMW project M. Shotadze, GLOWS, GE
	'Participatory cross-sectoral approach for integrated watershed management – INRMW-Georgia': objectives, watershed planning, community selection, priority actions & projects, ecoclubs, lessons.
	Flood prevention project in Georgia I. Tsiklauri, AF/UNDP, GE
	'Developing climate resilient flood and flash flood management practices to protect vulnerable communities of Georgia': objective & components, flood model, early warning, progress with outputs.
	EEA ENPI-SEIS in Georgia T. Bakuradze, on behalf of NFP, GE
	ENPI-SEIS project description, priority themes (water, waste, air & climate, biodiversity), environmental data identified in Georgia, web sources for core indicators, key agencies, statistical reporting.
	Uptaking PEGASO project results M. Gvilava, IASON, GeoGraphic, GE
	'Uptaking FP7 PEGASO outputs: ICZM stock-taking survey tool': ICZM stock-take background, protocol, audit themes & questions, results mapping, LimeSurvey based data entry tool, live demo.
	Workshop summary and closure P. Patias, IASON Coordinator, GR
14:00-15:00	Lunch and adjourn (IASON)

DAY 2 – 31 October 2014 – INTERNATIONAL BLACK SEA DAY			
15:00-16:45	Black Sea Day - Plenary Session – ILMM-BSE Workshop		
	Addresses by Civitas Georgica (G. Meskhidze, GE) and BRTA (S. Enilova, BG)		
	<table border="1" style="width: 100%;"> <tr> <td style="width: 60%;">Presentation of BRTA (ILMM-BSE Applicant)</td> <td>S. Enilova, BRTA, BG</td> </tr> </table>	Presentation of BRTA (ILMM-BSE Applicant)	S. Enilova, BRTA , BG
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	<table border="1" style="width: 100%;"> <tr> <td style="width: 15%; text-align: center;"></td> <td>'Burgas Regional Tourist Association, Bulgaria, presentation': about country of Bulgaria, its south-eastern part and city of Burgas, Black Sea coast, cultural & natural heritage of Thrace, BRTA activities and projects.</td> </tr> </table>		'Burgas Regional Tourist Association, Bulgaria, presentation': about country of Bulgaria, its south-eastern part and city of Burgas, Black Sea coast, cultural & natural heritage of Thrace, BRTA activities and projects.
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16:45-17:00	Coffee break		
17:00-18:00	Black Sea Day - Plenary Session – ILMM-BSE Workshop (Continued)		
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3.3 Photos, Presentations, and Recordings

Per Project Grant Agreement, Workshop Material must be public, 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.



Opening GEO/GEOS training session



Facilitators from UNIGE



Venue and training audience



Training participants in action



UTCN capacity building team at work



Selfie at HPC hydrology modelling session



In memory of Professor Laurence Mee
<http://www.sams.ac.uk/laurence-mee>



Launching the Black Sea Day Workshop



Opening addresses



Opening session packed with audience



BSC PS ExDi & BSC Member addresses



IASON Coordinator



Workshop as reflected in venue mirrors



ILMM-BSE Project Coordinator



ILMM-BSE Joint Research Coordinator



Presenting enviroGRIDS HPC tools



EO marketing and business opportunities



Aerosols – yet another land-sea challenge



Black Sea Day Workshop in TV & Media



[Black Sea REPAIR](#)



[HOT Black Sea](#)



Concluding remarks by Civitas Georgica



... and by GeoGraphic



Workshop group photo on international Black Sea Day of 31 October 2014

Figure 7 Workshop photos

4. CONCLUSIONS

IASON workshop II organized in Batumi, Georgia on 30-31 October 2014 was a success with an important participation of experts from 14 countries (with 5 Black Sea countries including Georgia, latter constituting 50% of participants). These were:

- IASON partners
- ILMM-BSE partners and beneficiaries
- EU & other regional projects concerned with catchment observations & management
- Authorities and scientists/experts from Georgia and other Black Sea region countries
- Public and NGO representatives

Important outcome of the meeting is the capacity building and opportunity delivered by IASON and obtained by partner projects such as ILMM-BSE, establishment of person-to-person links and networking between institutions represented at the meeting. Particularly high level of satisfaction was expressed to the acquaintance with advanced GEO/GEOSS knowledge among participants; opportunity to exchange knowledge and experience on hydrological modelling tools, with particular satisfaction regarding the

high power computing resource access opportunities. European experts were satisfied as well with the better understanding of ongoing projects and initiatives in the Black Sea region. It also needs to be noted that direct personal contacts strongly support the knowledge sharing and experience distribution in the application of modern Earth Observations tools and instruments in support of environmental governance.

5. ACKNOWLEDGEMENTS

Organising these workshops in Georgia would not have been possible without close cooperation, delicate cost sharing and intense synergy between the two European projects IASON and ILMM-BSE. Support of the Coordinators and the Management of these two projects are therefore thankfully acknowledged. IASON project, through Geolmaging partner covered all venue related costs as well as meals for all the participants on 30th of October and in the first half of the 31st October workshop, while ILMM-BSE project through Civitas Georgica partner covered costs of venue on second half of the 31st of October, as well as the costs of receptions on 30th of October (ice-breaker) and 31st of October (Black Sea Day reception).

All IASON and ILMM-BSE partners as well as all invited other project representatives (for which latter are gratefully acknowledged!) covered their own travel and hotel costs. Civitas Georgica through ILMM-BSE budget generously supported participation (travel and hotel accommodation) for all Georgian stakeholders invited to Batumi to participate in the capacity building and plenary workshops (10 participants), as well as covered all the local logistics (including bus and minivan service costs).

University of Novi Sad (IASON) and Namik Kemal University (ILMM-BSE) Partners are sincerely thanked for administering webpage announcements.

Special thanks go to UNIGE, UTCN and GeoGraphic partners of IASON for providing content, material and facilitation for the capacity building workshop on 30th of October.

ANNEX I – ADDRESS OF BSC PS



***Distinguished colleagues and friends,
dear participants of IASON and ILMM-BSE
Black Sea Day Workshops,***

In my capacity of Executive Director of the Black Sea Commission' Permanent Secretariat, let me thank you for joining the Black Sea celebrations in Georgia, in this wonderful city of Batumi! I do regret that I cannot join you today and wish you a successful meeting!

I would like to mention that the Black Sea Day is one of the most outstanding and important events of the Black Sea Commission recalling us the day then the first Strategic Action Plan for the Rehabilitation and Protection of the Black Sea was signed by all riparian countries of the Black Sea on the 31st of October back in 1996 in Istanbul. It continues to be our good tradition every year and let me extend the warmest congratulations to each and every one of us, to every person dealing with the preservation of the Black Sea, our precious common heritage.

By means of having such events in different coastal regions of the Black Sea we try to attract the attention of scientists, politicians, decision-makers and just a wider public to our day-by-day activities related to the protection of the Black Sea. I hope your meeting will bring us to some new solutions and help to better coordinate our efforts in the future.

I would like to thank my Georgian colleagues for organizing this event and mark their continuous dedication and efforts to improve the environment of the Black Sea and support of our activities.

Thank you very much for your kind attention and once again, heartily congratulations to all of us!

Prof. Dr. Halil Ibrahim Sur, Executive Director

The Black Sea Commission Permanent Secretariat

ANNEX II – ADDRESS OF BSC MEMBER FROM GEORGIA



**Ladies and Gentlemen,
distinguished guests,**

Welcome to Batumi and 18th celebration of international Black Sea Day. Cooperation which started between Black Sea countries by signing the Bucharest Convention and Odessa Declaration deepened on 31st of October 1996, when first Black Sea Strategic Action Plan was endorsed. International Black Sea Day commemorates this date.

All six coastal states celebrate this day to raise public awareness for the protection of Black Sea environment and ongoing cooperation. We are indeed pleased and humbled to be greeted by the Black Sea Commission Permanent Secretariat Executive Director on this memorable event here in Batumi.

The Convention on the Protection of the Black Sea Against Pollution is the first International Environmental Agreement which Georgia signed as an independent country. Therefore the Convention and its following policy documents like the Black Sea Strategic Action Plan remain very important for Georgia. Several environmental specialists and other stakeholders gained first experience in negotiations of international agreements. We would like to underline in this regard the important role of the international community, GEF, UN organizations, EU and other key supporters in the development of this process. Many thanks to them.

Because of the economic and political crisis of that time, Georgia was unable to implement provisions of the Convention. From that time, Georgia attempts to develop stronger legal frameworks. As part of the environmental policy reform process, the legal framework on the environment and some other Black Sea relevant laws have been developed or updated. Black Sea issues were included in a separate chapter of the new National Environmental Action Plan. This chapter is based on priorities and findings of the Regional BS SAP.

The beautiful city of Batumi is an example of the outputs of this regional policy on environmental protection of the resources of the Black Sea. Quite recently, in 2012, a new system of sewage and water supply was completed in this city. Certainly the

Government of Georgia is committed in recognizing environmental protection as one of the top priorities and is thriving to achieve much more for the protection of the Black Sea and its coastal zones.

This year, the international Black Sea Day celebration here in Georgia is organized in collaboration and in synergy with two European projects with quite different sources of funding – IASON – a so called ‘uptake’ type project supported by the European research 7th Framework Program (FP7) – that is aiming at building capacity on Earth Observation in the Black Sea and Mediterranean basins and catchments. IASON present its main results in relationship with international agreements on data sharing such as GEO/GEOSS at a global level, and INSPIRE at the European level. Some of the ‘uptake’ projects IASON is trying to peruse in the Black Sea regional are FP7 enviroGRIDS and PEGASO. Until 2014 among the six Black Sea countries, only Georgia and Bulgaria still were not members of Group on Earth Observations – GEO. It is indeed great pleasure to report, that thanks to efforts of enviroGRIDS and its continuation momentum under IASON Georgia accomplish these tasks and joined GEO as 90th of its member. It is also noteworthy that at least two countries in the Black Sea and Caucasus Region were indeed encouraged to take this step and at forthcoming GEO Plenary Armenia and Bulgaria are expected to be welcomed as member of this global network.

Another European project sponsoring this collaborative celebration of the Black Sea Day in Georgia is ILMM-BSE – and initiative to apply reach toolsets of land use modelling in the catchments draining to estuaries and marine waters of the Black Sea. It is also noteworthy that Cross-Border Cooperation Program for the Black Sea is administered by Romania – the European country adjoining the Black Sea. It is not surprising to expect that this project will try to deliver more at the regional and the local grassroots level.

These Projects are indeed relevant instruments for strengthening the application and implementation of European instruments such as the Water Framework Directive, while helping the dissemination of good environmental and policy practice eastward. This is

particularly important for Georgian environmental governance agenda in the context of the Association Agreements, established with the 28 Countries of the European Union.

A key lesson that we learned from our Regional and European cooperation for the protection of the Black Sea is that the network is stronger than its individual parts. Cooperation between countries, sharing the problems and best practices for their solving is a way how coastal states should act. We have difficult problems to face, and we will get through them if we face them together. Thank you.

Nino Tskhadadze

The Black Sea Commission Member from Georgia

Ministry of Environment and Natural Resources Protection of Georgia

ANNEX III – PARTICIPANT LIST

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No	Surname	Name	Country	Organisation	Project	E-mail	30 Oct	31 Oct
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No	Surname	Name	Country	Organisation	Project	E-mail	30 Oct	31 Oct
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52	Diasamidze	Inga	Georgia	Batumi Shota Rustaveli State University		inga_diasamidze@yahoo.com	1	1
53	Tskhadadze	Nino	Georgia	Ministry of Environment and Natural Resources Protection of Georgia		ninotskhadadze@yahoo.com	0	1
54	Metreveli	Beka	Georgia				1	1
55	Khakhiashvili	Givi	Georgia	Thermarsenal		khakhiashvili@yahoo.com	1	1
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No	Surname	Name	Country	Organisation	Project	E-mail	30 Oct	31 Oct
60	Bolkvadze	Gia	Georgia	Batumi Shota Rustaveli State University		giabatumi@yahoo.com	0	1
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62	Baramidze	Irine	Georgia	National Environmental Agency		Irine.Baramidze@gamil.com	0	1
63	Khalvashi	Meri	Georgia	National Environmental Agency, Black Sea Monitoring Centre, Batumi			0	1
64	Bolkvadze	Aslan	Georgia	Batumi Shota Rustaveli State University		bolkvadzeaslan@mail.ru	0	1
TOTAL							52	60