Fifth Session of the IODE Steering Group for the ODINBlackSea project (SG-ODINBlackSea-V)

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1. INTRODUCTION AND BACKGROUND INFORMATION

The Head of the BG NODC and IODE National Coordinator for Oceanographic Data Management, Atanas Palazov, opened the meeting and welcomed the participants. He noted that the purpose of the meeting is to review the activities implemented by the ODIN BLACKSEA network and elect new Chair of the Steering Committee and project Coordinator. The agenda was revised and adopted (Annex 1).

A. Palazov presented a brief historical review and brought to mind the aims and objectives of the ODINBLACKSEA project. He reminded that the Ocean Data and Information Network for the Black Sea (ODINBLACKSEA) Pilot Project were established during the XIXth Session of the IODE Committee (Trieste, Italy, March 2007) through the Recommendation IODE-XIX.10. All riparian Black Sea countries participate in the project. Atanas Palazov (IO-BAS, Bulgaria) was elected for ODIN-Black Sea coordinator.

Project was created to fulfill following objectives:

- **Objective 1:** Provide assistance in the development, operation and strengthening of National Oceanographic Data (and Information) Centres to advance the level of less experienced data centres and to establish their networking in the region;

- **Objective 2:** Provide training and education in marine data and information management, taking into account the requirements of operational oceanography; applying standard formats and methodologies as defined by the IODE;

- **Objective 3:** Enhance national and regional awareness for Marine Data and Information Management;

- **Objective 4:** Assist in the development and maintenance of national and regional marine data, metadata and information databases;

- **Objective 5:** Assist in the development and dissemination of marine data, information products and services, meeting the needs of user communities at the national and regional levels, and responding to national and regional priorities;

- **Objective 6:** Undertake the activities needed for applying modern technologies for data collection, processing, storing and dissemination to achieve end-to-end data management (E2EDM).

- **Objective 7:** Undertake the ODINBLACKSEA activities in close collaboration and networking with other relevant organizations, programmes and projects operating in the region.

A. Palazov also presented the progress made during 2007 – 2011 period and underline that since 2012 there are no activity in frame of the ODINBLACKSEA. He stressed on the utmost importance to resume ODINBLACKSEA activity especially in view of decisions taken at Working Group Meeting held on 17-18 March 2015 in Bruges, Belgium. There, four National Coordinators for Oceanographic Data Management – Atanas Palazov, Nick Michailov, Emre Tukenmez and Olga Akimova - after discussion they underlined the importance of ODINBLACKSEA for the Black Sea region and recalled that the ODINBLACKSEA was the pilot project for implementing End to End data Management technology. They also pointed out the importance of the project for implementation of the IODE policies and practices in the region and stressed that ODINBLACKSEA played significant role for capacity building in the Black Sea region.

The Working Group endorsed the following decision:

1. Recommends revitalization of ODINBLACKSEA;
2. Adopts the revitalization plan of ODINBLACKSEA;
2. Presentations of the Black Sea NODCs

Following the agenda representatives of each NODC in the Black Sea region gave presentations with main topics being: information of data centers establishment, main objectives and activities, data types (historical and real time), products, data management system, data sources and collaboration with different international programs and projects.

RIHMI-WDC suggested setting up the new version of Ocean Data Portal (ODP) software to sustain existing data and information exchange network within ODINBLACKSEA. E. Viazilov explained technology and infrastructure of ODP portal.

Borys Aleksandrov described the current situation in the Ukrainian Academy of Sciences and briefly presented some of the major scientific institutes in Ukraine. He assured that in short terms a host of Ukrainian NODC will be appointed after consultation with Prof. V. Eremeev - Scientific Head of Scientific and Production Center of Oceanography Research and Technologies of Ukraine and official representative of Ukraine in IOC/UNESCO.

3. New oceanographic data sources in Black Sea

A. Palazov acquainted the audience with the current status of data acquisition systems paying particular attention to Argo buoy programme in the Black Sea (currently active 12 buoys). He also mentioned that 4 Ferry box systems, 4 marine noise monitoring moorings, 2 marine water monitoring moorings and a DRON for marine litter monitoring will be put into function in frame of several projects.

4. Collaboration with Black SeaGOOS and Black Sea Commission

During the second day of the meeting the cooperation between these two organizations was discussed. It was mentioned cooperation with BlackSeaGOOS currently is not close since it is not particularly active. In frame of ARENA and ASCABOS projects partners were obliged to organize joint workshops each year but after those projects finished this practice was given up.

During the discussion it was supported the potential partnership with The Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission) in the sphere of oceanographic data and information exchange.

Therefore, ODINBLACKSEA will work towards an increase of collaboration with Black Sea Commission through its Advisory Group on Information and Data Exchange. Common needs will be defined jointly and the initiatives will assist each other in the field of ocean data and information management. ODINBLACKSEA ODP will be proposed as one of the tools for data and information exchange.

5. Revision of the ODINBLACKSEA documents

After two days of discussion the main project document of ODINBLACKSEA was updated.

6. Elections of Chair of the Steering Committee and Project Coordinator

Steering Committee decided to abolish position of Chair of the Steering Committee and the Project Coordinator to chair the Steering Committee. A. Palazov nominated Murat Elge who was subsequently elected with consensus to be a Project Coordinator.

7. Adoption of New ODINBLACKSEA Project Document

After final revision a new version of ODINBLACKSEA Project Document was adopted.
ANNEX I

AGENDA OF THE MEETING

1. INTRODUCTION AND BACKGROUND INFORMATION
2. PRESENTATIONS OF THE BLACK SEA NODCS
3. NEW OCEANOGRAPHIC DATA SOURCES IN BLACK SEA
4. COLLABORATION WITH BLACK SEAGOOS AND BLACK SEA COMMISSION
5. REVISION OF THE ODINBLACKSEA DOCUMENTS
6. ELECTIONS OF THE CHAIR OF THE STEERING COMMITTEE AND PROJECT COORDINATOR
7. ADOPTION OF NEW ODINBLACKSEA PROJECT DOCUMENT
ANNEX II
LIST OF PARTICIPANTS

Atanas Palazov
Institute of Oceanology
Bulgarian Academy of Sciences
Bulgaria
E-mail: palazov@io-bas.bg

Asen Stefanov
Institute of Oceanology
Bulgarian Academy of Sciences
Bulgaria
E-mail: a.stefanov@io-bas.bg

Veselka Marinova
Institute of Oceanology
Bulgarian Academy of Sciences
Bulgaria
E-mail: marinova@io-bas.bg

Nadezhda Valcheva
Institute of Oceanology
Bulgarian Academy of Sciences
Bulgaria
E-mail: valcheva@io-bas.bg

Zurab Savaneli
Tbilisi State University
Oceanological Research Centre and GeoDNA

Georgia
E-mail: zsavaneli@gmail.com

Viorel Malciu
National Institute for Marine Research and Development "GrigoreAntipa"
Romania
E-mail: incdmct@datanet.ro

Evgenii Viazilov
Federal Service for Hydrometeorology and Environmental Monitoring
All-Russian Research Institute of Hydrometeorological Information - World Data Center (RIHMI-WDC)
Russian Federation
E-mail: vjaz@meteo.ru

Murat Elge
Office of Navigation, Hydrography and Oceanography
Turkey
Email: m_elge@hotmail.com

Borys Aleksandrov
Institute of Marine Biology
National Academy of Sciences of Ukraine
Ukraine
E-mail: borys.aleksandrov@gmail.com
ANNEX III

REVISED PROJECT DOCUMENT FOR THE OCEANOGRAPHIC DATA AND INFORMATION NETWORK FOR THE BLACK SEA REGION (ODINBLACKSEA)

1. INTRODUCTION

The IOC’s International Oceanographic Data and Information Exchange (IODE) is established to enhance marine research, exploitation and development by facilitating the exchange of oceanographic data and information between participating Member States and by meeting the needs of users for data and information products. The main objectives of the IODE Programme are: (i) to facilitate and promote the exchange of oceanographic data and information; (ii) to develop standards, formats, and methods for the global exchange of oceanographic data and information; (iii) to assist Member States to acquire the necessary capacity to manage oceanographic data and information and become partners in the IODE network; (iv) to support international scientific and operational oceanographic programmes of IOC and WMO and their sponsor organizations with advice and data management services.

Recognising that the lives of at least 160 Million people are profoundly influenced by the Black Sea and considering that all riparian countries depend to a large extent on marine and coastal resources, the ability to acquire, manage, archive and disseminate data, as well as the capacity to generate products and services in support of decision making and management of the Sea and Coastal Zones is of vital importance. The Oceanographic Data and Information Network for the Black Sea Region (ODINBLACKSEA) was established during IODE XIX to respond to these needs through: (i) providing assistance in the development, operation and strengthening of National Oceanographic Data (and Information) Centres and Associate Data Units (ADU) of Black Sea Countries and to establish oceanographic data and information network amongst them by applying IOC/IODE Ocean Data Portal (ODP); (ii) training and education in oceanographic data and information management as well as data collection, taking into account the requirements of operational oceanography by applying standard formats and methodologies as defined by the IOC/IODE; (iii) enhancing national and regional awareness for oceanographic data and information management; (iv) assisting in integration and maintenance of national and regional oceanographic data, metadata and information databases; (v) assisting in the development and dissemination of oceanographic data and information products and services, meeting the needs of user communities at the national and regional levels, and responding to national and regional priorities; (vi) undertaking the ODINBLACKSEA activities in close collaboration and networking with The Commission on The Protection of the Black Sea Against Pollution (Black Sea Commission) and other relevant organizations, programmes and projects operating in the Black Sea.

The ODINBLACKSEA was first proposed during the IODE XIX in 2007 and accepted by the Committee. It was also the pilot project to implement Ocean Data Portal (ODP) infrastructure at the regional level. Between the years of 2007-2015 the project was conducted and ODP as oceanographic data and information environment was implemented successfully where all the Black Sea NODCs became a data provider for ODP. Georgian and Romanian NODCs were established in agreement with IODE
procedures within this period in comply with the project objectives. Ukrainian NODC has moved from Sevastopol to Odessa.

Since the ODP software (Data Provider and Integration Server) was upgraded and the need of further development the NODCs in the region, the revised ODINBLACKSEA project document is being proposed.

2. CURRENT STATUS

All Black Sea countries have now well established NODCs. Since the old version of Data Provider software of ODP is being used for oceanographic data and information exchange, the data cannot be exchanged efficiently. At the same time, due to the technological improvements in data and information management during recent years, the capacity building activities must be reorganized within the revised project.

On the other hand, increased need of closer cooperation with Black Sea Commission and other oceanographic data management and exchange projects involving Black Sea such as SeaDataNet make ODINBLACKSEA project to be revised and sustainable.

At this stage the all the Black Sea countries NODCs and oceanographic data management organisations are involved in ODINBLACKSEA (in alphabetical order):

**Bulgaria** – Bulgarian National Oceanographic Data Centre (BGODC), Institute of Oceanology – Bulgarian Academy of Sciences;

**Georgia** – Tbilisi State University (ADU);

**Romania** – National Institute for Marine Research and Development "Grigore Antipa" (NODC);

**Russia** - All-Russian Research Institute of Hydrometeorological Information - World Data Centre (RIHMI-WDC), Federal Service of Russia for Hydrometeorology and Monitoring of Environment;

**Turkey** - NODC-Turkey, Office of Navigation, Hydrography and Oceanography;

**Ukraine** – Institute of Marine Biology, National Academy of Sciences of Ukraine (NODC to be established).

3. PROJECT OBJECTIVES

**OBJECTIVE 1:** Provide assistance in the development, operation and strengthening of National Oceanographic Data (and Information) Centres and Associate Data Units (ADU) of Black Sea Countries and to establish oceanographic data and information network amongst them by applying IOC/IODE Ocean Data Portal (ODP)

**OBJECTIVE 2:** Provide training and education in oceanographic data and information management as well as data collection, taking into account the requirements of operational oceanography; applying standard formats and methodologies as defined by the IOC/IODE ;
OBJECTIVE 3: Enhance national and regional awareness for oceanographic data and information management;

OBJECTIVE 4: Assist in integration and maintenance of national and regional oceanographic data, metadata and information databases;

OBJECTIVE 5: Assist in development and dissemination of oceanographic data and information products and services, meeting the needs of user communities at the national and regional levels, and responding to national and regional priorities;

OBJECTIVE 6: Undertake the ODINBLACKSEA activities in close collaboration and networking with The Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission) and other relevant organizations, programmes and projects operating in the Black Sea;

4. ACTIVITIES DESCRIPTION

OBJECTIVE 1 Provide assistance in the development, operation and strengthening of National Oceanographic Data (and Information) Centres and Associate Data Units (ADU) of Black Sea Countries and to establish oceanographic data and information network amongst them by applying IOC/IODE Ocean Data Portal (ODP)

1.1 Provision of expert support for development, operation and strengthening of NODCs’ structure in the Black Sea region

National experts will work in close collaboration with each other and with IODE experts to improve NODCs’ structure in the Black Sea region aiming to meet IOC-IODE requirements and best practices.

Expected result: Strengthen the structure of existing NODCs and ADUs in the Black Sea region.

1.2 Setting up/Maintaining the Project office

Project office could be set up in one of the participating countries. It is recommended to set up the office in the project Coordinator’s country. The main function of the office will be to support day-to-day activities of the project.

Expected result: Project office set up/maintenance.

1.3 Setting upgraded version of ODP software regional segment for ODINBLACKSEA to establish oceanographic data and information network

The ODP technology as an “umbrella” that comprises NODCs data systems and provides communication and “transparent” interaction between metadata, data and products resulted from these local data systems and also an end-user access to any data and information generated by systems.

ODINBLACKSEA Regional ODP will be set-up and other ODINBLACKSEA NODCs and/or ADUs will be data providers to ODINBLACKSEA ODP.
Expected result: Oceanographic data, information, products and services exchange network will be set for the Black Sea called as ODINBLACKSEA ODP.

OBJECTIVE 2: Provide training and education in oceanographic data and information management as well as data collection, taking into account the requirements of operational oceanography; applying standard formats and methodologies as defined by the IOC/IODE;

2.1 Participation in advanced data and information management training course

These data management training courses should be attended by the staff of NODCs with special emphasis on Ocean Data Portal technologies and operational oceanography with the support of IOC/IODE.

Expected result: Increased expertise of the NODCs’ staff.

2.2 Operational oceanography training, provided by top experts

To organize a basic course on Operational Oceanography for the specialists from regional NODCs with the support and collaboration with GOOS and IODE.

Expected result: NODCs will obtain expertise on Operational oceanography.

2.3 Training and capacity building activities on Oceanographic Data Collection will be organized at regional level.

In cooperation with all NODCs and related oceanographic research institutes in the region, when possible, joint data collection cruises with Black Sea Countries’ research vessels will be conducted in close collaboration with other projects in the region.

Expected result: Oceanographic data gaps in the region will be defined by the NODCs and these gaps will be closed during theses expeditions while on the job training on data collection will be implemented for NODCs’ experts.

OBJECTIVE 3: Enhance national and regional awareness for oceanographic data and information management;

3.1 Support to enhance national awareness

To enhance awareness about the importance of oceanographic data and information management, NODCs will develop a number of promotional products such as brochures, posters, newsletters etc in local language. The NODCs will also organize national awareness workshops for data and information users.

Expected result: Enhanced national awareness and increased institutional and public support.

3.2 Development and maintenance of project web site

In order to assist the coordination of project activities, as well as to create awareness and to promote the project, an ODINBLACKSEA project website will be developed. It will be hosted and maintained by the Project Office.

Expected result: ODINBLACKSEA web site set up.
OBJECTIVE 4: Assist in integration and maintenance of national and regional oceanographic data, metadata and information databases;

4.1 Development and updating of inventory of oceanographic data sources (observing platforms, such as: research vessels, buoys, coastal stations, automatic stations, drifters, etc.) and integrate mentioned inventory at regional level.

In order to provide best knowledge about the data collection infrastructure in the Black Sea region, the inventory of the oceanographic observation platforms (such as research vessels, buoys, coastal stations, automatic stations, drifters, etc.) will be prepared in comply with existing national and international projects. The inventory data base will be integrated through ODINBLACKSEA ODP.

Expected result: Updated inventory of the above mentioned will be in use for the region.

4.2 Integrating of NODCs oceanographic metadata bases and if possible data bases at regional level.

In order to make oceanographic metadata and the data itself if possible to be visible and useful for scientific use and other end users such as Black Sea Commission these data bases will be integrated through ODINBLACKSEA ODP.

Expected result: Update NODCs Oceanographic Metadata and data if possible and integrate them through ODINBLACKSEA ODP

OBJECTIVE 5: Assist in development and dissemination of oceanographic data and information products and services, meeting the needs of user communities at the national and regional levels, and responding to national and regional priorities;

5.1 Support for elaboration of concept of data products

To enhance utilization of the existing oceanographic data and information products and services, ODINBLACKSEA will support these efforts in terms of data and information management concepts.

Expected result: Enhance utilization of the existing oceanographic data and information products and services.

5.2 Development of user oriented data and information products

ODINBLACKSEA will work in close collaboration with the research community which will develop products and services that can be provided to the decision makers and stakeholders at the regional level.

Expected result: End-user oriented products and services.

5.3 Specification of potential need of information and data for the Black Sea

Black Sea countries will assess user's data and information needs and prepare the list of information resources which it has to be submitted to the ODINBLACKSEA ODP.

Expected result: List of information resources.
OBJECTIVE 6: Undertake the ODINBLACKSEA activities in close collaboration and networking with The Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission) and other relevant organizations, programmes and projects operating in the Black Sea;

6.1 To increase potential partnership with Black Sea Commission in terms of Oceanographic Data and Information

ODINBLACKSEA will increase the collaboration with Black Sea Commission through its Advisory Group on Information and Data Exchange. Common needs for both initiatives will be defined jointly and assist each other in the field of ocean data and information management. ODINBLACKSEA ODP will be proposed as main environment to exchange data and information.

Expected Result: ODINBLACKSEA and Black Sea Commission partnership in oceanographic data and information exchange and management.

6.2 To harmonize ODINBLACKSEA activities with the other relevant organizations, programmes and projects operating in the Black Sea.

ODINBLACKSEA ODP will be aligned with the existing international oceanographic data and metadata standards and formats developed under the other programmes and projects related to oceanographic data and information management whereas ODINBLACKSEA ODP will be one of tools for the future programs and projects in the region.

Expected Result: Promoting ODINBLACKSEA ODP as the one of the tool for oceanographic data and information exchange in Black Sea.

5. ORGANISATION AND MANAGEMENT

The project will be directed, monitored and supervised by the Project Steering Committee. Members of the Project Steering Committee are IODE national coordinators from Black Sea countries. It is recommended that the Steering Committee will meet once a year.

Project Coordinator will be elected by the Steering Committee and will manage day-to-day activity of the project. He/She is elected every two years by the Project Steering Committee. The Project Coordinator is eligible for re-election, but only once for successive terms.

It is recommended to set up project office equipped with all needed communications to support everyday activities.

ODINBLACKSEA may have joint meetings and activities with Black Sea Commission through its Advisory Group on Information and Data Exchange.

6. FUNDING

The activities of ODINBLACKSEA project will be funded by:

- participating countries;
- IOC/IODE;
7. Requested Actions from the Committee

The Committee is requested to:

Comment on the PROJECT DOCUMENT FOR THE REVIVAL OF THE OCEAN DATA AND INFORMATION NETWORK FOR THE BLACK SEA REGION (ODINBLACKSEA)

Adopt the Recommendation IODE-??/??
ANNEX IV

ODINBLACKSEA IMPLEMENTATION PLAN 2015-2016

1. ODINBLACKSEA ODP will be established in Turkey and all other NODCs of ODINBLACKSEA will be nodes of ODINBLACKSEA ODP.
   - NODC Russia will provide to NODC Turkey specifications of necessary hardware to install ODP and Turkey will examine if this specifications will be satisfied at national level or not and inform ODINBLACKSEA countries and IODE about results. (By the end of October 2015)

   Responsible: Russia and Turkey

   - NODC Russia will provide all necessary software defined in Appendix I to all NODCs and Turkey with the instructions to install them to set up ODINBLACKSEA ODP and its nodes (By the end of December 2015)

   Responsible: Russia and Turkey

   - NODC Turkey will install ODINBLACKSEA ODP by using the software and instructions provided by NODC Russia. (By the end of April 2016)

    Responsible: Russia and Turkey

   - Bulgaria, Georgia, Romania, Russia and Turkey NODCs will be node to ODINBLACKSEA ODP by installing the necessary software (as explained in Annex I) provided by Russia. (By the end of June 2016)

    Responsible: Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine.

2. Project Coordinator will contact with Executive Secretary of The Commission on the Protection of the Black Sea Against Pollution (Black Sea Commission) and its Advisory Group on Data and Information Exchange to search for possible joint work and partnership. (By the end of December 2015)

    Responsible: Project Coordinator

3. Project Coordinator will prepare a draft format of Research Vessels Catalogue and observation stations at Sea /coast and circulate amongst the other NODCs, get feedbacks and finalize the draft. (By the end of December 2015).

    Responsible: Project Coordinator

4. Prepare the BLACKSEA Research Vessels Catalogue and Observation Stations and disseminate it. (by the end of August 2016)

    Responsible: All ODINBLACKSEA Members.

5. Prepare annual Research Vessel Cruise Plan and disseminate it within the Members. (By the end of March 2016)
6. Prepare “Joint Black Sea Expedition” document (By the end of September 2016)
   Responsible: All ODINBLACKSEA Members

7. Set up ODINBLACKSEA Web site (by the end of December 2015)
   Responsible: Project Coordinator and All ODINBLACKSEA Members

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