INTEGOVERNMENTAL OCEANOGRAPHIC COMISSION
(of UNESCO)

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IODE NATIONAL REPORT ON OCEANOGRAPHIC DATA MANAGEMENT AND EXCHANGE FOR UKRAINE
1. **Name of Data Centre:**
   Department of Marine Information Systems & Technologies (MIST Dept.) of the Marine Hydrophysical Institute (MHI) of the Ukrainian National Academy of Sciences

2. **Acting National IODE Coordinator:**
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3. **Data Center Address:** same as above

4. **Data Center URL:** [http://www.mhi.iuf.net/ DEPTS/mistDpt.html](http://www.mhi.iuf.net/ DEPTS/mistDpt.html)

5. **IODE Data Center Designation Date:** DNA, 1993

6. **Description of national data flow:**

   How does data flow operate in your country (if possible illustrate by means of one or more diagrams)? This should cover:

   1. **Metadata management:**
      - At the discovery level (e.g. do you contribute to IOC/IODE MEDI, GCMD, EDMED, another system, none?)
      - At the Cruise level (e.g. do you contribute to IOC/IODE Cruise Summary Reports (ROSCOPs), other in-house system, none)
      - For monitoring/operational systems (e.g. EDIOS, regional GOOS systems, etc)

   2. **Data tracking:**
      - What systems are in place to track data through from collecting organisations to through to data dissemination?

The MIST Dpt. is involved in several European projects and other activities related to ocean marine data management issues. More specifically it participates in the following projects:

- **EU EDIOS Project**
  The MIST Dpt. contributes to the EU funded EDIOS project, through the HNODC regional coordination. Main objective of the EDIOS (European Directory of Initial Observing System) project is to build a computerized database directory that will include information on all European ocean observing sites and devices in routine and repeated operation and to use this directory to define the Initial EuroGOOS. ([http://www.edios-project.de](http://www.edios-project.de));

- **EU SEA-SEARCH Project**
  Main objectives of the project are: to upgrade and develop further the EURONODIM network, to improve the exchange, availability and accessibility of ocean and marine data and information within Europe, including non-EU countries of Europe, to improve the transfer of knowledge, exchange of best practices and communications on ocean and marine data and information management in order to strengthen the overall performance of ocean data and information management both on a national and international level in Europe, to stimulate the overall awareness of potential users of ocean and marine data and information,
and to enhance the European competitiveness in the field of ocean and marine data management. EDIOS, EDMERP and ROSCOP are included as components into the SEA-SEARCH project. The MIST Dpt. made a contribution to these projects. The SEA-SEARCH project funded by the EU was started in December 2002. (http://www.sea-search.net);

The Black Sea Global Oceanographic Observing System – Black Sea GOOS Project constitutes a close co-operation between national governmental agencies of the Black Sea countries responsible for the observational data collection, models operation and forecasts production, services and information for marine industry, public and other end users. The main goal of the BLACK SEA GOOS is to explore, quantify, and predict the variability of the Black Sea from the overall basin scale to the coastal/shelf areas over time scales extending from days to weeks to months through the development and implementation of a forecasting and observation system.

The design of the Black Sea GOOS, and the use of GOOS data, need to be closely linked with the recent and continuing advances in numerical modelling of ocean and coupled ocean-atmosphere system. The Black Sea GOOS could utilize remote sensing of the marine environment from satellites (some satellite observations are already available in all National Meteorological Centres in the area) and \textit{in-situ} measurements using ship-borne observations, towed and anchored instrument systems, drifting buoys and sub-surface floats in case the above mentioned principles are implemented. GOOS data must be available much faster than the measuring data from current research programs. (http://www.mhi.iuf.net/inter/goos.htm)

Data tracking from MIST Dpt. to the interested organizations is implemented by following scheme:

- data selection according to organizations requests;
- data decoding to the requesting formats;
- data tracking by e-mail or sending of hard copy.

7. \textbf{What is the structure of marine data management in your country:}

1. How many organizations are involved?

8 organizations are involved:

- Marine Hydrophysical Institute (MHI) of the Ukrainian National Academy of Sciences (Sevastopol);
- Institute of Biology of Southern Seas (IBSS) of the Ukrainian National Academy of Sciences (Sevastopol);
- Ukrainian Scientific Center of the Ecology of Sea (UkrSCES) of the Ministry of Ecology and Natural Resources of the Ukraine (Odessa);
- Southern Scientific Research Institute of Marine Fisheries and Oceanography (SSRIMFO) of the Ministry of Ecology and Natural Resources of the Ukraine (Kerch);
- Marine Branch of Ukrainian Research Hydrometeorological Institute (MB of UkrRHMI) of the Ministry of Ecology and Natural Resources of the Ukraine (Sevastopol);
- Odessa Branch of the Institute of Biology of Southern Seas (OB of IBSS) of the Ukrainian National Academy of Sciences (Odessa);
- Experimental Branch of Marine Hydrophysical Institute (EB MHI) of the Ukrainian National Academy of Sciences (Katsiveli);
- Institute of Geological Sciences (IGS) of the Ukrainian National Academy of Sciences (Kiev).

2. Who does what?

MIST Dept. of MHI is responsible for developing & creation of the national system for compiling, transfer, storage, analysis and dissemination of oceanographic data and information;

SSRIMFO is responsible for database of living marine resources;

MB of UkrRHMI is responsible for database of marine meteorology;

IGS is responsible for database of non-living marine resources.

3. What data goes where?

The Ukrainian systems in data management and operation have been targeted for different classes of users. They are weather services, physical oceanographic researchers, students, governmental organizations and others.
4. Are there data for which there is no home?

No

5. What gets passed on to other organisations?

All data for scientific purposes are passed on non-commercial base.

6. What regional links and data centres are there?

We have links with various data centers of the Black Sea and Mediterranean regions: WDC-B (Russia), Georgian, Bulgarian, Turkish, Greece and some other national data centres.

8. What are the strengths and problems of the present arrangements nationally, regionally and internationally?:

We have no strengths and problems with this

9. What improvements could be made nationally, regionally and internationally?:

It will be good if IOC and IODE support creation of regional data management and exchange systems via Internet for improving connection between data centres and using of present technologies. It can be realized through organization of international projects, training courses and so on.

10. What future national activities are planned?:

Our plans:

• Developing & creation of the multidisciplinary national marine geo-information system of Ukraine;
• Developing of the scientific basis, algorithms and software for the oceanographic data quality control, processing and database management systems;
• Creation, loading and maintenance of the regional special and multidisciplinary oceanographic database;
• Creation of computer marine atlas & reference book of the Black Sea and Sea of Azov and other regions of the World Ocean;

The MIST Dpt. will take part in the following national projects:

• Creation of national system for compiling, transfer, storage, analysis and dissemination of oceanographic data and information (project "National bank of oceanological data");
• Creation of Computer Marine Atlas & Reference book of the Black Sea and Sea of Azov and other regions of World Ocean;
• Developing and creation of conception of national multidisciplinary marine geo-information system of Ukraine;
• Principles of developing and creation of new marine information systems and technologies (Programme of National Academy of Sciences of Ukraine);
• Creation of global and regional marine environment control systems and information support of decision making for the sake of stable development of the marine economy complex (Programme of National Academy of Sciences of Ukraine);
• Creation of computer information-analytic system for assistance to engineering and oceanological activity in the regions of gas and oilfields in the North-Western Black Sea (Programme of National Academy of Sciences of Ukraine);
• Construction of maps for “Seas and their resources” section of the National Atlas of Ukraine;

The MIST Dpt. future activities in the International Programmes and Projects:

• IOC International Oceanographic Data and Information Exchange (IODE);
• IOC Global Oceanographic Data Archaeology and Rescue Project (GODAR);
• IOC Black Sea Regional Programme in Marine Sciences and Services;
• Project "Sea-search, a Pan-European Network for Ocean and Marine Data and Information Management";
• Programme "Black Sea GOOS";
• Project “Sea DataNet”.

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