Data services providing by the Ukrainian NODC (MHI NASU)

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At modern stage of the World Ocean study information support of investigation based on ad-vanced computer technologies becomes of particular importance. These abstracts are devoted to presentation of several data services developed in the Ukrainian NODC on the base of the Ma-rine Environmental and Information Technologies Department of MHI NASU.

The Data Quality Control Service Using experience of international collaboration in the field of data collection and quality check we have developed the quality control (QC) software providing both preliminary(automatic) and expert(manual) data quality check procedures. The current version of the QC software works for the Mediterranean and Black seas and includes the climatic arrays for hydrological and few hydrochemical parameters based on such products as MEDAR/MEDATLAS II, Physical Oceanography of the Black Sea and Climatic Atlas of Oxygen and Hydrogen Sulfide in the Black sea. The data quality check procedure includes metadata control and hydrological and hydrochemical data control. Metadata control provides checking of duplicate cruises and pro-files, date and chronology, ship velocity, station location, sea depth and observation depth. Data QC procedure includes climatic (or range for parameters with small number of observations) data QC, density inversion check for hydrological data and searching for spikes. Using of cli-matic fields and profiles prepared by regional oceanography experts leads to more reliable results of data quality check procedure.

The Data Access Services The Ukrainian NODC provides two products for data access – on-line software and data access module for the MHI NASU local net. This software allows select-ing data on rectangle area, on date, on months, on cruises. The result of query is metadata which are presented in the table and the visual presentation of stations on the map. It is possible to see both metadata and data. For this purpose it is necessary to select station in the table of metadata or on the map. There is also an opportunity to export data in ODV format. The product is avail-able on http://www.ocean.nodc.org.ua/DataAccess.php

The local net version provides access to the oceanological database of the MHI NASU. The cur-rent version allows selecting data by spatial and temporal limits, depth, values of parameters, quality flags and works for the Mediterranean and Black seas. It provides visualization of meta-data and data, statistics of data selection, data export into several data formats.

The Operational Data Management Services The collaborators of the MHI Experimental Branch developed a system of obtaining information on water pressure and temperature, as well as on atmospheric pressure. Sea level observations are also conducted.

The obtained data are transferred online. The interface for operation data access was developed. It allows to select parameters (sea level, water temperature, atmospheric pressure, wind and wa-ter pressure) and time interval to see parameter graphics. The product is available on http://www.ocean.nodc.org.ua/Katsively.php .

The Climatic products The current version of the Climatic Atlas includes maps on such pa-rameters as temperature, salinity, density, heat storage, dynamic heights, upper boundary of hy-drogen sulfide and lower boundary of oxygen for the Black sea basin. Maps for temperature, sa-linity, density were calculated on 19 standard depths and averaged monthly for depths 0 – 300 m and annually for lower depth values. The climatic maps of upper boundary of hydrogen sulfide and lower boundary of oxygen were averaged by decades from 20 till 90 of the XX century and by seasons. Two versions of climatic atlas viewer – on-line and desktop for presentation of the climatic maps were developed. They provide similar functions of selection and viewing maps by parameter, month and depth and saving maps in various formats. On-line version of atlas is available on http://www.ocean.nodc.org.ua/Main_Atlas.php .