SeaDataNet : Pan-European infrastructure for marine and ocean data management - Project objectives, structure and components

G. Maudire, C. Maillard, M. Fichaut, G. Manzella, and D.M.A. Schaap

IFREMER, Centre de Brest, BP 70, 29280 Plouzané, France (Gilbert.Maudire@ifremer.fr)

SeaDataNet : Pan-European infrastructure for marine and ocean data management
Project objectives, structure and components

G. Maudire (1), C. Maillard (1), G. Manzella (2), M. Fichaut (1), D.M.A. Schaap (3), E. Iona (4)
and the SeaDataNet consortium.

(1) IFREMER, Brest, France (Gilbert.Maudire@ifremer.fr),
(2) ENEA, La Spezia, Italy,
(3) Mariene Informatie Service 'MARIS', Voorburg, The Netherlands,
(4) Hellenic Centre for Marine Research-HCMR, Anavyssos, Greece.

Since a large part of the earth population lives near the oceans or carries on activities directly or indirectly linked to the seas (fishery and aquaculture, exploitation of sea bottom resources, international shipping, tourism), knowledge of oceans is of primary importance for security and economy. However, observation and monitoring of the oceans remains difficult and expensive even if real improvements have been achieved using research vessels and submersibles, satellites and automatic observatories like buoys, floats and seafloor observatories transmitting directly to the shore using global transmission systems. More than 600 governmental or private organizations are active in observation of seas bordering Europe, but European oceanographic data are fragmented, not always validated and not always easily accessible. That highlights the need of international collaboration to tend toward a comprehensive view of ocean mechanisms, resources and changes.

SeaDataNet is an Integrated research Infrastructure Initiative (I3) in European Union Framework Program 6 (2006 – 2011) to provide the data management system adapted both to the fragmented observation systems and to the users need for an integrated access to data, meta-data, products and services. Its major objectives are to:

- encourage long-term archiving at national level to secure ocean data taking into account that all the observations made in the variable oceanic environment can never be remade if they are lost;
- promote best practices for data management, taking benefits of the development of international initiatives and standards on data quality insurance, data descriptions (metadata and common vocabulary) and interoperability. Software tools are developed or adapted accordingly to support these practices and the adoption of standards;
- establish online services to facilitate data discovery, data requests, data visualisation and data download for the users;
- process data sets of reference like ocean climatologies at a regional basin scale to provide comprehensive data sets

Sustainability of the provided services is researched by a balance between the activities mostly undertaken at National level by the National Oceanographic data centres or some thematic data centres and the effort done at the Pan-European level by the project. The SeaDataNet consortium brings now together a unique group of 49 partners from major oceanographic institutes of 35 countries. Taking in account that valuable work on ocean data

management must be done at basin level, most of countries bordering Black Sea, Mediterranean Sea, North-East Atlantic, North Sea, Baltic Sea and Artic Sea are part of the project.

Capacity building of consortium members is necessary to meet project objectives and a comprehensive training program is conducted both for data management and for IT technologies which are necessary to establish such a distributed system: databases management, XML language, web portal and services, GIS technologies.

SeaDataNet Partners:
IFREMER (France), MARIS (Netherlands), HCMR/HNODC (Greece), ULg (Belgium), OGS (Italy),NERC/BODC (UK), BSH/DOD (Germany), SMHI (Sweden), IEO (Spain), RIHMI/WDC (Russia), IOC (International), ENEA (Italy), INGV (Italy), METU (Turkey), CLS (France), AWI (Germany), IMR (Norway), NERI (Denmark), ICES (International), EC-DG JRC (International), MI (Ireland), IHPT (Portugal), RIKZ (Netherlands), RBINS/MUMM (Belgium), VLIZ (Belgium), MRI (Iceland), FIMR (Finland), IMGW (Poland), MSI (Estonia), IAE/UL (Latvia), CMR (Lithuania), SIO/RAS (Russia), MHI/DMIST (Ukraine), IO/BAS (Bulgaria), NIMRD (Romania), TSU (Georgia), INRH (Morocco), IOF (Croatia), PUT (Albania), NIB (Slovenia), UoM (Malta), OC/UCY (Cyprus), IOLR (Israel), NCSR/NCMS (Lebanon), CNR-ISAC (Italy), ISMAL (Algeria), INSTM (Tunisia)