

EMODNET Chemical pilot, being implemented by using the SeaDataNet infrastructure



Go to: <http://www.emodnet-chemistry.eu>

What is EMODNET?

EMODNET aims to assemble fragmented and inaccessible marine data into interoperable, continuous and publicly available data streams for complete maritime basins. **EMODNET** is a preparatory action for a final operational **European Marine Observation and Data Network**.

EMODNET Chemical pilot is focused on the **groups of chemicals** required for monitoring the Marine Strategy Directive:

EMODNET Chemical pilot will use **SeaDataNet** decentralised scheme of databases for managing the chemical data sets, adopting and adapting the following elements of the infrastructure:

Chemical group	Parameter	SDN PARAMETERS P021 vocab CODE	SDN UNITS P061 vocab CODE
Pesticides	Dichlorodiphenyltrichloroethane (DDT)	PEWB	UNGL
Pesticides	Hexachlorobenzene (HCB)	PEWB	UNGL
Antifoulants	Tributyltin (TBT)	WCOC	UNGL
Antifoulants	Triphenyltin (TPT)	WCOC	UNGL
Pharmaceuticals	Oxytetracycline (C22H24N2O9)	PHWB	UNGL
Heavy metals	Mercury (Hg)	MTWP	UNGL
Heavy metals	Cadmium (Cd)	MTWP	UNGL
Heavy metals	Lead (Pb)	MTWP	UNGL
Hydrocarbons	Anthracene (C14H10)	PCHW	UNGL
Hydrocarbons	Fluoranthene (C16H10)	PCHW	UNGL
Radionuclides	Tritium	WRAD	UUBQ
Radionuclides	Cesium 137	WRAD	UUBQ
Radionuclides	Plutonium 239	WRAD	UUBQ
Fertilisers/Nitrogen	Nitrate (NO3)	NTRA	UPOX
Fertilisers/Nitrogen	Phosphate (PO4)	PHOS	UPOX
Organic matter	Organic Carbon (C)	CORG	UPOX
Organic matter	Organic Nitrogen (N)	NTOT	UPOX

- ❖ **SDN Standards** for data and metadata
- ❖ **CDI** mechanism to access data with data policy
- ❖ **ODV** format for data input
- ❖ **SDN Security Services** for users registrations (Authentication, Authorization & Accounting)
- ❖ **SDN Delivery Services** for data access and downloading
- ❖ **DIVA** software tool (Data-Interpolating Variational Analysis) to produce gridded data from raw data. Error maps reflect the accuracy of the observations and their distribution, used for the assessment
- ❖ **SDN Viewing Services** for data and data products visualization

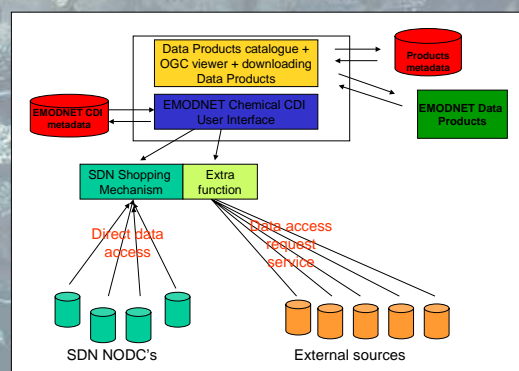
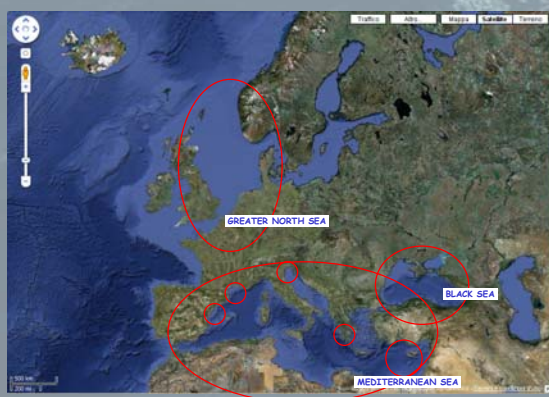
Example of parameters selected in the water column. The same exercise is done for sediment and biota.



EMODNET Chemistry started on 4 June 2009 and will be concluded in June 2012

The consortium has expanded upon the original regions (**Greater North Sea** and **Black Sea**) to include the **Mediterranean spots**, in mind of a later expansion to all European Seas and to explore the methods for achieving an overall consistent quality of data sets and products.

Data will reside at the original source (NODCs with direct access or External with requester service), will be used internally for products and described with **CDI metadata**. **EMODNET Portal** will distribute to users data and products (NetCDF files generated with DIVA software).



EMODNET Chemical pilot is organized into 5 workpackages:

WP1: Project management

WP2: Data collection and metadata compilation. Objectives of this WP are to gather all information related to selected chemical data sets into the NODC databases, to compile metadata in CDI format and convert data into ODV ASCII data format. This activities are split up by geographic region.

WP3: QC/QA and products. The validation and the quality harmonization of all chemical data sets are key elements to generate integrated and high quality map products for selected parameters.

WP4: Technical development and operation. This WP mainly deals with the development and launch of EMODNET portal and services (for data and maps viewing, discovery and delivery).

WP5: Analysis and evaluation. The analysis of the lessons learned during this project will be prepared, including a set of recommendations describing what would be necessary for the overall EMODNET to remain as a sustained infrastructure.

EMODNET Chemical lot is based on SeaDataNet network of NODC's:

OGS (ITALY)	SIO-RAS (RUSSIAN FEDERATION)
MARIS BV (NETHERLANDS)	MHI (UKRAINE)
NERC-BODC (UNITED KINGDOM)	IO-BAS (BULGARIA)
IFREMER (FRANCE)	NIMRD (ROMANIA)
BSH-DOD (GERMANY)	TSU-DNA (GEORGIA)
IMR (NORWAY)	ICES (INTERNATIONAL)
NERI-MAR (DENMARK)	AWI (GERMANY)
VLIZ (BELGIUM)	ULG (BELGIUM)
RBINS-MUMM (BELGIUM)	IEO (SPAIN)
NODC /NIOZ (NETHERLANDS)	CLS (FRANCE)
SMHI (SWEDEN)	MI (IRELAND)
HNODC-HCMR (GREECE)	OC-UCY (CYPRUS)
RIHMI-WDC (RUSSIAN FEDERATION)	