

## A MARINE BIOLOGICAL GIS FOR EUROPE, BASED ON OGC STANDARDS

*Simon Claus, Leen Vandepitte, Bart Vanhoorne, Nathalie De Hauwere, Francisco Hernandez  
Flanders Marine Institute, Oostende, Belgium, Corresponding author: simon.claus@vliz.be*

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### ABSTRACT

In December 2007 the European Parliament and Council adopted a common text for the Marine Strategy Framework Directive which aims to achieve environmentally healthy marine waters by 2020. This Directive includes a requirement for an overarching European Marine Observation and Data Network (EMODNET). The "proof of concept" of EMODNET is being tested through preparatory actions. Portals for a number of maritime basins are being set up for biological, physical, hydrographic, geological, and chemical data as well as functional habitat maps. These portals will provide access to marine data of a standard format and known quality and identify gaps in coverage.

The biological data portal, launched in February 2011 aims to visualize and redistribute fragmented marine biological data for complete maritime basins. The architecture of the system, partly based on the European Ocean Biogeographic Information System (EurOBIS), is developed to meet the final objective of EMODnet - that is to become an integrated and inter-operable network of systems of European marine observations and data communications. The biological data portal is fully OGC compliant, allowing compatibility with OGC compliant data servers (like Geoserver). This allows integrating and visualizing species observations served from different data providers and databases, and OGC compliant geographic maps. Through OGC compliancy, the marine biological data portal can visualize also data products developed in the other thematic projects of EMODnet. The main functionalities of the portal include viewing a catalogue of the data available, data querying, data visualization and data downloading. In order to integrate marine biological observation data, taxonomic standardization is a key element. The taxonomic standardization allows to detect and filter out spelling mistakes of species names occurring in the contributing datasets, solve issues or ambiguities related to the nomenclature of a species and to search and browse data for aggregated groups. Therefore all species names are matched with the World Register of Marine Species (WoRMS) and its European component, the European Register of Marine Species (ERMS).

The biological data portal of EMODNET can be consulted at <http://bio.emodnet.eu/portal>.