

The European Ocean Biogeographic Information System (EurOBIS) and its relation with international data systems

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The European Ocean Biogeographic Information System – EurOBIS – is an online marine biogeographic data system compiling data on all living marine species. The main aims are to centralize the largely scattered biogeographic data on marine species collected by European institutions and to make these data freely available and easily accessible. EurOBIS continues to grow through voluntary data contributions from the marine scientific world. Currently, EurOBIS consists of more than 850 datasets, representing over 20 million distribution records.

All data in EurOBIS are subject to a number of quality control procedures before they are made available online, assuring a minimum level of quality necessary to put the data to good use. These quality control steps are embedded in online web services available through LifeWatch and encompass a taxonomic, geographic, outlier and data format check. Several data systems developed and maintained at the Flanders Marine Institute (VLIZ) are involved in these checks, such as the World Register of Marine Species and Marine Regions.

On a European level, EurOBIS intensively collaborates with the Biological Lot of the European Marine Observation and Data Network (EMODnet). While EurOBIS is the data engine for EMODnet Biology and is investing in the development of relevant analysis tools and applications, EMODnet Biology is developing new data products illustrating the temporal and geographic variability of European marine species having high environmental relevance based on EurOBIS data.

EurOBIS also plays an important international role. As a regional OBIS node, it shares all its data with OBIS. EurOBIS is also a key component of the LifeWatch Taxonomic Backbone, which aims to (virtually) bring together different component databases and data systems, all of them related to taxonomy, biogeography, ecology, genetics and literature. By doing so, the LW-TaxBB standardises species data and integrates biodiversity data from different repositories and operating facilities and is the driving force behind the species information services of the Belgian LifeWatch.be e-Lab and the Marine Virtual Research Environment that are being developed.

Data collected for biological studies however often include more than just the biological parameters such as presence or abundance. Data collected at the same time can include physical and chemical measurements, which can provide insights into the environmental conditions the species live in. Details on the nature of the sampling methods, equipment used and effort can also be of major importance. The EurOBIS database is fully compatible with the newly established OBIS-ENV data format, allowing easy capture of such related data.

References

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