

# Progress towards European marine biodiversity data integration

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We have recently undergone a change in leadership in the data integration work package. Edward Vanden Berghe, who was leading this WP, has taken up a new position as executive director of OBIS, in New Jersey. From now on, Ward Appeltans will take over from him and will coordinate the MarBEF data and information management activities at VLIZ.

Edward has done an excellent job and in several ways has paved the path towards a European approach to marine biodiversity data management and integration. At VLIZ we will continue building on this road, and hope we can do our part in further strengthening this network of collaborative research and partnerships. We experience a very positive attitude and many scientists are willing to share their knowledge, including basic data, with others, and in return also benefit from data exchange practices. In addition, only recently, new technologies in informatics are making this possible. Europe has a wide spectrum of marine institutions, universities, marine stations and museums, of which 92 are now partners in MarBEF.

The way so many different partners from so many different countries are working together and forming this network is certainly unique and is setting a trend towards a more global approach to marine biodiversity science. Data integration and dissemination are some of the fruitful products of these networks, and for this good data management practices are essential. MarBEF recognises this and is making good progress. The amount of data integrated and effectively used is increasing. The Responsive Mode Project on data archaeology allows for rescuing data and making them available in a digital format suitable to share with a much larger public.

Europe now has two unique and large integrated databases, one on soft-bottom macrobenthos and one on meiobenthos (read more in the article on the new MANUELA database). The subproject LargeNet will do a similar job on hard-bottom macrobenthos and pelagic biota. The benefits of these kinds of integrative projects are enormous. The

analyses that are going to be done on these databases with such an extensive geographical, temporal and taxonomical scale will undoubtedly bring several new insights, which were impossible to obtain on an individual basis.

We strongly support MarBEF's philosophy of open access to data within a partnership approach and sincere thanks to many partners who have contributed a lot of data, which is now freely available through the European node of the Ocean Biogeographic Information System (EurOBIS). With 3.5 million records from 47 data providers, EurOBIS serves one-third of all species distribution records in the world and hopefully in the future several more datasets will be added. Also interesting is that EurOBIS integrates data from a variety of data sources, from large-scale monitoring surveys to time-series of a single location, from observational data to museum collections. EurOBIS is making good progress and is already an important source to data discovery. We are aware that this is just a tiny bit of the top of the iceberg, and we will have a lot more work just to get the data, currently at risk of being lost forever, integrated and made publicly available, as soon as possible.

Another big challenge is to control data quality. We rely very much on the data providers, but there are a number of things we can do, such as to link the taxonomic names with the European Register of Marine Species (ERMS). There is now also an online tool where you can do this exercise yourself (called taxon match) and check the geographical positions and other parameters related to the taxon. Extensive metadata, the information on the datasets, describing the accuracy of the data, the protocols applied and the people involved,

will be extremely important. The more data available, the more difficult it will be to find the right data that fits your needs and satisfies your standards.

It is heartwarming to see how many people are actually making use of the systems. Every month there are over 10,000 visitors (nearly half a million hits) on the MarBEF website. The taxonomic register ERMS comes up as one of the most visited pages and we have nearly 100 people visiting EurOBIS every day and many are effectively downloading the data. It is also encouraging to see that the mobility portal, a system that matches CVs and vacancies, is a success and the MarBEF calendar of events is serving details on many meetings, not only those organized by MarBEF. The MarBEF Open Archive (MOA), an initiative we started only one year ago, already includes over 250 scientific papers, fully downloadable in PDF format. MOA is now also indexed by Google Scholar, which increases our visibility. The weekly news bulletin (MarBEF web news) is a way to advertise the latest news from MarBEF, including related topics by a simple weekly email. The mailing list of this e-bulletin includes over 1,500 subscribers, and thereby has become a service that is now appreciated by a large community of scientists, students, policy-makers and many others interested in marine sciences.

Time is moving on quickly and, as we said, there is still a lot of work left to be done. Our team will do its best and hopefully we can be of service to everyone. If you need any assistance or have data you want to contribute, archive and share, please let us know, so that we can plan this and deal with it appropriately.

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