



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n°V – Biology

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Start date of the project: 19/04/2019 - (24 months)

EMODnet Phase III – Quarterly Progress Report (QR13)

Reporting Period: 01/04/2020 – 30/06/2020





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1. Highlights in this quarter

Task1: WP2- Data access to marine biological data and WP3- Data archaeology and rescue

This reporting period included the preparation and submission of the D1.5. Interim report and the organization of the joint WP2/WP3 “EMODnet Biology workshop on data formatting, QC & publishing”, both of which were inevitably affected by new challenges (e.g. working remotely from home, turning physical meetings/workshops into online events) and delays due to the COVID-19 changes in work patterns. Despite the constraints, the relevant highlights are reported below:

- 1) Harvest of 29 datasets (including two updates): this work was completed in May and contributed with 201,707 occurrences. This procedure has increased the number of metadata records with data available to 982 and increased the total number of occurrence records to 25.901.323, of which 75% are QC'd. Annex 7 includes more detailed information on the harvested datasets and graphs with their geographical and taxonomical coverage.
- 2) WP2 and WP3 workshop: The workshop was initially planned as a one week in-presence event but due to COVID, plans were quickly adjusted and a decision was made to turn it into an online event. The workshop took place over two weeks in June (8-19 June) and was based around the Ocean Teacher course on “[Contributing datasets to EMODnet Biology](#)”. Work was also done to update and expand the course and during the workshop, 11 online sessions were held to clarify any questions the participants had. More than 50 people participated in the workshop with an average of 34 people joining the online sessions. The online workshop included a special section entitled “Dealing with archaeology data”, providing insights in the importance of data archaeology and how such data can be processed to become part of EMODnet Biology.

An online session with the trainer (WP3 leader) and discussions on the course forum were organized in order to answer questions and discuss about the importance of rescuing legacy data with the workshop participants. All other aspects on how to format and quality control such data were covered and described throughout the other chapters of this training course, in collaboration with WP2. Information will be made available in the form of a pdf file in the Ocean Teacher Global Academy (OTGA) platform.

- 3) Two conference contributions were prepared by the WP2 and WP3 participants, entitled “10 years of EMODnet Biology: past, present & future” and “Mobilizing historical marine data within EMODnet Biology”, and were submitted to the upcoming Conference on Marine Data and Information Systems 2020 (26-28 October 2020, Amsterdam). Recent information has been released and this conference was postponed to April 2021. Both submissions were accepted as posters
- 4) WP3 Data digitisation and processing is still ongoing for a number of priority datasets with emphasis on the “Report on the Mollusca and Radiata of the Aegean Sea” by Forbes (1843), which includes historical records (1841-1842) of Mollusca, Cnidaria, Ctenophora and Echinodermata from the Aegean Sea (Eastern Mediterranean). Data processing will continue during the next reporting period.

Task 2: WP4- Data product creation

The WP4 workshop due to take place in Oostende was re-organised and an online event setup instead which took place from the 15th to the 18th June. There were regular plenary electronic meetings to discuss progress. Sub-groups often discussed particular problems and issues during ad-hoc electronic

meetings. Plenary meetings at the start and end of the workshop were devoted to presentations, planning and discussion of results.

The workshop focused on the development of reproducible workflows leading to harmonised data packages, following the requirements to produce composite datasets based on a diversity of sources, as specified in [D4.5](#). In addition to pursue the modelling of absences, based on species traits and characteristics of datasets, the workshop has also pursued the goal of incorporating other external knowledge in the improvement of the interpretation of the data in EMODnet Biology. This included the use of data from other EMODnet lots, attention focused on the Seabed Habitats in the first place, but also chemical data were used in a separate project.

As the reproducibility of the data products is a major concern, the code developed during (and partly after) this workshop, which is at the basis of the data products, will be stored in a systematic way in GitHub repositories. Additionally, the data products documentation received considerable attention.

A complete report of this workshop and the products resulting from it will be made available in the following months.

Task 3 & 4: WP6- Technical update EMODnet biological portal & machine to machine connections

Aside from implementing mandatory fields in the download form (when users request the download of the data they have pre-selected), the main actions were of maintenance and routine.

The download form now has several mandatory fields that will allow for a better comparison between the user's details with other EMODnet lots. All fields in red are mandatory and pre-defined as shown in Figure 6.

Figure 7 includes the information on number of visitors the portal received during the reporting period, which amounted to a total of 2483 visitors with an average visit duration of 04:04 minutes. The weeks before, during and after the WP2/WP3 and WP4 workshops exhibit an increase in the average visitor's number.

The subsequent figure, presents the OGC HealthCheck results for the operational and reliability status of the webservices since early March 2020.

All Figures are included in Annex 7 under the appropriate task.

Tasks 5 & 6: WP5- Uptake and outreach

The WP5 team joined the WP2 training for new data grant holders and the WP4 data products workshop to ensure effective communication and awareness. In addition, discussion took place as to how the outcomes and experiences would support the next deliverable within WP5, the Transatlantic data integration and development workshop. Several key participants from WP4 will be involved to support the testing of the existing suite of products to ensure they are as FAIR as possible, and possess a high degree of reproducibility.

We have taken some time to consider and review the options for the delivery of D5.5 (Transatlantic data integration and product development workshop). The current travel restrictions mean a physical meeting is not viable, nor likely to be so in time for the effective delivery of the workshop. Following the experiences of the WP2/WP3 and WP4 workshops in this reporting period, we will therefore move to a series of short online meetings and remote participation between EMODnet Biology partners and our transatlantic colleagues. This will take place in Sept/Oct of 2020.

Further reviewers' comments have been received from the submission of D5.2, a peer-reviewed publication to the journal Marine Policy. The manuscript, titled "Supporting the Essential - Recommendations for the development of accessible and interoperable marine biological data products" has now been accepted for publication. In the paper we outline the stakeholder-led approaches in the development of the biological data products of WP4 to support effective conservation, management and policy development. We highlight how WP5 captured the requirements of a broad range of stakeholders and the iterative, structured processes that framed the development of tools, models and maps supporting the FAIR (Findable, Accessible, Interoperable, Reusable) data principles (Wilkinson et al, 2016).

Tasks 7 & 8: WP1- Project management

Due to COVID-19 restrictions, a number of partners and associated data partners were affected and a reduction in work output was clear. That was the case for the associated data partners, that were due to submit their dataset's metadata by end of April, but also for a number of partners that reported their teams/co-workers had been affected by COVID and thus were not able to work on their data.

Work evolved slowly as the situation progressed positively but, with no doubt, the holiday period will again see a decrease in activity.

The quarterly (covering the period from 01 January 2020 to 30 March 2020) and interim reports (covering the period from 19 April 2019 to 19 April 2020) were submitted during the reporting period.

2. Identified issues: status and actions taken

A. Priority issues identified and communicated by EASME/ DG MARE/ SECRETARIAT

Priority issue	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due
Including data and metadata URL in web services of data products	Ongoing	Completed for all layers considered relevant. Secretariat performed an analysis and requested clarification items specific items where this implementation was not optimal	
Include data download size (MB) in the quarterly report indicators file	Resolved	Minor changes to download information storing procedures	QR13

B. Issues / challenges identified by the thematic assembly group itself

Priority issue / challenge	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due
Data download form to include standardised organisation type, country and purpose	Resolved	Implemented on portal	QR13
Data download toolbox does not retrieve all parameters when they are not linked to occurrences	Pending	Feature request	
Data product gallery not easy to find (https://www.emodnet-biology.eu/data-products)	Pending	Solution proposed is to merge this page with https://www.emodnet-biology.eu/toolbox/en/gallery/	

3. User feedback (Contact Us form, online chat & other communication means)

Overview of user feedback and/or requests received in this quarter							
Date	Organisation	Type of user feedback (e.g. technical, case study, etc.) and short description of the feedback received	Means of contact	Response time	Status of user query: resolved/pending	Measures taken to resolve the query	Status: if not (yet) resolved/pending, explain reason why and expected timeline
2020-06-16	Marine Institute, Ireland	Difficulty downloading OOPS data product	Email	1 day	Resolved	File sent manually. Technical issue subsequently fixed	
2020-06-18	Private	Information about EMODnet Biology Workshop/Ocean Teacher course	Email	1 day	Resolved	Workshop was almost over, suggested that user enrolls in course once it is made public in July	

4. Meetings/events held/attended & planned

A. Meetings/events organised and attended				
Date	Location	Type event (internal or external meeting, training (workshop), etc.)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
2020-04-20	Online	CMEMS-EMODnet Coordination meeting	A	Bring together EMODnet, CMEMS, inter-DG representation and the EEA to discuss marine data and data products and information on Coastal behaviour. Objectives include assessing existing capabilities and emerging areas for collaboration across EMODnet themes and between EMODnet and CMEMS, in particular with a regional focus
2020-04-21/22	Online	EMODnet Steering Committee	A/O	DG MARE Vision Objectives & Priorities for next phase of EMODnet, General feedback and discussion on EMODnet central Portal Gateway framework, Interactions with other initiatives, framework for new developments, prioritisation of ongoing developments
2020-04-23/24	Online	EMODnet Technical Working Group	A/O	DG MARE Vision Objectives & Priorities for next phase of EMODnet and implications, Updates and progress since last meeting, technical development framework in view of new developments
2020-06-8/19	Online	WP2/WP3 Workshop on Data formatting, Quality control and Publishing	O	Provide training to current and future data providers on how to format and submit their data to EMODnet Biology. An average of 34 participants participated in 11 online sessions over the course of two weeks.
2020-06-15/21	Online	WP4 Data Product Workshop	A	Production of consistent data products resulting from the integration of several underlying datasets. 15 participants from the various partner organisations were



				involved in the workshop
2020-06-16	Online	EMODnet-CMEMS Thematic Workshop on Coastal Issues	A	Bring together EMODnet, CMEMS, inter-DG representation and the EEA to discuss marine data and data products and information on Coastal behaviour. Objectives include assessing existing capabilities and emerging areas for collaboration across EMODnet themes and between EMODnet and CMEMS, in particular with a regional focus
SUM			O	Total # of meetings organised = 3
SUM			A	Total # of meetings attended = 5

B. Meetings/events planned in the future				
Date	Location	Type event (meeting, training (workshop), etc.)	Meeting to be attended (A) / organised (O)	Short description and main expected outcomes
2020-07-15	Online	Webinar	A	Exotic Invasive Species, clarifying the role of citizens in controlling these species
2020-07	Online	Meeting	A	OSPAR benthic working group
2020-09	Online	Meeting	A/O	EMODnet Biology annual meeting
2020-09	Online	Webinar	A	10 years of EMODnet
2020-09	Online	Workshop	O	Transatlantic data integration and product development workshop
2020-10-20/21	Online	Event	A	Marine data to support aquaculture in the North Atlantic

5. Communication and dissemination assets

A. Communication products				
Date	Communication action/material	Short description (of the material, title, ...) and/or link to the activity	Main results	Name of event at which material was disseminated (if applicable)
QR13	Via EurOBIS Twitter	25 Tweets, most providing information on datasets added to EMODnet Biology, but also a number relating to the WP2/WP3 and WP4 workshops	Increase in number of followers, retweets, impressions	NA
2020-04-01	Tweet	https://twitter.com/DickeyCollas/status/1245305428063465474?s=20		NA
2020-04-13	Tweet	https://twitter.com/thembauk/status/1249618353196609536?s=20		NA
2020-04-23	Tweet	https://twitter.com/EMODnet/status/1253246359454580736?s=20		NA
2020-04-30	Tweet	https://twitter.com/DanLear/status/1255752144579420165?s=20		NA
2020-04-30	Tweet	https://twitter.com/EMODnet/status/1255765884884455425?s=20		NA
2020-06-03	News	https://www.emodnet-biology.eu/news?p=show&id=8389		NA
2020-06-15	News	https://www.emodnet-biology.eu/news?p=show&id=8406		NA
2020-06-15	Tweet	https://twitter.com/Birchenough_S/status/1272453573587144705?s=20		NA
2020-06-15	Tweet	https://twitter.com/tomjwebb/status/1263822935481028610?s=20		NA
2020-06-22	News	https://www.emodnet-biology.eu/news?p=show&id=8425		NA
2020-05-22	Tweet	https://twitter.com/tomjwebb/status/1272517071642001409?s=20		NA
2020-04-23	Tweet	https://twitter.com/BlueCloudEU/status/1253229899168563200?s=20		NA
2020-06-26	Tweet	https://twitter.com/amyycartwright/status/1276485939573993475?s=20		NA
Total # tweets				35

Total # news articles	3
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B. Planned communication products			
Date	Communication action/ material	Short description (of the material, title, ...) and/or link to the activity	Main results expected
2020	News/tweet	Promoting the data products resulting from WP4 workshop	Uptake of products by users
QR14	News/tweet	Promoting WP5 workshop	Disseminate activity
QR14	News/tweet	Promoting Ocean teacher course on Contributing data to EMODnet Biology	Disseminate course/ project
QR14	Tweet	Continue to promote datasets harvested	Project dissemination
QR14	News/Tweet	Announce when next harvest is complete and summary of results (e.g. # datasets, records, addition to the project)	Project dissemination

List of known publications using EMODnet data or data products

Date	Type and name of journal, conference, ...	Publication title including DOI (if known)	Author(s)	Organisation(s)
2020-06-29	Journal	The BenBioDen database, a global database for meio-, macro- and megabenthic biomass and densities https://doi.org/10.1038/s41597-020-0551-2	Tanja Stratmann 1,2,3 Dick van Oevelen 1 Pedro Martínez Arbizu 4 Chih-Lin Wei 5 Jian-Xiang Liao 5 Mathieu Cusson 6 Ricardo A. Scrosati 7 Philippe Archambault 8 Paul V. R. Snelgrove 9 Patricia A. Ramey-Balci 10 Brenda J. Burd 11 Ellen Kenchington 12 Kent Gilkinson 13 Rénald Belley 14 Karline Soetaert 1	1 NiOZ Royal Netherlands Institute for Sea Research, Department of estuarine and Delta Systems, and Utrecht University 2 Utrecht University, Department of Earth Sciences 3 HGF MPG Joint Research Group for Deep-Sea Ecology and Technology, Max Planck Institute for Marine Microbiology 4 German Centre for Marine Biodiversity, Senckenberg am Meer 5 Institute of Oceanography, National Taiwan University 6 Département des sciences fondamentales et Québec-Océan, Université du Québec à Chicoutimi 7 Department of Biology, St. Francis Xavier University 8 ArcticNet & Québec-Océan/Takuvik, Université Laval. 9 Department of Ocean Sciences and Biology, Memorial University of Newfoundland 10 College of Sciences, Koç University 11 Institute of Ocean Sciences, Fisheries and Ocean Canada 12 Bedford Institute of Oceanography, Fisheries and Ocean Canada 13 Northwest Atlantic Fisheries Centre, Fisheries and Ocean Canada 14 Maurice Lamontagne Institute, Fisheries and Oceans Canada
2020-06-15	Journal	Occupancy-derived thermal affinities reflect known physiological thermal limits of marine species	Thomas J. Webb 1 Aaron Lines 1 Leigh M. Howarth 1,2	1 Department of Animal and Plant Sciences, University of Sheffield, Sheffield, UK 2 Life Sciences Centre, Dalhousie

		https://doi.org/10.1002/ece3.6407		University, Halifax, NS, Canada
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6. Monitoring indicators

Comments on the progress indicators in the excel template	
Progress indicator	Comment
1.1 Status/Volume and coverage of all available acquired data A) Volume and coverage of available acquired data	For most sub-themes/regions there was an increase in the holdings, as expected. The % added or covered varies as they are directly connected to the amount of data received, which is very variable from dataset to dataset. A few trends are negative, but this means that fewer records were added this quarter, when compared with the previous quarter. Please note that the areas calculated for the regions defined in this file, refer to the IHO limits and the areas in km2 are slightly different from the ones provided. Also worth noting that the Other Seas include all remaining world IHO areas not covered by the marine regions explicitly addressed in the table.
B) Usage of data in this quarter (formerly indicator 4)	Slight decrease in data usage might be explained by the decrease in activities due to COVID restrictions
1.2 Status/Total number and the coverage of all built & external data products A) Volume and coverage of available built & acquired data products	Not Available
B) Usage of data products in this quarter (formerly indicator 4)	Biology products in general don't seem to have much use from the user community. An analysis is being undertaken to assess what the reasons could be
2. Organisations supplying/approached to supply data and data products within reporting period	One provider volunteered the data, remaining are partners in the Biology consortia
3. Online 'Web' interfaces to access or view data	All data and data products in EMODnet Biology are available for download.
5. Statistics on data volunteered through download forms	The reporting period a change in the download form was implemented. Fields became mandatory and the number of users providing feedback has

	thus increased. The big majority of users were from Academia/research, the low % for other organisation types might reflect the decrease in activity across the various activity sectors due to COVID restrictions
7. Published use cases	The uptake of use cases doesn't seem to be relevant. An assessment is underway to determine what the possible cause can be
9.1. Technical monitoring	Uptime during the reporting period is of 100%, as confirmed by the OGC GeoHealthCheck tool
9.2. Portal user-friendliness (Visual Harmonization score)	Improvement is due to minor updates done to comply with visual guidelines.
10. Visibility & Analytics for web pages	Trends appear quite stable across the different quarters
11. Visibility & Analytics for web sections	Increase in the Toolbox usage which could be due to the WP2/WP3 and WP4 workshops in June
12. Average visit duration for web pages	No obvious trend can be inferred, users seem to be spending more time in the data portal than other pages, but it could be they are querying the holdings and not necessarily downloading data

The monitoring numbers reported as part of the progress monitoring of EMODnet performance are collected through Matomo. In some cases, numbers from other monitoring systems may also be reported (e.g. Awstats, Google Analytics). Each system uses different technical approaches and therefore has its strengths and shortcomings. Therefore, results are indicative and care should be taken with interpreting absolute numbers or comparing results from different tools. It is often more sensible to consider trends over time collected by the same monitoring tool.

7. Annex: Other documentation attached

Task 1

Inventory of datasets harvested during the reporting period:

- [Analysis of macrobenthos in the Southern Bight of the North Sea \(1971-1972\)](#)
- [Analysis of the macrobenthic community near Nieuwpoort \(1970-1971\)](#)
- [Epibenthic fauna along the salinity gradient in the Westerschelde area in 1990](#)
- [Historical landings for the lagoon of Venice \(Italy\) between 1945 and 2001](#)
- [Historical landings from the Venice \(Italy\) fish market between 1905 and 1927](#)
- [Life cycle and biomass of Tachidius discipes \(Crustacea, Copepoda\) in the 'Dievangat' \(Knokke\) in 1979](#)
- [Macrobenthos Data from Shoreham, the Tyne and the Thames Estuaries, UK, 2000 to 2006](#)
- [Macrobenthos of the Voordelta \(Grevelingen, Oosterschelde\) in 1988 and 1989](#)
- [Macrobenthos of the Western Scheldt \(Ossensisse, Valkenisse, Terneuzen and Vlissingen\) on 27 and 28 September 1978](#)
- [Mesopelagic Crustaceans of the North Western Portuguese Coast between 1998 and 2000](#)
- [North Atlantic and Arctic Isopoda sampled during the IceAGE project](#)
- [Ornithological observations in the southeast of the North Sea between June 1971 and January 1972](#)
- [Royal Belgian Institute of Natural Sciences Bird Collection](#)
- [Royal Belgian Institute of Natural Sciences Brachiopoda collection](#)
- [Royal Belgian Institute of Natural Sciences Bryozoa collection](#)
- [Royal Belgian Institute of Natural Sciences Cnidaria collection](#)
- [Royal Belgian Institute of Natural Sciences Crustacea collection](#)
- [Royal Belgian Institute of Natural Sciences Echinodermata collection](#)
- [Royal Belgian Institute of Natural Sciences Mammalia collection](#)
- [Royal Belgian Institute of Natural Sciences marine Chelicerata collection](#)
- [Royal Belgian Institute of Natural Sciences Mollusca collection](#)
- [Royal Belgian Institute of Natural Sciences Pisces collection](#)
- [Royal Belgian Institute of Natural Sciences Reptilia collection](#)
- [Royal Belgian Institute of Natural Sciences Rotifera collection](#)
- [Royal Belgian Institute of Natural Sciences Vertebrates/Types collection](#)
- [Study of epibenthos and demersal fish in and around the dredging areas of the Belgian Continental Shelf \(1977-1981\)](#)
- [Vertical distribution of meiofauna in the North Sea and the Westerschelde estuary in 1993 and 1994](#)
- [Young Fish Survey Data 1981 to 2010](#)
- [Zooplankton and Ichthyoplankton of the North Western Portuguese Coast in May 2002](#)

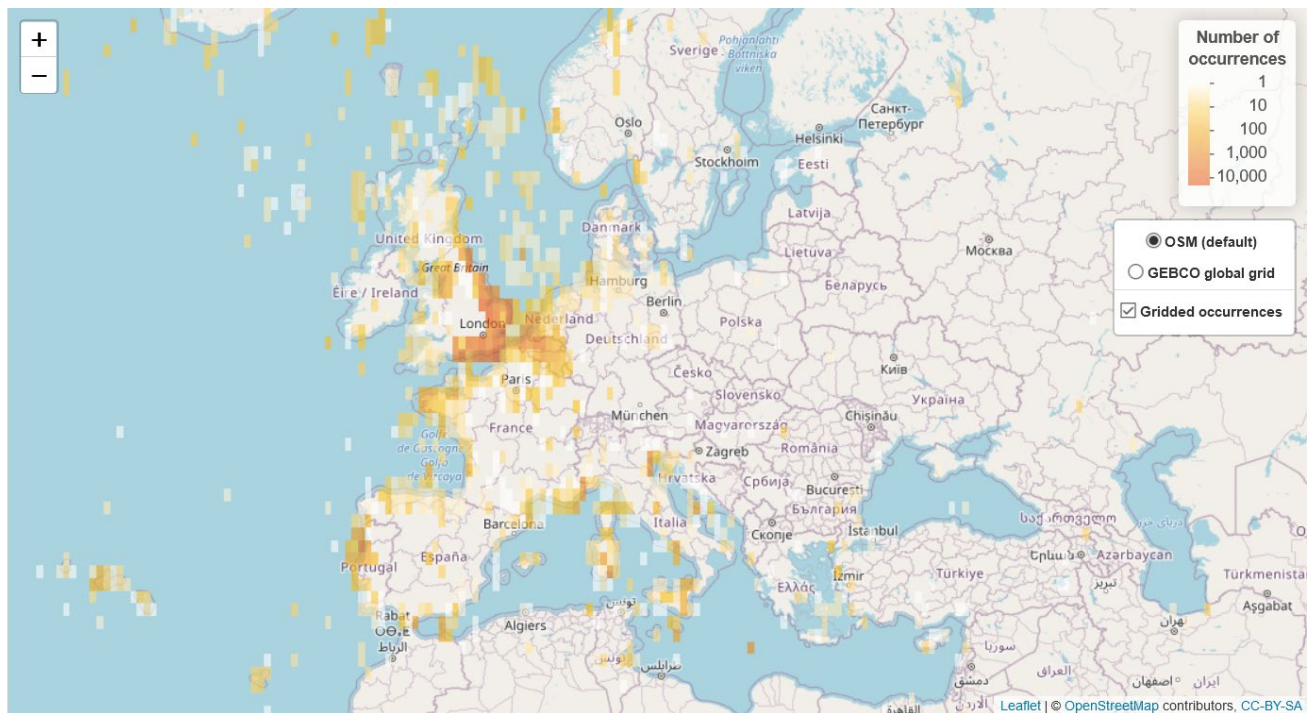


Figure 1 . Map display of gridded occurrences added to EMODnet Biology during the reporting period

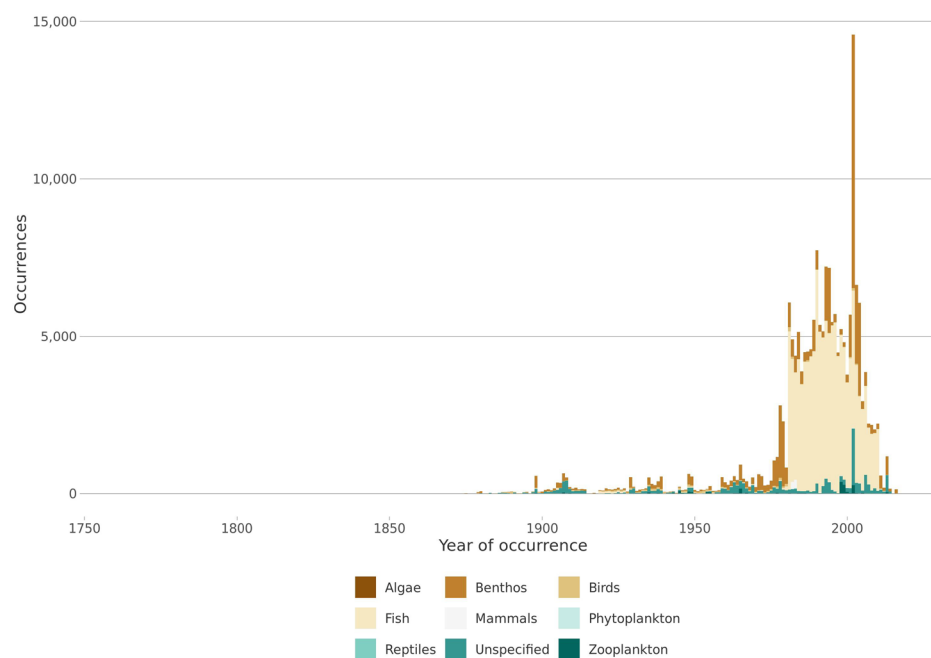


Figure 2 . Number of occurrences per sample year and sub-theme added to EMODnet Biology during the reporting period

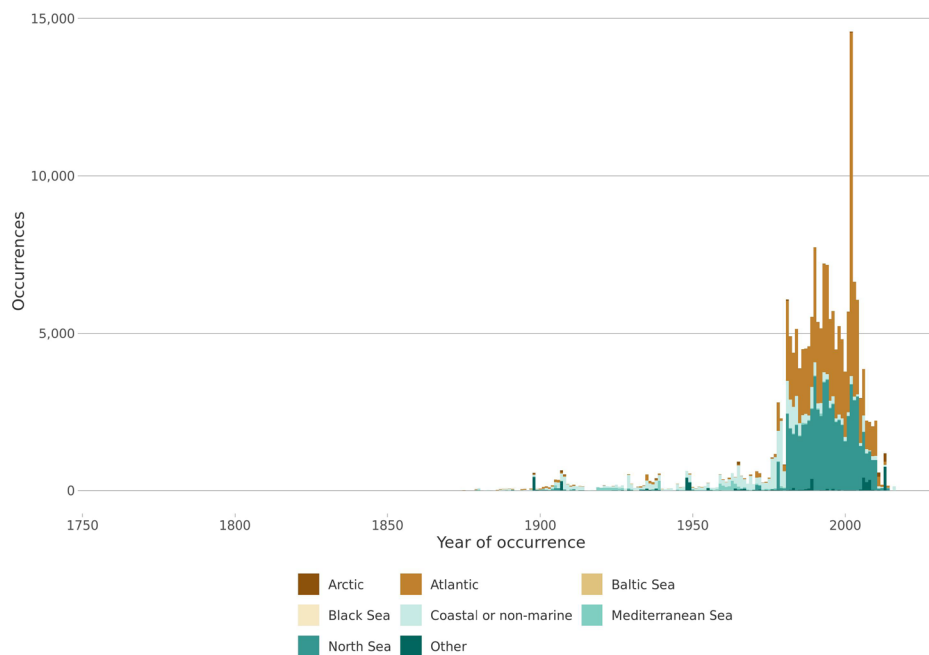


Figure 3 . Number of occurrences per sample year and marine region added to EMODnet Biology during the reporting period

The photo below shows the WP2/WP3 workshop participants:

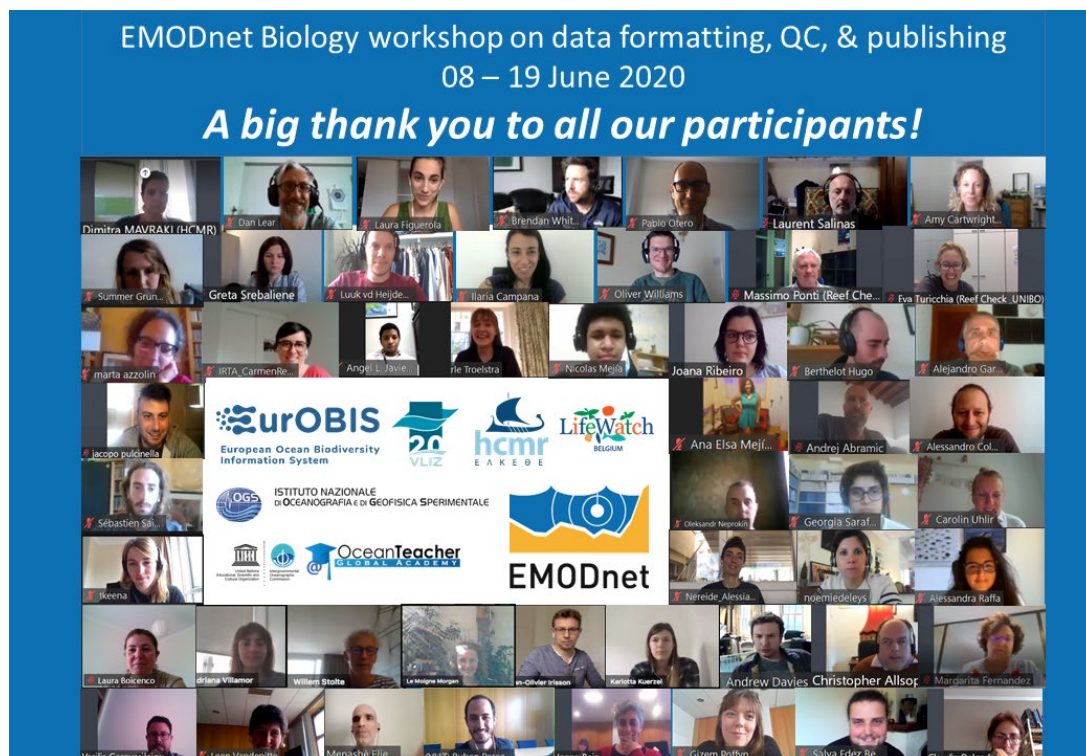


Figure 4 . WP2/WP3 Workshop participants

Task 2

The photo below shows the WP4 workshop participants:



Figure 5 . WP4 Workshop participants

Task 3 & 4

Organization:

Email:

☒ Get a notification by email when the download is ready.

Country:

Data Purpose:

☐ I agree to EMODnet Biology keeping my personal data to inform me about the EMODnet Biology project and its products. (optional)

Figure 6. Pre-defined mandatory fields updated in the EMODnet Biology download form

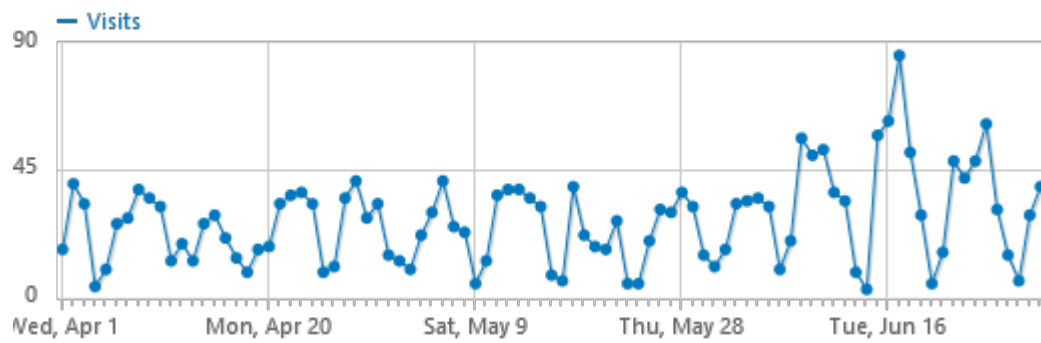


Figure 7. Evolution of visitors for emodnet-biology.eu during the reporting period

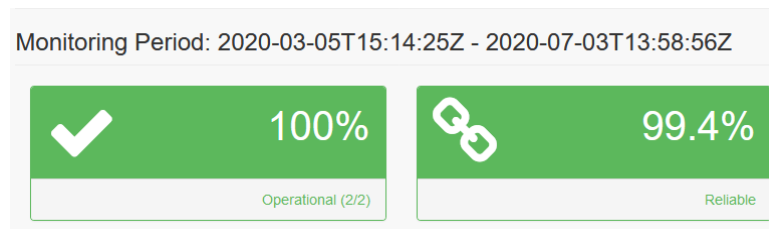


Figure 8 . OCG HealthCheck monitoring for the period from 2020-03-05 to 2020-07-03