



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n° V - Biology

EASME/EMFF/2017/1.3.1.2/02/SI2.789013

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

EMODnet Phase III – Quarterly Progress Report (QR14)

Reporting Period: 01/07/2020 – 30/09/2020





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1. Highlights in this quarter

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

At the end of September 2020, a new harvest cycle was completed. This brought 45 new datasets to the EurOBIS database and EMODnet Biology Portal, with an additional update of 7 previously available datasets. A list of datasets is included in the Annex.

With this harvest, the mythical milestone of 1,000 available datasets was reached, and even exceeded, there are now data from 1,022 datasets available online, representing 24,9 million occurrence records. The number of associated Measurement or Facts (eMoF) is growing rapidly as well - now being at 41,5 million records – with the most abundant eMoF information related to the sampling instrument name, counts, abundances, biomasses & lengths.

While the number of datasets and occurrences is continuously growing within the EurOBIS database, we are able to keep the quality of the records at a steady level of \pm 87-88%. Records not passing the fixed quality control levels mostly relate to the fact that the taxa have either not been identified to genus or species level, or the taxon name is not (yet) available within the World Register of Marine Species (WoRMS).

Compared to the previous Quarterly Report, there is a slight drop in the number of available occurrence records. This is due to a major update of the Continuous Plankton Recorder (CPR) data. Through the update, the available CPR data is now of higher quality as the provider has removed all occurrence records where the taxon identification was above family level. So, although there are fewer records, the quality of the available records is higher. Another change for CPR is that the data now represent actual counts instead of presence values.

More and more data partners are adhering to the EventCore format, and are investing time in mapping their data with BODC vocabularies. This largely improves its interoperability and FAIRness. Currently, 202 of the available datasets are in EventCore. In addition, 450 datasets already have eMoF information included.

The partners of 16 data grants have largely delivered their metadata, and are gradually preparing their datasets for submission through IPT. The Data Management Team is engaging in individual meetings to assist with questions and issues they are facing in the process. We expect some delay in final delivery of metadata, but this will completely be covered by the next reporting.

From WP3, the main activity for this reporting period was the preparation of “D3.7. Scientific document on the design of the workflow of text mining technologies in data archaeology” (in progress). WP3 also participated in the EMODnet Biology annual meeting and EMODnet 2nd Open Conference & Jamboree.

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) as well as Macrozoobenthos data collected in the northern part of the Romanian littoral - Danube mouths (2000-2010) and Macrozoobenthos data collected in the EAST CONSTANTIA sector - Romanian marine waters (2000-2010). Data processing and completion (e.g. quality control checks) of the above-mentioned datasets will continue during the next reporting period. It is worth mentioning that a high number of species names are not registered in the WoRMS, something that will be reported to that team to seek a resolution.

WP3 contributed with 22 datasets of the total number of datasets harvested during the reporting period.

Task 2: WP4- Data product creation



During the reporting period, work has continued on the data products that were initiated during the June workshop. One additional product has been added to the list of products made earlier. It appeared that the product on numerical abundance of macrobenthos in the North Sea and Baltic Sea, which is underlying the product of Macrobenthos trait groups, was not reproducible with the available code and the present state of the database. Therefore, it was decided to recreate this product and insert it as a separate product on macrobenthos. It will be released together with the product based on presence/absence data of macrobenthos in the Greater North Sea.

A schedule for publication of the products has been setup and all aspects of the products (product story, product code, product results) are being reviewed and refined where necessary.

The workshop report was finalised and published during the reporting period and can be found [here](#).

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

In MetaGIS, the tool that manages the metadata and links the geospatial layers to the map viewers, a number of bug fixes were performed, and some existing code was restructured. For map viewers containing a substantial number of layers, these layers are now displayed in multiple pages to facilitate their management (pagination). It is now also possible to overwrite the GeoServer content template from MetaGIS, even when the name of the store (data source connection) and workspace (layer container) in GeoServer are not the same for a specific layer. This content template affects the appearance of the feature info output (e.g. which attributes to show, what attribute name to show, in what layout to show the attribute info, ...).

Updates were also done to the reporting systems: enhancements for the reporting tool (ongoing work) and internal standardisation and documentation on how the stats that appear on the website are calculated.

Tasks 5 & 6: WP5- Uptake and outreach

All WP5 activity within this reporting period has focused on the planning and organisation of D5.5, now scheduled for the 9th October 2020. We transitioned this event from a physical, code-sprint style workshop into an online community-building activity as a result of the current COVID-19 global pandemic. Through engagement with existing contacts and previous workshop attendees we focussed on organisations, projects, initiatives and individuals who produce or manage data around the coastline of the Western Atlantic. In addition to potentially providing alternative sources of data to test the robustness and FAIRness of the existing suite of EMODnet Biology Data Products, we aim to build the wider network and support the adoption and use of global standards to facilitate Transatlantic data interoperability in the marine biological community.

All WP5 members participated in the EMODnet Biology Annual meeting. Progress and activities from the current and previous phases were presented, alongside discussion of the next deliverables, including the final 'Showcase' event planned for the end of the current phase (Spring 2021). At the time of writing it is anticipated that this will be an online webinar highlighting the significant outputs from the current phase of activity. A plenary session focussing on improving the reach and impact of EMODnet Biology more widely generated significant discussion which will be integrated into future EMODnet Biology activities to ensure maximal impact from the project outputs.

Tasks 7 & 8: WP1- Project management

As the summer months tend to be quieter, work focused on organising the annual meeting, which took place on the morning of the 22 and 24th of September. On the first day, each WP leader provided a status update of the project and on the second morning there was time for WP feedback and a discussion between the partners on various topics, a summary of which will be included in the annual meeting report, to be published in the next quarter.



In order to keep the meeting restricted to a reasonable number of hours, the breakout discussions for each WP were organised in a way that differed from previous years. They either weren't done (due to the recent/future workshops being held) or were done with a limited number of partners, focusing only on those that had not shown much progress in their data submissions. All of this information will be included in the annual meeting report.

As a consequence of the approval of the interim report, the project's partners were notified that they should send their first invoices and, despite some delays, payment processing began from early September.

The information concerning the user monitoring and Web Services is included in the Annex. The reporting period had a slight decrease in visits (2,483 in QR13 to 2,230 in QR14) but the number of downloads remained roughly the same (72 in QR13 to 70 in QR14). Regarding the Web Services monitoring, the reliability for both the WFS and WMS remain over 99.5% with a 100% rate of service operationality.

Following requests from the Secretariat, a number of resources and information were provided:

- Updated mailing list for EMODnet Biology consortium
- Feedback on indicators and templates for quarterly reports
- Video and ppt for EMODnet Jamboree
- Feedback for annual report
- Feedback following the GDPR requirements for third party services
- Implemented banner directing users to Online survey
- Discussion held on data product publication and how the procedures could be applied to future EMODnet Biology products

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	
GDPR requirement from SC&DGIT	Resolved	Confirmed no changes were required concerning third party services used on the EMODnet Biology portal	25-08-2020

B. Issues / challenges identified by the thematic assembly group itself			
(Priority) issue / challenge	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due
Standardisation of how statistics in https://www.emodnet-biology.eu/statistics are calculated	Resolved	Implemented internal consistency in reporting and documented how the numbers are calculated	QR14
Accepting OBIS files instead of DwC-A files?	Resolved	No action. Our procedures are designed for DwC-A files, no other (DwC) formats are accepted	QR14
Improvements to EMODnet Biology Biocheck tool	Pending	Feature requests to make the tool more user friendly	
Issues with MACROBEL, POHJE and NSBS datasets	Pending	Data management team will analyse each dataset and assess the work required	QR15
Removing data from a DOI-ed dataset	Pending	Clarified with partner what procedures could be done, when they could be done and when they would be in place. Also clarified the rules for a dataset DOI	QR15
Partner request for team to disclose dates when data are harvested so they can adjust their work patterns	Pending	Data management team will assess all pros and cons with the release of exact dates. At	QR15

		present, an email is sent to all partners one month ahead of the data harvest process so they can submit any datasets they have been working on	
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
14/07/2020	NIB	Request to access http://www.eurobis.org/imis?module=dataset&dasid=744 to assess new additions and how to cite the dataset	email	< 1 day	Resolved	Clarified contents of dataset and how user could submit new data for an update. Sent links to OBIS-ENV format, and download toolbox	
10/07/2020	CSIRO	Information for a global map of marine biological observing networks	Email forwarded by EMODnet	4 days	Resolved	Clarified data flow in Europe, how to	

			Secretaria t			access biological monitorin g data through EMODNet Biology catalogue and directed user to EMODnet Biology partners and EurOBIS providers	
10/08/2020	NIOZ	Requested .XML file to examine zooplankton data	Email forwarded by EMODnet Secretaria t	1 day	Resolved	Question was not clear as EMODnet Biology does not provide informatio n in .XML. Directed user to API, download toolbox and IPT, all accessible from the	

						portal.	
20/08/2020	EuroGOOS	Map EMODnet Biology infrastructure	Email forwarded by EMODnet Physics	2 weeks (first email replied on the same day)	Resolved	After clarifying what information, the user was asking for, an export of specific catalogue fields was provided	
07/09/2020	Blackpool & Fylde College	Extracting data from EMODnet Biology	Email forwarded by EMODnet Secretariat	1 week (delay due to holidays)	Resolved	Clarified, for the specific dataset how data could be accessed and what the different file formats were and how they could be visually checked	
28/09/2020	OBIS	Clarification on restricted datasets	email	< 1 day	Resolved	Majority of datasets	

						are from HCMR, OBIS harvests them from MedOBIS and not EurOBIS. Contacted HCMR for them to update their records. Remaining datasets will be checked by data management team	
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4. Meetings/events held/attended & planned

A. Meetings/events organised and attended					
Date	Location	Type event (internal or external meeting, training/workshop)	Indicate if a ppt was given (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
15/07/2020	Online	Webinar	no	A	Exotic Invasive Aquatic Species > 100 participants Not much outcome as when attending I realised the focus was on freshwater and not marine species
22 September 2020	Online	Webinar	Yes (EMODnet Biology overview and highlights to be included in the 10 years-10 minutes presentation)	A	10 years of EMODnet > 250 participants
22 and 24 September 2020	Online	Online meeting	Yes Each WP gave a status updated for the first year and presented the collated feedback	A/O	EMODnet Biology annual meeting >50 participants All partners and several Associated Data Partners attended Meeting summary will be published in the form of a report
SUM				O	Total # of meetings organised = 1
SUM				A	Total # of meetings attended = 3

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
9 October 2020	Online	Workshop	A/O	Transatlantic data integration and product development workshop
20-21 October 2020	Online	Workshop	A	Marine data to support aquaculture in the North Atlantic https://webgate.ec.europa.eu/maritimeforum/en/node/4476
23-25 November 2020	Online	Congress	A	EVOLMAR 2020 (MARINE EVOLUTION - 1° Italian Congress)- https://www.evolar.it/ Highlight EMODnet Biology and how data can be submitted and downloaded

5. Communication assets

A. Communication products				
Date	Communication material	Short description (of the material, title, ...) of the asset	Main results	Name of event at which material was disseminated (if applicable)
QR14	Via EurOBIS twitter	45 Tweets, most providing information on datasets added to EMODnet Biology, but also a number relating to the WP2/WP3 and WP4 workshops and also how data can be submitted	Increase in # of followers (20 new followers), increase in # engagements	NA
07 July 2020	Tweet	https://twitter.com/domembassybe/status/1280445486567247874?s=20		NA
20 July 2020	News	"The EMODnet Biology workshop on data formatting, QC and publishing course is now easily accessible through OceanTeacher!" https://www.emodnet-biology.eu/news?p=show&id=8457		NA
10 August 2020	News	"EMODnet Biology Interim report now available online" https://www.emodnet-biology.eu/news?p=show&id=8474		NA
15 September 2020	News	"EMODnet Biology Annual meeting" https://www.emodnet-biology.eu/news?p=show&id=8495		NA
15 September 2020	News	"More than 1000 datasets now available for download!" https://www.emodnet-biology.eu/news?p=show&id=8496		NA
22 September 2020	Tweet	https://twitter.com/WRMarineSpecies/status/1308320512016252928?s=20		NA
30 September	News	"EMODnet Biology WP4 Workshop Report" https://www.emodnet-biology.eu/news?p=show&id=8515		NA

2020				
			Total tweets	# 47
			Total news articles	# 5

Your Tweets earned **60.2K impressions** over this **91 day** period

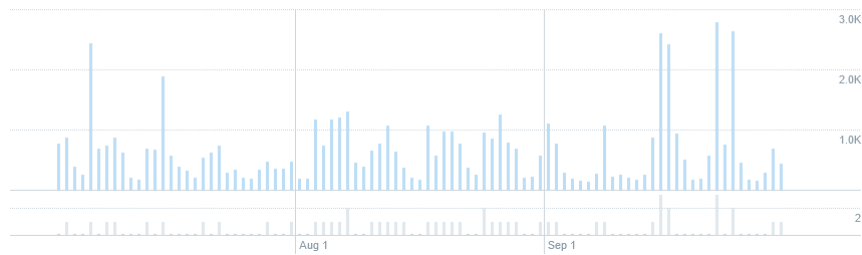


Figure 1. QR 14 Impressions for EurOBIS twitter

B. Planned communication products			
Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected
QR15	Tweets	Highlight datasets made available online	Increase # followers, engagements
QR15	News/tweet	Promoting WP5 workshop	Disseminate activity
QR15	News/Tweet	Highlight EMODnet Biology participation in events as identified on table B, chapter 4	Disseminate activity

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)
2019	EEA Technical Report	Biodiversity in Europe's seas. ETC/ICM Technical Report 3/2019: European Topic Centre on Inland and Marine Waters ISBN 978--3--944280--64--6	Vaughan D., Korpinen S., Nygård H., Andersen J.H., Murray C, Kallenbach E., Jensen N.J., Tunesi L., Mo G., Agnesi S., Klančnik K., Herbon C., Singleton G., Pagou K., Borja Á., Reker J	European Environment Agency, European Topic Centre European Topic Centre on Inland, Coastal and Marine waters (ETC/ICM)
9 September 2020	Quarterly Journal of Engineering Geology and Hydrogeology	INFOMAR data in the EMODnet Geology data portal supports marine spatial planning and offshore energy development in the Irish offshore http://dx.doi.org/10.1144/qjegh2020-033	J. Guinan, C. McKeon, E. O'Keeffe, X. Monteys, F. Sacchetti, M. Coughlan and C. Nic Aonghusa	Geological Survey Ireland, Marine Institute, Irish Centre for Research in Applied Geosciences and Gavin and Doherty Geosolutions
29 September 2020	Biodiversity Information Science and Standards 4: e58932	Coordinating Efforts to Define Marine Plankton Imagery Data and Metadata Best Practices and Standards https://doi.org/10.3897/biss.4.58932	Patricia Martin-Cabrera, Fabien Lombard, Jean-Olivier Irisson, Lars Stemmann, Klas O. Möller, Markus Lindh, Veronique Creach, Lennert Schepers	Flanders Marine Institute, Institute de la Mer de Villefranche, Institute of Coastal Research, Swedish Meteorological and Hydrological Institute, Centre for Environment, Fisheries and Aquaculture

6. Monitoring indicators

EMODnet Biology Dashboard: <https://grafana-emodnet.trust-itservices.dev/d/koz4-8rZz/emodnet-biology?orgId=1&from=1561932000000&to=1601503199000>

Comments on the progress indicators in the excel template		
Progress indicator	Means of collecting figures	Comment
1. Current status and coverage of total available thematic data A) Volume and coverage of available data If you don't use the provided sea-basin figures, please indicate why you do not use them, as from when, and what do you use instead and why?	Information collated from in-house developed reporting tool.	Information collated from in-house developed reporting tool With the inclusion of 52 datasets (including 7 updates), the trend for most functional groups is positive. The regions being used for reporting are from Marine Regions gazetter and have the following MRGIDs: Atlantic- 1912, Arctic- 1906, Baltic- 2401, Black-3319, Mediterranean-1905, North Sea- 2350. Any coastal records that are not included in the polygons, will be listed as Other Seas, even if, e.g they are located within the Mediterranean or Atlantic. This is due to the fact that the polygons boundaries are defined by the official coastline. Please note that the % area coverage reflects the # records in each area/functional group and not exact area covered. Trends reflect the data that were ingested over the last quarter and also the increase in total numbers.
B) Usage of data in this quarter	Information collated from in-house developed reporting tool	There was a decrease in the download of data through the website which might be explained by not only the COVID impacts on research and other activities but also due to the holiday period.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products If you don't use the provided sea-basin figures, please indicate why you do not use them, as from when, and what do you use instead and why?	Information collated from Matomo downloads	Despite the recent data product workshop, no products have been published so the number remains the same as the previous reporting period. EMODnet Biology also does not have an overview of how much coverage, in terms of area, each product has. The listing is for all products and not grouped by sub-theme as some products include data from more than one sub-theme. It is not yet possible to provide information for which areas are covered by each product. Products were not grouped into functional groups as some of them cover multiple groups.

B) Usage of data products in this quarter	Information collated from Matomo downloads	Product usage by users is very low and the reasons could be multiple: users are more interested in data, not products; products do not cater for users requirements; users are unaware of the existence of these products, ...
3. Organisations supplying/approached to supply data and data products within this quarter	Information captured via data provider's records	All organisations volunteered the data, due to either being part of the EMODnet Biology consortium or because they have contacted the team to supply the data. Note that several datasets have multiple organisations listed. All data made available online are public
4. Online 'Web' interfaces to access or view data		All EMODnet Biology data available through the download toolbox are public. The data products created within the project are also public. No changes from the previous quarter
5. Statistics on information volunteered through download forms	Information collated from download toolbox form	Download form, which is use to capture user information, is now standardised and certain fields (organisation type, country and purpose) are mandatory. More than half of the users downloading the data are from academia/research and the purpose is also mainly for research. With Belgium being the main country of origin of the portal's users
6. Published use cases	EMODnet Dashboard	Decrease in the uptake of use cases possibly due to COVID impacting activities but also the holiday period
8.1. Technical monitoring	EMODnet Dashboard	Average response time within required limits and average uptime of 100%
8.2. Portal user-friendliness (Visual harmonization score)	Trust-IT report	A few discrepancies have been identified between the visual guidelines and what is implemented in the portal
9. Visibility & Analytics for web pages	EMODnet Dashboard	Numbers confirm the decrease in number of pageviews, associated with the decrease of user visits during the reporting period
10. Visibility & Analytics for web sections	EMODnet Dashboard	Similar to indicator 10, decrease in number of pageviews during the reporting period
11. Average visit duration for web pages	EMODnet Dashboard	Similar to indicator 10, decrease in number of pageviews during the reporting period

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), and if so, must be reported in the table above. Each system uses different technical approaches and therefore has its strengths and shortcomings. Therefore, results are indicative and care should be taken when 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:

- [Abundance and biomass of benthic infauna as part of the North Channel habitat mapping project, 2017](#)
- [Abundance and biomass of benthic infauna from mud grabs in the Irish sea as part of a mud habitat project from 2014-2015](#)
- [Abundance and biomass of infaunal species as part of Essential fish habitat surveys, Co. Down Coast \(Northern Ireland\) 2012-2013.](#)
- [Abundance and Biomass of infaunal species from grab samples from a benthic assessment for Fair Head tidal energy development site \(Fair Head, Co. Antrim\), 2014.](#)
- [Benthic bycatch from dredge surveys for seed mussel \(*Mytilus edilus*\) stock assessment, Outer Ards, Northern Ireland](#)
- [Benthic infaunal abundance and biomass from Belfast Lough dredge disposal monitoring operations 2017 and 2018](#)
- [Billards A. 1936. The fishery grounds near Alexandria. VI Hydroidea. Notes et memoires No 13](#)
- [Brachiopoda in a *Posidonia oceanica* meadow in Plakias, SW Crete, Greece, 2017.](#)
- [Comparative study of the meiobenthos in the Arctic region in 1991](#)
- [Dr.Karl Viets. 1935. The fishery grounds near Alexandria. IV. -Some Marine Mites From Alexandria. Notes and Memoirs No 11. Fisheries Research Directorate, Egypt.](#)
- [Epifauna community at Waarde and Saeftinghe \(Westerschelde\) in 1991](#)
- [F.M.Ghazzawi \(1938\) Plankton of the Egyptian waters. Two Cladocera from the plankton. Notes and Memories of the Hydrobiology and Fisheries Directorate of Egypt, Notes and Memories No 31](#)
- [Fauvel P. 1937. The fishery grounds near Alexandria. XI. Annelida Polychaeta. Notes et memoires No 19](#)
- [Feeding rhythms of the common goby *Pomatoschistus microps* at the brackish tidal marsh 'Het verdrinken land van Saeftinghe' in 1994](#)
- [Fish and marine invertebrates from the Israeli Eastern Mediterranean Sea](#)
- [Free-living plathelminthes of marine habitats near Wimereux \(1990-1991\)](#)
- [H.Bachmann \(1936\) The fishery grounds near Alexandria. XIV. Phytoplankton from the Nile. Fisheries Research Directorate of Egypt, Notes and Memoirs No 22](#)
- [Harant H. 1939. The fishery grounds near Alexandria. Ascidiacea \(Cartes 1-5\). Notes et Memoirs No 28.](#)
- [Historical landings from the Rijeka \(Croatia\) fish market between 1914 and 1932](#)
- [Historical landings from the Trieste \(Italy\) fish market between 1902 and 1968](#)
- [Hyperbenthos community in the salt marsh of Saeftinghe in 1990 and 1991](#)
- [Infaunal abundance & biomass from sediment grabs in Belfast Lough as part of a habitat mapping project in 2018](#)
- [Infaunal abundance and biomass data from surveys of the East Antrim Maerl bed in 2004](#)
- [Infaunal abundances from mud samples taken from the Outer Ards peninsula \(Northern Ireland\) in 2014 and 2016 as part of an assessment of the *Modiolus modiolus* reefs.](#)
- [Italian official Adriatic \(Mediterranean Sea\) landings between 1953 and 2012](#)
- [LifeWatch observatory data: phytoplankton observations by imaging flow cytometry \(FlowCam\) in the Belgian Part of the North Sea](#)
- [LifeWatch observatory data: zooplankton observations in the Belgian Part of the North Sea](#)
- [Literature review of the Scheldt estuary with emphasis on the biotic components](#)



- [M. Burton \(1936\). The Fishery grounds near Alexandria IX – Sponges. Notes and Memoirs No.17. Department of Zoology, British Museum. Fisheries Research Directorate. Ministry of Commerce and Industry, Egypt.](#)
- [Macrobenthos Data from Shoreham, the Tyne and the Thames Estuaries, UK, 2000 to 2006](#)
- [MEDITS-Spain: Demersal and mega-benthic species from the MEDITS \(Mediterranean International Trawl Survey\) project on the Spanish continental shelf between 1994 and 2010](#)
- [Meiobenthic community in the Westerschelde estuary between 1977 and 1979](#)
- [Mortensen Th. And Steuer Ad. 1937. The fishery grounds near Alexandria. XIII Echinoderma. Notes and Memoirs No 21. Hydrobiology and Fisheries Directorate, Egypt](#)
- [Organochlorine and total mercury in bivalve Anadara tuberculosa and other species from the Nicoya Gulf, Costa Rica in 1988](#)
- [Phytoplankton in longitudinal east-west transect of the Mediterranean Sea,1999.](#)
- [Phytoplankton of coastal waters in Aegean Sea, Eastern Mediterranean, 2002-2003.](#)
- [Population dynamics of Mesopodopsis slabberi in the Western Scheldt between 1990 and 1991](#)
- [Report on the Danish Oceanographical Expeditions 1908-10 to the Mediterranean and adjacent seas- Calcareous Algae](#)
- [Report on the Danish Oceanographical expeditions 1908-1910 to the Mediterranean and adjacent seas - Pelagic Polychaetes](#)
- [Report on the Danish Oceanographical Expeditions 1908-1910 to the Mediterranean and adjacent seas- Engraulidae-Clupeidae](#)
- [Schellenberg A. 1936. The fishery grounds near Alexandria. Amphipoda Benthonica. Notes and memoirs No 18.](#)
- [Spatial and seasonal variability of the molluscan macrofauna at the marine-lagoonal environmental gradient at Kalloni saltworks \(Lesvos Island, NE Aegean Sea, Greece\)](#)
- [Sponge faunas of exposed and sheltered reef flats in eastern Indonesia in 1984](#)
- [Steuer Ad., 1939. The fishery grounds near Alexandria. XVIII Sipunculoidea, Phoronidea, Brachiopoda, Enteropneusta and Acrania. Notes and Memoirs No. 30. Fouad I Institute of Hydrobiology and Fisheries, Egypt](#)
- [Summary on benthic studies of the Southern Bight of the North Sea and its adjacent continental estuaries \(Western Scheldt and Eems-Dollard\) between 1976 and 1978](#)
- [The CPR Survey](#)
- [The fishery ground near Alexandria. XVI. Cumacea, stomatopoda, leptostraca by Adolf Steuer \(1938\).Notes and Memoirs No 26.](#)
- [The fishery ground near Alexandria. XX. Nemertini by Herman Friedrich \(1940\).Notes and Memoirs No 38.](#)
- [The fishery ground near Alexandria. XXI. Tanaidacea and Isopoda by H.J. Larwood \(1940\).Notes and Memoirs No35.](#)
- [Vatova A., 1935. The fishery grounds near Alexandria, II. A bottom sample taken at Alexandria, Notes and Memoirs No 9. Fisheries Research Directorate, Egypt](#)
- [Zooplankton and Ichthyoplankton of the North Western Portuguese Coast in May 2002](#)

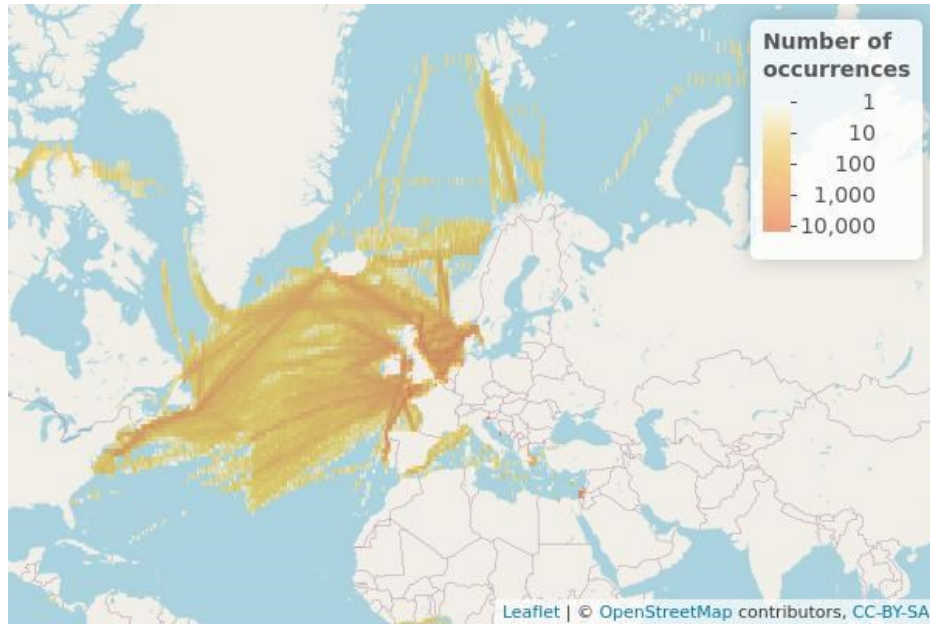


Figure 2 . Map display of gridded occurrences added to EMODnet Biology during the reporting period

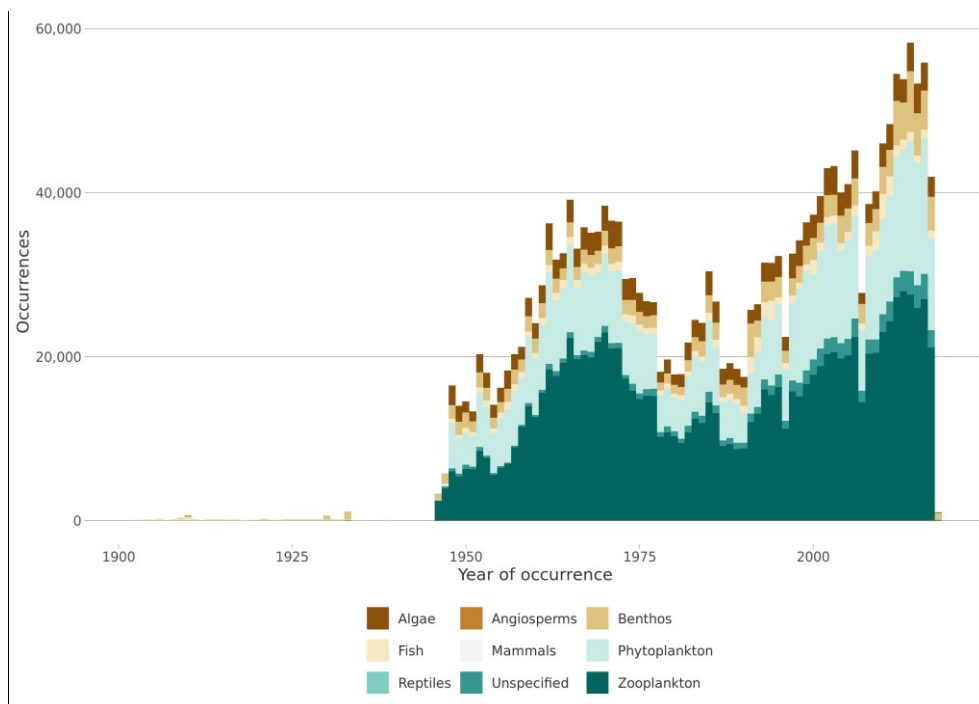


Figure 3. Number of occurrences per sample year and sub-theme added to EMODnet Biology during the reporting period

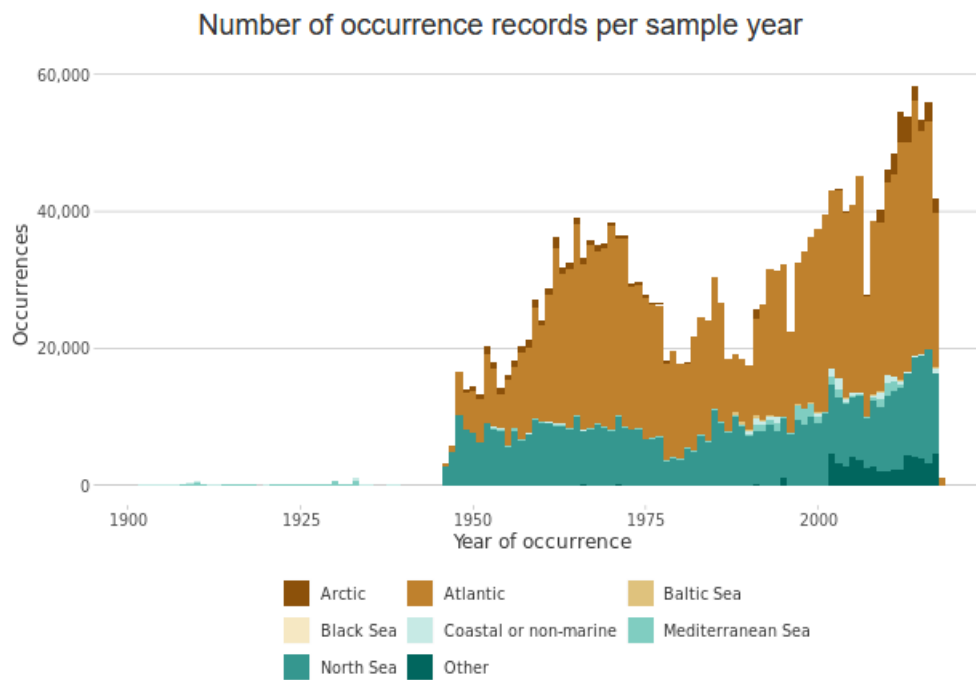


Figure 4. Number of occurrences per sample year and marine region added to EMODnet Biology during the reporting period

Tasks 7 and 8

Visits Over Time

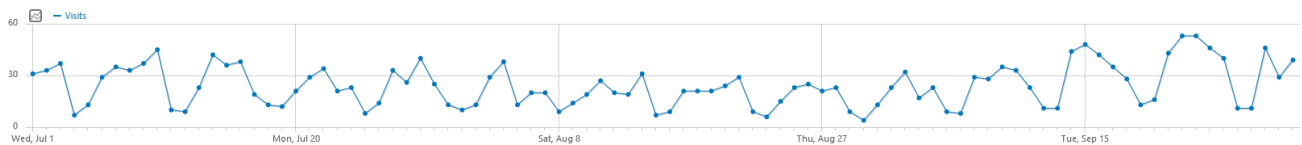
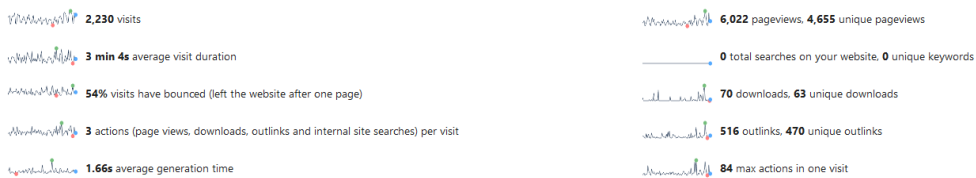


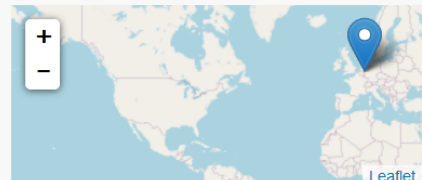
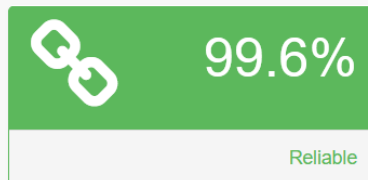
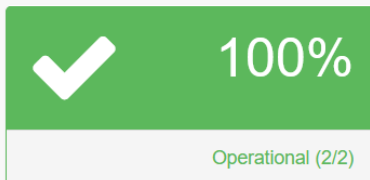
Figure 5. Number of visits to the EMODnet Biology portal during the reporting period

Visits Overview



Dashboard

Monitoring Period: 2020-03-05T15:14:25Z - 2020-10-01T10:18:54Z



Resources

[JSON](#) [CSV](#)

Search... (foo, site:.org, title:foo, type:wms, url:example.org)

2 results

Type	Name	Status	Reliability
Web Feature Service (WFS)	EMODnet Biology (WFS) Biology	✓	99.6%
Web Map Service (WMS)	EMODnet Biology (WMS) Biology	✓	99.59%

Figure 6. Summary of the GeoHealth check assessment for the EMODnet Biology web services from March 5th until end of the reporting period