



# EMODnet



European Marine  
Observation and  
Data Network

## EMODnet Thematic Lot n° 1 - Bathymetry

EASME/EMFF/2019/1.3.1.9/Lot1/SI2.836043

Start date of the project: 20/12/2020 - (24 months)

### EMODnet Phase III – Quarterly Progress Report (3)

Reporting Period: 01/07/2021 – 30/09/2021



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## Disclaimer

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# 1. Highlights in this quarter

*[List progress for each of the tasks specified in Section 1.4.1 of the Tender Specifications; provide an explanation for any tasks in which progress has not been noted. Provide in the table a list of all Milestones and Deliverables as from the technical workplan, the date due and status. Max 2 pages]*

- **Task 1 - Gather and give access to bathymetric survey data:**  
During the reporting period, the number of survey data sets has increased by new contributions of 19 data providers from 30812 to 31097 CDI entries while also the number of Composite DTM entries has increased considerably with new contributions of 7 data providers from 207 to 243. This increase is taking place because gathering and population of new survey data sets and new Composite DTMs should take place in the first year of the new contract as this will provide contributions for updating and generating the new versions of the Regional DTMs for which activities will take place from early 2022. More contributions are expected and underway from other data providers, as so far 23 of the 43 agreed data providers have fulfilled their population activities. A number of the new CDTMs concern the new Caribbean Sea region. For instance, partner EOMAP has produced 8 Satellite Derived Bathymetry (SDB) DTMs for various Caribbean islands.
- **Task 2 - Compile a multi-resolution digital terrain model of European seas:**  
A new version of the GLOBE software has been made available by IFREMER, following a list of requirements as collected from consortium members, and based upon earlier experiences during the previous contract. The software is now available in version 1.18.5. As usual this dedicated software is made available to the members of the EMODnet consortium but also is available for the wider scientific community. A dedicated, workshop on the use of GLOBE for data contributors took part on the 6<sup>th</sup> of September (software presentation in the morning, training in the afternoon) via a virtual meeting. Data providers will use the GLOBE software to pre-process and grid their individual bathymetric datasets to the EMODnet DTM format in order to make them ready for the Basin coordinators by the end of 2021.
- **Task 3 - Develop procedures for machine-to-machine connections to data and data products:**  
The present EMODnet Bathymetry portal and its services have many features for providing a gateway to data, metadata and data products. These are combined with web services, such as OGC services for sharing map layers of the EMODnet DTM and sharing locations and metadata of survey data sets (CDI service) and composite DTMs (Sextant catalogue service). In the new contract, there is a migration planned from thematic portals to one central portal, which will become the one-stop-shop for EMODnet products and services. The thematic groups will continue to be responsible for the gathering of data sets, generation of their products and the provision of web services and API's which will feed the EMODnet central portal. To find a suitable solution for this migration challenge, there is regular contact between the EMODnet Central Portal team (CP team) and a technical team from EMODnet Bathymetry since early January 2021. In the previous reporting period 3 technical meetings took place. As outcome, also shared with EU DG-MARE and CINEA, a vision for the migration was agreed, for which activities are ongoing, as follows:
  - The dedicated functionalities as provided by EMODnet Bathymetry in its map viewer should come back in the central portal map viewer service as these are very instrumental for uses and their users. EMODnet Bathymetry has handed over its software solutions to the CP team and Bilbomatica joined as GIS expert, extra funded by EU, to adapt the central portal viewer. Bilbomatica made good progress and gave a preview of the new viewer with a few bathymetry layers and with the dedicated functions. Recently, a link was provided to EMODnet Bathymetry for testing these layers and functionalities, to provide feedback, while CP team will expand the viewer with the other remaining Bathymetry layers and functionalities. The viewer functionality interacts with web services that will continue to be published and maintained by EMODnet Bathymetry;
  - The new viewer should also take over the functionality of the Bathymetry viewing and download service to facilitate selection and downloading of EMODnet DTM tiles (different formats and versions) and HR-DTMs. For that purpose, EMODnet Bathymetry is providing copies of the DTM tiles and HR-DTM files to CP team, who are planning to include these in the new central EMODnet Data Products catalogue that will run as an ERDDAP instance. A link will have to be made between the new viewer for selecting the requested files and facilitating the download. Thereby, the CP team wants to benefit, where possible, from ERDDAP's options for data format conversions, using NetCDF V4 as leading format. This has been

tested already by the CP team and works for selected format conversions and also for supporting user defined areas for downloading. However, EMODnet Bathymetry also provides copies in formats not supported by ERDDAP conversions. So, in those cases it seems best to store the files on the shelf as part of ERDDAP, because making ERDDAP extensions might be less favorable.

- The website contents of EMODnet Bathymetry will be taken and after review, included in the online CMS of the CP site. The CP site manager is in charge and has started with making an inventory of sections and pages, which needs to be checked for completeness by EMODnet Bathymetry site manager. As a next step it is planned that a new thematic site map will be prepared by the CP site manager and inclusion and review of contents will start. In a later stage, EMODnet Bathymetry site manager will get access to the CMS for checking and approving the draft before going public, and later on for maintenance suggestions in a staging set-up.
- Other important services of EMODnet Bathymetry are the CDI Data Discovery and Access service for survey data sets and Sextant CPRD catalogue service for Composite DTMs. The EMODnet DTM is built from both inputs and both catalogues facilitate to include input references in the DTM gridcells about the data that were used to determine the bathymetry indicators. Moreover, the CDI service allows to submit requests for data access, and if ok, to download those data sets. For both services use is made of SeaDataNet, while currently an EMODnet Bathymetry look & feel is being applied. In the new CP portal these catalogue services should be continued as they are instrumental for several reasons: 1) to encourage data providers to populate more bathymetric data sets, which are input for refining and expanding the EMODnet DTM; 2) to give users overview and option for access to those underlying data sets; 3) to support the FAIRness that data products (DTM tiles and HR-DTMs) acknowledge in detail which data sets were used, together with INSPIRE compliant metadata. In the new situation both services will be included with links to SeaDataNet as SeaDataNet is considered as an external infrastructure and one of the modules on which EMODnet is built. This way, the CDI service also can continue to have its own AAA service, Marine-ID, as part of the CDI shopping module as it is not integrated and presented as an EMODnet service, but supporting infrastructure. To keep the focus on bathymetry, EMODnet Bathymetry will work with SeaDataNet on versions, which cover only relevant records and whereby the user interfaces are fitted for bathymetry queries. In practice, it will implicate continuing current services but adapting their URLs (no longer part of EMODnet Bathymetry domain, but SeaDataNet domain) and adapting their styling.
- The CDI and Sextant services should also come back in the layers of the new CP viewer: the source reference layer displays which areas of the DTM are originating from specific CDI or CPRD inputs and allows to query to pull up the metadata details of such references. Moreover, there is a Survey tracks / polygons layer in the viewer, which is driven by the WMS – WFS services of the CDI service. This layer is again important for bathymetry to see which surveys have been done and are available in specific sea areas. This way, also a good insight can be gained about gaps in coverage. These CDI WMS – WFS layers are also shared internationally as part of Seabed 2030 with IHO by means of inclusion in the NOAA NGDC viewer, which displays NGDC and EMODnet Bathymetry resources worldwide.

Unfortunately, the progress with migration is quite slow, as the CP team has to deal with many thematic groups and their specific requirements. Moreover, it involves developing and testing new central software solutions as well as adopting and adapting software from parties such as EMODnet Bathymetry. This also takes time, as it should be done in a robust and reliable way and not as an experiment. As there are many developments needed for a full migration, EMODnet Bathymetry hopes that sufficient time will be given to the process of finetuning as it is very important that the launch of the new Central Portal will go without major flaws.

Another relevant activity in Task 3 is for Ifremer to adopt the earlier developed prototype for a Collaborative Virtual Environment (CVE) on the DATARMOR computing infrastructure of IFREMER with online Globe software. This will be loaded with the current EMODnet 2020 grid in order to annotate of residual artefacts, such as anomalies and outliers, on which the Regional Coordinators then can focus in their activities for improving the Regional DTMs, e.g. using possible new data sets and/or using interpolation and smoothing algorithms as provided in Globe. Later, the CVE then can also be used again to visualise and validate the new Regional DTMs, before those files are forwarded to the integrator. The regional DTMs concern big data files which require high performance computing for efficient handling and visual inspection. Due to its computing configuration, the CVE will provide more efficient and performing handling and visualisation of the full regional DTMs than most

regional coordinators have at their own workspace. It will also allow to zoom-in on the alignment of adjoining regional DTMs. The CVE tool is planned to be ready by November 2021.

- **Task 4 - Contribute data, data products and content to a central portal that allows users to find, view and download data and data products:**

This is related to updating the Central Portal with the new products, which are planned as part of the new contract. The updating will take place once the migration activities as described above under Task 3 have been fulfilled and finalised. During the current migration activities, it concerns bringing over the current services and products. A start has been made with preparing and handing over a set of XML metadata files for describing DTM tiles. This will be followed by XML metadata files for HR-DTM files. Both types will be integrated in the data products catalogue service at the central portal. Once operational, there will be an update with every new release of the EMODnet DTM and its HR-DTMs, which currently happens each 2 years.

As indicated under Task 3, recently a few EMODnet Bathymetry layers are made available for access on the development version of the EMODnet Central Portal alongside with associated functionalities. EMODnet Bathymetry has to test these functionalities and the visualisation of the layers, in order to help the CP team and its contractor Bilbomatica to fine tune. Import of other layers (Quality layer for example, CDI / CPRD, ...) and functionalities (download, see above) is still pending and deemed necessary to reach the current EMODnet Bathymetry user's experience.

- **Task 5 - Contributing content to dedicated spaces in Central Portal:**

The CP team has recently generated a full inventory of EMODnet Bathymetry pages content. Work is currently undertaken to confirm this inventory and further detail the mapping needed between the current EMODnet Bathymetry content and the future Central portal section dedicated on EMODnet Bathymetry. See also Task 3.

- **Task 6 - Ensure the involvement of regional sea conventions:**

There are good relationships with the secretariats of the Regional Sea Conventions who are kept up-to-date of the EMODnet Bathymetry services and products, and where possible, engaged in wider promotion and contributing to mobilising more potential data providers and product users. As mentioned above communication has started with actors of the Caribbean area. Notably, the EMODnet Bathymetry methodology has been presented to members of a dedicated meeting on Marine Spatial Data Infrastructure held by the Meso-American and Caribbean Sea Hydrographic Commission (22/09/2021). Likewise, similar presentations have been done in other Hydrographic Commissions / Working Groups (Chato 29/09, Crowd Source Bathymetry 14-16/09, Baltic HC 2/09/2021)

- **Task 8 - Monitor quality / performance and deal with user feedback:**

The overall performance of the portal and its services is continuously measured and its results are reported in the separate indicators spreadsheet. It demonstrates that the Bathymetry portal and its services and products continue to be highly popular and in great demand for a wide range of user applications. Also, several user feedback questions were received and answered by the helpdesk. The user questions received and answered are detailed in chapter 3 and Annex 1.

- **Task 9 - Maintain the existing thematic web portal for a maximum of six months from the start of the project:**

The current EMODnet Bathymetry portal will be maintained (and used as focal point for Bathymetry users) until agreement is reached between EMODnet Bathymetry team, CP team, CINEA and DGMARE that the level of service of the new Central Portal has reached a similar standard as the EMODnet Bathymetry portal.

- **Project management:**

The coordinator and technical coordinator have prepared the 2<sup>nd</sup> quarterly progress report for the new contract which was accepted by EU (CINEA and DG MARE).

Status of the Milestones and Deliverables listed in the workplan				
Milestone/Deliverable	WP	Date due	Status (Delivered/Delayed)	If Delayed: reason for delay and expected delivery date
D1.1: Quarterly concise progress reports	WP1	M4, M7, M10, M13, M16, M19, M24,	M4, M7 and M10 delivered	
D1.2: Annual Interim report	WP1	M12		
D1.3: Final report	WP1	M24		
D1.4: Plan for service continuity, incl. docs and sources	WP1	M24		
D2.1: Upgraded guidelines for data pre-processing and population of metadata	WP2	M3	M4 delivered	
<i>D2.2i: Training Workshop for data pre-processing and metadata population</i>	WP2	M3	M4 delivered	
D2.3: Pre-processed survey data sets and included in CDI Service	WP2	M12	Currently ongoing, and well progressing	
D2.4: Pre-processed composite DTMs and included in Sextant service	WP2	M12	Currently ongoing and well progressing	
D2.5: Satellite Derived Bathymetry data sets and included in Sextant Service	WP2	M12	Currently ongoing and well progressing	
D3.1: Upgraded guideline of EMODnet methodology for DTM production, including using prototype CVE	WP3	M8	Delayed to M11	
<i>D3.2i: Upgraded Globe software</i>	WP3	M8	Delivered in M9	
<i>D3.3i: Training and intercalibration Workshop</i>	WP3	M11	Delivered in M9	
<i>D3.4i: Processed and pre-gridded data sets as input for RDTMs</i>	WP3	M14	Striving for M12	
<i>D3.5i: Regional DTMs with common resolution of 1/16 arc minutes grid</i>	WP3	M17		
<i>D3.6i: Best version HR DTMs for coastal waters and hotspots</i>	WP3	M20		
D3.7: New EMODnet DTM incl Quality Index and loaded in EMODnet web	WP3	M23		

services for viewing and downloading				
D3.8: HR-DTMs loaded as separate layer in EMODnet web services for viewing and downloading	WP3	M23		
D3.9: Source reference layer to link to CDI and Sextant Catalogue services	WP3	M23		
D3.10: Refined best-estimate European digital coastlines for a range of vertical levels at the portal	WP3	M22		
D3.11: Updated Inventory of existing and ratified baselines and registered claims / disputes under UNCLOS, for European countries at the portal	WP3	M20		
D3.12: Tidal bathymetry for Venice Lagoon	WP3	M23		
D4.1: Standard machine-to-machine services delivered for common functionalities	WP4	M3	M1 delivered	
D4.2: Dedicated machine-to-machine services adapted / delivered for special functionalities	WP4	M6	As part of the migration process, scripts have been shared with Central Portal team. Integration in Central Portal is making progress but is delayed compared to initial planning with EU in agreement.	
<i>D4.3i: CVE adapted for handling review of RDTMs</i>	WP4	M14	Striving for M11	
<i>D4.4i: Globe software + GGSGC workbench upgraded with extra functionality</i>	WP4	When required	An updated version of GLOBE has been delivered (1.18.15)	
D5.1: Operational Help-desk	WP5	continuously		
D5.2: Monitoring data about visits and usage	WP5	continuously		
D5.3: Promotional material and up-to-date thematic space at central portal	WP5	continuously		



D5.4: Presentations at relevant conferences	WP5	regularly		
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## 2. Identified issues: status and actions taken

*[Provide an overview of the issues identified by CINEA (Table A), if any, since the start of the project phase (provide date), the status of those issues and actions taken to address them and/or roadmap with remaining actions planned to resolve the issues. in Table B, provide information about issues and challenges identified by yourself, if any.]*

<b>A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT</b>				
Priority issue	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved
<b>EM-341 Collect fields/forms used on Bathymetry Thematic Portal</b>	Pending	Involves check if CP team has listed all sections of the current website as part of planned migration	22/10/2021	
<b>EM-333 Collect names of portal editors</b>	Resolved	Name of editors given		14/10/2021
<b>EM-294 Dashboard issue with Helpdesk page-views</b>	Resolved	Checked that Grafana no longer gives unrealistic web stats for helpdesk visits		17/10/2021
<b>EM247 Bathymetry – Banner UPDATE - deadline extension</b>	Resolved		02/07/2021	06/07/2021
<b>EM-162 Issue in information display for the mean depth in multi-colour layer</b>	Pending	Reaching full OGC compliancy. Also refer to EM180. As it is intermittent, both tickets are in review	22/02/2021	03/05/2021 (last action)
<b>The Secretariat requests that the Bathymetry lot provides to the Secretariat the reference shapefiles and/or grids which they plan to use for the coverage of the Caribbean Sea Region.</b>	Pending	Attached to this report one can find the coverage extent of the Caribbean area on which the DTM will be generated. Note: Individual bathymetric survey coverage (polygons and polylines) as so far populated by the consortium can already be found on the EMODnet Bathymetry portal.		

<b>B. Issues / challenges identified by the thematic assembly group itself</b>				
Priority issue / challenge	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved

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

*[Provide a list of all user feedback received on your portal in chronological order since the start of the project (provide date). Indicate the type of the feedback received, a clear description of the query, and the actions undertaken to resolve the issue (e.g. update of metadata, fixing a particular issue with the map viewer). Indicate the status of the query (i.e. has the query been resolved or not yet), and if not provide an explanation why. List any feedback you received on the portal that can be used to build EMODnet use cases.]*

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
16 July 2021	Irish Wildlife Trust, Ireland	Question if isolines can be provided as separate file	Email feedback form	Same day	Resolved	Explained how to use WMS as alternative	
26 July 2021	??, ??	Question about opening TDM NetCDF in QGIS	Email feedback form	Same day	Resolved	Explained how to do it in QGIS	
26 July 2021	Company, Analytics-Pika, Finland	Question about use of DTM in commercial software	Email feedback form	Same day	Resolved	Explained that DTM is public product	
6 August 2021	Malta government	Question if bathymetric depth contours are available in shapefile	Email feedback form	Same day	Resolved	Explained that there is a WFS for isobaths	

19 August 2021	??, ??	Found a weird structure in the bottom of the Atlantic Ocean north of Funchal.	Email feedback form	Next day	Resolved	Asked to provide some images. No further follow-up	
2 September 2021	Center for Coastal and Ocean Mapping/Joint Hydrographic Center (CCOM/JHC), USA	Question about possible API for HR-DTMs	Email feedback form	Next day	Resolved	Explained that there is only GUI	
2 September 2021	JNCC, UK	Question about copyright information to use	Email feedback form	One week later	Resolved	Referred to section about acknowledgement and DOIs	
17 September 2021	Marine Institute, Ireland	Question about how to operate the HR-DTM layer	Email feedback form	Three days later	Resolved	Explained how the layer with HR-DTMs functions	
21 September 2021	Company, C2Wind ApS, Denmark	Noted issue with the WMS service	Email feedback form	Same day	Resolved	Thanked for his alert. Was small glitch	
20 September 2021	Company, Teledetection, France	Had a problem with registration	Email feedback form	Next day	Resolved	Asked for more details as message was unclear. No further follow-up	
28 September 2021	Company, TechnipFMC, UK	Issue with downloading areas of interest	Email feedback form	Same day	Resolved	Checked and asked to look again as files were quite large but no errors. User confirmed all ok.	

## 4. Meetings/events held/attended & planned

*[Organisational meetings/events held/participated (incl. presentations, lectures, trainings, demonstrations, workshops, etc.) by the contractor since the last quarterly report and planned in the future. Please add a short description on the meeting as well as the nature and volume of the audience.*

*When listing a meeting, please indicate whether it was an internal (i.e. within your partnership/lot) or external meeting (i.e. outside your partnership/lot).]*

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.)
2 September 2021	VTC	IHO Baltic Sea Hydrographic Commission meeting	yes	A	EMODnet presentation given. 15 participants
6 September 2021	VTC	Internal GLOBE Training workshop	yes	O	Project workshop with approx. 40 participants of consortium
8-10 September 2021	VTC	EMODnet Steering Committee and Technical Working Group meetings	Yes	A	Presented progress and tuning with other lots and overall developments. Participation by Shom and MARIS.
14-16 September 2021	VTC	IHO Crowd Source Bathymetry	yes	O	Joined by several members of the EMODnet Bathymetry Consortium. Approx. 30 participants.
22 September 2021	VTC	Marine Strategic Data Infrastructure – Meso-American and Caribbean Working Group meeting	yes	A	Joined by Shom.
<b>SUM</b>				<b>O</b>	<b>Total # of meetings organised = 2</b>

<b>SUM</b>				<b>A</b>	<b>Total # of meetings attended = 3</b>
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<b>B. Meetings/events planned in the future</b>				
Date	Location	Type event (meeting, training (workshop), etc.)	Meeting to be attended (A) / organised (O)	Short description and main expected outcomes
14 October 2021	VTC	Meeting with Central Portal team about migration. to discuss progress and actions	A	To discuss progress and formulate mutual actions

## 5. Communication assets

*[List all the relevant communication and dissemination products and assets you have developed since the start of the project phase (provide date) (e.g. brochures, videos, press releases, newsletters, blogs) and are planning to do. At the bottom of the table, provide a total number for every type of communication product you have developed (e.g. total # of press releases, etc.) or provide a summary from the actions on Twitter from (e.g. Twitter Analytics: number of Tweets and followers of Twitter account).]*

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)

B. Planned communication products			
Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected



[For the reporting period, please list all publications, e.g. peer-reviewed journals, book chapters, conference papers, etc.) of which you are aware, within the reporting period, including a reference to the EMODnet data or data products which is being discussed.]

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)
07/2021	Preprint Available at SSRN 3885492	The Influence of Large-Scale Wind Farm Wake Losses and Sector Coupling on the Development of Offshore Grids. <a href="https://dx.doi.org/10.2139/ssrn.3885492">https://dx.doi.org/10.2139/ssrn.3885492</a>	Gea-Bermudez, J., Kitzing, L., Matti, K., Kaushik, D., Murcia León, J. P., & Sørensen, P.	Technical University of Denmark Denmark
07/2021	Synthesis Report.	Sensitive Ecosystem Assessment and ROV Exploration of Reef (SeaRover),	Picton, B., Morrow, C., Scally, L., & Pfeiffer, N. .	Marine Institute Ireland
07/2021	Scientific Data, 8(1), 1-9.	A database of submarine landslides offshore West and Southwest Iberia.  <a href="https://doi.org/10.1038/s41597-021-00969-w">https://doi.org/10.1038/s41597-021-00969-w</a>	Gamboa, D., Omira, R., & Terrinha, P.	Instituto Português do Mar e de Atmosfera Portugal
07/2021	Quaternary Science Reviews, 266, 107071.	A Holocene relative sea-level database for the Baltic Sea.  <a href="https://doi.org/10.1016/j.quascirev.2021.107071">https://doi.org/10.1016/j.quascirev.2021.107071</a>	Rosentau, A., Klemann, V., Bennike, O., Steffen, H., Wehr, J., Latinović, M., ... & Subetto, D.	University of Tartu Estonia
07/2021	Deep Sea Research Part I: Oceanographic Research Papers, 176, 103603.	Potential factors influencing the condition of demersal sharks in the Mediterranean deep sea ecosystems.  <a href="https://doi.org/10.1016/j.dsr.2021.103603">https://doi.org/10.1016/j.dsr.2021.103603</a>	Ordines, F., Valls, M., Meléndez, M. J., Ramírez-Amaro, S., López, E., Lloret, J., ... & Massutí, E.	Instituto Español de Oceanografía, Palma, Spain
07/2021	Marine Ecology Progress Series, 670, 121-137.	Living at the top. Connectivity limitations and summit depth drive fish diversity patterns in an isolated seamount.	González-Irusta, J. M., De la Torre, A., Punzón, A., Blanco, M., Arronte, J. C., Bañón, R., ... & Serrano, A.	Instituto Español de Oceanografía Sapin

		<a href="https://doi.org/10.3354/meps13766">https://doi.org/10.3354/meps13766</a>		
<b>07/2021</b>	<i>Marine Ecology Progress Series</i> , 670, 75-91.	Predicting sea pen (Pennatulacea) distribution on the UK continental shelf: evidence of range modification by benthic trawling. <a href="https://doi.org/10.3354/meps13744">https://doi.org/10.3354/meps13744</a>	Downie, A. L., Noble-James, T., Chaverra, A., & Howell, K. L.	Centre for Environment, Fisheries and Aquaculture Science UK
<b>07/2021</b>	<i>Journal of Geodesy</i> , 95(8), 1-18.	The potential impact of hydrodynamic leveling on the quality of the European vertical reference frame. <a href="https://doi.org/10.1007/s00190-021-01543-3">https://doi.org/10.1007/s00190-021-01543-3</a>	Afrasteh, Y., Slobbe, D. C., Verlaan, M., Sacher, M., Klees, R., Guarneri, H., ... & Zijl, F.	Delft University of Technology Netherlands
<b>07/2021</b>	<i>Marine Pollution Bulletin</i> , 171, 112744.	Stochastic oil spill modeling for environmental protection at the Port of Taranto (southern Italy). <a href="https://doi.org/10.1016/j.marpolbul.2021.112744">https://doi.org/10.1016/j.marpolbul.2021.112744</a>	Liubartseva, S., Federico, I., Coppini, G., & Lecci, R.	Centro Euro-Mediterraneo sui Cambiamenti Climatici Italy
<b>07/2021</b>	<i>Report</i>	Estudio del conocimiento del sector pesquero del Plan Castellón y propuestas de nuevas medidas de gestión.	Pitarch Font, D.	Universidad de Alicante Spain
<b>07/2021</b>	<i>Journal of Maps</i> , 1-11.	Geomorphology of the seafloor north east of the Maltese Islands, Central Mediterranean. <a href="https://doi.org/10.1080/17445647.2021.1957034">https://doi.org/10.1080/17445647.2021.1957034</a>	Prampolini, M., Coratza, P., Rossi, S., Parenti, C., Galea, C., Caruana, A., & Soldati, M.	CNR Bologna Italy
<b>07/2021</b>	<i>Journal of Geophysical Research: Solid Earth</i> , 126(8), e2021JB021711.	The Structure of the Continent-Ocean Transition in the Gulf of Lions From Joint Refraction and Reflection Travel-Time Tomography. <a href="https://doi.org/10.1029/2021JB021711">https://doi.org/10.1029/2021JB021711</a>	Merino, I., Prada, M., Ranero, C. R., Sallarès, V., & Calahorrano, A.	CSIC Spain

<b>07/2021</b>	<i>arXiv preprint arXiv:2108.00509.</i>	Current interaction in large-scale wave models with an application to Ireland.	Calvino, C., Dabrowski, T., & Dias, F.	University College Dublin Ireland
<b>07/2021</b>	<i>Scientific Reports, 11(1), 1-12.</i>	Habitat suitability mapping of the black coral <i>Leiopathes glaberrima</i> to support conservation of vulnerable marine ecosystems. <a href="https://doi.org/10.1038/s41598-021-95256-4">https://doi.org/10.1038/s41598-021-95256-4</a>	Lauria, V., Massi, D., Fiorentino, F., Milisenda, G., & Cillari, T.	National Research Council CNR (CNR) Italy
<b>07/2021</b>	<i>Doctoral dissertation,</i>	Magmatism and Rifting in Oceanic Intraplate Environments: The Evolution of the Azores Plateau	Romer, R.	Friedrich-Alexander-Universität Erlangen-Nürnberg Germany
<b>07/2021</b>	<i>Environmental Microbiology Reports, 13(5), 744-752.</i>	The worm affair: fidelity and environmental adaptation in symbiont species that co-occur in vestimentiferan tubeworms. <a href="https://doi.org/10.1111/1758-2229.12994">https://doi.org/10.1111/1758-2229.12994</a>	Zvi-Kedem, T., Shemesh, E., Tchernov, D., & Rubin-Blum, M.	University of Haifa Israel
<b>07/2021</b>	<i>PeerJ, 9, e11898.</i>	Biogeography, diversity and environmental relationships of shelf and deep-sea benthic Amphipoda around Iceland. <a href="https://doi.org/10.7717/peerj.11898">10.7717/peerj.11898</a>	Lörz, A. N., Kaiser, S., Oldeland, J., Stolter, C., Kürzel, K., & Brix, S.	Universität Hamburg Germany
<b>07/2021</b>	<i>Quaternary Science Reviews, 268, 107131.</i>	New human remains from the Late Epigravettian necropolis of Arene Candide (Liguria, northwestern Italy): Direct radiocarbon evidence and inferences on the funerary use of the cave during the Younger Dryas. <a href="https://doi.org/10.1016/j.quascirev.2021.107131">https://doi.org/10.1016/j.quascirev.2021.107131</a>	Sparacello, V. S., Dori, I., Rossi, S., Varalli, A., Riel-Salvatore, J., Gravel-Miguel, C., ... & Moggi-Cecchi, J.	Università Degli Studi di Cagliari Italy
<b>08/2021</b>	<i>Report</i>	Advanced Energy Storage and Distribution Grid.	Shubov, M. V.	University of MA Lowell USA

<b>08/2021</b>	<i>Continental Shelf Research</i> , 228, 104535.	Modelling the water dynamics of a tidal lagoon: The impact of human intervention in the Nador Lagoon (Morocco). <a href="https://doi.org/10.1016/j.csr.2021.104535">https://doi.org/10.1016/j.csr.2021.104535</a>	Maicu, F., Abdellaoui, B., Bajo, M., Chair, A., Hilmi, K., & Umgieser, G.	CNR-ISMAR Italy
<b>08/2021</b>	<i>Master's thesis, UiT</i>	Romlig og tidsmessig analyse av garn-og linefiske. En studie av fiskeriatferd i området Lofoten, Vesterålen og Senja (2011-2018)	Steinsbø, S.	The Arctic University of Norway. Norway
<b>08/2021</b>	<i>Science of the Total Environment</i> , 801, 149712.	Offshore benthic habitat mapping based on object-based image analysis and geomorphometric approach. A case study from the Slupsk Bank, Southern Baltic Sea. <a href="https://doi.org/10.1016/j.scitotenv.2021.149712">https://doi.org/10.1016/j.scitotenv.2021.149712</a>	Janowski, L., Wroblewski, R., Dworniczak, J., Kolakowski, M., Rogowska, K., Wojcik, M., & Gajewski, J.	Gdynia Maritime University Poland
<b>08/2021</b>	<i>Report</i>	AMAP Litter and Microplastics Monitoring Guidelines	LARSEN, J. R., BOOTH, A. M., ROCHMAN, C. M., LIBOIRON, M., MURPHY, P., PRIMPKE, S., & ALIANI, S.	Arctic Monitoring and Assessment Programme(AMAP) Tromsø, Norway
<b>08/2021</b>	<i>Marine and Petroleum Geology</i> , 133, 105300.	Interference between Apennines and Hellenides foreland basins around the Apulian swell (Italy and Greece). <a href="https://doi.org/10.1016/j.marpetgeo.2021.105300">https://doi.org/10.1016/j.marpetgeo.2021.105300</a>	Cicala, M., Festa, V., Sabato, L., Tropeano, M., & Doglioni, C.	Università degli Studi di Bari Italy
<b>08/2021</b>	<i>Earth System Science Data (ESSD)</i>	An integrated marine data collection for the German Bight-Part 1: Subaqueous geomorphology and surface sedimentology (1996–2016). <a href="https://doi.org/10.5194/essd-13-4053-2021">https://doi.org/10.5194/essd-13-4053-2021</a> .	Sievers, J., Milbradt, P., Ihde, R., Valerius, J., Hagen, R., & Plüß, A.	smile consult GmbH Germany
<b>08/2021</b>	<i>Report</i>	Análisis del clima marítimo y eventos de inundación en la zona de San Andrés, Tenerife.	López de Subijana Esteban, I.	Universidad de Cantabria Spain

<b>08/2021</b>	<i>Marine and Petroleum Geology</i> , 133, 105302.	Seismic imaging of an active fluid conduit below Scanner Pockmark, Central North Sea. <a href="https://doi.org/10.1016/j.marpetgeo.2021.105302">https://doi.org/10.1016/j.marpetgeo.2021.105302</a>	Schramm, B., Berndt, C., Dannowski, A., Böttner, C., Karstens, J., & Elger, J.	GEOMAR Helmholtz Centre for Ocean Research Kiel Germany
<b>08/2021</b>	<i>Geologica Acta</i> , 19.10 1-11	Critical analysis of Mediterranean sea level limit cycles during the Messinian salinity crisis. DOI: 10.1344/GeologicaActa2021.19.10	Baum, M. .	Harvard University USA
<b>08/2021</b>	<i>Chapter in Landscapes and Landforms of Scotland</i> (pp. 169-191). Springer, Cham.	The Outer Hebrides and St Kilda. <a href="https://doi.org/10.1007/978-3-030-71246-4_9">https://doi.org/10.1007/978-3-030-71246-4_9</a>	Hall, A. M., Ballantyne, C. K., & Hansom, J. D.	Stockholm University Sweden
<b>08/2021</b>	<i>PhD Thesis</i>	Wind-Generated Waves in Fjords and Coastal Areas	Christakos, K. .	University of Bergen Norway
<b>08/2021</b>	<i>Heliyon</i> , 7(9), e07880.	Living benthic foraminifera from cold-water coral ecosystems in the eastern Alboran Sea, Western Mediterranean. <a href="https://doi.org/10.1016/j.heliyon.2021.e07880">https://doi.org/10.1016/j.heliyon.2021.e07880</a>	Stalder, C., ElKateb, A., Spangenberg, J. E., Terhzaz, L., Vertino, A., & Spezzaferri, S.	University of Fribourg Switzerland
<b>08/2021</b>	<i>Journal of Marine Science and Engineering</i> , 9(9), 933	Undercurrents in the Northeastern Black Sea Detected on the Basis of Multi-Model Experiments and Observations. <a href="https://doi.org/10.3390/jmse9090933">https://doi.org/10.3390/jmse9090933</a>	Demyshev, S. G., Dymova, O. A., Markova, N. V., Korshenko, E. A., Senderov, M. V., Turko, N. A., & Ushakov, K. V. .	Russian Academy of Sciences Russia
<b>08/2021</b>	<i>Report</i>	Constructing EUSeaMap-User Guide.	Vasquez, M.	Ifremer France

08/2021	<i>PHYSICAL OCEANOGRAPHY</i> , 28(4), 393.	Assessment of the Black Sea Temperature and Salinity Climatic Fields for the Recent Climatological Period (1991–2020).	Markova, N. V., Belokopytov, V. N., Dymova, O. A., & Miklashevskaya, N. A.	Russian Academy of Sciences Russia
08/2021	<i>Diversity and Distributions</i> . 27(4):668-683	Specific niche requirements underpin multidecadal range edge stability, but may introduce barriers for climate change adaptation. DOI: 10.1111/ddi.13224	Firth Louise, B., Daniel, H., Blaze Julie, A., Marzloff Martin, P., Aurélien, B., Miller Peter, I., ... & Hawkins Stephen, J.	University of Plymouth, UK
08/2021	<i>Journal of Marine Science and Engineering</i> , 9(9), 966	Fin Whale ( <i>Balaenoptera physalus</i> ) in the Ligurian Sea: Preliminary Study on Acoustics Demonstrates Their Regular Occurrence in Autumn. <a href="https://doi.org/10.3390/jmse9090966">https://doi.org/10.3390/jmse9090966</a>	Pintore, L., Sciacca, V., Viola, S., Giacomina, C., Papale, E., & Giorli, G.	University of Torino, Italy
08/2021	<i>Морской гидрофизический журнал</i> , 37(4), 423-435.	Оценка климатических полей температуры и солености вод Черного моря для современного периода (1991–2020). <a href="https://doi.org/10.22449/0233-7584-2021-4-423-435">https://doi.org/10.22449/0233-7584-2021-4-423-435</a>	Маркова, Н. В., Белокопытов, В. Н., Дымова, О. А., & Миклашевская, Н. А.	Russian Academy of Sciences Russia
08/2021	<i>Progress in Oceanography</i> , 198, 102669.	First recording of a bathypelagic deep scattering layer in the Bay of Biscay. <a href="https://doi.org/10.1016/j.pocean.2021.102669">https://doi.org/10.1016/j.pocean.2021.102669</a>	Peña, M., Munuera-Fernández, I., Nogueira, E., & González-Quirós, R.	Centro Oceanográfico de Baleares Spain
08/2021	<i>Estuarine, Coastal and Shelf Science</i> , 107573.	Long-term evolution of an inner bar at the mouth of a microtidal river. <a href="https://doi.org/10.1016/j.ecss.2021.107573">https://doi.org/10.1016/j.ecss.2021.107573</a>	Baldoni, A., Perugini, E., Soldini, L., Calantoni, J., & Brocchini, M.	Università Politecnica Delle Marche Italy
08/2021	<i>MRes Thesis</i>	Bedrock target analysis for ROV rockdrill sampling and existing sample stratigraphic and mineralogical verification (BeTar_drill).	Strachan, R.	University College Cork. Ireland
08/2021	<i>. Journal of Maps</i> , 17(2), 533-542.	Echo-character distribution in the Cantabrian Margin and the Biscay Abyssal Plain	Maestro, A., Gallastegui, A., Moreta, M., Llave, E.,	Instituto Geológico y Minero de España,

		<a href="https://doi.org/10.1080/17445647.2021.1973917">https://doi.org/10.1080/17445647.2021.1973917</a>	Bohoyo, F., Druet, M., ... & Granja-Bruña, J. L.	Spain
<b>09/2021</b>	<i>Animal Biodiversity and Conservation</i> , 44.2: 289–301	Machine learning as a successful approach for predicting complex spatio-temporal patterns in animal species abundance. <a href="https://doi.org/10.32800/abc.2021.44.0289">https://doi.org/10.32800/abc.2021.44.0289</a>	Martín, B., González-Arias, J., & Vicente-Virseda, J. A.	Departamento de Economía de la Empresa y Contabilida Spain
<b>09/2021</b>	BÖLÜM XIV	İstanbul Boğazı'nda gemi kazalarının önlenmesi için bayes ağı tabanlı bir karar destek sistemi önerisi.	Yağdır Çeliker, E., Cenani, Ş., & Çağdaş, G.	İstanbul Bilgi Üniversitesi Turkey
<b>09/2021</b>	<i>Cruise report</i>	Wave induced pockmark formation in the North Sea, Cruise No. MSM 99/2 (GPF 21-1_013), 26.03. 2021-05.04. 2021, Emden (Germany)-Emden (Germany). HELGOLAND POCKMARKS.	Schmidt, C., Böttner, C., Schmidt, M., Müller, T. H., Wünsche, A., Willems, T., ... & Spiegel, T.	GEOMAR Helmholtz Centre for Ocean Research Kiel Germany
<b>09/2021</b>	<i>Bull. Geophys. Oceanogr.</i>	Chirp data processing for fluid flow detection at the Gulf of Trieste (northern Adriatic Sea). DOI 10.4430/bgo00361	Vesnaver, A., Buseti, M., & Baradello, L.	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale – Italy
<b>09/2021</b>	<i>Ecological Indicators</i> , 131, 108219.	Geomorphological characterization, spatial distribution and environmental status assessment of coralligenous reefs along the Latium continental shelf. <a href="https://doi.org/10.1016/j.ecolind.2021.108219">https://doi.org/10.1016/j.ecolind.2021.108219</a>	Pierdomenico, M., Bonifazi, A., Argenti, L., Ingrassia, M., Casalbore, D., Aguzzi, L., ... & Chiocci, F. L.	Italian National Research Council Italy
<b>09/2021</b>	<i>Seismological Research Letters</i> .	Noise Levels and Signals Observed on Submarine Fibers in the Canary Islands Using DAS. <a href="https://doi.org/10.1785/0220210049">https://doi.org/10.1785/0220210049</a>	Ugalde, A., Becerril, C., Villaseñor, A., Ranero, C. R., Fernández-Ruiz, M. R., Martín-Lopez, S., ... & Martins, H. F.	CSIC Spain



<b>09/2021</b>	<i>Journal of Marine Science and Engineering</i> , 9(10), 1043.	First Evidence of Contourite Drifts in the North-Western Sicilian Active Continental Margin (Southern Tyrrhenian Sea). <a href="https://doi.org/10.3390/jmse9101043">https://doi.org/10.3390/jmse9101043</a>	Spatola, D., Sulli, A., Casalbore, D., & Chiocci, F. L.	Sapienza University, Italy
<b>09/2021</b>	<i>Mediterranean Marine Science</i>	New records of rare species in the Mediterranean Sea. <a href="https://doi.org/10.12681/mms.25295">https://doi.org/10.12681/mms.25295</a>	Avola, S., & Gerovasileiou, V.	Institute of Marine Sciences (ICM-CSIC), Spain
<b>09/2021</b>	<i>Marine Geology</i> , 106648.	A multiproxy reconstruction of the Late Pleistocene-Holocene paleoenvironment: New insights from the NW Black Sea. <a href="https://doi.org/10.1016/j.margeo.2021.106648">https://doi.org/10.1016/j.margeo.2021.106648</a>	Ion, G., Briceag, A., Vasiliu, D., Lupaşcu, N., & Melinte-Dobrinescu, M.	Institute of Marine Geology and Geo-ecology, Romania
<b>09/2021</b>	<i>Technical report</i>	EUSeaMap 2021. A European broad-scale seabed habitat map. 10.13155/83528	Vasquez, M., Allen, H., Manca, E., Castle, L., Lillis, H., Agnesi, S., ... & Virtanen, E.	Institut Français de Recherche pour l'Exploitation de la Mer ("Ifremer") France
<b>09/2021</b>	<i>Geological Society, London, Special Publications</i> , 505.	A First Approach to a Quaternary Geomorphological Map of the German Seas. <a href="https://doi.org/10.1144/SP505-2021-24">https://doi.org/10.1144/SP505-2021-24</a>	Breuer, S., & Asch, K.	Bundestanstalt für Geowissenschaft und Rohstoffe Germany
<b>09/2021</b>	<i>Journal of Marine Science and Engineering</i> , 9(10), 1071.	Modelling the Past and Future Evolution of Tidal Sand Waves. <a href="https://doi.org/10.3390/jmse9101071">https://doi.org/10.3390/jmse9101071</a>	Krabbendam, J., Nnafie, A., de Swart, H., Borsje, B., & Perk, L.	Utrecht University The Netherlands
<b>09/2021</b>	<i>Marine Ecology Progress Series</i> , 675, 35-52.	A generic approach to develop a trait-based indicator of trawling-induced disturbance.	Beauchard, O., Amour, A. B., Schratzberger, M.,	Utrecht University The Netherlands

		<a href="https://doi.org/10.3354/meps13840">https://doi.org/10.3354/meps13840</a>	Laffargue, P., Hintzen, N. T., Somerfield, P. J., & Piet, G.	
<b>09/2021</b>	<i>Report</i>	EMODnet Geology-WP3 Case Study.  Exploring the suitability of historic datasets to produce robust quantitative sediment maps	Mitchell, P.	CEFAS  UK
<b>09/2021</b>	<i>Continental Shelf Research, 104574.</i>	A new seabed mobility index for the Irish Sea: Modelling seabed shear stress and classifying sediment mobilisation to help predict erosion, deposition, and sediment distribution.  <a href="https://doi.org/10.1016/j.csr.2021.104574">https://doi.org/10.1016/j.csr.2021.104574</a>	Coughlan, M., Guerrini, M., Creane, S., O'Shea, M., Ward, S. L., Van Landeghem, K. J., ... & Doherty, P.	University College Dublin, Ireland
<b>09/2021</b>	<i>Marine Pollution Bulletin, 173, 112982.</i>	Dropping the microbead: Source and sink related microplastic distribution in the Black Sea and Caspian Sea basins.  <a href="https://doi.org/10.1016/j.marpolbul.2021.112982">https://doi.org/10.1016/j.marpolbul.2021.112982</a>	D'Hont, A., Gittenberger, A., Leuven, R. S., & Hendriks, A. J.	Marine Research Inventory & Strategy Solutions,  The Netherlands

## 6. Monitoring indicators

*[Please refer to the standardised monitoring tool i.e., Matomo, to complete the monitoring and progress indicators excel template, and provide a short explanation in the table below on the numbers and trends for each indicator when possible/applicable. **Please indicate clearly if monitoring was carried out using tools other than Matomo.**]*

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?	CDI catalogue service	There is a substantial increase of CDIs by several data providers. This is related to the fact that data providers are tasked in the new contract with populating new data sets in the first year. More should follow in the next quarterly report.
B) Usage of data in this quarter	CDI RSM shopping ledger service	Slight decrease in number of downloaded CDIs compared to previous quarter, while number of users almost was the same: 32 in previous quarter to 30 now.
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?	Viewing and Download service and Sextant CPRD catalogue service	There is a substantial increase of Composite DTMs (CDTMs) by several data providers. Also, there is input for the Caribbean Sea which is a new area of interest. Both are related to the fact that data providers are tasked in the new contract with populating new data sets in the first year. More should follow in the next quarterly report.
B) Usage of data products in this quarter	Shopping module and analytics reporter of the Viewing and Download service	Still a large volume of downloads, both in numbers (> 7000) as in volume (> 0.8 TerraByte). However, a decrease compared to those numbers in the first two quarters of 2021, when the new releases of the EMODnet DTM and HR-DTMs were made available. The number of WMS requests is almost same like previous quarter.

3. Organisations supplying/approached to supply data and data products within this quarter	CDI catalogue service	There is a substantial increase of CDI population by several data providers. This is related to the fact that data providers are tasked in the new contract with populating new data sets in the first year. In this quarter, 19 data providers have populated new CDIs.
4. Online 'Web' interfaces to access or view data	N/A	No changes
5. Statistics on information volunteered through download forms	CDI RSM shopping ledger service and shopping module and analytics reporter of the Viewing and Download service	Bathymetry is used by all sectors and for many applications as it provides basis information. A lot of users do not give details about themselves, unless they use Marine-ID in the download forms.
6. Published use cases	Matomo	EMODnet Bathymetry has a steady number of use cases which all receive attention from users
8.1. Technical monitoring	Matomo – Grafana	The portal has a very good and stable response time and overall a very good up time (100%).
8.2. Portal user-friendliness (Visual harmonization score)	Trust-IT analysis	Nearly 100% score; only a minor remark
9. Visibility & Analytics for web pages	Matomo – Grafana	As expected and targeted, the pages related to the "EMODnet bathymetry viewing and Download Service" have the highest score and this traffic is very stable, like also other sections and services. This means that users spent the most time browsing and interacting with the viewing service which has many functions and overall is the most interesting product and service that EMODnet Bathymetry has to offer. As second interest, users undertake downloading of DTM tiles and visit the CDI service for details and downloading of survey data sets, which both have a comparable user interest level. The section on web services and standards also is well visited.
10. Visibility & Analytics for web sections	Matomo – Grafana	This indicator shows the interest of users for specific sections of the website, excluding the Bathymetry Viewing and Download service. The CDI service receives most attention, followed by the CPRD products catalogue service. The previous error with very high statistics for the helpdesk has been

		repaired so that current statistics now reflect the real traffic for the helpdesk which is low.
11. Average visit duration for web pages	Matomo – Grafana	Average visit duration is erratic, ranging from few seconds to 2:30 minutes. The interpretation of this diagram is complex as it might be interpreted in terms of user's interest but also as difficulty to understand the concept described on the web page.

*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

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### *Feedback Questions and Answers:*

**Subject:** Re: EMODnet Bathymetry Feedback form  
**Date:** Fri, 16 Jul 2021 12:52:00 +0200  
**From:** Dick M.A. Schaap <dick@maris.nl>  
**To:**

Dear ,  
Thanks for your interest in EMODnet Bathymetry. We do not have such a download option.  
However, you might make use of the online OGC web services, which are described at:  
<https://www.emodnet-bathymetry.eu/data-products/web-services-and-standards>  
including explanations about use at:  
<https://portal.emodnet-bathymetry.eu/services/>  
Using these you can overlay existing layers in most GIS packages.  
Hope this helps.  
Kind regards  
Dick M.A. Schaap  
Technical Coordinator

On 7/16/2021 12:21 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name  
Email

Feedback /  
Question

Hi, I've been trying to map the bathymetry of the Irish seabed, but the data sets are always too big for my computer to handle. All I really need are the depth contour lines, 100, 200, 300, 500, 1000, 2000 metres etc. as pictured in your online map viewer. Is it possible to obtain this? If not, can you recommend a data set that is not as detailed that I can use to create these contour lines myself.  
Thanks,

---

**Subject:** RE: EMODnet Bathymetry Feedback form  
**Date:** Mon, 26 Jul 2021 20:55:05 +0000  
**From:**  
**To:** Dick M.A. Schaap <dick@maris.nl>

Dear Dick,  
Thanks a lot for your fast answer!  
Now it works and i can open the bands, great, thanks!  
It seems that the geolocalisation of the layers is not well read by Qgis in default mode (map appears upside down and positions are wrongly calculated (based on the (X,Y) coordinates)), but I guess it can be resolved manually, I will try that tomorrow.  
Thanks and have a good week!

---

**De :** Dick M.A. Schaap <dick@maris.nl>  
**Envoyé :** lundi 26 juillet 2021 12:03  
**À :**  
**Objet :** EMODnet Bathymetry Feedback form

Dear ,

Thanks for your interest in EMODnet Bathymetry.

Concerning your question: The EMODnet NetCDF file (2020) is a multi band NetCDF file. In order to open such a file in QGIS, you have to click on the little arrow which is shown in front of the file in the browser panel. This will open the layer structure inside the file. You can then drag and drop an individual layer (band) into the map.

Hope this helps.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 7/24/2021 11:51 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

**Name:**

**Emailaddress:**

**Feedback:**

Hi, I have downloaded a DTM20 tile in netcdf, but when I try to open that tile (as a raster or as a mesh) with QGIS 3.10, the layer is said to be invalid and cannot be displayed nor used. Do you know how that could be solved? Thanks and have a good day Adrien

---

**Subject:** Re: EMODnet Bathymetry Feedback form

**Date:** Mon, 26 Jul 2021 12:10:20 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: the EMODnet Digital Terrain Model (DTM) is a public product which can be used for many applications. When using, we appreciate if you acknowledge EMODnet Bathymetry as specified at:

<https://www.emodnet-bathymetry.eu/data-products/acknowledgement-in-publications>

And also take into account the Disclaimer specified at:

[https://www.emodnet-bathymetry.eu/internal\\_html/disclaimer/10](https://www.emodnet-bathymetry.eu/internal_html/disclaimer/10)

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 26/7/2021 11:39 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback /  
Question

Dear Sir/Madam, We are a Data Science Expert Company based in Finland and we are interested in integrating EUMODnet's bathymetry data in our situational awareness solutions for marine sector. For example, our new product @PACE - Project Awareness and Collaboration Environment, would benefit greatly from data made public by EUMODnet-Bathymetry. @PACE is a project-centric, situational awareness portal aiding (de)commissioning of offshore installations bringing together diverse data sources to aid project planning, execution, and post (de)construction monitoring. It is developed under the program of and funded by European Space Agency (ESA). Please could you advise under what conditions could we obtain the permission to incorporate EUMODnet's bathymetry data in our commercial solutions? You can find more information about our company at <https://www.analytics-pika.fi/>, and about @PACE on ESA's webpage <https://business.esa.int/projects/atpace> Looking forward to hearing from you.



**Subject:**EMODnet Bathymetry Feedback form

**Date:** Fri, 6 Aug 2021 11:34:56 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: EMODnet Bathymetry has an OGC WFS service for the Isobaths (depth contours). See: <https://portal.emodnet-bathymetry.eu/services> where this is explained.

Hope this will be helpfull for your application.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 8/6/2021 11:07 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question      Good morning. May I ask if bathymetric depth contours in shapefile format are available for download from the portal? Thank you.

---

**Subject:**Re: EMODnet Bathymetry Feedback form

**Date:** Fri, 20 Aug 2021 08:53:38 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear,

Thanks for your interest in EMODnet Bathymetry.

Please send some pictures and explanation, so that I can forward it to our bathymetry experts. I will then keep you updated. There might be some delay due to holiday period.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 8/19/2021 4:55 PM, wrote:

**Name:**

**Emailaddress:**

**Feedback:**      Hello I found a weird structure in the bottom of the Atlantic Ocean north of Funchal. It looks like a radar artifact from surveys of the ocean floor. I wanted to know more. can i send you the image i captured so you can reply to me?

---

**Subject:**Re: EMODnet Bathymetry Feedback form

**Date:** Fri, 3 Sep 2021 06:40:46 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: the only way to download the High-Resolution areas is how you described, using the GUI. There is no API.

Kind regards  
Dick M.A. Schaap  
Technical coordinator

On 9/2/2021 4:08 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question Hi, I was curious if there was a way to select all "high resolution areas" for download in the portal, without having to manually click each one? Do you happen to offer an API? Thanks

---

**Subject:**Fwd: EMODnet Bathymetry Feedback form

**Date:** Thu, 9 Sep 2021 17:20:17 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thanks for your interest in EMODnet Bathymetry.

We are working with the general acknowledgements that you already found at:

<https://www.emodnet-bathymetry.eu/data-products/acknowledgement-in-publications>

This gives DOIs for 2020, 2018, and 2016 versions. We have no DOI for earlier versions and also advise you to update to a newer version.

We have no detailed copyright statement for specific layers or regions.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 9/8/2021 11:10 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question Good morning, I am looking for the appropriate copyright information to use for the 2015 Emodnet Bathymetry tif layer - specifically focussing on UK waters. I can't seem to find this information within the acknowledgments in publication section and wondered if you could please provide this to me.  
Kind regards,

---

**Subject:**EMODnet Bathymetry Feedback form

**Date:** Tue, 21 Sep 2021 13:47:45 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thank you for your interest in EMODnet Bathymetry.

We are not sure what you might do/expect wrong. The process should work as follows:

If you make the High-Res layer active you should be able to see the orange outlines of the demarcated areas where we have High Res data available.

Then you can zoom in deeper on those areas than on the surrounding areas to see the high-resolution bathymetry. Note that the high resolution areas are like 'stamps' on the EMODnet DTM which has an overall resolution of 1/16 arc minute \* 1/16 arc minute.

If it is not a use issue but a technical issue, then please try a different browser and/or another computer at home / office to see if you still experience issues.

Hope this helps.

Kind regards<

Dick M.A. Schaap

Technical Coordinator

On 9/17/2021 10:42 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

**Name:**

**Emailaddress:**

**Feedback:**

Hi, I want to view MBES data for the the extents of EMODnet. If I select high res bathy from the drop down list on the bathy viewer, I do not see the extent of high res bathy that is there? For example off Irelands shelf? For the moment I can use the source references and configure the displayed coverage, and look at the metadata to find MBES data. Is the High res Bathy option still a work in progress or am I missing something? Many thanks,

---

**Subject:**EMODnet Bathymetry Feedback form

**Date:** Tue, 21 Sep 2021 13:39:42 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thank you for your interest in EMODnet Bathymetry.

Can you please try again. My colleagues informed me that there was an error in the cache which might have disturbed the WMS service operation.

Will hear from you.

Kind regards,

Dick M.A. Schaap

Technical Coordinator

On 9/21/2021 7:23 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question Dear team EMODnet, I can't seem to be able to access the WMS any more, can you confirm the link is <https://ows.emodnet-bathymetry.eu/wms?request=GetCapabilities&service=WMS> ? All the best from Denmark

---

**Subject:**EMODnet Bathymetry Feedback form

**Date:** Tue, 21 Sep 2021 13:52:10 +0200

**From:** Dick M.A. Schaap <dick@maris.nl>

**To:**

Dear ,

Thank you for your interest in EMODnet Bathymetry.

To understand better your issue, could you tell us where you are trying to register and download data sets. Is it in the Data Discovery & Access service (aka CDI service) in which you can request access to survey data sets OR is it in the DTM Viewing service in which you can request access to DTM tiles?

Can you also try again and make and send some screengrabs of what happens?

Hoping to hear from you so that we can try to help you.

Kind regards,

Dick M.A. Schaap

Technical Coordinator

On 9/20/2021 11:09 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question I fill the request form to download BUT I CAN'T EVEN REGISTER. I tried three times to register respecting the conditions for the password. I need the bathymetric data quickly! Thank for your understanding.

**Subject:**Re: EMODnet Bathymetry Feedback form

**Date:** Tue, 28 Sep 2021 10:24:38 +0200

**From:** Dick M.A. Schaap <[dick@maris.nl](mailto:dick@maris.nl)>

**To:**

Dear ,

Perfect and thanks for notifying us, so we can close this 'ticket'.

Kind regards,

Dick

On 9/28/2021 10:17 AM, John Wharton wrote:

Dick,

Good morning and thank you for the quick response.

I have been very impressed with the data and it has proven to be very useful to me.

The set I had requested this morning have all downloaded correctly, so whatever the issue was it seems resolved.

Thank you,

**From:** Dick M.A. Schaap <[dick@maris.nl](mailto:dick@maris.nl)>

**Sent:** 28 September 2021 08:37

**To:**

**Subject:** EMODnet Bathymetry Feedback form

Dear ,

Thanks for your continued interest in EMODnet Bathymetry.

My colleague looked into your case and saw that you had made several download requests for area of interest, but not all of them have been processed yet. Possibly, this takes more time if the areas are quite large. Maybe the larger set will then be available later today. Or in case, you keep on having issues, write us again. Anyway, for test: Could you make another request for a small area and see if that works fine?and let us know?

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 9/28/2021 9:01 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback / Question I tried to use your website to download some bathymetry data yesterday which I have done before without issue and I have been incredibly impressed by your site. The email arrived with the links but when I click the link I get a message that said that the file was not available. The download was tried within the 12hours and I have not experienced this error before. Was there some issue with the downloads as ESRI ASCII yesterday?