



# 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 (4)

Reporting Period: 01/10/2021 – 31/12/2021



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## Disclaimer

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# 1. Highlights in this quarter

- **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 16 data providers from 31097 to 31432 CDI entries while also the number of Composite DTM entries has increased considerably with new contributions from 243 to 258. 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 start early 2022. Some more contributions are expected and underway from 5 data providers, while so far 38 of the 43 agreed data providers have fulfilled their population activities.

- **Task 2 - Compile a multi-resolution digital terrain model of European seas:**

Data providers have been busy producing their new bathymetric grid contributions using the newest version of the GLOBE software and following the training they got early in September 2021. New formatted dataset have been transferred from the data providers to the respective Regional Coordinators. They are now able to start early evaluation of the new datasets, using dedicated functionalities of the GLOBE software, by comparing them to the fully gridded 2020 product. The status of progressing of each of the basins will be provided and discussed at the full group meeting, to be held on 24 January 2022. Moreover, a training workshop with Regional Coordinators dedicated to the online GLOBE version project will be held back-to-back with the full group meeting. Ultimately, Regional Coordinators are expected to provide the results of their compilation before the summer 2022 to partner GGSgc who will then integrate all the regional components into the full DTM product.

- **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. A number of meetings has taken place since begin 2021, 2 in the current reporting period, and a good understanding has been reached about the way forward which is summarized 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. Therefore, EMODnet Bathymetry has handed over its software solutions to the CP team and in particular to Bilbomatica, GIS expert, to adapt the central portal viewer. Bilbomatica has made good progress with the new viewer and EMODnet Bathymetry has received a link for testing. Unfortunately, so far only a few layers and services have been included, while EMODnet Bathymetry would like to see all Bathy layers and functions soon for review and tuning the interaction 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. EMODnet Bathymetry has provided 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. CP team has made a successful test, but further progress for the full range of products is needed as EMODnet Bathymetry also delivers other formats than NetCDF.
- The website contents of EMODnet Bathymetry will be taken and after review, included in the online CMS of the CP site. CP team has made an inventory of sections and pages, which has been checked for completeness by EMODnet Bathymetry. Waiting is now for CP team to make progress with preparing a new thematic site map and including contents, so that EMODnet Bathymetry can review and contribute to this content migration. 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. It has been agreed that both services will be considered as external services, operated outside the CP, but accessible and integrated by links. Recently, a new domain has been activated for the CDI service: <https://cdi-bathymetry.seadatanet.org/search>. This way, no longer the [www.emodnet-bathymetry.eu](http://www.emodnet-bathymetry.eu) domain is used and the look&feel is adapted to SeaDataNet. The same will be done for the Sextant service.
- The CDI and Sextant services should also come back in the layers of the new CP viewer, namely the 'source reference layer' and the 'survey tracks / polygons layer', which are provided by EMODnet Bathymetry as WMS – WFS services. So far, the CP team has not yet integrated these layers in the new viewer, so testing of the links to CDI and Sextant services cannot yet be performed.

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.

Following the workplan, Ifremer progressed further with advancing the Collaborative Virtual Environment (CVE) on the DATARMOR computing infrastructure of IFREMER with online Globe software. Tests have been made with loading the current EMODnet 2020 grid so that residual artefacts, such as anomalies and outliers, can be annotated on which the Regional Coordinators then can focus in their activities for improving the Regional DTMs. Later, the CVE can also be used to visualise and validate the new Regional DTMs, before those files are forwarded to the integrator. The status of the CVE development has been discussed at a technical meeting (16 December 2021) and a training workshop for Regional Coordinators is planned at 24 January 2022.

- **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. In the previous quarter EMODnet Bathymetry has provided the CP team with a set of XML metadata files describing the DTM tiles. Later, also XML metadata files for HR-DTM files will be transferred. EMODnet Bathymetry is awaiting the integration in the new central data products catalogue service, which will allow to review also the download mechanism. 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.

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

As indicated under task 3, EMODnet Bathymetry is awaiting progress by the CP team with a new sitemap and processing the provided site content into draft Bathymetry space for review and finalising.

- **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. During the reviewed period, participants of the EMODnet Bathymetry consortium notably took part in the IHO Europe Network working group (8-9/12/2021) and the GEBCO – Seabed 2030 Map the gaps symposium (30/11/2021-3/12/2021).

During this same period, George Spoelstra (GGSgc) and Federica Foglini (CNR), both members of the EMODnet Bathymetry consortium have been elected as Chair and Vice-Chair of the GEBCO subcommittee TSCOM (Technical Subcommittee on Ocean Mapping) for a period of 3 years.

- **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 3<sup>rd</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	Delayed to M13	Delayed with agreement of CINEA with the main reason being to be able to integrate actions which have to be reported in Q4.
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	Will be included as Annex to Annual Report (D1.2)
<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	Mostly done	A few partners are still underway
D2.4: Pre-processed composite DTMs and included in Sextant service	WP2	M12	Done	
D2.5: Satellite Derived Bathymetry data sets and included in Sextant Service	WP2	M12	Done	
D3.1: Upgraded guideline of EMODnet methodology for DTM production, including using prototype CVE	WP3	M8	Delivered in M12	Will be included as Annex to Annual Report (D1.2)
<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	Well underway	
<i>D3.5i: Regional DTMs with common resolution of 1/16 arc minutes grid</i>	WP3	M17		

D3.6i: Best version HR DTMs for coastal waters and hotspots	WP3	M20		
D3.7: New EMODnet DTM incl Quality Index and loaded in EMODnet web services for viewing and downloading	WP3	M23		
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.	
D4.3i: CVE adapted for handling review of RDTMs	WP4	M14	Done	A demonstration has been done to the technical group. Training workshop for Regional Coordinators is planned 24 January 2022
D4.4i: Globe software + GGSGC workbench upgraded with extra functionality	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		



## 2. Identified issues: status and actions taken

<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-389 and EM-390 Review of the new Central Portal Map Viewer</b>	Pending	Test and provide feedback		
<b>EM-357 Bathymetry to report on number and volume downloaded and data products</b>	Resolved	Provided number of data products and associated volume downloaded	29/10/2021	27/10/2021
<b>EM-341 Collect fields/forms used on Bathymetry Thematic Portal</b>	Resolved	Involves check if CP team has listed all sections of the current website as part of planned migration	22/10/2021	1/11/2021, but somehow not updated in JIRA. Now ok
<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>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>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

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### 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
4 October 2021	Company, Lighthouse, Italy	Noticed issue with wrecks layer	Email feedback form	Same day	Resolved	Explained that there was issue with external WMS. Now on again.	
10 October 2021	EU, Belgium	Question if functionality of viewing services could be expanded	Email feedback form	Two days later	Resolved	Explained that honoring request will require programming which is not opportune considering the ongoing migration	
17 October 2021	?,?	Wants to use the DTM data for CNC project but experience difficulties	Email feedback form	One week later	Resolved	Explained how the DTM data might be used to overcome the difficulties.	
25 October 2021	University of Rouen, France	Data difficulties with DTM close to Bretagne coast	Email feedback form	Two days later	Resolved	Explained that EMODnet uses LAT which can give large differences in tidal areas. As alternative suggested to	

						consider the MSL DTM.	
26 October 2021	JASCO, UK?	Found an issue with selecting area of interest function along Italian coastal area	Email feedback form	Two days late	Resolved	It appeared that the function used a wrong data set in the area. Has been corrected.	
27 October 2021	Meteo France, France	Question about merging DTM tiles, overlap and scientific analyses	Email feedback form	Multiple Questions and Answers over a week	Resolved	Explained which tools might be used, why overlap and a number of references to publications	
17 November 2021	Deltares, Netherlands	Questions about differences between DTM versions	Email feedback form	Multiple Questions and Answers over a week	Resolved	Explained that there is also a resolution difference.	
18 November 2021	Subacoustech Environmental Limited, United Kingdom	Found an issue with missing DTM tile file	Email feedback form	Next day	Resolved	DTM tile was added and user informed	
19 November 2021	Golden Software, USA	Indicated an issue with WFS and WCS services	Email feedback form	Two days later	Resolved	Checked but no issue, so advised to try again. Which was confirmed by user.	
23 November 2021	Marine Scotland, United Kingdom	Requested a copy of the quality index data for fish habitat map analysis	Resolved	Two weeks later because of arranging file transfer	Resolved	Arranged access the quality index data sets together with Shom	

29 November 2021	Tragsatec, Spain	Interested in receiving the SDB files for Spanish coast	Email feedback form	Two days later	Resolved	Given contact at EOMAP for further arrangements	
16 December 2021	Twozansurveys, Saudi Arabia	Asked if EMODnet can process surveys on commercial basis	Email feedback form	Same day	Resolved	Explained that EMODnet is an EU project	

## 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.)
1 Oct 2021	VTC	Technical discussion MARIS – NHS (Norway)	No	O	Discussed best options for NHS for CDI population
14 Oct 2021	VTC	EMODnet Central portal meeting	No	A	Following main developments of the central portal migration effort
19 Nov 2021	VTC	HRSM3 Progress meeting with core group	No	O	Monitoring project progress with core partners
30 Nov -3 Dec 2021	VTC	GEBCO – Seabed 2030 Map the Gaps Symposium	No	A	Joined by several members of the EMODnet Bathymetry Consortium. Approx. 150 participants.
8-9 Dec 2021	VTC	IHO Europe Network Working Group	Yes	A	Joined by Shom.
16 Dec 2021	VTC	HRSM3 Technical Meeting	Yes	O	Discussing progress of CVE and planning training workshop
17 Dec 2021	VTC	EMODnet Central portal meeting	No	A	Following main developments of the central portal migration effort
<b>SUM</b>				<b>O</b>	<b>Total # of meetings organised = 3</b>

<b>SUM</b>				<b>A</b>	<b>Total # of meetings attended = 4</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
13 Jan 2022	VTC	Meeting with Central Portal team about migration. to discuss progress and actions	A	To discuss progress and formulate mutual actions
24 Jan 2022	VTC	HRSM3 Plenary meeting and Training Workshop	O	To monitor overall progress and to train Regional Coordinators in using CVE Workbench with online GLOBE

## 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
10/2021	In : <i>Ocean Science Data</i> . Elsevier, 2022. p. 131-193.	Chapter 3: Data management infrastructures and their practices in Europe. <a href="https://doi.org/10.1016/B978-0-12-823427-3.00007-4">https://doi.org/10.1016/B978-0-12-823427-3.00007-4</a>	SCHAAP, Dick MA, NOVELLINO, Antonio, FICHAUT, Michele, <i>et al</i>	Maris BV, The Netherlands
10/2021	In <i>Ocean Science Data</i> (pp. 283-317). Elsevier.	Chapter 5: Connecting marine data to society. <a href="https://doi.org/10.1016/B978-0-12-823427-3.00003-7">https://doi.org/10.1016/B978-0-12-823427-3.00003-7</a>	Larkin, K. E., Marsan, A. A., Tonné, N., Van Isacker, N., Collart, T., Delaney, C., ... & Calewaert, J. B.	European Marine Observation and Data Network (EMODnet) Secretariat, Ostend, Belgium
10/2021	In <i>Ocean Science Data</i> (pp. 197-280). Elsevier.	Chapter 4: A collaborative framework among data producers, managers, and users. <a href="https://doi.org/10.1016/B978-0-12-823427-3.00001-3">https://doi.org/10.1016/B978-0-12-823427-3.00001-3</a>	Simoncelli, S., Manzella, G. M., Storto, A., Pisano, A., Lipizer, M., Barth, A., ... & Diggs, S.	Istituto Nazionale di Geofisica e Vulcanologia, Sezione di Bologna, Italy
10/2021	<i>Basin Research</i> . In press	Assessing the rate of crustal extension by 2D sequential restoration analysis: A case study from the active portion of the Malta Escarpment.	Gambino, S., Barreca, G., Gross, F., Monaco, C., Gutscher, M. A., & Alsop, G. I.	University of Catania, Catania, Italy,
10/2021	<i>Ocean Modelling</i> , 168, 101894.	The impact of surface currents on the wave climate in narrow fjords. <a href="https://doi.org/10.1016/j.ocemod.2021.101894">https://doi.org/10.1016/j.ocemod.2021.101894</a>	Christakos, K., Björkqvist, J. V., Breivik, Ø., Tuomi, L., Furevik, B. R., & Albrechtsen, J.	Norwegian Meteorological Institute, Norway
10/2021	<i>Atmosphere</i> , 12(10), 1360.	Offshore Wind and Wave Energy Complementarity in the Greek Seas Based on ERA5 Data. <a href="https://doi.org/10.3390/atmos12101360">https://doi.org/10.3390/atmos12101360</a>	Kardakaris, K., Boufidi, I., & Soukissian, T.	National Technical University of Athens, Greece

10/2021	Tectonics, 40(11), e2021TC006870.	Segmentation and Holocene Behavior of the Middle Strand of the North Anatolian Fault (NW Turkey) <a href="https://doi.org/10.1029/2021TC006870">https://doi.org/10.1029/2021TC006870</a>	Benjelloun, Y., de Sigoyer, J., Garambois, S., Carcaillet, J., & Klinger, Y.	Institut de physique du globe de Paris, CNRS, Paris, France
10/2021	Master's thesis,	Wave environment assessment at a Norwegian harbor for land-based aquaculture facilities using a combined numerical approach	Reidulff, K.	Norwegian University of Science and Technology, Norway
10/2021	Doctoral Thesis	Submarine Landslides in the Central Mediterranean: Causes and Recurrences.	Gauchery, T. T. N. M.	University of Bologna, Italy
10/2021	Geochemistry, Geophysics, Geosystems, 22(11), e2021GC010090.	Slow slip triggers the 2018 Mw 6.9 Zakynthos Earthquake within the weakly locked Hellenic Subduction System, Greece. <a href="https://doi.org/10.1029/2021GC010090">https://doi.org/10.1029/2021GC010090</a>	Saltogianni, V., Mouslopoulou, V., Dielforder, A., Bocchini, G. M., Bedford, J., & Oncken, O.	GFZ Helmholtz Centre Potsdam, Germany
10/2021	Marine Geology, 443, 106686.	Mobile bedform dynamics approaching a bedload parting site: Pentland Firth, northeast UK. <a href="https://doi.org/10.1016/j.margeo.2021.106686">https://doi.org/10.1016/j.margeo.2021.106686</a>	Armstrong, C., Howe, J. A., Allen, C., & Watson, P.	Scottish Association for Marine Science, UK
10/2021	Master's thesis,	FAIR and Open Energy Data for the wind Energy Sector	Ziaabadi, M.	Western Norway University of Applied Sciences, Norway
10/2021	Journal of Geophysical Research: Earth Surface, 126(11), e2021JF006387.	The role of fluid seepage in the erosion of Mesozoic carbonate escarpments. <a href="https://doi.org/10.1029/2021JF006387">https://doi.org/10.1029/2021JF006387</a>	Micallef, A., Paull, C. K., Saadatkah, N., & Bialik, O.	Helmholtz Centre for Ocean Research, Germany
10/2021	Renewable and Sustainable Energy Reviews, 154, 111794.	Global assessment of historical, current and forecast ocean energy infrastructure: Implications for marine space planning, sustainable design and end-of-engineered-life management.	Gourvenec, S., Sturt, F., Reid, E., & Trigos, F.	University of Southampton, UK
10/2021	Fisheries Research, 246, 106156.	Risk assessment of coastal fisheries in the Azores (north-eastern Atlantic). <a href="https://doi.org/10.1016/j.fishres.2021.106156">https://doi.org/10.1016/j.fishres.2021.106156</a>	Torres, P., i Figueras, D. M., Diogo, H., & Afonso, P.	Okeanos – Centro I&D da Universidade dos Açores, Portugal

11/2021	<i>Helgoland Marine Research</i> , 75(1), 1-6.	Who lives Where? Macrobenthic species distribution over sediment types and depth classes in the eastern North Sea.	Armonies, W.	Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, Germany
11/2021	<i>Journal of Geophysical Research: Solid Earth</i> , 126(11), e2021JB022629.	The Rift and Continent-Ocean Transition Structure Under the Tagus Abyssal Plain West of the Iberia. <a href="https://doi.org/10.1029/2021JB022629">https://doi.org/10.1029/2021JB022629</a>	Merino, I., Ranero, C. R., Prada, M., Sallarès, V., & Grevemeyer, I.	CSIC, Barcelona, Spain
11/2021	<i>Journal of fish biology</i> .	Decline in Atlantic wolffish <i>Anarhichas lupus</i> in the North Sea: Impacts of fishing pressure and climate change. <a href="https://doi.org/10.1111/jfb.14942">https://doi.org/10.1111/jfb.14942</a>	Bluemel, J. K., Fischer, S. H., Kulka, D. W., Lynam, C. P., & Ellis, J. R.	Centre for Environment, Fisheries and Aquaculture Science, UK
	<i>Earth System Science Data Discussions</i> , 1-75.	Last Interglacial sea-level data points from Northwest Europe. <a href="https://doi.org/10.5194/essd-2021-390">https://doi.org/10.5194/essd-2021-390</a>	Cohen, K. M., Cartelle, V., Barnett, R., Busschers, F. S., & Barlow, N. L.	Utrecht University, The Netherlands
11/2021	<i>Estuarine, Coastal and Shelf Science</i> , 263, 107651.	The Irish Sea bed load parting zone: Is it a mid-sea hydrodynamic phenomenon or a geological theoretical concept? <a href="https://doi.org/10.1016/j.ecss.2021.107651">https://doi.org/10.1016/j.ecss.2021.107651</a>	Creane, S., O'Shea, M., Coughlan, M., & Murphy, J.	University College Cork, Ireland
11/2021	<i>Report</i>	Dynamics and variability of POC burial in depocenters of the North Sea (Skagerrak), Cruise No. AL561, 2.08. 2021–13.08. 2021, Kiel-Kiel, APOC.	Schmidt, M., Sommer, S., Böttner, C., Dale, A. W., Lenz, N., & Spiegel, T.	GEOMAR Helmholtz Centre for Ocean Research Kiel Germany
11/2021	<i>Paleoceanography and Paleoclimatology</i> , 36, e2020PA004171.	Rapid Climate Changes in the Westernmost Mediterranean (Alboran Sea) Over the Last 35 kyr: New Insights From Four Lipid Paleothermometers (U K'37, TEX H 86, RI-OH', and LDI). 10.1029/2020PA004171	Morcillo-Montalbá, L., Rodrigo-Gámiz, M., Martínez-Ruiz, F., Ortega-Huertas, M., Schouten, S., & Sinninghe Damsté, J. S.	CSIC, Spain
11/2021	<i>Environ Sci Ecol: Curr Res</i> 2: 1038	Data Sharing, Public Engagement and Innovation: the Open Science Pillars to Support Knowledge-Based Marine Strategies.	Altobelli, C., Giorgetti, A., Diviacco, P., Salon, S., Saraò, A., & Tirelli, V.	National Institute of Oceanography and Applied Geophysics, OGS, Italy

11/2021	<i>Marine Ecology Progress Series</i> , 679, 181-194.	Foraging distribution of breeding northern fulmars is predicted by commercial fisheries.  <a href="https://doi.org/10.3354/meps13887">https://doi.org/10.3354/meps13887</a>	Darby, J. H., de Grissac, S., Arneill, G. E., Pirotta, E., Waggitt, J. J., Börger, L., ... & Jessopp, M.	University College Cork, Ireland
11/2021	<i>Evolutionary Applications</i> .	Population and seascape genomics of a critically endangered benthic elasmobranch, the blue skate <i>Dipturus batis</i> . <a href="https://doi.org/10.1111/eva.13327">https://doi.org/10.1111/eva.13327</a>	Delaval, A., Frost, M., Bendall, V., Hetherington, S. J., Stirling, D., Hoarau, G., ... & Noble, L. R.	Nord University, Norway
11/2021	<i>Natural Hazards and Earth System Sciences</i> , 21(12), 3713-3730.	Characterization of fault plane and coseismic slip for the 2 May 2020, Mw 6.6 Cretan Passage earthquake from tide gauge tsunami data and moment tensor solutions.  <a href="https://doi.org/10.5194/nhess-21-3713-2021">https://doi.org/10.5194/nhess-21-3713-2021</a> , 2021.	Baglione, E., Lorito, S., Piatanesi, A., Romano, F., Basili, R., Brizuela, B., ... & Amato, A.	OGS, Italy
11/2021	<i>European Maritime Board Position Paper 26</i>	Marine geohazards: Safeguarding society and the Blue Economy from a hidden threat.	Kopp, H., Latino Chiozzi, F., Berndt, C., Namık Çağatay, M., Ferreira, T., Juana Fortes, C., ... & Yeo, I.	Marine Board Expert Working Group on Marine Geohazard
	<i>Journal of Maps</i> , 17(2), 891-900.	Gravity data on the Central Pyrenees: a step forward to help a better understanding of the Pyrenean structures. <a href="https://doi.org/10.1080/17445647.2021.2001386">https://doi.org/10.1080/17445647.2021.2001386</a>	Ayala, C., Rey-Moral, C., Rubio, F., Soto, R., Clariana, P., Martín-León, J., ... & Benjumea, B.	IGME-CSIC, Spain
	<i>Geo-Marine Letters</i> , 41(4), 1-16.	Palaeoenvironmental context and significance of ferruginous tubular bioforms and other authigenic mineral formations in source-to-sink sedimentary systems.  <a href="https://doi.org/10.1007/s00367-021-00726-3">https://doi.org/10.1007/s00367-021-00726-3</a>	López-Pérez, A. E., Rubio, B., Rey, D., & Plaza-Morlote, M.	Universidade de Vigo, Spain

12/2021	Doctoral dissertation	<i>Structure, tectonic processes and deformation of the South Aegean Sea</i>	Tsampuraki-Kraounaki, K.	University of Patras, Greece
12/2021	Doctoral dissertation,	<i>Landscape response to glacial-interglacial cycles: insights from a southern North Sea offshore wind farm dataset</i>	Eaton, S. J.	University of Leeds, UK
12/2021	Master research dissertation	<i>Climatic and environmental drivers of extinction in Mediterranean island reptiles since the height of the last Ice Age</i>	Kalb, S.	<u>University of Michigan, USA</u>
12/2021	<i>Earth and Planetary Science Letters</i> , 578, 117333.	How hazardous are tsunamis triggered by small-scale mass-wasting events on volcanic islands? New insights from Madeira-NE Atlantic <a href="https://doi.org/10.1016/j.epsl.2021.117333">https://doi.org/10.1016/j.epsl.2021.117333</a>	Omira, R., Baptista, M. A., Quartau, R., Ramalho, R. S., Kim, J., Ramalho, I., & Rodrigues, A.	Universidade de Lisboa, Lisbon, Portugal
12/2021	<i>Marine Geology</i> , 106706.	A combined approach to cliff characterization: Cliff Stability index. <a href="https://doi.org/10.1016/j.margeo.2021.106706">https://doi.org/10.1016/j.margeo.2021.106706</a>	Bergillos, R. J., Rodriguez-Delgado, C., Medinad, L., Fernández-Ruiz, J., Rodriguez-Ortiz, J. M., & Iglesias, G.	Universitat Politècnica de València, Spain
12/2021	<i>Renewable and Sustainable Energy Reviews</i> , 156, 111943.	Subsea superconductors: The future of offshore renewable energy transmission? <a href="https://doi.org/10.1016/j.rser.2021.111943">https://doi.org/10.1016/j.rser.2021.111943</a>	Cullinane, M., Judge, F., O'Shea, M., Thandayutham, K., & Murphy, J.	University College Cork, Ireland
12/2021	<i>Estuarine, Coastal and Shelf Science</i> , 107737.	Ecological role and phylogenetic position of a new habitat-forming species (Canalipalpata, Sabellidae) from the Mediterranean mesophotic soft bottoms. <a href="https://doi.org/10.1016/j.ecss.2021.107737">https://doi.org/10.1016/j.ecss.2021.107737</a>	Enrichetti, F., Baldrighi, E., Bavestrello, G., Betti, F., Canese, S., Costa, A., ... & Bo, M.	University of Genova, Italy

## 6. Monitoring indicators

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 before the end of the first year. Some more should follow in the next quarter to finish this activity for having sufficient new input for the generation of the new EMODnet DTM release.
B) Usage of data in this quarter	CDI RSM shopping ledger service	Slight increase in number of downloaded CDIs compared to previous quarter, while number of users is almost the same: 30 in previous quarter to 31 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 as they are tasked in the new contract with populating new data sets in the first year. The cataloguing of new HR-DTMs will start before summer 2022.
B) Usage of data products in this quarter	Shopping module and analytics reporter of the Viewing and Download service	A very large volume of downloads, both in numbers (> 15000) as in volume (> 1.9 TerraByte). Compared to the previous quarter, this implicates circa 2.5 times more in numbers and volumes. The number of WMS and WFS requests are almost the same as in 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, 16 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..
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:** Mon, 4 Oct 2021 13:51:38 +0200

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

**To:**

Dear ...,

Thanks for your interest in EMODnet Bathymetry.

The wrecks layer has an issue which we are trying to solve soon.

Kind regards,

Dick M.A. Schaap

Technical Coordinator

On 9/28/2021 3:32 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback /	I'm not able to view the wrecks in <a href="https://portal.emodnet-bathymetry.eu/">https://portal.emodnet-bathymetry.eu/</a> . Where do I go
Question	wrong?

---

**Subject:** RE: EMODnet Bathymetry Feedback form

**Date:** Mon, 11 Oct 2021 15:40:39 +0000

**From:**

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

Dear Dick

Thanks for the quick feedback. Seems that a simple request is not so simple!!

Would an alternative be to generate a separate data layer with the selected depth contours? I appreciate that this starts to become a more bespoke solution. We have a lot of policy issues these days linked to the 800m (Atlantic) and 1000m (Mediterranean) bans on bottom trawling, and it's not always easy to generate a map of these.

*Best regards*

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

**Sent:** Monday, October 11, 2021 10:20 AM

**To:**

**Subject:** EMODnet Bathymetry Feedback form

Dear ..,

Thanks for your interest in EMODnet Bathymetry.

Concerning your suggestion: the basis of the depth contours is a vector file and the isolines are automatically rendered in GeoServer. We will analyse what options GeoServer offers to provide more functionality like what you suggest. This will take some time and we will inform you.

A complication is that we are in the migration process from thematic to central portal, which also implicates that the viewing interface for Bathymetry is migrating to a centrally hosted viewer. Adding functionality at this moment might give complications for the migration. However, we will check what is possible in a technical sense, and if successful, discuss with the Central Portal team and DG MARE.

Kind regards,  
Dick M.A. Schaap  
Technical Coordinator EMODnet Bathymetry

On 10/8/2021 5:32 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

**Name:** ...

**Emailaddress:**

**Feedback:** In depth contour view, can the depth intervals be shown on the map (perhaps as screen tip when hovering over a specific contour)? It would also be very useful to be able to select specific contours (e.g. 200m, 800m, 1000m) as these relate to policy implementation. And to shade all areas above each contour (i.e. to have a map of all areas above 200m depth).

---

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

**Date:** Mon, 25 Oct 2021 14:55:18 +0200

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

**To:**

Dear

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: the EMODnet Bathymetry DTM model is referenced to Lowest Astronomical Tide (LAT). LAT is the lowest theoretical water level that can occur in a given area. As a consequence in LAT what you refer to as the 0 meter line is the line between water and dry ground when the water level is at it's lowest level. Especially in the Mount saint Michel Bay there is a very large tidal effect causing most of the bay to be dry land at low water. Hence the 0 meter line in the data is relatively far away from the topographic coastline.

You may investigate this a bit further by activating the coastline layer in the data portal. There you have the option to select the low water and high water coastline. Also, you may wish to download the Mean Sea Level DTM data set which is identical to the standard LAT dataset but is referenced to mean sea level instead. You will still notice a discrepancy between the 0 meter line and the topographic coastline (which is the actual high water line) but it will be less than for the LAT data.

We hope this might provide an explanation.

Kind regards,

Dick M.A. Schaap

Technical Coordinator EMODnet Bathymetry

On 10/22/2021 5:25 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback /  
Question

Dear colleagues, I am using your data to simulate some hydrodynamics conditions in the English Channel and the surrounding area, but I am getting some problems with the coastal data in several areas. In particular, in the Mount Saint Michel Bay, the area is all located over the shoreline (with positive altitudes), when it should be underwater. Drawing the depth profile towards coast following the axis of the Bay, the bathymetric line 0 is about 17 km away from the actual shoreline (around 48.69°N,-1.64°E), so I don't know if the data have a problem nearshore. I would like to use the data for the simulation, so if you can help me fix this, I would really thank you.

---

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

**Date:** Mon, 25 Oct 2021 15:03:37 +0200

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

**To:**

Dear ...,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question / issue: the EMODnet Bathymetry DTM dataset is a non projected dataset and data points are referenced using latitude/longitude. If you wish to use the data set for a CNC project you have to reproject the data first to a map projection that fits your work. I assume that you prefer to keep the result rectangular so a Transverse Mercator projection with the central meridian at 1 West would probably be the most suitable for you. Re-projecting geographic datasets is usually performed using GIS software. Various options are available free of cost. QGIS is the most common one but not very easy to use if you lack GIS knowledge. Global Mapper is somewhat easier and has a free evaluation license that allows you to export up to 4 files.

We advise you to download the Esri Ascii grid version of the E4 grid first before reprojecting. This will be a lot faster compared to reprojecting the XYZ file. After reprojection in the GIS software, you can then export the data in various formats that will fit your CNC software.

We hope this will work for you. Also we would be interested to see the result of your work. Could you elaborate on your work a bit?

Moreover, would you mind indicating who advised you that the bathymetry dataset from <https://portal.emodnet-bathymetry.eu/#> looks like 'bad data'? We have not yet encountered such a statement as we normally get a lot of praise from the professionals in the hydrographic community, both for the work and the products. Our consortium includes most national hydrographic services around European seas, together with private experts.

Kind regards

Dick M.A. Schaap

Technical Coordinator EMODnet Bathymetry

On 10/17/2021 9:51 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ..

Email ..

Feedback / Question Hi. I'm trying to make a CNC model of tile E4 2020 XYZ and have been advised that "the bathymetry dataset from <https://portal.emodnet-bathymetry.eu/#> looks like bad data. I've been able to read in the data and take a look at it's components, and the extents of the dataset seem off. The X and Y values only have an extent of ~10m, whereas the Z (elevation) value has extents that are over 5000m, this is likely what's causing the issues." Please advise, thanks.

---

**Subject:**EMODnet Bathymetry Feedback form

**Date:** Thu, 28 Oct 2021 09:42:45 +0200

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

**To:**

Dear ....

Thank you for your interest in EMODnet Bathymetry.

Concerning your issue: soon after launch of the latest EMODnet DTM we found out that a mistake had been made with integrating a number of new surveys along the Italian coast, namely - and + were switched. Once identified, we immediately have made corrections which are active and work fine for the Map viewer, the downloadable DTM tiles, and other related functions such as query for depth and cross sections.

However, it seems that the function for selecting area of interest is still using the incorrect data, as you found out, and which we are investigating now for a fix.

We are sorry for this error and also thank you for finding it.

Once the selection by area has been fixed, I will inform you again. For now, please make use of an alternative, which is downloading relevant DTM tiles as their coverage is correct.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 10/26/2021 11:45 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ..

Email ...

I downloaded an area of interest from the bathymetry portal for a portion of the Tyrrhenian Sea with the following approximate bounds: Upper Left (UL) Lat/Lon - 44.465 N, 8.482 E Lower Right (LR) Lat/Lon - 42.498 N, 10.631 E When downloading the area of interest in ESRI ASCII format or 32 bit float GeoTiff there are large anomalies in the data where regions incorrectly show as land (positive depth; e.g., approx. coverage area UL Lat/Lon 44.148 N, 9.673 E, UR Lat/Lon 10.106 N, 43.833 E). This issue does not occur in the RGB GeoTiff format, nor in the DTM tile E5 in ESRI ASCII format. Judging by the metadata map on the bathymetry portal, this appears to be an error with the integration of the smaller bathymetry datasets with the GEBCO 2021 grid.

---

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

**Date:** Thu, 4 Nov 2021 14:30:22 +0100

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

**To:** ...

Dear ...,

The EMODnet Bathymetry consortium involves most of the National Hydrography Services in Europe and major research institutes. They all agree this is the best common DTM for European seas on the market. An every two years improvements are made incorporating more new survey data sets, national DTMs and satellite derived bathymetry products.

There are some references, such as:

<https://www.emodnet-bathymetry.eu/news/news-details/emodnet-improves-storm-surge-modelling-in-uk/2>

<https://www.emodnet-bathymetry.eu/news/news-details/paper-on-3d-visualization-in-emodnet-bathymetry-published-in-remote-sensing-open-access-journal/62>

<https://www.emodnet-bathymetry.eu/news/news-details/emodnet-bathymetry-featured-in-article-in-hydrographische-nachrichten-oct-2020/66>

Also we keep track of references to EMODnet Bathymetry in publications by Google Scholar. I attach a long list of those from oct 2020 to september 2021 which you have to filter for relevant papers.

In our opinion, we have no competitors at the given resolution and are making use of large and increasing number of survey data sets (last DTM is built upon more than 16.000 survey data sets and composite dtms) and involving the most hydrographic expert group in Europe:

See: <https://www.emodnet-bathymetry.eu/partners>

For that reason, several modellers are very happy with the EMODnet DTM, such as UK MetOffice , Deltares, and others.

Hope this helps.

Kind regards Dick

On 11/4/2021 12:42 PM, ....:

Dear Mr. Schaap,

Thank you very much for your fast answer. If it does not bother you, I have one last question.

I have some trouble to find if EMODnet bathymetry has been compared to other bathymetric products, and if its realism has been assessed in a scientific paper. Do you know if such exercise has been done so far?

Thank you in advance.

Best regards,

---

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

**À:** .....

**Date:** Jeudi 4 Novembre 2021 08:36:10

**Objet:** Re: EMODnet Bathymetry Feedback form

Dear ...,

Yes very valid. The overlap is included to ensure that there are no gaps in between in case of coordinate roundings.

Kind regards Dick.

On 11/3/2021 4:28 PM, ...:

Dear Mr. Schaap,

Thank you very much for your answer. In the end, I used python to merge the files (netcdf datasets). I have noticed that the last 3 rows and columns of each domain overlap with its east and north neighbor. Thus, I used the overlapping area to merge the files.

In your experience, does this method seems valid?

Thank you in advance.

Best regards,

---

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

**À:**

**Date:** Mercredi 3 Novembre 2021 11:32:37

**Objet:** EMODnet Bathymetry Feedback form

Dear ....,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: the quickest way would be by using GIS software such as ArcGIS, QGIS, GlobalMapper etc. Each of these main stream software packages can handle this task out of the box. QGIS is open source and can be used free of charge but has a steep learning curve. GlobalMapper is easier to use and has a free trial version that allows for a few data exports. ArcGIS is more expensive but has a home use version which is rather affordable. Unfortunately, the EMODnet project data portal does not offer data processing tools in the browser.

Hope this helps you.

Kind regards Dick M.A. Schaap Technical Coordinator

On 10/27/2021 3:07 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

**Name:** ...

**Emailaddress:** ...

**Feedback:** Is there any way to obtain the merge of two selected DTM tiles ? Thank you in advance!

---

**Subject:**RE: EMODnet Bathymetry Feedback form

**Date:** Fri, 19 Nov 2021 12:56:52 +0000

**From:** ...

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

Dear Dick,

Thank you for your elaborate response.

About the 2020/2016 difference, that is when comparing the two datasets. I have interpolated the datasets to my model grid and attached the results. The 2016 looks smooth, but in the 2020 dataset there are some dark blue spots. It seemed a bit odd that there is a bathymetry drop of 500 meters, but it might be valid of course. I wonder what you think.

Thanks for the notice about the MSL correction issue. When using the new 2020 MSL dataset, I get all values close to 0 (minus 1 or so), so I think something is wrong with the improved MSL dataset (\_newfiles.png attached). Or is this only the correction field now?

I have checked in different software whether I could load the LAT referenced arcinfo file, and also there I get an error (also with a freshly downloaded asc file):

I do not get this error with the MSL referenced files, are you really sure these LAT files are properly written and contain indeed the nrows and ncols that the headers says they contain?

Best,

..

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

**Sent:** vrijdag 19 november 2021 10:47

**To:** ...

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

Dear ...,

Thank you for your interest in EMODnet Bathymetry.

Concerning the issues that you report, we have again checked and found no issues with the C6\_2020.asc. In case the issue remains we advice you to download the file again or check your software for any incompatibility issues with the Esri ASCII grid standard.

With regards to the deep pits resulting from the comparison of the 2016 LAT file with the 2020 MSL you have to be aware that the resolution of the 2016 files is lower than the 2020 files (1/8 vs 1/16 arc minute). Especially on steeper slopes this may result in unexpected differences. A lot of work was done on the data for the Baltic sea between 2016 and 2018 and again in 2020. The resulting models are not "simple" updates but have been recompiled from source data using improved software algorithms. Therefore large difference can be expected. You did not mention the magnitude of these "pits" but we expect that they are caused by these differences.

Also for your information, we recently discovered a slight shift in the MSL files compared to the LAT files. This shift (half a grid cell) was caused by different interpretation of the grid origin (center vs lower left) between the LAT master files and the LAT - MSL conversion files (PS: based upon the GTSM model of Deltares). We have corrected this by replacing all MSL DTM tiles (only available as ESRI) on the portal. Sorry for this inconvenience.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 11/17/2021 11:46 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

Feedback  
/  
Question

Recently I downloaded EMODNET2020 MSL referenced ARCINFO files for the Baltic sea. When comparing these to EMODNET2016 LAT referenced bathy, I see that the 2020 version has some deep pits that seem invalid. I would have liked to attach pictures, but that is not possible in this form. I can send them if you reply via email. I tried comparing to the EMODNET2020 LAT referenced data, but my model states an error '\*\* ERROR : unexpected end of file in /p/11207554-gennaker-owf/01\_Data/02\_EMODnet/Bathy/EMODNET2020\_LAT\_referenced/C6\_2020.asc'. If I compare file sizes of both files, they indeed seem to be significantly different, but that can also mainly be due to the missing value of 99 instead of 9999. I expect that some rows/columns are missing, could you please validate that? C6 is the first file that is read, but I also get the error with C7 and probably also the other files (D5, D6, D7 in my case), but in that case probably also the others.

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

**Date:** Fri, 19 Nov 2021 10:30:38 +0100

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

**To:** ..

Dear ...,

Thanks for your interest in EMODnet Bathymetry. Somehow, the MSL file of C8 tile was not available. This has been solved now, also because we had to do a repair of all MSL DTM tiles for a small shift in grid between MSL and LAT versions.

So sorry for this, but please make a new shopping effort for C8 MSL and any other MSL tiles that you might have downloaded recently.

Please let us know if there are issues again.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 11/18/2021 4:08 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ..

Email ..

Feedback / Question I recently downloaded a dataset of ASCII Mean Sea Level DTM tiles, however link in the email to tile C8 (<https://rest.emodnet-bathymetry.eu/file/aYQDi4DhXQ2ZSv9qAhcBdsHn>) leads to an error, meaning I cannot download the bathymetry data. Any help is greatly appreciated. Thanks.

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

**Date:** Tue, 23 Nov 2021 10:20:53 +0100

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

**To:** ..

Dear ...,

Thank you for your interest in EMODnet Bathymetry.

I had asked one of my technical colleagues to check the OGC services and his feedback is that all are working fine, for instance using QGIS.

Can you try again? Maybe there was a temporary glitch?

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 11/19/2021 8:18 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name

Email

I'm trying to connect to your WMS/WFS and WCS servers using the URLs from here: <https://www.emodnet-bathymetry.eu/data-products/web-services-and-standards>. The WMS can connect just fine, but both the WFS and WCS servers cannot connect and show a bad gateway error. Are the URLs still correct and those servers active? WFS: <https://ows.emodnet-bathymetry.eu/wfs> WCS: <https://ows.emodnet-bathymetry.eu/wcs> Thanks! Kari

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**Subject:**EMODnet Bathymetry Feedback form

**Date:** Wed, 1 Dec 2021 11:21:35 +0100

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

**To:**

Dear ...,

Thank you for your interest in EMODnet Bathymetry.

Concerning your question: the bathymetric gridded data of EMODnet Bathymetry can be downloaded at the portal as DTM tiles with spatial resolution of approx. 115m.

Please contact the data provider EOMAP of the Satellite Derived Bathymetry parts, if you wish to receive a higher spatial resolution or sites which have (yet) been provided to EMODnet. The point of contact is Knut Hartmann ([hartmann@eomap.de](mailto:hartmann@eomap.de), +491702494658).

Kind regards,

Dick M.A. Schaap

Technical Coordinator

On 11/29/2021 2:01 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ...

Email ....

Hello good Morning, I am Angel, I work in the Tragsatec company in Seville(Spain). We are carrying out a project for the coastline of the Andalusian coast and we wanted to know if you could give us the bathymetry data for Andalusia (Satellite Derived Bathymetry Andalusia II - Spain; Satellite Derived Bathymetry Andalusia, Murcia, Com. Valencia - Spain; Satellite Derived Bathymetry Andalusia - Spain).And if there is any information on the part of Huelva in Andalusia (Atlantic Ocean. Thanks you very much,



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

**Date:** Tue, 14 Dec 2021 15:00:57 +0100

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

**To:** ....

**CC:** Thierry Schmitt <thierry.schmitt@shom.fr>

Dear ....,

Thank you for your interest in EMODnet Bathymetry and sorry for some delay in answering as we had to discuss your question somewhat internally in our team.

The quality index information is part of the EMODnet Bathymetry viewer and indeed cannot be downloaded at present. However, we are quite interested in your proposed application. Therefore my colleague from Shom, Thierry Schmitt, who is coordinator of EMODnet Bathymetry but also the author of the Quality Index layer, has prepared a Quality Index shapefile of the full DTM.

I will send you this by WeTransfer soon.

In case of questions, I advise you to contact Thierry directly ([thierry.schmitt@shom.fr](mailto:thierry.schmitt@shom.fr)).

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 11/23/2021 4:56 PM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ..

Email ...

Feedback / Question Hi, I am undertaking a project developing essential fish habitat maps and we are relying heavily on EMODnet data as information on confidence/quality is available. However, I have not been able to download the quality index data for your bathymetry layer (2020). Is it possible to download this? The dtm tiles I need this for are C2, C3, C4, C5, D2, D3, D4, D5, E2, E3, E4, E5. I hope you can help thanks Shona

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

**Date:** Thu, 16 Dec 2021 08:30:23 +0100

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

**To:** ....

Dear ... ,

Thank you for your invitation. However, as EMODnet Bathymetry we are not processing survey data sets, but building upon already processed data sets to compile the best Digital Terrain Model for the European seas.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 12/16/2021 7:47 AM, [noreply@maris.nl](mailto:noreply@maris.nl) wrote:

Name ...

Email ....

Feedback / Question Gents, We would like to know that if your organization is providing data processing services for Bathymetric data of Single beam and Multibeam echo sounders. We are currently collecting the data in the Red Sea near Yanbu City, Saudi Arabia using HYPACK software. Please provide us with the quotation for the required services. Regards,

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