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)

Centralisation Phase

Quarterly Progress Report (5)

Reporting Period: 01/01/2022 – 31/03/2022

Contents

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1.   Highlights in this quarter

Task 1: Maintain and improve a common method of access to data held in repositories

During the reporting period, the number of survey data sets has increased by new contributions of 9 data providers from 31432 to 36716 CDI entries while the number of Composite DTM entries has increased from 258 to 259. A major new contribution was made by the Estonian Transport Administration of 4565 CDI survey entries for their Estonian waters in the Baltic Sea. This was accomplished with support of the Swedish Maritime Administration. Also, Shom populated 405 new CDI survey entries while earlier Shom had relieved the access restriction on circa 5000 of their CDIs from Restricted to CC-BY-4.0. The data population phase is now nearly finished for the current contract, because the data sets have to be used as input for updating and generating the new versions of the Regional DTMs for which activities have started early 2022. Some more contributions might come from 3 data providers, while 40 of the 43 agreed data providers have fully fulfilled their population activities.

Task 2: Construct products from one or more data sources that provide users with information about the distribution and quality of parameters in time and space

Bathymetric datasets, pre-gridded by data providers using the EMODnet method, are now being brought together by the respective regional coordinators. They are evaluating these new datasets, selecting the most relevant ones for updating existing areas or for covering gaps in the current DTM. This is a tedious process involving both the experience of the regional coordinators and making use of special functions included in the Globe software enabling dedicated analysis and visualisation. During the reporting period a full meeting was held on the 24th of January 2022, at which discussion took place on the handover of the new datasets, as populated in the CDI and Sextant catalogue services, from data providers to regional coordinators. This same day, a training workshop, intended principally to the regional coordinators, was organised to show Globe functionalities and current developments on Globe dedicated to improve further the aggregation of bathymetric datasets. Moreover, the status of progress for each of the sea basins was discussed. As the process is in a critical phase for the project, progress is being tracked regularly. Another meeting has been organised with the basin coordinators on the 24th of March 2022, while an additional meeting will be organised later in May 2022. From the meetings, it can be concluded, that the process so far is well underway. Ultimately, regional coordinators are expected to provide the results of their updated regional compilations around summer 2022 to partner GGSGc who will then have several months to integrate all the regional components into the full DTM product. Based upon earlier experiences, that phase will include a lot of interaction from the integrator to regional coordinators to discuss and solve possible identified discrepancies and anomalies.

Task 3 - Develop procedures for machine-to-machine connections to data and data products

A major activity in EMODnet is working on the migration from thematic portals to one central portal, which will become the one-stop-shop for EMODnet products and services. While, the thematic groups will continue to be responsible for the gathering of data sets, generation of their products, the provision of web services and API's which will feed the EMODnet central portal, and the overall quality of their products and services as made available through the 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, and overtime a good understanding has been reached about the way forward concerning EMODnet Bathymetry. As a follow up concrete activities are undertaken, both at the Central Portal and at EMODnet Bathymetry, for arranging migration of the inventorised individual services and products in practice and for testing their deployment. In the reporting period two meetings took place between the Central Portal and EMODnet Bathymetry technical teams, where progress was discussed of earlier actions, as included in JIRA, and new items. In the period,

EMODnet Bathymetry has started and undertaken a number of actions of relevance for the migration, which are a number are summarised below:

- CP team has made a sitemap and collation of editorial content from the original website for later inclusion in the Centra Portal as narrative. EMODnet Bathymetry has reviewed and edited the collation considerably in order to turn it into a fluent story, which explains the aims, methods, and resulting products and services. CP team will work on populating this new narrative into the CP online CMS, so that EMODnet Bathymetry can review again and also supply illustrations to make it more attractive;
- CP team has made available a test version of the new CP central viewer service, which includes already a number of Bathymetry layers and additional functionalities. EMODnet Bathymetry has prepared an excel overview with all expected layers and functionalities and a review of their present status in the test CP viewer. This excel overview will serve as a check list and will be used in the regular progress meetings with CP team.
- CP team wanted to merge all DTM tiles of the 2020 version in one integrated NetCDF file for hosting at ERDDAP and this way providing an extra functionality to users of the CP viewer for retrieving a selected area in a number of formats. To overcome technical difficulties, there has been a meeting between VLIZ and GGSGc technicians which solved the problem.
- Downloading of all DTM files and HR-DTM files is foreseen at the CP by a Central Products Catalogue service. Bathymetry team is underway with arranging another Sextant service deployment which will bring together all metadata entries for these DTM products, so that these can be regularly harvested by means of CSW. For the time being, the metadata entries will point to data sets that are hosted at EMODnet Bathymetry, but later at CP. IFREMER is underway with generating metadata entries for the individual DTM tiles of the 3 DTM versions.
- CP team has prepared an excel with map layers which will be served by EMODnet Bathymetry as OGC services. EMODnet Bathymetry is underway with reviewing and completing the excel with persistent links to metadata for each layer and the URLs of OGC services.

Another activity under Task 3, is further development and uptake of an online Collaborative Virtual Environment (CVE). At a meeting of 24 March 2022, the CVE was demonstrated again to the regional coordinators, including the latest developments. The CVE tool allows visualising the differences between the current EMODnet 2020 and the new aggregation that regional coordinators will have made. The difference is visualised as a residual grid, which allows to highlight grid improvement, but also artefacts, such as anomalies and outliers, which need to be solved. At the present stage, the CVE includes the western Mediterrannean area. Next step is to generalise by adding the other regional basin DTMs.

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. 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

This is related to updating the narrative pages of EMODnet Bathymetry at the Central Portal. The updating will take place once the migration activities as described above under Task 3 have been fulfilled and finalised. Once operational, there might be regular updates.

Task 6 - Ensure the involvement of regional sea conventions

As part of the IODE conference, good relationships with the actors of Regional Sea Conventions has been revitalised.

Task 7: Contribute to the implementation of EU legislation and broader initiatives for open data:

The consortium consists of organisations that have relevant international networks and are well acquainted with international cooperation, also aiming at international interoperability. This includes relationships concerning standards such as: ISO, OGC, INSPIRE, SeaDataNet, IHO, IOC, and ODIP. It also includes relationships concerning collection and sharing of metadata, data and DTMs such as: GEBCO, IBCAO, BSBD, NSBD, NOAA-NCEI as part of Galway declaration. Leading partners of the consortium are involved in SeaDataNet, Blue-Cloud, EOSC, and other European digital initiatives and projects, and are interacting with these developments, to the benefits of EMODnet Bathymetry. This can be done by presentations at conferences and workshops, by dedicated meetings, and by joint projects. Considering the major experience and adoption of EMODnet Bathymetry of Satellite Derived Bathymetry, tidal bathymetry, and complexity of coast – land interfaces, EMODnet Bathymetry also strives for synergy and cooperation with CMEMS, combining digital bathymetry, topography, and hydrodynamic models for exploring joint initiatives, for instance for dynamic coasts.

EMODnet Bathymetry members are regularly discussing technical matters with GEBCO / Seabed 2030 counterparts. Thanks to the delivery of web services, the inventory of worldwide bathymetric data held by the IHO Data Centre for Digital Bathymetry, has been automatically updated with new datasets from the EMODnet contribution.

INSPIRE compliance for all EMODnet Bathymetry OGC web services, both from the CDI service and the Bathymetry Viewing and Download service components is satisfied. The latest validation by the EMODnet Secretariat indicated that EMODnet Bathymetry has a full score. This is maintained.

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.

A major updating was required to reformulate statistics following the new MSFD-region approach. In particular, MSFD regions were reformulated in line with the polygons as retrieved from the EEA portal. These were used to geo-tag again all CDIs (>2.5 millions). These concern the CDI matrix to report coverage of available datasets per sea region and Organisations supplying data. Moreover, implementing the procedures for extracting new KPIs to indicate quarterly CDI differences per data provider, per sea region, and #restricted;#unrestricted took quite some efforts.

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 is maintained (and used as focal point for Bathymetry users) until agreement is reached between EMODnet Bathymetry team, CP team, CINEA and DG MARE 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 4rd quarterly progress report for the new contract which was accepted by EU (CINEA and DG MARE). Likewise, the interim report has been generated and also accepted.

Status of the Milestones and Deliverables listed in the workplan					
Milestone/Deliverable in numerical order	WP	Date due	Status (To do/ Delivered/ Delayed)	Date delivered	If Delayed: reason for delay and expected delivery date
D1.1: Quarterly concise progress reports	WP1	M4, M7, M10, M13, M16, M19, M24,	Delivered	M4, M7 and M10, M13	
D1.2: Annual Interim report	WP1	M12	Delivered	M14	
D1.3: Final report	WP1	M24	To do		
D1.4: Plan for service continuity, incl. docs and sources	WP1	M24	To do		
D2.1: Upgraded guidelines for data pre-processing and population of metadata	WP2	M3	Delivered	M4	
D2.2i: Training Workshop for data pre-processing and metadata population	WP2	M3	Delivered	M4	
D2.3: Pre-processed survey data sets and included in CDI Service	WP2	M12	Delivered	M15	A few data providers might provide extra entries.
D2.4: Pre-processed composite DTMs and included in Sextant service	WP2	M12	Delivered	M12	
D2.5: Satellite Derived Bathymetry data sets and included in Sextant Service	WP2	M12	Delivered	M12	
D3.1: Upgraded guideline of EMODnet methodology for DTM production, including using prototype CVE	WP3	M8	Delivered	M12	
D3.2i: Upgraded Globe software	WP3	M8	Delivered	M9	The software is continuously maintained and upgraded

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D3.3i: Training and intercalibration Workshop	WP3	M11	Delivered	M11	
D3.4i: Processed and pre-gridded data sets as input for RDTMs	WP3	M14	Well underway		Difficulties are limited to a small number of providers. Not critical (yet)
D3.5i: Regional DTMs with common resolution of 1/16 arc minutes grid	WP3	M17	Underway		
D3.6i: Best version HR DTMs for coastal waters and hotspots	WP3	M20	To do		
D3.7: New EMODnet DTM incl Quality Index and loaded in EMODnet web services for viewing and downloading	WP3	M23	To do		
D3.8: HR-DTMs loaded as separate layer in EMODnet web services for viewing and downloading	WP3	M23	To do		
D3.9: Source reference layer to link to CDI and Sextant Catalogue services	WP3	M23	To do		
D3.10: Refined best-estimate European digital coastlines for a range of vertical levels at the portal	WP3	M22	Underway		
D3.11: Updated Inventory of existing and ratified baselines and registered claims / disputes under UNCLOS, for European countries at the portal	WP3	M20	To do		
D3.12: Tidal bathymetry for Venice Lagoon	WP3	M23	Underway		

D4.1: Standard machine- to-machine services delivered for common functionalities	WP4	M3	Delivered	M1	
D4.2: Dedicated machine- to-machine services adapted / delivered for special functionalities	WP4	M6	Delivered	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	M14	Demo for technical group, followed by training workshops for Regional Coordinators.
D4.4i: Globe software + GGSGC workbench upgraded with extra functionality	WP4	When required	Done		Globe Software is continuously maintained and upgraded
D5.1: Operational Help-desk	WP5	continuously	Done/To do		
D5.2: Monitoring data about visits and usage	WP5	continuously	Done/To do		
D5.3: Promotional material and up-to-date thematic space at central portal	WP5	continuously	Done/To do		
D5.4: Presentations at relevant conferences	WP5	Regularly	Done/To do		

2. Identified issues: status and actions taken

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
EM489 – Bathymetry to report on number and volumes of downloaded data and data products	Resolved	Provided relevant stats	11/02/2022	03/02/2022
EM487 - Metadata: survey tracks/polygons layer And **EM188 - Adding the URL to the metadata as an attribute field in the Bathymetry Source reference layer** And **EM390 – Bathymetry review of the new CP Map viewer**	Pending	Progress through Continuous discussion between CP team and EMODnet Bathy Team		
EM511 – Create single bathymetry NetCDF file from 64x tiles (2020 DTM)	Pending	Nc tiles provided along with specifications on reading them. Active feedback between EMODnet Bathy team and CP team to solve pending issues		
EM527 – Bathymetry – EMODnet Catalogue Tags	Pending			
EM544 – Geofabrik land names and layer	Pending			25/04/2022
EM-294 Dashboard issue with Helpdesk page views	Pending (should be passed in Resolved)	Checked that Grafana no longer gives unrealistic web stats for helpdesk visits		17/10/2021

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

3. User feedback

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
12 January 2022	Bundesanstalt für Wasserbau	Reported issues with OGC services into QGIS	Email feedback form	Next day	Resolved	Explained how to do it.	
13 January 2022	Johnson Outdoors, USA	Are developing recreational fishing maps for Europe. Had several questions about DTM.	Email feedback form	Next day	Resolved	Details given about DTM following their questions.	
18 January 2022	CSIC, Spain	Noticed that WMS server was down	Email feedback form	Same day	Resolved	Checked and corrected.	
12 January 2022	?,?	Asked if it is possible to download DTM 2020 tiles in 32bit tif format	Email feedback form	Week later because of checking with experts	Resolved	Explained that this is not possible now, but possibly with the 2022 DTM release.	

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12 January 2022	Ericknightmaps, ?	Had difficulty with loading .emo files	Email feedback form	Week later because of checking with experts	Resolved	Explained how to do this.	
13 January 2022	GISonline, Poland	Asked about reference for use	Email feedback form	Week later	Resolved	Explained where to find this.	
21 January 2022	TNO, Netherlands	Found differences between maps and DTM around NL sand extraction areas	Email feedback form	Week later because of checking with Netherland Hydrography Service	Resolved	Gave information from NHS and BSH about possible differences and how to overcome.	
8 February 2022	VLIZ, Belgium	Had difficulty with 3D viewer.	Email feedback form	Two days later	Resolved	Gave suggestions what to do.	
28 February 2022	Argans, France	Tried to download DTM by WCS	Email feedback form	Same day	Resolved	Explained that WCS had limitations and better to used DTM tiles download service	

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4. Meetings/events held/attended & planned

A. Meetings/events organised and attended in the quarter					
Date	Location	Type event (internal or external meeting; training/ workshop)	Was a presentation given? (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
13 Jan 2022	VTC	Meeting with Central Portal team about migration. to discuss progress and actions	No	A	To discuss progress and formulate mutual actions
24 Jan 2022	VTC	EMODnet Bathymetry Consortium Plenary meeting and Basin coordinators Training Workshop	No	O	To monitor overall progress with attendance of all the members of the consortium (morning) and to train Regional Coordinators in using new Globe functionalities and to expose CVE Workbench with online shared tools (afternoon).
25 Jan 2022	VTC	Seabed 2030 Technical	No	A	To share methodologies
14-16 Feb 2022	VTC / Sopot Poland	IODE conference	Yes	A	Present EMODnet Bathymetry
3 March 2022	VTC	Meeting with Central Portal team about	No	A	To discuss progress and formulate mutual actions

		migration. to discuss progress and actions			
15-17 March 2022	London, UK	Oceanology International	No	A	To discuss EMODnet bathymetry FAIR principles and implementations. Collaborate with the industry (notably Fugro). Presenting EMODnet Bathymetry at MARIS stand.
24 March 2022	VTC	Basin coordinators progress meeting	No	O	Monitor overall progress of the generation of the RDTMs
SUM				**O**	**Total # of meetings organised =**
SUM				**A**	**Total # of meetings attended =**

B. Meetings/events planned in the future				
Date	Location	Type event (meeting, training (workshop), etc.)	Meeting to be attended (A) / organised (O)	Short description and main expected outcomes
5 Apr 2022	VTC	Meeting with Central Portal team about migration. to discuss progress and actions	A	To discuss progress and formulate mutual actions
8 Apr 2022	VTC	EMODnet meet and greet - Bathymetry	A	To present EMODnet Bathymetry main activities and objectives to new Deputy Head of DG MARE A1 Unit
14 Apr	VTC	Hydrograhic Society of Benelux	A	To present EMODnet current status and future objectives

26-27 Apr		EMODnet TWG and SC meetings	A		To update on recent progress on centralisation and thematic work towards next products release

5. Communication assets

A. Communication products developed				
Date	Communication material	Short description (of the material, title, …) of the asset	Main results	Name of event at which material was disseminated (if applicable)
12-14 March 2022	Poster of EMODnet Bathymetry	Poster showing products and services of EMODnet Bathymetry	Several people visiting the stand and discussing EMODnet Bathymetry	Presented at Oceanology International 2022 in London, UK at MARIS stand

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

A. (Co-)Authored peer-reviewed publications in the quarter					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
	e.g. paper; conference proceedings; book chapter; …				

B. Other/non-peer reviewed types of publications (co-)authored in the quarter					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
	e.g. paper; conference proceedings; book chapter; …				

For a compressive overview of publications referring to/making use of EMODnet data and/or data products, please consult Google Scholar.

6. Monitoring indicators

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
1. Current status and coverage of total available thematic data A) Volume and coverage of available data	CDI catalogue service	There is a substantial increase of CDIs. More than 3000 of these are originating from the Estonian Transport Administration, who have contributed as part of the Baltic Sea Hydrographic Commission.
What is your opinion on the data coverage within EMODnet for your thematic?	Sea regions in CDI service have been reformulated to follow latest EEA regional polygons. Was considerable effort but now in place.	
B) Usage of data in this quarter	CDI RSM shopping ledger service	Enormous increase in number of downloaded CDIs compared to previous quarter. The big difference can be explained by heavy downloading by one institute from China and one from Greece. Overall, there are 45 users compared to 31 in previous quarter.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products	Viewing and Download service and Sextant CPRD catalogue service Shopping module and analytics reporter of the Viewing and Download service	Number of products is stable as regional coordinators are underway with production of new Regional DTM releases. 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 CDI catalogue service	Again, a very large volume of downloads, both in numbers (> 10000) as in volume (> 1.3 TerraByte). However, a decrease compared to the previous quarter, which was exceptional. The number of WMS and WFS requests are somewhat higher than in previous quarter and again very considerable.

3. Internal and external 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.
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 almost all received attention from users with a high number for the use case on applying the DTM for improving storm surge modelling.
8.1. Technical monitoring	Matomo – Grafana	The portal has a very good and stable response time and overall 100% up time.
9. Visibility & Analytics for web pages	Matomo – Grafana	Problem with Grafana showing only Quarterly average and not values in time. Anyway, as expected and targeted, the pages related to the "EMODnet bathymetry viewing and Download Service" have the highest score. 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	Problem with Grafana showing only Quarterly average and not values in time. Anyway,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	Problem with Grafana showing only Quarterly average and not values in time. Without this, interpretation is not really possible.

The monitoring numbers reported as part of the progress monitoring of EMODnet performance are collected through Matomo and/or Europa Analytics, unless reported otherwise.

7. Annex: Other documentation attached

Feedback Questions and Answers:

Subject: Re: EMODnet Bathymetry Feedback form
Date: Thu, 13 Jan 2022 08:52:41 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ....,
Thank you for your interest in EMODnet Bathymetry products and services.
We checked and could not find any issues with our OGC services, also not in QGIS. Could you try again or else explain somewhat better illustrated with screengrabs what you are doing and what goes wrong. So that I can then forward this to our technical operators?
Concerning the URLs of web services. These are listed at:
https://www.emodnet-bathymetry.eu/data-products/web-services-and-standards
You are writing about https://ows.emodnet-bathymetry.eu/wmts but that is not in use; actually it is redirected to the correct WMTS URL:
https://tiles.emodnet-bathymetry.eu/wmts/1.0.0/WMTSCapabilities.xml
Will hear from you again.
Kind regards
Dick M.A. Schaap
Technical Coordinator

On 1/12/2022 11:25 PM, wrote:

Email	
Feedback / Question	Good morning, I was using your great looking WMTS service (https://ows.emodnet-bathymetry.eu/wmts) for a map with QGIS 3.16 today. Unfortunately, I was unable to run your WMS service at all (the images do not load) and the WMTS as well. The WMTS does not load all tiles in my zoom area. It looks like most of your web services are not working? You may want to check the link of the WMTS as well. If I use the one supplied on your website I do not seem to connect at all - it only works with the one mentioned above. Still, thank you for the great products - I like using them. Best wishes from Hamburg,

Subject: RE: EMODnet Bathymetry Feedback form
Date: Tue, 18 Jan 2022 17:31:44 +0000
From:
To: Dick M.A. Schaap <dick@maris.nl>
Dear Dick,

Thank you again for a detailed and informative email. I also copied my colleague Amanda Holt who is a GIS specialist and has been downloading some of the datasets on EMODnet website.
I have a couple of follow up questions below that I hope you can further help us with:
1. Considering the data is released every 2 years, looks like the next release is slated for 2022. If so, would you happen to know in which month the data is made available? The reason I ask is to see if we can include the latest data in the upcoming maps, and whether the release date is before our internal cutoff dates for data gathering.

2. We understand that the Swedish military is very strict about the details of any public data. However, does the same apply to Norway and Finland? Or any other parts of Europe? If not, would you happen to have any contact names/email

addresses that you do not mind sharing with us so we could reach out to them directly and see if they are willing to license more detailed bathymetry for a recreational activity such as fishing?

I imagine you are based in the Netherlands. If so, do you visit the METS show in Amsterdam (mid Nov)? The reason I asked is that I visit the METS every year (last two years being the exception) and look forward to meeting you in person if possible.
Thanks again and with best regards

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From: Dick M.A. Schaap <dick@maris.nl>
Sent: Friday, January 14, 2022 3:06 AM
To:
Subject: Re: EMODnet Bathymetry Feedback form

Dear ...,
Our common DTM model has a 115*115 meter grid and as you say, that is quite large for coastal and near-coastal areas. However, that is what we can offer on an overall European scale, although we do not have detailed surveys everywhere to underpin it. In several locations we then make use of GEBCO Bathymetry which is derived mostly from altimetry and has a 1km * 1 km grid. The source reference layer in the map viewer indicates where survey data has been used and where GEBCO.
The challenges we face are: 1) not all seas and coastal waters have been surveyed; 2) a lot of surveys have been done a long time ago and have limited resolution and precision 3) several hydrographic services (countries) limit the resolution of publising because of national security reasons 4) not all data providers are willing to share their data with us.
To improve the resolution locally we have started with asking also for HR-DTMs which have a higher resolution of at least 1/16 * 1/16 arc minutes (ca 60 * 60 m) and these are made available in the map viewer by means of the High Resolution layer which gives browsing and downloading options of these HR stamps which are mostly focused on coastal waters, sea-land interfaces and interestig undersea features. This is an increasing collection, however, only covering spots / stamps.
This is what we can offer, which is a major step forward to 10 years ago when only the GEBCO bathymetry at 1km * 1 km was available and largely underpinned by altimetry. Now we have a much better digital bathymetry of European seas and by this project we are successful in motivating and turning an increasing number of Hydrographicf Services and Research Institutes to release their data at higher resolution.
But I can imagine that it is not yet at the level that you or many others would like. Which is why we are running our project already for 10 years and releasing new DTMs every 2 years, including more and more high resolution surveys and also satellite derived bathymetry.
Hope this gives you some more backgrounds.
Kind regards
Dick

On 1/13/2022 10:30 PM, wrote:
Hi Dick,
Thank you again for sending the helpful links and confirming CC 4.0 licensing.

We are developing recreational fishing maps for Europe. We released one such map called CoastMaster for France last year to be used in conjunction with our GPS chartplotters (Humminbird brand) and the trolling motors (Minn Kota). We have now turned our attention to the Baltic Sea.

The typical end-users are passionate, recreational anglers with trailered boats of up to 10 meters. Due to the size of the boats these anglers do not venture too far from the coast. What they need most to make it a pleasant and useful fishing trip, with minimum amount of driving around and using fuel unnecessarily is detailed bathymetry. With detailed maps they can plan their trips ahead of time, drive straight to hot spots which is good for them and good for the environment. The grid lines of the DTMs being 115 x 115 meters would not produce the kind of detailed bathymetry that the anglers need.

Some agencies dumb down the details, and/or remove spot soundings to unclutter the maps, at times to make it easier for end-users to download the data. We are wondering if EMODnet has access to more detailed bathymetry than what is on the website, or has any tips as to how we may be able to access more detailed data. We will be happy to license it for a fee if required.

Looking forward to hearing from you.

Best regards

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From: Dick M.A. Schaap <dick@maris.nl>
Sent: Thursday, January 13, 2022 3:18 AM
To:

Dear ,
Thank you for your interest in EMODnet Bathymetry products and services.
The EMODnet Bathymetry products are published under the Creative Commons Attribution License CC BY 4.0
(http://creativecommons.org/licenses/by/4.0/). So you are free to use the products and services. However include
acknowledgements, which are detailed at:
https://www.emodnet-bathymetry.eu/data-products/acknowledgement-in-publications

This also gives DOIs for the 2020, 2018, and 2016 versions of the EMODnet DTM. Each DOI leads to a landig page with full metadata
about the DTM releases. Moreover, each grid cell in the DTM refers to a survey data sets or a Composite DTM data set which are
fully decribed with metadata in the so-called CDI Data Discovery & Access service (survey data) and the CPRD Sextant Catalogue
service (Composite DTMs).
You can find access to these 2 catalogues from the home page: https://www.emodnet-bathymetry.eu
While the interaction between grid cells and used data sets can also be found in the Map Viewer service, which also can be started
from the homepage. See the Map HELP menu for further instructions.

Kind regards
Dick M.A. Schaap
Technical Coordinator

On 12/16/2021 8:22 PM, noreply@maris.nl wrote:

Name:	
Emailaddress:	
Feedback:	Hi, We are looking into developing recreational fishing maps and would like to integrate the Bathymetry and other relevant data sets from EMODnet site for this purpose. However, we have not been able to find the link for the metadata for the DTM tiles. By metadata, we mean the projection, spatial resolution, publication and survey dates, vertical datum, licensing and such information. The metadata will also help us determine which format to use. Thank you and best regards

Subject: EMODnet Bathymetry Feedback form
Date: Tue, 18 Jan 2022 18:16:32 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To: justino@icm.csic.es

Dear Justino,
Thank you for your interest in EMODnet Bathymetry.
It appeared that a disk space was full, which has been solved.
Therefore, it should work again.
Thank you for alerting us!
Kind regards
Dick M.A. Schaap
Technical Coordinator

On 1/18/2022 2:56 PM, noreply@maris.nl wrote:

Name	
Email	
Feedback / Question	Dear EMODnet staff, We have detected that your WMS baselayer_land tile (https://tiles.emodnet-bathymetry.eu/#baselayer_land) is not accessible. Could you confirm us this point? Thanks in advance

Subject: Re: EMODnet Bathymetry Feedback form
Date: Wed, 19 Jan 2022 15:19:55 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,
Thank you for your interest in EMODnet Bathymetry.
Concerning your question: Currently we do not have the 32 bit GeoTiff files available in the public domain. This will change with the upcoming 2022 release but it may take to the end of this year / early next year before this release is made available. In the mean time we advise you to download the Esri ASCII grid files and convert them to Geotiff 32 bit using GDAL. If you are not familiar with GDAL, please let us know and we will provide you with some guidance.
Kind regards
Dick M.A. Schaap
Technical Coordinator

On 1/12/2022 9:15 PM, noreply@maris.nl wrote:

Name

Email

Feedback / Question	Hi I'm trying to download DTM 2020 data. Is it possible to download all the tiles, on 32bit tif format ? Rather than the RGB Tif ? Or at least do you have someway to convert the RGB tiffs into a single band tiff ? Thanks in advance.

Subject: Re: EMODnet Bathymetry Feedback form
Date: Wed, 19 Jan 2022 15:29:11 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,
Thanks for your interest in EMODnet Bathymetry.
Concerning your issue: one of my colleagues has downloaded the '590_HR_Lidar_Centro' file and was able to load the file into GlobalMapper without issues. Attached are two screenshots (overview and detail) of the point distribution). We decided to make these files available as non-projected EMO files in order to distribute all statistic fields available for the data. The EMO files are gridded but delivered as point clouds. Users that require gridded files have to use a GIS to grid the points.
Possibly you misinterpreted the coordinate system. EMO files are lat/lon based referenced to WGS84. Full documentation on the EMO files is available here: https://www.emodnet-bathymetry.eu/data-products/qaqc-and-dtm-production-details
Kind regards
Dick M.A. Schaap
Technical Coordinator

On 12/1/2021 9:02 PM, noreply@maris.nl wrote:

Name

Email

Feedback / Question	Hi, we are trying to obtain a standard, georeferenced raster version of the '590_HR_Nazare' and '590_HR_Lidar_Centro' bathymetry datasets. Tried to import the .emo file into GIS software, but just got a strip of points in a straight line. Are these datasets available in a different format? Thanks

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Subject: Re: EMODnet Bathymetry Feedback form
Date: Wed, 19 Jan 2022 15:34:44 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,

Thank you for your interest in EMODnet Bathymetry.
The mentioned layers are part of the latest EMODnet DTM 2020 version. Metadata on this release can be found at:https://www.emodnet-bathymetry.eu/data-products/acknowledgement-in-publications
This includes a DOI which leads to a landing page with various metadata info including data providers.
Kind regards,
Dick M.A. Schaap
Technical Coordinator
On 1/13/2022 3:38 PM, noreply@maris.nl wrote:

Name	
Email	
Feedback / Question	Hello, I would like to use your data in accordance with the privacy policy available on your website. Unfortunately, I have a problem with finding information about the data originator(s) I want to use. Could you please provide me with the details about data organizers of the following datasets: Mean depths full coverage Mean depths multi colour from WMS: https://portal.emodnet-bathymetry.eu/services/services.html Thank you in advance for your help. Kind regards,

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Subject: EMODnet Bathymetry Feedback form
Date: Sun, 30 Jan 2022 16:29:29 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,

My colleagues of Royal Netherlands Navy – Hydrographic Service (RNLN), responsible for surveys of NL sand pits, and Federal Maritime and Hydrographic Agency (BSH) of Germany, responsible for the North Sea DTM compilation, have looked into the case. BSH confirms that the shift might be there and due to using an interpolated depth layer, which originated from a TIN whereby CARIS rounded the grid cells to 6 digits. Somehow this created a shift which unfortunately was not corrected in the final editing. For sure, this will be solved, but not before end 2022 when the new EMODnet DTM release is planned.

Our Dutch colleagues pointed out that there are many contacts between TNO and the RNLN Hydrographic Service, so most probably TNO already has access to more recent surveys of the area In the highest public resolution (20 m). This could be used as an alternative for the time being. Moreover, gridded bathymetry of the entire Netherlands Continental Shelf is also available at a 20 m grid through INSPIRE, see:
https://www.nationaalgeoregister.nl/geonetwork/srv/dut/catalog.search;jsessionid=2542411ED4B09FE47BC8115382BB7199#/search?facet.q=protocol%2FOGC%253AWCS%26type%2Fservice&resultType=details&sortBy=relevance&fast=index&_content_type=json&from=1&to=50&inspiretheme=Hoogte
We hope this will help you. Let us know if you can proceed.
Kind regards
Dick M.A. Schaap
Technical Coordinator
On 1/21/2022 10:57 AM, noreply@maris.nl wrote:

Name	
Email	j
Feedback / Question	when I compare the emodnet bathymetry with local bathymetry and The Dutch sand extraction areas and (https://geo.rijkswaterstaat.nl/services/ogc/gdr/wingebieden_noordzee/ows?) there appears to be a significant shift of about 200m to the NNE. Especially in front of the cities of the Hague and Rotterdam. The shift is in the wms and also in the downloadable products. This shift prevents us from using the product, in some cases. Can this be fixed? kind regards, Jelte Stam

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Subject: EMODnet Bathymetry Feedback form
Date: Fri, 11 Feb 2022 08:29:15 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,

Thanks for your interest in EMODnet Bathymetry.

Concerning your issue: your WMS layers work in 2D mode. However, for this to work in 3D mode it appears that your WMS should be https:// and not http://

Could you change to https:// OR try with another VLIZ WMS with https:// and keep us informed?

Our own https:// wms services work fine in 3D mode.

Kind regards,

Dick M.A. Schaap

Technical Coordinator

On 2/8/2022 9:35 AM, noreply@maris.nl wrote:

Name:

Emailaddress:

Feedback: Hi, I'm trying to add a WMS layer to the 3D globe but it is not working. I can request GetCapabilities and see the available layers but once you select one and press Add Layer, it doesn't add it. The wms endpoint is http://geo.vliz.be/geoserver/MarineRegions/wms Hope the feedback helps, cheers!

Subject: EMODnet Bathymetry Feedback form
Date: Mon, 28 Feb 2022 11:47:03 +0100
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,

Thank you for your interest in EMODnet Bathymetry.

The OGC WCS service has limitations in size of areas that you can download as it is a very heavy operation (data volume wise).

Therefore, we advise you to download the DTM tiles which are available for downloading in several formats and also in LAT and MSL. Please go the EMODnet Bathymetry Viewing and Download service, introduced at: https://www.emodnet-bathymetry.eu/data-products

The actual service runs at: https://portal.emodnet-bathymetry.eu/

The layer menu allows you to activate several layers, while there is an option 'downloads' in the top menu. This shows a grid of DTM tiles, whereby each tile is circa 1 GB. This includes a shopping mechanism to click on grid tiles to include DTM tiles in your list and to indicate per tile which format.

Please have a try. This way, you can download and then use the DTM in your local GIS systems.

Kind regards

Dick M.A. Schaap

Technical Coordinator

On 2/28/2022 11:31 AM, noreply@maris.nl wrote:

Name

Email

Feedback / Question   Bonjour, Dans le cadre d'un projet européen, nous essayons de télécharger les données de bathymétrie grâce au webservice WCS. Nous rencontrons un 'read timeout' au bout de 30 secondes, il me semble que ce temps de lecture limité provient du web service. Pouvez-vous me dire s'il existe une autre manière d'accéder aux données de bathymétrie sans être limité en temps de lecture. Merci par avance pour votre aide. Cordialement,

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Subject: Re: EMODnet Bathymetry Feedback form
Date: Tue, 19 Apr 2022 09:18:28 +0200
From: Dick M.A. Schaap <dick@maris.nl>
To:

Dear ,

Thanks for your interest in EMODnet Bathymetry.

We have checked our logs, but can find only one order from you:

Requested   Expired
22-2-2022 10:26:15   22-2-2022 22:26:15
So it seems your new order did not come through.
Could you try again?
Kind regards
Dick M.A. Schaap
Technical Coordinator

On 4/13/2022 10:24 AM, noreply@maris.nl wrote:

Name	
Email	
Feedback / Question	Hi! I requested some bathymetry .nc files yesterday and I still haven't received any email with download links. It's the first time it takes so long. I was wondering if there are any delays or technical issues with the service ?