



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n°3 – Seabed Habitats

EASME/EMFF/2020/3.1.11/Lot3/SI2.843624

Start date of the project: 25/09/2021 - (24 months)

EMODnet Phase IV – Quarterly Progress Report (1)

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



1. Highlights in this quarter.....	4
2. Identified issues: status and actions taken	14
3. User feedback (Contact Us form, online chat & other communication means)	16
4. Meetings/events held/attended & planned	18
5. Communication assets.....	21
6. Monitoring indicators	26
7. Annex: Other documentation attached	28

Disclaimer

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the CINEA or of the European Commission. Neither the CINEA, nor the European Commission, guarantee the accuracy of the data included in this study. Neither the CINEA, the European Commission nor any person acting on the CINEA's or on the European Commission's behalf may be held responsible for the use which may be made of the information.



*EASME/EMFF/2020/3.1.11/Lot3/SI2.843624 – EMODnet Thematic Lot n°3 –
Seabed Habitats*

Quarterly Progress Report

1. Highlights in this quarter

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

- All consortium members are contributors to the data collation work package (WP2) and have begun work to format and gather data described in Appendix 3 of the project proposal.
- ISPRA, JNCC and MI have been creating tutorial videos corresponding to each step in the data submission process to help new and existing partners correctly submit data to WP2,
- With help from the previous WP2 leaders, ISPRA, JNCC has designed a new data collation tracker, which allows us to track data acquisition status, data preparation status and data upload status. The data acquisition status can also be summarised efficiently to report against indicator 3.
- SYKE are leading on a new data theme – coastal wetlands – and have begun developing standard vocabularies to use in all data submissions.
- CCMAR are leading on a new data theme – essential fish habitats – and have identified many new datasets in addition to those listed in the project proposal.
- Data uploads to the portal will occur at six-monthly intervals, starting in April 2022.

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

- JNCC, CCMAR and Ifremer held a planning meeting for WP3 Building Composite Data Products.
- MI, JNCC and other partners have been promoting EUSeaMap via EMODnet news, Twitter and LinkedIn to ensure that potential users are aware of them.
- MI presented EUSeaMap at a Caspian Sea conference to raise awareness of EMODnet in this new region and identify potential data providers.
- JNCC created a log to track issues and potential improvements to existing composite data products.
- Using the library of EUNIS habitat maps collated in previous phases, we have completed a composite data product that combines individual habitat maps from surveys with EUSeaMap to create a full-coverage habitat map for the northeast Atlantic showing the best available data. This work started in the last phase, but was completed in the last quarter on request by the OSPAR Interesessional Correspondence Group on the Coordination of Biodiversity Assessment and Monitoring (ICG-COBAM). This data product is now being used in the latest OSPAR assessment on the extent of physical damage to the seabed.

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

- Nothing to report yet.

Task 4: Contribute data, data products and content to a central portal that allows users to find, view and download data and data products AND Task 5: Contribute content to dedicated spaces in the Central Portal

- JNCC has been having monthly meetings about the central portal with the central portal team.
- On request, JNCC has provided information about the seabed habitats portal, including a list of data products, a list of static content on the website and explained functionality from our portal that we would like to see on the central portal.

- On request, JNCC and other partners have provided feedback on the current version of the new central portal map viewer.

Task 6: Ensure the involvement of regional sea conventions

- Many members of our consortium have active, ongoing relationships with regional sea conventions and continue to take part of various working groups and expert groups.
- As described under Task 2, we have provided the OSPAR ICG-COBAM with a vital data product for their assessment of the extent of physical damage to the seabed. We remain in constant communication with them to answer any questions and provide advice on how to use the data product.
- As described under Task 2, MI presented EUSeaMap at the Scientific Conference [Eon](#) Climate Change in the Caspian Sea Region which was organised by CASPCOM and the Tehran Convention, hosted by UN Environment Programme.

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

- The consortium has submitted a pledge to the Make EU Blue campaign to “continue to improve & expand the coverage of the broadscale seabed habitat map for Europe, EUSeaMap, which serves as a base map for national, regional & global assessments”.
- The Project Coordinator has submitted an abstract to the upcoming International Ocean Data Conference 2022 - The Data We Need for the Ocean We Want, entitled “EMODnet Seabed Habitats: collecting habitat maps once, using many times”.

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

- Our support team is available Monday to Friday 9-17:00 to respond to queries and feedback received via the Contact Us form on the website, or by direct email.
- In this quarter, the responsibility for monitoring the email inbox (to which the Contact Us form completions are sent) has transferred back from Ifremer to JNCC. This has once again become possible since the UK received adequacy status from the EU.
- All correspondence by these means is tracked in our dedicated Feedback Log, which is owned by the WP5 leader, MI, and recently updated to ensure more efficient reporting in the feedback section of this report.
- A new communication plan has been produced between WP5 (communication) leaders old (JNCC) and new (MI). All communication assets and meetings and events are tracked in our dedicated Publicity Log, which has recently been updated to ensure more efficient reporting in the communication assets section of this report.
- For monitoring web performance, we have started the process of streamlining the reporting of data and data product trends on the portal, by labelling every single data layer on GeoServer using the terminology and categories required by the quarterly reports (e.g. themes, sub-themes, data vs data product, sea-basin, etc.).

Task 9: Maintain the existing thematic web portal for a maximum of 6 months from the start of the project

- The seabed habitats web portal continues to be updated for as long as it is operational.
- Project information pages have been updated, included an updated data products summary page, news articles and partner information.

- Data submission pages have been updated to help data providers (predominantly project team members) to prepare data for submission to the project.

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
D1.01: Modified substrate data product including biogenic substrate and data not possible to include in EMODnet Geology product, but which would improve the broad-scale seabed habitat map for Europe (EUSeaMap) [dependent on new product from Geology]	1	25/05/2023		NA
D1.02: Confidence layer for modified substrate data product published	1	25/05/2023		NA
D1.03: A ready-to-use DTM for EUSeaMap	1	25/05/2023		NA
D1.04: Confidence layer for the DTM product published	1	25/05/2023		NA
D1.05: EUNIS-style habitat classification in the Caspian Sea for broad-scale habitat mapping	1	25/09/2022		NA
D1.06: EUNIS-style habitat classification in the Caribbean Sea for broad-scale habitat mapping	1	25/12/2022		NA
D1.07: Environmental layers for the Caspian Sea ready for EUSeaMap	1	25/12/2022		NA
D1.08: Environmental layers for the Caribbean Sea ready for EUSeaMap	1	25/12/2022		NA
D1.09: Halocline layer for the Baltic Sea ready for EUSeaMap	1	25/05/2022		NA
D1.10: Thresholds for Caspian, Caribbean, Baltic, and Mediterranean Seas	1	25/05/2023		NA
D1.11: Broad-scale seabed habitat map for Europe, Caribbean Sea, and Caspian, in EUNIS 2019 and MSFD broad habitat classifications, including a column that describes the habitat descriptor classes	1	25/09/2023		NA
D1.12: Confidence assessment for updated broad-scale seabed habitat map in all considered classifications	1	25/09/2023		NA
D1.13: Confidence associated to all environmental layers published	1	25/09/2023		NA

D1.14: A R script automating the calculation of environmental layers at the seabed from a CMEMS product archives

1 25/09/2022 NA

D1.15: Technical report published

1 25/09/2023 NA

D1.16: Well-documented R code and ArcGIS models used to construct the broad-scale seabed habitat map

1 25/09/2023 NA

D1.17: For Swedish waters, a modelled habitat map based on Geology's novel type of seabed substrate map for habitat modelling [dependent on applicability if this new type of map to habitat modelling]

1 25/12/2022 NA

D2.01: An expanded library of maps of communities, biocenoses, biotopes and habitats for all of Europe, Caribbean Sea and Caspian Sea ingested and converted to a standard format, with metadata for every map

2 25/2/22-
25/8/23 NA

D2.02: An expanded collation of point records of communities, biocenoses, biotopes and habitats for all of Europe, Caribbean Sea and Caspian Sea ingested and converted to a standard format, with metadata for every dataset

2 25/2/22-
25/8/23 NA

D2.03: Updated and integrated templates for habitat map data exchange formats

2 25/11/2021 Delayed

Some decisions needed to be made before this could be delivered. New due date: 31/01/22.

D2.04: Webinars, tutorials or other forms of training material on the EMODnet Seabed Habitats data submission process

2 25/12/2021 Delayed

Dependent on delayed deliverable D2.03. Also overlaps with D5.06 (due 25/03/23). New due date: 31/01/22.

D2.05: An expanded library of modelled maps of specific habitats for all of Europe ingested and converted to a standard format, with metadata for every dataset

2 25/2/22-
25/8/23 NA

D2.06: Evidence of use of the EMODnet Ingestion and safe-keeping of marine data facility for ingesting data points, maps and models from third parties

2 25/09/2023 NA

D2.07: Translation tables for coastal wetland types into one or more standard classifications

2 25/01/2022 NA

D2.08: A data submission process and protocol for coastal wetlands types maps and points

2 25/01/2022 NA

D2.09: Controlled vocabulary lists for classification systems published on NERC Vocabulary Server, as required	2	25/12/21- 25/08/23		NA
D2.10: A library of maps of Essential Fish habitats maps for major fish species in the Mediterranean, North East Atlantic and Baltic Sea ingested and converted to a standard format, with metadata for every map	2	25/2/22- 25/8/23		NA
D2.11: A data submission process and protocol for Essential Fish Habitats maps	2	25/01/2022		NA
D2.12: Formal protocol for data sharing and identification of relevant benthic data between EMODnet Biology and EMODnet Seabed Habitats	2	25/09/2022		NA
D2.13: Updated data model and guidance for benthic point data	2	25/09/2023		NA
D2.14: A standard transformation between OSPAR T&D data schema and OBIS Schema to enable import into OBIS, including a test pilot run using the 2022 OSPAR T&D database	2	25/09/2022		NA
D2.15: Agree a protocol with the OSPAR commission for the continued archiving of the public database within the OBIS network, pending success of D2.14	2	25/09/2023		NA
D2.16: List of point datasets, maps and models available via machine-to-machine connections	2	25/2/22- 25/8/23		NA
D2.17: Progress log for the ingestion of point data, maps and models	2	25/10/21- 25/09/23	Delivered	NA
D3.01: A list of products to be created or updated and product specifications	3	25/03/2022		NA
D3.02: A combined, harmonized data product showing the best evidence for extent and distribution of the Essential Ocean Variable "Live hard coral cover" in Europe, with metadata (updated)	3	25/08/2023		NA
D3.03: A combined, harmonized data product showing the best evidence for extent and distribution of the Essential Ocean Variable "Seagrass cover" in Europe, with metadata (updated)	3	25/08/2023		NA

D3.04: A combined, harmonized data product showing the best evidence for extent and distribution of the Essential Ocean Variable "Macroalgal canopy coral cover" in Europe, with metadata (updated)	3	25/08/2023		NA
D3.05: A combined, harmonized data product showing the best evidence for the extent of wetland type in Europe, Caspian Sea and the Caribbean, with metadata (new)	3	25/04/2023		NA
D3.06: Data contributed to a harmonized data product showing the best evidence for extent and distribution of the Essential Ocean Variable "Mangrove cover and composition", with metadata (new, if required)	3	25/08/2023		NA
D3.07: Evaluation of EFH approaches to determine map suitability to combine into products useful for fisheries management and biodiversity conservation	3	25/05/2023		NA
D3.08: Combined, harmonized data products showing the best evidence for extent and distribution of habitats defined in other classifications in all regions, with metadata, depending on stakeholder needs (new)	3	25/08/2023		NA
D3.09: An updated combined, harmonized data product showing the best evidence for the extent of biogenic substrate in all regions, with metadata (updated)	3	25/01/2023		NA
D3.10: Report detailing the construction of the biogenic habitat data product (updated)	3	25/05/2023		NA
D3.11: Report(s) detailing the construction of the data products defined by stakeholder needs (new)	3	25/09/2023		NA
D3.12: Report detailing the construction of the Essential Ocean Variable data products (updated)	3	25/09/2023		NA
D4.01: A web portal including a digital map, facilities for downloading data, metadata search and technical information	4	25/09/2021	Delivered	NA
D4.02: Contribute to EMODnet Technical Working Group as necessary	4	As necessary		NA
D4.03: Minutes & actions from Technical Working Group within 1 month of meeting	4	Within 1 month of each meeting		NA

D4.04: Ad hoc changes to website and visual identity, as requested by Secretariat	4	25/10/21- 25/03/22		NA
D4.05: A set of data schema standards for the provision of habitat data, built upon international standard.	4	25/09/2021	Delivered	NA
D4.06: Method for indirect cascading of problematic external services prior to onward publication	4	25/12/2022		NA
				Original target date was based on an assumption that there would be more habitat data in EurOBIS by this point. Currently, this is not the case. Also, EurOBIS is not updated very frequently, and for performance issues, we may decide to cache the data locally rather than access by web services. Expected due date: 25/09/23.
D4.07: Habitat ground-truthing data from EurOBIS extracted via web services	4	25/12/2021	Delayed	
D4.08: IPT (or alternative) infrastructure for the publication of habitat data into EurOBIS	4	25/08/2023		NA
D4.09: Internal database of unpublishable habitat data for use in WP1 and to aid public discoverability	4	25/09/2021	Delivered	NA
D4.10: A GeoServer web-server for the provision of OGC spatial web-services (WMS, WFS, WCS)	4	25/09/2021	Delivered	NA
D4.11: A plan of action for the provision of key habitat datasets as attributed raster data	4	25/08/2022		NA
D4.12: A GeoNetwork INSPIRE-compliant metadata instance with OGC CSW capabilities	4	25/09/2021	Delivered	NA
D4.13: Publication to the central portal of relevant data and products collected and created under WP1 and WP2	4	25/03/22 with updates at least every 6 months		NA
D4.14: Website liaison and training node between lot partners/content creators and central portal team.	4	25/09/2021	Delivered	NA
D4.15: Transfer of key habitat mapping resources from the thematic portal to the central portal	4	25/09/2022		NA
D4.16: Direct link to the HELCOM Mapping and Data Service, and similar services from other Regional Sea Conventions where feasible	4	25/03/2022		NA

D4.17: A direct data link to the ICES VME database, providing access to vulnerable marine ecosystem data	4	25/03/2022		NA
D4.18: Tracked issues and suggestions regarding the portal and services, and improvements made as a result.	4	25/09/2021	Delivered	NA
D4.19: Abstracts submitted for annual INSPIRE conference and participation in community forum where relevant.	4	depends on conference dates		NA
D4.20: Publication of relevant products, datasets and services through EOSC and EUODP	4	25/12/2022		NA
D4.21: Live operation of help desk 9-5, Mon-Fri	4	25/10/2021	Delivered	NA
D4.22: Collated anonymous questions and answers published on the portal and through RSS (or alternative mechanism after portal retirement).	4	25/10/2021	Cancelled	It was agreed with CINEA in the previous phase that this was no longer required
D4.23: Provision of Matomo (or similar as steered by secretariat) web analytics information to secretariat for reporting	4	25/09/2021	Delivered	NA
D4.24: Statistics from OGC webservice usage - to be guided by secretariat.	4	25/12/2021	Delivered	NA
D5.01: Evidence of efforts to ensure maximum coherence with data delivery to and from regional sea conventions	5	26/09/2023		NA
D5.02: Updated review of RSC needs	5	31/03/2022		NA
D5.03: Liaise with ICES in advance of annual WG meetings to ascertain products they require for reporting on ToRs	5	26/05/22, 26/05/23		NA
D5.04: Tutorials for creating new maps from existing data	5	26/03/2023		NA
D5.05: Promotion of simple procedural guidelines for creating alternative data formats from existing data formats	5	26/03/2023		NA
D5.06: Tutorial on how to format habitat maps using templates and to simplify the data submission process.	5	26/03/2023		NA
D5.07: Evidence of engagement with relevant working groups and expert groups to gather feedback and needs of habitat data requirements and products that will help Member States to fulfil reporting obligations	5	26/01/22- 26/09/23		NA

D5.08: Minutes of meeting(s) with EMODnet biology	5	26/03/2022		NA
D5.09: Communications plan	5	26/01/2022		NA
D5.10: New use cases on the EMODnet central portal	5	25/09/21- 26/09/23		NA
D5.11: A prominent summary of the data and data products available from EMODnet seabed Habitats web services	5	26/09/2022		NA
D5.12: Co-ordinated and sustained online presence: news stories, blogs, tweets, etc.	5	25/09/21- 26/09/23		NA
D5.13: Presentations and posters at conferences and cross-cutting meetings	5	25/09/21- 26/09/23		NA
D5.14: ESRI story maps / Infographics	5	26/03/2022		NA
D5.15: Record of all promotion and outreach activities	5	25/09/21- 26/09/23		NA
D6.01: Project management plan and project initiation document	6	25/10/2021	Delivered	NA
				A knock on effect of Covid-related delays in the previous phase meant that the previous phase's reporting continued into the start of the current phase and that it was not possible to do any planning in advance of the current phase beginning. New due date: 28/02/22.
D6.02: Project quality management plan and project audit document	6	25/10/2021	Delayed	A knock on effect of Covid-related delays in the previous phase meant that the previous phase's reporting continued into the start of the current phase and that it was not possible to do any planning in advance of the current phase beginning. It has been drafted and partners have reviewed it. Just need to finalise it and get it signed. New due date: 31/01/22.
D6.03: Consortium Agreement	6	25/10/2021	Delayed	
D6.04: Participation in EMODnet SC meetings as necessary	6	As necessary		NA
D6.05: Minutes & actions from Steering Committee meetings within 1 month of meeting	6	Within 1 month of each meeting		NA
D6.06: Progress meeting 1 - WP leads	6	25/03/2022		NA

D6.07: Minutes & actions from progress meeting 1	6	Within 1 month of meeting	NA
D6.08: Progress meeting 2 - whole consortium	6	25/03/2023	NA
D6.09: Minutes & actions from progress meeting 2	6	Within 1 month of meeting	NA
D6.10: Quarterly progress report to EASME, DG-MARE and EMODnet Secretariat	6	15 Jan, 15 Apr, 15 Jul & 15 Oct each year	NA
D6.11: Interim report	6	25/09/2022	NA
D6.12: Submission of the invoice for the interim payment	6	25/09/2022	NA
D6.13: Final report	6	25/09/2023	NA
D6.14: Submission of the invoice for the final payment	6	25/09/2023	NA

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
EM-420 (Task): Log4jShell Critical Bug > EM-422 (Sub-task): Log4jshell Update from SBH	pending	Secretariat has raised a critical security issue affecting all portals. JNCC is looking into it. Marked as 'In Progress' on JIRA.	none	
EM-389 (Task): Please review the new CP map viewer > EM-391 (Sub-task): SBH review of the new CP Map Viewer	resolved	JNCC provided feedback on the new CP Map Viewer. Resolved as far as JNCC is concerned, although still marked as 'To Do' on JIRA.	none	01/12/2021
EM-384 (Task): SBH to produce an inventory of products	resolved	JNCC provided a inventory of products. Resolved as far as JNCC is concerned, unless the Secretariat have further questions. Marked as 'In Review' on JIRA.	none	30/11/2021
EM-383 (Task): SBH Grafana dashboard stopped tracking webpage Search Metadata	resolved	the page URL had changed. JNCC confirmed the URL of the new page. marked as 'In Progress' on JIRA at time of writing this.	none	06/01/2021
EM-354 (Task): statistics for downloads and visitors for the whole EMODnet party for the last 12 months (per month)? > EM-363 (Sub-task): Seabed Habitats to report on number and volume of downloaded data and data products by 29th of October 2021	resolved	JNCC provided the requested statistics. Resolved as far as JNCC is concerned, unless the Secretariat have further questions. Marked as 'In Review' on JIRA.	none	27/10/2021
EM-350 (Bug): Missing attribute in eusm2019_full_800 layer of Seabed Habitat WMS service	resolved	JNCC updated the styling of this layer and resolved the bug. Marked as 'Done' on JIRA	none	07/10/2021
EM-340 (Task): Collect fields/forms used on Thematic Portals > EM-347 (Sub-task): Collect fields/forms used on Seabed Habitats Thematic Portal	resolved	a straightforward task to tell the Secretariat what forms are used on the website, which JNCC completed. Although the Secretariat have not marked it as 'Done' on JIRA yet (still 'To Do').	none	28/11/2021

EM-326 (Task): Collect names of Portal editors for a possible DG COMM training > EM-339 (Sub-task): Collect names of Portal editors	resolved	a straightforward task to send a list of portal editors to the Secretariat, which JNCC completed. Marked as 'Done' on JIRA	none	29/11/2021
---	----------	--	------	------------

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
Nothing to report				

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
2/11/2021	French Museum	technical - Would like to implement a model with substrate data so downloaded C20211108_EUSeaMap_2021_Arctic_Atlantic.gdb but does not know : 1- How to read the data 2- How to extract the data to use them with R Is there a tutorial?	web form	4 hours	resolved	replied via email. Sent a R script to read ArcGIS geodatabase format in R using the rgdal package	resolved
9/11/2021	Cornwall IFCA	technical - trying to find/ download biotope distribution data to produce the same maps that marlin have used for each of their biotopes for the seagrass habitat. Is there a layer which contains this information?	web form	4 hours	resolved	replied via email	resolved
23/11/2021	Not disclosed	technical - Is undertaking a project developing essential fish habitat maps and is relying heavily on our data as information on confidence is available. However, has not been able to download the quality index data for our 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	web form	10 minutes	resolved	replied via email EMODnet bathymetry is in charge of the information she's looking for	resolved
1/12/2021	Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR)	technical - Current work involves the use of the EMODnet KdPAR and Seabed PAR datasets in Northern Germany. As such, would like to cite this dataset in my manuscript. What is the correct ref?	email	10 minutes	resolved	replied via email	resolved
8/12/2021	JNCC	technical - I wanted to add the windfarm data (point and polys) from EMODnet Human Activities to the ESH mapper, but when I select Add external	web form	10 minutes	resolved	replied via email to explain that this is a problem with SSL	resolved

		layers and try to get layers from HA, I get 'No layers available from this source'. Is this a bug at our end or theirs?				certification at EHA's end	
9/12/2021	DG-ENV	request for analysis - Would you have values for the extent (km2) of each MSFD broad habitat type per country (and per subregion if several for a country)? ... I need to do some calculations in relation to seabed trawling.	email		pending	Offered to do these calculations and publish them online	will take some time. aiming for January 2022
10/12/2021	Not disclosed	technical - Would need the data for the probability of coralligenous, maerl and posidonia habitats in Greece. Tried to download the three datasets from the map viewer but did not work.	web form	6 days	resolved	replied via email. There has been a change in the permissions associated with this data and that they are not available for download. Suggested to contact the owner	resolved

4. Meetings/events held/attended & planned

A. Meetings/events organised and attended					
Date	Location	Type event (internal or external meeting, training/workshop)	Indicate if a ppt was given (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
15/10/2021	Web	Internal Meeting	no	O	WP5 planning, including JNCC handing over responsibility for this WP to MI. 4 participants. MI now prepared to manage WP5.
27/10/2021	Web	External Conference	yes - on the challenges of delivering EUSeaMap in the Caspian Sea	A	Conference on Climate Change in the Caspian Sea Region (27-28 October). ~200 participants. Promotion of EMODnet Seabed Habitats Phase 4 extension of EUSeaMap into the Caspian Region. Initial identification of primary research contacts for this region. 6 recommendations submitted for inclusion into the Conference Summary Report.
28/10/2021	Web	External Meeting	no	A	EMODnet Central Portal Technical team meeting with Seabed Habitats - meeting 1. ~15 participants. Central Portal team gained a better understanding of steps needed to incorporate the contents and functionality of the Seabed Habitat portal into the Central Portal.
11/11/2021	Web	Internal Meeting	no	O	WP2 planning, including ISPRA handing over responsibility for this WP to JNCC. 5 participants. JNCC now prepared to manage WP2.
23/11/2021	Web	External Workshop	yes - on data standards and useful EMODnet Seabed Habitats data	A	Workshop: Towards a Coordinated European Observing System for Marine Macroalgae. 53 participants. Awareness of EMODnet Seabed Habitats data standards

			products (prepared as part of a wider EMODnet presentation delivered by Biology)		and existing data products relevant to marine macroalgae.
30/11/2021	Web	Internal Meeting	no	O	Caspian Climate Conference - Presentation Debrief. 4 participants. MI described the 27/10 conference to other partners, with some suggested next steps
30/11/2021	Web	Internal Meeting	no	O	WP1 and WP6 planning. 2 participants. Agreement on division of responsibilities between Project Coordinator (at JNCC) and Technical Project Manager (at Ifremer), who together with the Project Administrator (at JNCC), form the 'Project Office'. Ifremer now prepared to manage WP1.
30/11/2021	Web	Internal Meeting	no	O	WP3 planning and essential fish habitats. 4 participants. CCMAR now prepared to manage WP3.
01/12/2021	Web	External Meeting	no	A	EMODnet Central Portal Technical team meeting with Seabed Habitats - meeting 2. ~15 participants. Central Portal team gained a better understanding of steps needed to incorporate the contents and functionality of the Seabed Habitat portal into the Central Portal.
02/12/2021	Peterborough	Internal Meeting	no	O	WP4 planning. 2 participants. JNCC now prepared to manage WP4.
SUM				O	Total # of meetings organised = 6
SUM				A	Total # of meetings attended = 4

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
19/01/2022	Web	Internal Meeting	O	EMODnet Seabed Habitats kick-off. We expect that all consortium members will gain a greater understanding of what is required in the project.
02/02/2022	Web	External Meeting	A	EMODnet Central Portal Technical team meeting with Seabed Habitats - meeting 3. We expect the Central Portal team to continue to gain a better understanding of steps needed to incorporate the contents and functionality of the Seabed Habitat portal into the Central Portal.
14/02/2022	Web	External Conference	A	International Ocean Data Conference 2022 - The Data We Need for the Ocean We Want.

5. Communication assets

A. Communication products				
Date	Communication material	Short description (of the material, title, ...) of the asset	Main results	Name of event at which material was disseminated (if applicable)
29/10/2021	News article	EMODnet Central news article entitled "EUSeaMap 2021: EMODnet broad-scale seabed habitat map for Europe"	Greater awareness of the existence of an updated EUSeaMap so that the latest version of this product is used.	NA
11/11/2021	Newsletter item	EMODnet newsletter item entitled New release of EMODnet broad-scale seabed habitat map for Europe (EUSeaMap)"	Readers see that there is an update to EUSeaMap, and their attention is drawn to the longer news article on this topic.	NA
11/11/2021	News article	EMODnet Seabed Habitats news article entitled "Official Release of EUSeaMap 2021"	Greater awareness of the existence of an updated EUSeaMap so that the latest version of this product is used.	NA
12/11/2021	News article	EMODnet Seabed Habitats news article entitled "EMODnet Seabed Habitats - Phase 4"	Awareness that the new phase of EMODnet Seabed Habitats has begun, with some new objectives and partners	NA
23/11/2021	Online pledge	A pledge: "EMODnet Seabed Habitats will continue to improve & expand the coverage of the broadscale seabed habitat map for Europe, EUSeaMap, which serves as a base map for national, regional & global assessments"	Greater awareness of EMODnet as a contributor to marine environmental protection in Europe.	NA

30/11/2021	News article	EMODnet Central news article entitled "Conference on Climate Change in the Caspian Sea 2021"	Awareness that the geographic scope has expanded to the Caspian Sea	NA
30/11/2021	Newsletter item	EMODnet news item entitled "Conference on Climate Change in the Caspian Sea 2021"	Readers see that the geographic scope has expanded to the Caspian Sea and their attention is drawn to the longer news article on this topic.	NA
30/11/2021	News article	EMODnet news item entitled "EMODnet Seabed Habitats Phase IV"	Awareness that the new phase of EMODnet Seabed Habitats has begun, with some new objectives and partners	NA
30/11/2021	Newsletter item	EMODnet newsletter item entitled "EMODnet Seabed Habitats Phase IV"	Readers see that a new phase has begun, with some new objectives, and their attention is drawn to the longer news article on this topic.	NA

B. Planned communication products

Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected
In progress	Article in MEDIN newsletter	Release of new EUSeaMap 2021 and other datasets ESH products, including data layers and technical report	Promote EMODnet Seabed Habitats Products
Feb 1	EMODnet Central Protocol for promoting new datasets	Release of biogenic substrate layer for Europe	Promote EMODnet Seabed Habitats Products
Feb 21	News item on ESH website	Release of biogenic substrate layer for Europe	Promote EMODnet Seabed Habitats Products

Mar 1	EMODnet Central Protocol for promoting new datasets	Release of coralligenous habitats in the Mediterranean Sea	Promote EMODnet Seabed Habitats Products
Mar 21	News item on ESH website	Release of coralligenous habitats in the Mediterranean Sea	Promote EMODnet Seabed Habitats Products

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)
Sept 2021	Ecological Indicators	Beyond connecting the dots: A multi-scale, multi-resolution approach to marine habitat mapping. http://dx.doi.org/10.1016/j.ecolind.2021.107849	Karin J.van der Reijden, Laura L. Govers, Leo Koop, Johan H. Damveld, Peter M. J. Herman, Sebastiaan Mestdagh, Gerjan Pieth, Adriaan D. Rijnsdorph, Grete E. Dinesen, Mirjam Snellen and Han Olff.	University of Groningen, Technical University of Denmark, Royal Netherlands Institute for Sea Research, Delft University of Technology, University of Twente, Coastal Engineering Group of Deltares, Wageningen Marine Research, Wageningen University, Department of Applied Geology and Geophysics, Deltares.
2021	Marine Policy	Spatial overlap between human activities and seabed habitats in European Seas: Insights into EMODnet's data for management purposes. https://doi.org/10.1016/j.marpol.2021.104551	Oihana Solaun Yolanda Sagarmínaga , Iratxe Menchaca , Ibon Galparsoro	AZTI, Marine Research, Basque Research and Technology Alliance (BRTA)
2021	Marine Pollution Bulletin	Identifying hotspots of non-indigenous species' high impact in the Maltese islands (Central Mediterranean Sea). https://doi.org/10.1016/j.marpolbul.2021.112016	Angela G. Bartolo, Konstantinos Tsiamis, Frithjof C. Küpper	School of Biological Sciences, University of Aberdeen, UK, Vroutou 12, Greece, Marine Biodiscovery Centre, Department of Chemistry, University of Aberdeen, Aberdeen, UK.

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	Matomo/ other (Please state which monitoring tool was used to collate the information in each case)	No new data uploaded during the quarter as per workplan.
B) Usage of data in this quarter		Considerable increase in number of manual downloads over the previous quarter, especially accounting for the December holiday period. Main peak in downloads appears to be November, possibly coinciding with greater communications coverage due to EUSeaMap 2021 news story. Increase in number of WMS and WFS requests despite Geoserver logging error mid-december (now rectified), so true figures likely even higher.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products		6 Finnish habitat maps removed from the portal at request of data provider (due to security concerns) - bounding boxes and metadata retained. No new data added this quarter as per workplan.
B) Usage of data products in this quarter		Similar to Data, heavy increase in manual downloads of products. Also similar to data, peak downloads are in early November which potentially show a link with increased communications coverage due to the EUSeaMap 2021 news story on the central portal. WFS requests marginally down for composite products, though not significantly, likely impacted by a Geoserver logging error in mid-December (since rectified)
3. Organisations supplying/approached to supply data and data products within this quarter		Excellent initial progress made with initial requests for data and data products from not only European continent but also Caribbean seas. All listed rows represent data or data products that have been successfully received by the relevant EMODnet partner. They will then subsequently be QC'd and ingested into the portal throughout the phase.

4. Online 'Web' interfaces to access or view data		No changes to services. Move to new Geoserver delayed by person circumstances of relevant staff, though still in pipeline.
5. Statistics on information volunteered through download forms		Roughly 50% of "users" (treated as individual download events) gave some form of information. From those giving sector information, heavy slant towards academia, which is consistent with previous quarters. Geographic percentages remain similarly consistent.
6. Published use cases		Much heavier viewership of Mediterranean case studies (along with the UK-French interconnector study) in comparison to other regions. Reasoning uncertain. Recommend publication of further use cases on the central portal is tied in with centralisation work to avoid duplication of effort.
8.1. Technical monitoring		Response times improved since previous (final report) and satisfactory. Previous high response time likely an anomaly (no intentional change made to server).
8.2. Portal user-friendliness (Visual harmonization score)		Increase in conformity of footer structure and webportal header scores in comparison to previous (final) report, suggesting greater conformance.
9. Visibility & Analytics for web pages		Stats remain consistent since the start of the phase (October 2021)
10. Visibility & Analytics for web sections		Pageviews remaining generally consistent since the start of the phase.
11. Average visit duration for web pages		Key trends are increase in duration spent on documentation site area (possibly linked with viewing of EUSeaMap 2021 papers) and lowered duration on data exchange format area, which ties in with the reduced activity on data submission commonly happens at the start of a phase.

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
