



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n° 2 - Seabed Habitats

EASME/EMFF/2018/1.3.1.8/Lot2/SI2.810241

Start date of the project: 25/09/2019 - (24 months)

EMODnet Phase III – Quarterly Progress Report (13)

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



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1. Highlights in this quarter

Task 1: develop a common method of access to data held in repositories

- We recently obtained permission from HCMR to make a series of Greek maps open-source and available to download. This was a total of 132 maps which are now showing on open access GeoServer map library (https://ows.emodnet-seabedhabitats.eu/emodnet_open_maplibrary/wfs).
- An error was noticed with a series of habitat maps on our GeoServer instance whereby maps were showing as a “geometry collection” as opposed to a polygon geometry type, indicating an error with layers. Upon investigating the error was found to the virtual tables used in the XML files on the GeoServer data directory were not updating. A script was written to automate the changes by directly inputting the relevant SQL statement to the virtual table.
- 48 new maps from survey or groundtruth point datasets have been collated, processed and made available through the portal (see section 7): Spain (4), France (8), Italy (8), Ireland (8), Denmark(9), Bulgaria (1), United Kingdom (10)

Task 2: construct products

- No progress in this task in the period July-September 2020

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

- Progress has been made on collating and disseminating third-party maps using M2M connections where possible. We liaised with the Institute of Marine research (Norway) and have added to the interactive mapper 5 modelled maps of specific habitats produced by the MAREANO project and accessed via their web services.
- Set up a meeting with the OSPAR Data Administrator to discuss EMODnet Seabed Habitats web services. Seabed Habitats, via JNCC, prepares and disseminates the OSPAR Threatened & Declining Habitats database, which is hosted on Seabed Habitats. OSPAR harvest our web services to show the database on the ODIMS system. They noticed some continuity issues with naming conventions for the GeoServer layers and have agreed on a new process going forward.
- Liaised with ICES about harvesting their VME database, as they now implement HTTPS on their servers which should prevent any CORS errors when harvesting to Seabed Habitats. However, we are still experiencing some issues harvesting it. The OSPAR Data Administrator also had similar issues harvesting their data. It seems they only implemented HTTPS on their servers and not the GeoServer instance, meaning any requests routed to GeoServer come back as HTTP, resulting in the original CORS error.
- Specific work with OBIS/EMODnet Biology on harvesting and filtering habitat point information stored in OBIS is due to begin in the second year of the phase. Preparatory work has already been undertaken with trialing the submission of the UK’s habitat point database to OBIS and initial feedback is positive.
- Progress is being made on the JIRA 33 issue. We are currently going through all of the layers highlighted in the previous validation report and making changes where possible. As mentioned before, some layers cannot be parsed in XML because they are not available in that format. Additionally, some of the layers highlighted are cascaded to our GeoServer from external services where their metadata does not provide metadata or data links, meaning we have to source these ourselves.

Task 4: maintain and further develop a thematic web portal

- We have renewed the website support contract with the same contractor who developed the content management system for the portal. They have amended the download forms so they are consistent with the quarterly reporting requirements.
- JNCC have worked with their inhouse developers to develop a new GeoServer environment. The aim is for the GeoServer instances to be provided through a series of “self-healing” Docker containers, whereby if one container goes down for any reason a replica copy will activate to continue the provision of web services, therefore minimizing any downtime
- We have published a series of news items on EMODnet activities in the News section of the portal as listed in Section 5.
- We added new resources on habitat mapping (e.g. EUSeaMap 2019 technical report) and added the latest EMODnet Seabed Habitats quarterly progress reports and indicators spreadsheets in the “Resources” pages, as requested by the EMODnet Secretariat
- We are currently working with the contractors who developed the mapper to add new functionality to the mapper. Progress has been made on downloading map data using a bounding box tool, and we are currently looking to implement a distance/area calculator tool. These are currently still in development.
- Users noticed an error when trying to display the GEBCO undersea features layers. The error seemed to be a change in their API endpoints which was now out of date. This issue has been resolved and the layers should be showing on the mapper.
- We experienced an issue this quarter with the mapper, whereby there seemed to be a javascript error preventing users from accepting cookies which is required to launch the mapper. We spoke with contractor who developed the content management system and got this error resolved.

Task 5: ensure the involvement of regional sea conventions

- A report on the stakeholder needs for combined harmonized seabed habitat data products in Europe has been created
- We have been invited to make a presentation at 4th meeting of the HELCOM Expert network on Benthic Habitats. We will present and ask comments from regional experts in HELCOM EN-benthic expert group on our planned work - and future work. This will be an excellent opportunity to
 - Present Emodnet Seabed habitat initiative’s plans for the next year (e.g. EUSeaMap modelled in EUNIS2019 & MSFD BHT) and show what the ESH portal offer
 - Discuss synergies in data collation (e.g. Natura 2000 maps)
 - Gather feedback on requirement for habitat mapping products in the future

Task 6: install a process to monitor performance and deal with user feedback

- No new work has taken place as we already have a process to monitor performance and deal with user feedback

Task 7: operate a help desk offering support to users

- This task is operated routinely (see section 6 for a recap of all feedbacks). Following requests from EASME and the Secretariat, Seabed Habitats decided to deactivate the task.to instant messaging service following the changes in the US-EU privacy shield agreement (see issue in section 2).

2. Identified issues: status and actions taken

A. Priority issue(s) identified and communicated by EASME/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved
<p>email from EMODnet Secretariat on 12/08/2020: Urgent GDPR requirement from SC&DIGIT</p> <p>Judgment invalidating the EU-US Privacy Shield – the way forward. the EU Secretariat General and DIGIT are requesting EMODnet portals to either terminate, or inventorise (using an excel File) any processing agreements involving transfer of personal data to non-EU/EEA</p>	Resolved	We disabled the tawk.to service. As a result, there is no longer live chat services on EMODnet Seabed Habitats portal	28/08/2020	
<p>21/11/2019 JIRA issue EMODNET-33. EASME - Action on Web Services MetadataUrl and DataUrl fields</p> <p>Recap of task: for every layer in GeoServer, make it so that the data url points to a predefined download link.</p> <p>The problem is that we have hundreds of these layers.</p>	Pending	Progress is being made on the JIRA 33 issue. We are currently going through all of the layers highlighted in the previous validation report and making manual changes where possible. As mentioned before, some layers cannot be parsed in XML because they are not available in that format. Additionally, some of the layers highlighted are cascaded from external services	15/11/2020	

B. Issues / challenges identified by the thematic assembly group itself

Priority issue / challenge	Status (Pending/Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved
<p>JNCC (data processor) Data services team mentioned that the EMODnet Seabed Habitats cookie management system is not compliant with GDPR legislation and other privacy regulations. The cookie pops up should allow users to manage cookies preferences and give options to select which type of cookies they want to allow (e.g. customise settings option in cookies pop up in this website, https://sac.jncc.gov.uk/). Also users consent given should be properly managed and stored in a database (there are companies that offer this specific service). Changing EMODnet Seabed Habitats website implies we will need a service that manages the database with the consent, deploying a different cookie pop up - as well as providing an up to date cookie audit (we have a cookie list already). For doing this, we would need a decision for EASME as they are the Data Controller for EMODnet.</p> <p>JNCC would needs a steer from EASME about this, and if EASME decided not to make the changes, we would need the decision in writing.</p>	pending	Need steer from EASME		



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
07/07/2020	EMODnet Central	Technical - the WFS server is not working	Email	1 Hour	Resolved	Assistance provided	Resolved
16/07/2020	Blue Marine Foundation	Technical - what is the best data source for depth to seabed that I can combine with EUSeaMap?	Live Chat	1 Second	Resolved	Live assistance provided	Resolved
16/07/2020	Swansea University	Technical - Is the EOVS seagrass data available for download?	Email	1 Second	Resolved	Link to download sent	Resolved
20/07/2020	National meteorological, seismic, sea and atmospheric organization of Portugal (IPMA)	General - Do you have any seabed habitat data around Portugal?	Live Chat	1 Second	Resolved	Live assistance provided	Resolved
21/07/2020	Not disclosed	Technical - I have downloaded EUSeaMap 2019 but cannot access the data	Live Chat	20 minutes	Resolved	Emailed ways to access the feature classes in the GeoDatabase	Resolved

22/07/2020	Blue Marine Foundation	Technical - Can you please tell me how wave classes were identified	Live Chat	1 Second	Resolved	Emailed link to Technical Report	Resolved
23/07/2020	National meteorological, seismic, sea and atmospheric organization of Portugal (IPMA)	Technical - What are the values surrounding EUSeaMap confidence and how were they assigned?	Live Chat	1 Second	Resolved	Live assistance provided	Resolved
22/09/2020	Swansea University	Technical - What units are the attributes min and max depth recorded under?	Email	1 day	Resolved	Replied via email	Resolved
24/09/2020	OSPAR	Technical - Can we please keep the naming convention of the OSPAR WMS and WFS layers and just replace the dataset each year?	Email	1 day	Resolved	Replied via email	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.)
01/07/2020	Videoconf	meeting	No	O	4th Project Management Team meeting
03/07/2020	Videoconf	meeting	No	A	EMODnet human activities technical presentation - Organised by DG MARE - Partners attending: Ifremer - EMODnet human activities to present an overview of features/technology specific to the thematic portal
13/07/2020	Videoconf	meeting	No	O	EMODnet biology and EMODnet Seabed habitats OBIS collaboration and outreach - Organised by Emodnet Biology - Partners attending: JNCC - Catch up with EMODnet biology coordinator and WP-lead on coordinating outreach activities and working together for ingestion of data into EuroBIS - Agreement of joint outreach activities catch up on progress with EuroBIS ingestion. Coordination of future work, synergies and improved way of working together

17/09/2020	Videoconf	meeting	No	A	Update on indicators - Organised by EMODnet Secretariat - Partners attending: Ifremer, JNCC - Secretariat to update thematic lots on new indicators
22/09/2020	Videoconf	webinar	No	A	Webinar - EMODnet: A decade of achievements connecting marine data to knowledge - Organised by EMODnet Secretariat
23-24/09/2020	Videoconf	Meeting	No	A	Zyad Al-Hamdani (GEUS), both partner in EMODnet Geology and Seabed Habitat, attended EMODnet Geology Progress meeting There were about 100 participants, and the new substrate map was the main issue that concern the Habitat Lot. Also, the coastal zone and seabed morphology. WP3 1K resolution Seabed substrate map will be produced in early 2021, and the final product will be finished in summer 2021. Multiscale dataset will also be produced.
SUM				O	Total # of meetings organised =2
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
08/10/2020	Toulouse, France	meeting	O	Meeting with CMEMS - Organised by Ifremer and CMEMS - Partners attending: Ifremer Follow-up of the videoconf that occurred 28/02 - Further discuss ways to highlight and link to EMODnet products on CMEMS data services
09/10/2020	Videoconf	workshop	A	EMODnet biology Transatlantic data products workshop - Organised by Emodnet biology - Partners attending: JNCC - EMODnet biology Transatlantic data products workshop - how can we applying US/Canadian data to the product workflows
14/10/2020	Videoconf	workshop	A	Oral Presentation of Mickaël Vasquez at Copernicus user uptake workshop 'Using Earth Observation for Water Quality Monitoring' – Presentation title: Using Earth Observation for Seabed habitat mapping - The workshop is funded by 'Copernicus User Uptake' funds to deliver collaborative projects and events which are aimed at increasing the use of Copernicus satellite data for environmental applications. EMODnet Seabed habitats is going to participate from the perspective of end

				users and give a presentation on the first day.
09-10/11/2020	Videoconf	meeting	A	13th EMODnet Steering Committee Meeting
12-22/11/2020	Videoconf	meeting	A	8th EMODnet Technical Working Group Meeting
11-13/11/2020	Videoconf	HELCOM Secretariat	A	4th meeting of the HELCOM Expert network on Benthic Habitats Emodnet Seabed habitats has been invited to present and ask comments from regional experts in HELCOM EN-benthic expert group on our planned work - and future work
24-26/11/2020	Videoconf	conference	A	MeriGéo: French Marine GIS and remote sensing conference (occurs every 2 years). Oral Presentation of Mickaël Vasquez and Thierry Schmitt (EMODnet Bathymetry). Title: "Synergies between EMODnet Seabed Habitat et EMODnet Bathymetry". Poster. Title: "A European web portal to access spatial data on benthic habitats: EMODnet Seabed Habitats".
10/12/2020	Videoconf	webinar	O	JNCC Science Talks Series., Kate Larkin from EMODnet Secretariat will present a history of EMODnet initiative and its future, and take question from the

				<p>audience. ESH achievement will also be highlighted.</p> <p>The talk is advertised to JNCC partners and internally at JNCC as part of the JNCC Science talks series. If consent is given by the speaker the talk will be recorded and made available online as a webinar</p>
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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)
16-17/10/2019	Poster	Title: "Marine habitats of importance in Kerry" presented at the Annual seminar of the Irish National Seabed Mapping Programme, Dingle, Co. Kerry, Ireland. Link to event details: https://www.infomar.ie/sites/default/files/2019-10/INFOMAR_2019_Seminar_Agenda_0.pdf	100+ participants	
31/10/2019	Abstract submission: oral presentation	Title: "Synergies between EMODnet Seabed Habitat et EMODnet Bathymetry". Submitted to the French Marine GIS and remote sensing conference (occurs every 2 years).	Abstract accepted	
31/10/2019	Abstract submission: poster	Title: "A European web portal to access spatial data on benthic habitats: EMODnet Seabed Habitats". Submitted to the French Marine GIS and remote sensing conference (occurs every 2 years).	Abstract accepted	
20/11/2019	News item on ESH portal:	Title: "Phase three extended through to 2021". Link to new item: https://www.emodnet-seabedhabitats.eu/news/phase-3-extension/	Promotes the start of a new phase of ESH	
21/02/2020	EMODnet Data and data product portfolio	Helen Lillis (JNCC) - Coordination EMODnet Secretariat	Document updated	
24/02/2020	EMODnet Seabed Habitat Factsheet	Helen Lillis (JNCC) - Coordination EMODnet Secretariat	Document updated	
06/05/2020	News item on ESH portal:	A webpage providing a prominent summary of the data and data products --The variety of harmonised marine data and products are summarised in the form of pivot tables. The tables can be used to identify which data and products are available in different basins, which can be viewed by clicking on the links within in each product. <u>Link</u>	Improve user-friendliness of the portal	

12/06/2020	Report	Jordan Pinder (JNCC) - Contribution to EMODnet Annual Report 2019	Input to the "EMODnet in Figures" section	
14/07/2020	Story Map (video)	A story map which is available on the ESH website describing data available through the portal and how users can access it	Improve user-friendliness of the portal and promote the portal	
14/07/2020	News item on ESH portal: a story map	Promoting the publication of the Story map Link	Improve user-friendliness of the portal and promote the portal	
5/08/ 2020	News item on ESH portal	EMODnet Online survey Promoting the 2020 online Survey on EMODnet	Promote the survey to the users of ESH portal	
5/08/2020	EMODnet homepage updated with the banner on EMODnet Online survey	Promoting the 2020 online Survey on EMODnet	Promote the survey to the users of ESH portal	
15/08/2020	video	Contribution to the 10 years of EMODnet in 10 minutes - JNCC and Ifremer recoded short videos that were edited for the short documentary film that captures the EMODnet story over the last 10 years. Link	Contribute to the EMODnet 10 years event and publicity material	
21/08/2020	News item on ESH portal:	Discover the EU Atlas of the Seas powered by EMODnet - Promoting the newly launched European Atlas of the Seas and how ESH contributes to it	Promoting ESH contribution to the Atlas of the Seas	
22/09/2020	Tweets	Celebrating 10 years of EMODnet	2 tweets JNCC account has >7000 followers	https://www.emodnet.eu/en/webinar
05/10/2020	News item on ESH portal:	Celebrating 10 years of EMODnet LINK	Promoting the launch of the 10 years of EMODnet in 10 minutes video	
13/10/2020	Tweets	A series of tweets linked to the participation of ESH on of Copernicus users uptake workshop on the use Earth Observation for water quality monitoring (#JNCC_EO4water)	10 retweets 2 quote tweets JNCC account has >7000 followers	https://jncc.gov.uk/news/earth-observation-water-quality/

		Ifremer/Seabed Habitats presented using #EO products in seabed habitat mapping @EMODnet @CopernicusEU tagged		
10/10/2020	Newsletter article	JNCC Science Bulletin is an online monthly bulletin published by JNCC and aimed at informing JNCC stakeholders and clients of achievements and activities. The October bulletin will feature 10 years of EMODnet and key achievement of EMODnet Seabed Habitats in the past 10 years - the bulletin is promoted on all JNCC's social media channels (Twitter, Facebook and LinkedIn). LINK	Distributed to JNCC Bulletin subscribers and internally at JNCC	
15/07/2020	report	EUSeaMap 2019 Technical report release and publication on ESH and on ARCHIMER LINK	Inform users on methodologies and updates in EUSeaMap 2019	
08/2020 and ongoing	report	All 12 quarterly reports to the EU from all ESH phases published on ESH website LINK	Inform stakeholders on progress and activities carried out in the previous phases of ESH	
SUM			Reports	14
SUM			News items on ESH website	5
SUM			Tweet series	2
SUM			Conference posters and abstracts	3
SUM			Webpages	2
SUM			Newsletter articles	1
SUM			Videos and story maps	2
SUM			Other documents	2

B. Planned communication products			
Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected
10/2020	News item on WSH website	A news item on the participation of ESH to Copernicus users uptake seminars on the use Earth Observation for water quality monitoring with links to presentation by ESH and webinar recording	Promotion of links with Copernicus project and how the two initiatives benefit each other
11/2020	Report	Stakeholder review report published on ESH website and on ARCHIMER	Inform users and stakeholder of plan for ESH products creation
11/2020	News item on ESH website	Publication of Stakeholder report	Inform users and stakeholder of plan for ESH products creation
11/2020	News item on ESH website	Addition of new datasets to the portal	Inform users of updates also more traffic to the portal and promotion of the portal
11/2020	Tweet	Addition of new datasets to the portal – user of the story map in the tweet	More traffic to the portal and promotion of the portal
02/2021	Tweet	Meeting EMODnet biology on ingestion of habitat data into EuroOBIS	Promote the activities of both lots
02/2021	News item on ESH website	Meeting EMODnet biology on ingestion of habitat data into EuroOBIS	Promote the activities of both lots

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)
June 2020	EEA Report	Marine messages II Navigating the course towards clean, healthy and productive seas through implementation of an ecosystem-based approach EEA Report No 17/2019 LINK		
September 2020	Quarterly Journal of Engineering Geology and Hydrogeology	INFOMAR data supports offshore energy development and marine spatial planning in the Irish offshore via the EMODnet Geology portal DOI		
January 2020	Ecological Indicators	Assessing marine ecosystem services richness and exposure to anthropogenic threats in small sea areas: A case study for the Lithuanian sea space DOI		
August 2020	Marine Policy	Strategies and trends of bottom trawl fisheries in the Mediterranean Sea DOI		
June 2020	Environmental and Sustainability Indicators	Identifying ecosystem services research hotspots to illustrate the importance of site-specific research: An Atlantic coastal region case study DOI		

October 2020	Ecological Indicators	Detecting adverse effect on seabed integrity. Part 2: How much of seabed habitats are left in good environmental status by fisheries? DOI		
February 2020	Progress in Oceanography	Distribution and life history trait models indicate vulnerability of skates DOI		
February 2019	Science of The Total Environment	Ecosystem damage from anthropogenic seabed disturbance: A life cycle impact assessment characterisation model DOI		
November 2020	Ecological Modelling	Multi-scale interaction processes modulate the population response of a benthic species to global warming DOI		
August 2020	NIVA-rapport	Supplementary material to ECOMAR: A data-driven framework for ecosystem-based Maritime Spatial Planning in Danish marine waters LINK		

6. Monitoring indicators

Comments on the progress indicators in the excel template		
Progress indicator	Means of collecting figures	Comment
<p>1. Current status and coverage of total available thematic data</p> <p>A) Volume and coverage of available data</p>	<p>Other.</p> <p>Internally calculated based on data stored within backend databases, and updates made within that quarter.</p>	<p>6 point datasets were added this quarter. 1 dataset in the Black Sea, total of 60 points. 5 datasets in the North Sea, total of 717 points.</p> <p>Additionally, the only "data" we hold here are point records, meaning that area calculations are not relevant.</p> <p>Sea basin figures:</p> <p>Seabed Habitats uses a combination of ways to calculate the figures. Units are provided alongside each respective data/data product. For example, number of records for ground-truthing points, km2 coverage of EUSeaMap, number of datasets etc.</p> <p>The sea-basin area calculation has never been used so far. As raised at the previous TWG, Seabed Habitats would prefer a steer from the Secretariat on what data should be used to calculate these percentage coverages of each sea basin; for example what specific shapefiles should be used, what CRS etc.</p> <p>It needs to be a unified process across all portals where we use the same boundaries shapefiles and CRS to do these calculations, otherwise we risk each portal doing their own process with different results.</p>
<p>B) Usage of data in this quarter</p>	<p>Other.</p> <p>Internally calculated based on data stored within backend databases,</p>	<p>Small increase in downloads of point data, surprisingly quite small as thought ground-truthing would be more desired.</p> <p>Sea basin figures:</p> <p>Seabed Habitats uses a combination of ways to calculate the figures. Units are provided alongside each respective data/data product. For example, number of</p>

	<p>and updates made within that quarter.</p> <p>Logs extracted from manual download forms and GeoServer requests to provide number of OGC requests.</p>	<p>records for ground-truthing points, km2 coverage of EUSeaMap, number of datasets etc.</p> <p>The sea-basin area calculation has never been used so far. As raised at the previous TWG, Seabed Habitats would prefer a steer from the Secretariat on what data should be used to calculate these percentage coverages of each sea basin; for example what specific shapefiles should be used, what CRS etc.</p> <p>It needs to be a unified process across all portals where we use the same boundaries shapefiles and CRS to do these calculations, otherwise we risk each portal doing their own process with different results.</p>
<p>2. Current status and coverage of total number of data products</p> <p>A) Volume and coverage of available data products</p>	<p>Same as indicator 1.</p>	<p>A total of 42 new individual habitat maps from survey have been added to the portal. 20 new maps are in the Greater North Sea area, 13 new maps in the Atlantic, 9 maps in the Med and 1 map in the Baltic. Note the redundancy, 1 map is found in both the Greater North Sea & Atlantic and is included in both sea basin figures.</p> <p>5 new modelled habitat maps have been added to our collection. These were sourced from the Institute of Marine Research (Norway) and were part of the Mareano mapping project. All maps are hosted on our GeoServer & mapper using M2M connections.</p> <p>Sea basin figures:</p> <p>Seabed Habitats uses a combination of ways to calculate the figures. Units are provided alongside each respective data/data product. For example, number of records for ground-truthing points, km2 coverage of EUSeaMap, number of datasets etc.</p> <p>The sea-basin area calculation has never been used so far. As raised at the previous TWG, Seabed Habitats would prefer a steer from the Secretariat on what data should be used to calculate these percentage coverages of each sea basin; for example, what specific shapefiles should be used, what CRS etc.</p> <p>It needs to be a unified process across all portals where we use the same boundaries shapefiles and CRS to do these calculations, otherwise we risk each portal doing their own process with different results.</p>

<p>B) Usage of data products in this quarter</p>	<p>Same as indicator 1.</p>	<p>Based on previous reports the summer period is generally much quieter which is shown in the drop off of map visualisations and WMS requests. Interestingly there was a higher usage of actual data through WFS requests (up by 86%) and downloads of the Physical data products (e.g. light, energy etc.). Downloads of the main products (e.g. EUSeaMap) and individual habitat maps has remained largely constant.</p> <p>Sea basin figures:</p> <p>Seabed Habitats uses a combination of ways to calculate the figures. Units are provided alongside each respective data/data product. For example, number of records for ground-truthing points, km2 coverage of EUSeaMap, number of datasets etc.</p> <p>The sea-basin area calculation has never been used so far. As raised at the previous TWG, Seabed Habitats would prefer a steer from the Secretariat on what data should be used to calculate these percentage coverages of each sea basin; for example, what specific shapefiles should be used, what CRS etc.</p> <p>It needs to be a unified process across all portals where we use the same boundaries shapefiles and CRS to do these calculations, otherwise we risk each portal doing their own process with different results.</p>
<p>3. Organisations supplying/approached to supply data and data products within this quarter</p>	<p>Other. Manually done each quarter based on data providers. Internal log amongst providers used to keep track.</p>	<p>Portal updated occurred in September with various organisations providing dataset.</p>
<p>4. Online 'Web' interfaces to access or view data</p>	<p>Other. Manually put endpoints, although these do not change.</p>	<p>No changes compared to previous quarter.</p>

5. Statistics on information volunteered through download forms	Other. Manual download forms collated, information extracted.	<p>Interesting use cases for Global Fishing Watch, ICES fisheries assessments and a Defra research project.</p> <p>Note, country information was only collected half way through July, so country information for the first two weeks of this quarter are not accounted for.</p>
6. Published use cases	Matomo	Use cases on the central portal still needs updating with the latest provided on EMODnet Seabed Habitats.
8.1. Technical monitoring	Matomo	No specific comment here, would happily take advice on whether these response times are acceptable.
8.2. Portal user-friendliness (Visual harmonization score)	Other – Trust-IT	As mentioned in the interim report, incorrect icons need to be rectified.
9. Visibility & Analytics for web pages	Matomo	<p>Unsurprisingly there was lower usage of the portal over summer, which is usually experienced. As expected the mapper comes out on top.</p> <p>As a potential improvement to the Trust-IT dashboard, it would worthwhile keeping all category colours consistent amongst graphs, particularly as they change from 9a-9b.</p> <p>Also, the indicator names need to be updated. The spreadsheet lists them as indicator 9, but Trust-IT lists them as indicator 10.</p>
10. Visibility & Analytics for web sections	Matomo	Interesting with the number of users viewing the contribute data pages, which was reflected this quarter with a Polish habitat map being submitted by the University of Gdansk without any requests.
11. Average visit duration for web pages	Matomo	<p>I think this indicator might be overinflating the "download data" page - most people will likely download the dataset and leave the download page open whilst they explore the data, possibly overcounting the total amount of time on this page.</p> <p>Would expect the mapper to come out on top here.</p>

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

Primary data made available on the web portal in the period July-September 2020

In the table below, the dataset which have a reference number are those that were indicated in the annex 2 of the consortium's proposal. The datasets referred to as "Supplemental" were not identified in the proposal.

Reference number	Title	Area	Owner
MI01	Habitat map - single: Youghal seabed classification map	local scale, Ireland	INFOMAR
MI02	Habitat map - single: Shannon seabed classification map	local scale, Ireland	INFOMAR
MI03	Habitat map - single: Dungarvan seabed classification map	local scale, Ireland	INFOMAR
MI04	Habitat map - single: Boyne seabed classification map	local scale, Ireland	INFOMAR
MI05	Habitat map – set (3 maps): Celtic Sea habitats	local scale, Ireland	INFOMAR
CCMAR01	Habitat map - single: Marine communities from the litoral of Cadiz	local scale, Spain	MAPAMA
CCMAR02	Habitat map - single: Marine communities from the litoral of Almeria	local scale, Spain	MAPAMA
CCMAR03	Habitat map - single: Marine communities from the litoral of La Gomera	local scale, Spain	MAPAMA
CCMAR06	Habitat map - single: Marine communities from the litoral of Lanzarote	local scale, Spain	MAPAMA
Ifremer05	Habitat map - single: Récifs et marais arrière littoraux du Cap Levi à la pointe de Saire (France) - EUNIS classification	local scale, France	AFB
Ifremer06	Habitat map - single: Mission d'étude PNM golfe Normand Breton (France) - EUNIS classification	local scale, France	AFB
Ifremer10	Habitat map - single: Les abers (France) - EUNIS classification	local scale, France	Ifremer
ISPRA04	Habitat map - single: Carte Bionomica AMP Tor Paterno	Latium Region - Italy	MATTM - Consorzio Gestione AMP

ISPRA05	Habitat map - single: Caratterizzazione bio-ecologica e bionomica dell'AMP Punta Campanella	Campania Region - Italy	Parthenope Un. Napoli
ISPRA06	Habitat map - single: Caratterizzazione bio-ecologica e bionomica del Parco Marino Sommerso di Gaiola	Campania Region - Italy	MATTM - Consorzio Gestione AMP
ISPRA07	Habitat map - single: Caratterizzazione bio-ecologica e bionomica del Parco Marino Sommerso di Baia	Campania Region - Italy	Parthenope Un. Napoli
ISPRA08	Habitat map - single: Studi di fattibilità per l'area marina protetta di Capri, 2000	Campania Region - Italy	Parthenope Un. Napoli
JNCC02	Habitat map - set: ~2 Habitats Directive Annex I habitat maps in offshore UK SACs	local scale, UK	JNCC
JNCC04	Habitat map - set: ~7 Habitats Directive Annex I habitat maps in English SACs	local scale, UK	Natural Resources Wales
JNCC05	Habitat map - set: ~1 Habitats Directive Annex I habitat maps in Scottish SACs	local scale, UK	Natural England
Supplemental	Habitat map - single: Baie de Seine Orientale (France) - Habitat Directive classification	local scale, France	OFB (French Agency for the Biodiversity)
Supplemental	Habitat map - single: Baie de Seine Occidentale (France) - Habitat Directive classification	local scale, France	OFB (French Agency for the Biodiversity)
Supplemental	Habitat map - single: Récifs et marais arrière littoraux du Cap Levi à la pointe de Saire (France) - Habitat Directive classification	local scale, France	OFB (French Agency for the Biodiversity)
Supplemental	Habitat map - single: Mission d'étude PNM golfe Normand Breton (France) - Habitat Directive classification	local scale, France	OFB (French Agency for the Biodiversity)
Supplemental	Habitat map - single: Les abers (France) - Habitat Directive classification	local scale, France	Ifremer
Supplemental	Habitat map - single: Caratterizzazione bio-ecologica e bionomica dell'AMP Punta Campanella - seagrass meadows	Campania Region - Italy	Parthenope Un. Napoli
Supplemental	Habitat map - single: Caratterizzazione bio-ecologica e bionomica del Parco Marino Sommerso di Baia - seagrass meadows	Campania Region - Italy	Parthenope Un. Napoli
Supplemental	Habitat map - single: Studi di fattibilità per l'area marina protetta di Capri, 2000 - seagrass meadows	Campania Region - Italy	Parthenope Un. Napoli

Supplemental	Habitat map - single: Wexford seabed classification map	local scale, Ireland	INFOMAR
Supplemental	Point dataset: North Sea Data from 2017. three sets of sediment and biotop samples.	Denmark	Orbicon I WSP
Supplemental	Hab Dir Annex I. the North Sea and Skagerrak 2017	Denmark	Danish Nature Agency
Supplemental	Hab Dir Annex I. the North Sea and Skagerrak 2018	Denmark	Danish Nature Agency
Supplemental	Habitat map- Hab Dir Annex I. Skagerrak Natura 2000 habitat	Denmark	Danish Nature Agency
Supplemental	Habitat map- Hab Dir Annex I. North Sea Natura 2000 habitat	Denmark	Danish Nature Agency
Supplemental	Habitat map- Hab Dir Annex I. North Sea Natura 2000 habitat	Denmark	Danish Nature Agency
Supplemental	Habitat map- Hab Dir Annex I. North Sea Natura 2000 habitat	Denmark	Danish Nature Agency
Supplemental	Habitat map- Hab Dir Annex I. Frederikshavn Natura 2000 habitat	Denmark	Danish Nature Agency
Supplemental	Hab Dir Annex I. the North Sea and Skagerrak 2018	Denmark	Danish Nature Agency
Supplemental	Phytoplankton occurrence in WFD 2015 monitoring	Bulgaria	IO-BAS