EMODnet - Ingestion and safe-keeping of marine data

CINEA/EMFAF/2021/3.4.10/02/SI2.868290

Start date of the project: 30/03/2022 (24 months)

Centralisation Phase

Quarterly Progress Report (3)

Reporting Period: 01/10/2022 – 31/12/2022

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and its predecessor, Regulation (EU) No. 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund.

Contents

1. Highlights in this quarter

Task 1: Maintain, further develop and migrate a web-portal

During the reporting period the EMODnet Ingestion portal and its services were maintained and care was taken to ensure that all services continued to operate as required. Maintenance involves: content updates; adding new data centres contacts; manual work on submitted metadata mapping and missing values, automatic updating of Submission service vocabularies on a regular basis; exchange (JSON) of Submission service with Summary service; users support; and technical upgrades and improvements.

Early January 2023, the Central Portal has been launched, whereby all thematic portals have been de-activated. Therefore, next quarter also a start will be made with analysing how the Ingestion portal and its services could be migrated to the Central Portal.

Task 2: Implement pathways for delivering data to final repositories

The total number of received submissions increased from 1248 to 1308, while the number of processed and published data submissions increased from 1119 to 1176 and of which, the number of fully elaborated data submissions went from 508 to 536 data. This is illustrated in the following image while the separate statistics (attached) will provide more insight in the division over EMODnet themes and external data providers.

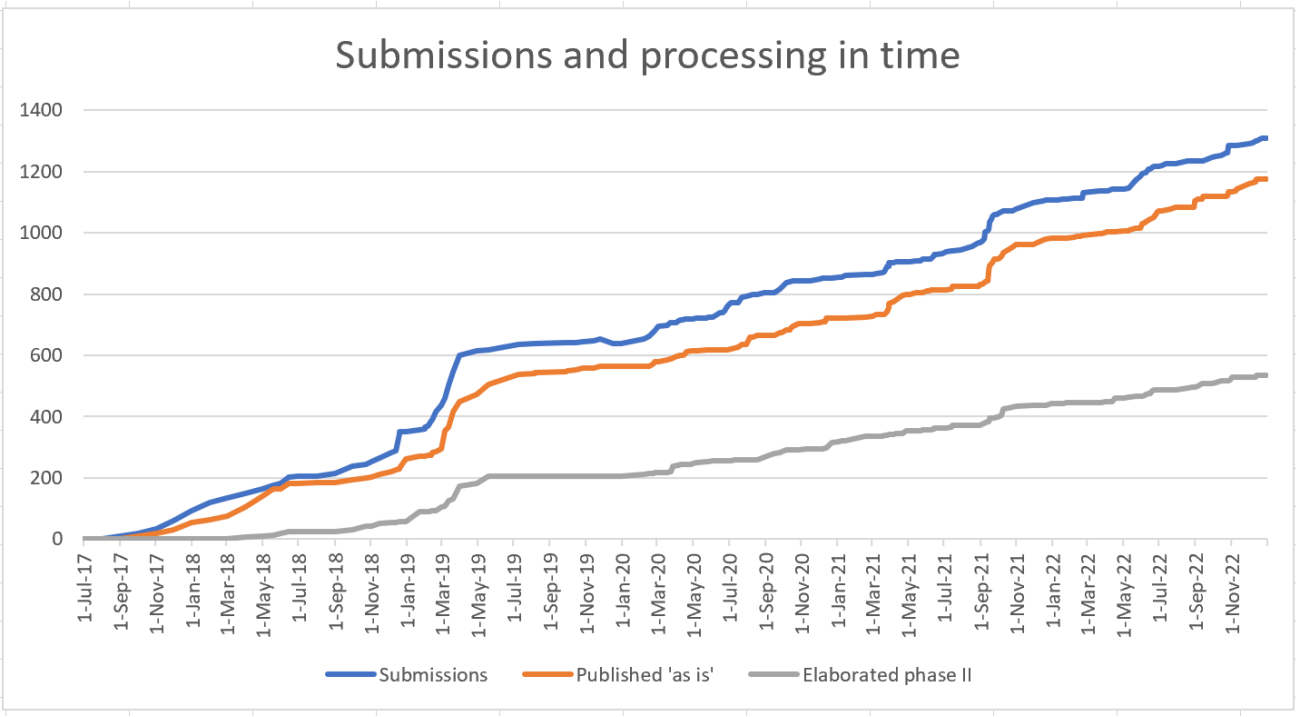


Image: number of submissions and phase 1 and phase 2 publications over the 3 contracts

Again, a major contribution came from the exchange with the SeaDataNet SEANOE data citing service (https://www.seadatanet.org/Software/SEANOE). In practice, EMODnet Ingestion partners encourage researchers to submit their scientific papers and associated data collections first to SEANOE in return for a DOI

which promotes their wider citation. As a next step, the SEANOE submissions are exchanged with EMODnet Ingestion for further metadata completion, publishing 'as-is', and further elaboration aimed at inclusion in national and European portals. 19 new SEANOE data sets have been harvested by the ingestion service during the 4th quarter of 2022. On a total of 238 submitted SEANOE records, 170 are now in Phase 1, of which 37 have also been elaborated to Phase 2.

Another continuing driver is the cooperation with the H2020 Eurofleets+ project which organizes scientific cruises with research vessels from the European fleet as transnational access activities. Eurofleets+ has an open data policy which requires scientific teams to publish their metadata and data in the established national and European portals. Thereby, scientific teams are encouraged to submit their data submissions to EMODnet Ingestion as an effective way for reaching the expert data centres. So far, this has resulted in 15 published data submissions of which 5 have been elaborated to common standards. The progress of this cooperation can also be followed at the Eurofleets+ website through the Cruise Data Sets Catalogue dashboard at: https://evior.eurofleets.eu/cds/search

Task 3: Facilitate machine-to-machine transfers

The goal of the task is to continue facilitating faster availability of data by establishing direct connections between monitoring stations and repositories and towards EMODnet by machine-to-machine transfers and expand and upgrade the Sensor Web Enablement (SWE) demonstrator.

During the period the activities focused on cleaning and fine-tuning data collections. The following collections were released/updated:

- IZOR tide gauge
- Sea Surface Currents fields from HFR EU NODE (EMODnet is now connected to the new endpoint[1])
- CTD from the Volvo Ocean Race (2017-2018)[2]

VOTO[3] (SMHI) ERDDAP was officially published.
SusTunTech (AZTI) ERDDAP was officially presented (and presented @EuroGEO Workshop 2022)

The team proactively participated to a series of events and workshops (e.g. EuroGOOS FerryBox Annual Scientific Workshop, European HFR Annual Assembly, MONGOOS workshop and assembly, TG NOISE, EuroGOOS DATAMEQ, Copernicus Marine Service INSTAC Stakeholders meeting, etc.) on common standards and open data. A Guest Lecture was given during the International Training program on ocean regional governance – University of Malta (16/11/2022). The team participated to the Sea Level Rise Conference (Venice, 17-18 October 2022): EMODnet was presented and endorsed as the European Hub for In Situ Data.

There is no update on the dialogue with the EUROPEAN MARINA NETWORK OF ENVIRONMENTAL DATA STATIONS (EMANEDS); the team is looking for opportunities for funding a small pilot action to proof of concept and show the implementation of the data flow.

[1] https://thredds.hfrnode.eu:8443/thredds/catalog.html

[2] https://erddap.emodnet-physics.eu/erddap/info/Volvo_OceanRace_17_18/index.html

[3] https://erddap.observations.voiceoftheocean.org/erddap/info/index.html?page=1&itemsPerPage=1000

Task 4: Operate a help-service for users to provide their data in the most appropriate format

The portal has a service-desk, which is operated on working days. Users can either email their questions or ask for a call back. Emails are sent to a generic service desk mailbox. All queries are saved and tracked in the Open-source Ticket Request System (OTRS), allowing providing statistics on the questions received. Recorded queries are analysed in order to elaborate a Frequently Asked Questions (FAQ) page at the portal. In the reporting period only two questions were received and answered.

Task 5: Allow providers of data to track the progress of their data from submission through to their storage in a repository

Data providers can follow the processing of their data submissions in the Submission Service, which is done in several steps each indicated by a status field. Data providers are contacted by assigned data centres, in case there are additional questions about the ingested data sets.

Task 6: Participate in discussions with EMODnet partners in order to improve the efficiency of the whole collection, assembly and dissemination process

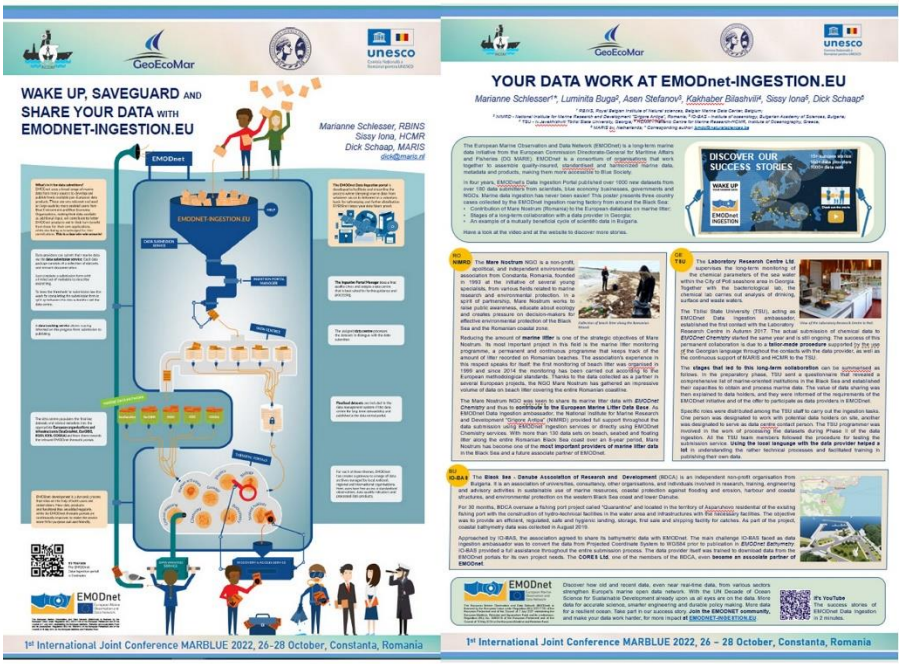
Representatives of the EMODnet Ingestion Coordination team participated in the EMODnet Steering Group meetings 7 – 8 November 2022. Furthermore, all coordinators of EMODnet Thematic projects are partners in EMODnet Ingestion which guarantees a mutual tuning with EMODnet Ingestion. At 13 December 2023, the set-up and further planning was discussed between NOC-BODC, MARIS and HCMR concerning a semi-automatic exchange between UK Marine Data Exchange and EMODnet Ingestion. This will be done in a comparable way as already functioning for the SeaDataNet SeaNoe service.

Task 7: Maintain a summary record of data delivered

This function is offered by the View Submissions service. Each completed submission is migrated to that service for publishing as part of a discovery and access service. Distinction is made in phase I and II which is one of the search facets. Editing activities take place aimed at replacing so-called orphan data for organisations from free text into controlled EDMO terms, orphan data for projects into controlled EDMERP terms, and orphan terms for Cruises into controlled Cruise Summary Reports (CSR) terms in order to improve the integrity and richness of the metadata.

Task 8: Engage in outreach activities towards significant holders of marine data whose data are not yet available.

During the reporting period, RBINS continued promoting the project in social media and supported some partners to increase the visibility of their communication activities. In particular, several partners participated and promoted the project at the 1st International MARBLUE Conference "Blue Growth: Challenges and opportunities for the Black Sea" from 26 to 28 October 2022 in Constanta, Romania (see programme). Two posters have been prepared and were presented under the poster session IV: Observing the Black Sea. The first poster explains how EMODnet Ingestion functions and is entitled "Wake up, safeguard and share your marine data with EMODnet-Ingestion.eu". The second poster showcases key achievement and focuses on three success stories collected from Romania (NIMRD), Bulgaria (IO-BAS) and Georgia (TSU). It is entitled "Your data work at EMODnet-Ingestion.eu". Moreover, the coordinator MARIS gave an oral presentation about Blue-Cloud, also mentioning EMODnet Ingestion, while IFREMER presented "SeaDataNet - Delivering marine and ocean data from the Cloud" and its relationship with EMODnet.



MARIS participated to the EU-Canada Ocean Partnership meeting that was organized by the EU in Brussels, 3 – 4 October 2022. At the meeting, brainstorming took place about possible subjects for cooperation between EU and Canada, whereby the EU topics had a focus on EMODnet and Copernicus Marine. During the brainstorming, several thematic EMODnet topics were highlighted, while also the Ingestion service was mentioned. The EU will prepare an official report from the meeting which will give a list of priority subjects which might become part of further development in an EU -Canada cooperation.

MARIS contributed to the 2nd Marine Data for and from the Offshore Renewable Energy (ORE) sector workshop, this time for the Mediterranean Sea and Black Sea ORE. This workshop was initiated by EU DG MARE and organised by the EMODnet secretariat at 20 – 21 October 2022. MARIS presented EMODnet Ingestion and in particular how industry partners could use Ingestion for sharing their marine data sets.

In November 2022, RBINS closed the compilation of Partners' **inventory of potential data sources** (D4.1 by M8 - November) prepared by all partners based on the guidelines shared in August. The survey resulted in 230 data sources from 25 countries and 35 institutes. It is shared as a collaborative Google spreadsheet to provide a dynamic survey follow-up. Partners will use the inventory to give a follow-up in their countries. The latest inventory at the end of November 2022 is included in the Deliverable D4.1, which is provided as an Annex to this Q4 progress report.

In December 2022, an updated and expanded presentation of the existing 9 + 3 use cases was prepared and published on the home page of the Ingestion portal under "Join our success stories". Each individual story case has been promoted on Twitter at the end of the year. The full compilation deserves more visibility and will be included in the upcoming News Digest.

According to the schedule of activities, in the coming months the focus will be on preparing a briefing for data ambassadors to record a video presentation of their use case, using the Belgian case as an example. In the first quarter of 2023, it is also planned to print a new R/V leaflet with two flagship case studies, in particular to support the objective of mobilising coastal and offshore licensing data. Copies will be distributed at the April plenary meeting. Thereafter, material for other success stories will be developed.

Partners participated in quite a number of events which are listed in Chapter 4 while an overview of communication items is given in Chapter 5.

Workshop on data management organized by IHPT in Lisbon (Portugal) on 16 December 2022 and promoting the EMODnet Ingestion service for data sharing. (Picture S. Almeida).

Task 9: Improve and document the availability of data provided for coastal and offshore licensing.

A new challenge is to engage with public authorities in Member States who receive data from licensing procedures for coastal or offshore activities, with particular emphasis on aquaculture and offshore energy.

The tender requirements mention that work shall include:

- Promoting common reporting standards that facilitate data ingestion;
- Documenting in a searchable database the parameters, specifications and accessibility of the data from each country;
- Organising a workshop on license data to start the road towards a more harmonised approach.

This activity is led by Deltares and requires input from all partners concerning their national situation. Identifying the different stakeholders was the first step of this task and reported back on in M6. At that time, only slightly more than half of the countries had completed the survey (Figure 1) and in total 81 potential stakeholders from 16 countries were identified.

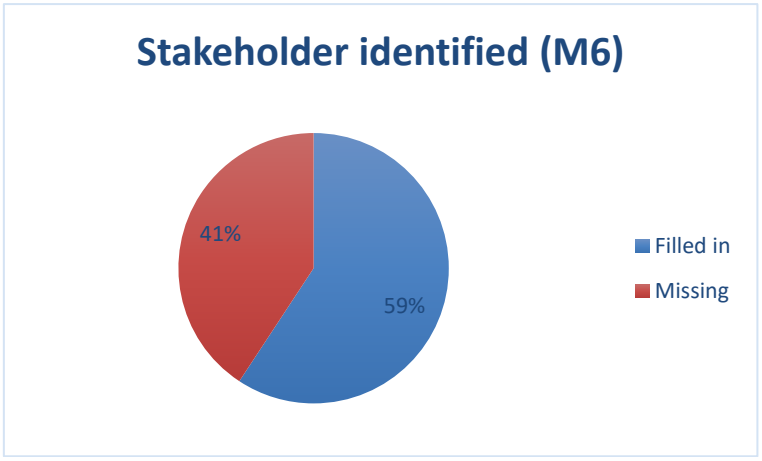


Figure 1: Stakeholders identified (M6)

Concerns about the completeness of this preliminary deliverable D4.4 were risen. The remarks were the following:

- the list of identified stakeholders in several countries lacks governmental authorities who should be in charge of the legal procedures;
- the information given about the roles and activities of identified stakeholders is too limited for a good understanding and requires additional information;
- there is no information provided at all for a number of countries and this needs to be solved.

Therefore, all partners were again asked in a joint action by MARIS as coordinator and Deltares as taskleader to review their input or provide improved and/or missing information. As a result, all countries have now provided at least one stakeholder and/or improved their previously delivered survey. So, in total 128 stakeholders from 27 countries could be identified (Table 1). All results have been summarised in Deliverable D4.4 Final release, which is attached to this Quarterly Report as an Annex.

Table 1: Overview of identified stakeholders per country in M6 and M10

Country	Number of identified stakeholders (M6)	Number of identified stakeholders (M10)
Belgium		4
Bulgaria	4	4
Croatia	9	9
Cyprus		5
Denmark		2
Estonia	1	5
Finland		3
France	10	10
Georgia	5	5
Germany		6
Greece	1	6
Iceland	1	1
Ireland	8	8
Israel		3
Italy		1
Latvia	2	2

Country	**Number of identified stakeholders (M6)**	**Number of identified stakeholders (M10)**
Belgium		4
Bulgaria	4	4
Croatia	9	9
Cyprus		5
Denmark		2
Estonia	1	5
Finland		3
France	10	10
Georgia	5	5
Germany		6
Greece	1	6
Iceland	1	1
Ireland	8	8
Israel		3
Italy		1
Latvia	2	2
Malta	3	3
Netherlands	1	2
Norway	1	1
Poland		1
Portugal	2	4
Romania		5
Slovenia		5

Country	**Number of identified stakeholders (M6)**	**Number of identified stakeholders (M10)**
Spain	5	1
Sweden	10	16
Turkey		3
UK	18	18
Total	**81**	**128**

The second step will deal with establishing a baseline Assessment or Inventory of Data Collection and Licensing Processes in each country (M7 – M12). This activity is again led by Deltares and will involve further surveys and contacts with identified stakeholders, assisted by EMODnet Ingestion partners, to make available relevant documentation and information. The objective of this task is twofold:

- Identify practices on data collection and licensing processes;
- Examine relevant previous EU-funded projects to identify common methodologies, roadmaps and synergies which would support the proposed approach of this project.

Currently, the methodological approach and action plan for this task are being finalized, meaning that the data-gathering activities will start soon. The activities that will be carried out for this task are divided into several steps:

- Step 1: Deltares will draft a general template that contains questions on licensing procedures for each member state. These questions will include amongst others:
    - Which institution or organization is responsible for issuing licenses for offshore energy/aquaculture in your country?
    - Who can apply for an offshore license or permit?
    - What is the procedure for obtaining a permit for offshore energy/aquaculture in your country?
        - Which information is needed?
        - How long does it take?
- Step 2: The partners from the consortium are requested to complete the template for their country. If they are familiar with the requested information, they can provide it themselves, but if this is not the case it is required to reach out to the identified stakeholders in order to obtain the relevant information.
- Step 3: The gathered data will be analysed by Deltares in collaboration with consortium partners. The first aim is to provide a comprehensive overview of methods and procedures for licensing in each country. In addition, the results are studied in more detail in order to make cross-country and cross-basin comparisons.
- Step 4: A desk study will be conducted to find any relevant previous EU-funded projects in order to identify possible methodologies, roadmaps or synergies which could be of value for the objectives of this project.
- Step 5: The findings and results will be presented in deliverable 4.5.

This deliverable and the findings will feed into the deliverables that are developed later in the course of this project. These are the setting up of a Database: (M12-M18) and Initiating development of a Roadmap towards a more harmonised approach: (M12-M22), which will include organising a workshop.

Task 10: Service continuity during operation and for transition

Coordination of the consortium is undertaken by MARIS and HCMR to ensure the continuity of the EMODnet Ingestion portal and its array of services.

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
D0.1: Quarterly concise progress reports	0.1	M4, M7, M10, M13, M16, M19, M22, M24	D0.1-a delivered; others to do	M4, M7, M10	
D0.2: Interim report	0.1	M12	To do		
D0.3: Final report	0.1	M24	To do		
D0.4: Transition and hand over protocol	0.1	M24	To do		
D0.5i: Agreement and subcontracts	0.1	M1	All done		
D0.6i: Short minutes - action lists of internal coordination meetings	0.1	Regularly	Ongoing		
D1.1: Web portal operational, incl extranet	1.1	M1 – M24	Delivered	Operational since M0	
D1.2: Guidelines, manuals, handbooks on portal	1.1	M1 – M24	Delivered	Operational since M0	
D1.3: User Management service operational (Marine-ID /EU Login)	1.2	M1 – M24	Delivered	Operational since M0	
D1.4: Data Submission Service operational	1.3	M1 – M24	Delivered	Operational since M0	
D1.5: Data Submission Service upgraded	1.3	M1 – M8	Delivered	Operational since M6	
D1.6: Data tracking service operational	1.4	M1 – M24	Delivered	Operational since M0	

D1.7: View Submissions service operational	1.5	M1 – M24	Delivered	Operational since M0	
D1.7: Portal and services moved to Central Portal	1.1 – 1.5	M1 – M12[4]	To do		
D2.1: Pathways operational	2.1	M1 – M24	Delivered	Operational since M0	
D2.2: Many submissions processed and published 'as is' (phase 1) and at EMODnet thematic services (phase 2)	2.1	M12, M24	Underway		
D2.3: Help service operational	2.2	M1 – M24	Delivered	Operational since M0	
D3.1: Updated documentation, standards and procedure for NRT and RT data published	3.1	M12, M24	To do		
D3.2: Connections with new NRT and RT monitoring stations operational	3.1	M12, M24	Underway		
D3.3: ERDDAP installation package	3.1	M12	Delivered.	M6	See Github in Task 3
D3.4: DAB installation package	3.1	M12	To do		
D3.5: SWE to ERDDAP software module	3.2	M22	To do		
D3.6: Upgraded Viewing service for NRT and RT stations	3.2	M12	To do		
D4.1: Inventory updated of potential data sources and	4.1	M8	Delivered	M8	Attached as Annex to this Quarterly Report

[4] Depending on start of migration process by Contracting Authority and complexity

providers in European countries and priorities					
D4.2: Updated promotion material	4.4	M12, M24	Regularly		
D4.3: Results of marketing and outreach activities	4.2	M12, M20	To do		
D4.4: Inventory of identified stakeholders for licensing data	4.3	M6	2nd and largely improved version Delivered	M6, M8	Attached as Annex to this Quarterly Report
D4.5: Inventory of current license data practices	4.3	M14	To do		
D4.6: Database about availability of license data per country	4.3	M18	To do		
D4.7: Reporting on license data Workshop	4.3	M22	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
Improving the 1st release of D4.4	Resolved	All consortium requested to improve and complete the survey for all countries. 2nd release of D4.4 is now available.		M8

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
27 Sep 2022	IRTA/Spain	Asked how to participate in IODE OceanTeacher as usder had interest in EMODnet Biology	Online Feedback form	Same day	Resolved	Request forwarded to IODE who answered	
29 Nov 2022	BugBounty/India	Reported a vulnerability in the Ingestion portal	Online Feedback form	Same day	Resolved	Issue solved and thanked	

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.)
15 Sep 2022	Risø, near Roskilde, Denmark	Meeting	Yes	O	AU-DCE: Meeting with scientists from Aarhus University regarding the uploading of several Marine Beach Litter datasets: "National monitoring data for beach litter from two Baltic Sea beaches in Denmark, 2020-21"
4 Oct 2022	Helsinki, Finland	Lecture, University of Helsinki, Faculty of Biological and Environmental Sciences	Yes	A	GTK: EMODnet, EMODnet Geology and EMODnet Ingestion were introduced to students during the lecture, 20 students
03 – 04 Oct 2022	Brussels, Belgium	Workshop EU-Canada – Ocean partnership	Yes	A	MARIS, SMHI, JNCC, VLIZ, and others: participated in brainstorming workshop about topics for cooperation. Included lot of attention for data management and exchange.
03-05 Oct. 2022	Milazzo, Italy	Metrology of the Seas conference: workshop	yes	O	ETT+SMHI: Organising session: https://www.metrosea.org/special-sessions Including EMODnet presentations
5-6 Oct 2022	Taunton, UK/Online	UK Centre for Seabed Mapping meetings	No	A	BGS: Meeting for management group, Standards, National Coordination and International Coordination. https://www.admiralty.co.uk/uk-centre-for-seabed-mapping

10-11 Oct 2022	Taranto, Italy	Workshop	no	A	ETT: GreenBlueDays
14 Oct 2022	Online	Meeting		A	ETT: EuroGOOS DATAMEQ
19-20 Oct 2022	Online	Workshop	yes	A	EMODnet for Business Workshops – Marine Data for and from the Offshore energy sector in the Mediterranean and Black Seas. ETT + MARIS: organised by DG-MARE. Presentations on EMODnet included.
20 – 21 Oct 2022	Varna, Bulgaria + Online	Conference Black Sea 2022	yes	A	IO-BAS: Promotional Emodnet Ingestion materials will be provided to the participants from potential data sources. https://nts.varna-bg.org/bg/52794
22 Oct 2022	Online	Workshop		A	ETT: MSFD TG NOISE (D11)
24-28 Oct 2022	Copenhagen, Denmark	Meeting	yes	A	Meeting with potential data providers at the Ministry of Environment and Aarhus University. AU-DCE: A presentation was given and further potential data sets discussed.
Oct 2022	Lisbon, Portugal	Historical data recovery		O	IHPT: intends to start working with Inst. Oceanography from the University of Lisbon to recover data from historical cruises.
21 Oct 2022	Riga, Latvia	external University of Latvia, Faculty of Chemistry, lectures	yes	A	LHEI: a short presentation on a couple of slides throughout the lecture about oceanology, sample handling, processing, data processing and data open access (examples from EMODnet).
24 Oct 2022	On-line	Meeting with Trans Europe Marinas/EMANEDS project	no	A	ETT+SMHI+HCMR: To discuss EMANEDs project activities implementation and evaluation
24 Oct 2022 –	Online – University	SEA-EU Marine Data Literacy Course	yes	O	UM: The SEA-EU Marine Data Literacy Course is a course organised by the European University of the Seas. Students were introduced to EMODnet

2 Dec 2022	of Cadiz, Spain				both during the lectures that were held online and the practical sessions held in person in Cadiz.
25-27 Oct 2022	Delft, Netherlands	GA-Jerico-DS meeting at Deltares	no	A	RWS joined this GA Jerico meeting - promotion of EMODNET in Jerico-RI / DS/S3 projects/program.
26 Oct 2022	Online meeting	The Danish Environmental Agency	Yes	A	AU-DCE: Decision making meeting resulting with the preparation of the dataset "Microplastic particles in sediments from Danish waters 2018-2021" published to the EMODnet Ingestion on the 21-12-2022
26-28 Oct. 2022	Constanta, Romania	International MARBLUE Conference	yes (poster)	A	TSU has a Poster Presentation – Session IV in the frame of the 1st Joint International Conference - MARBLUE 2022;The aim of the International Conference is to contribute to the protection of the Black Sea by supporting the sustainable development in a multi-disciplinary way.
26-28 Oct. 2022	Constanta, Romania and online	International MARBLUE Conference "Blue Growth: Challenges and opportunities for the Black Sea".	yes (poster)	A	RBINS with MARIS, HCMR had a Poster Presentation at MARBLUE– Session IV: Observing the Black Sea. The first poster explains how EMODnet Ingestion functions and is entitled "Wake up, safeguard and share your marine data with EMODnet-Ingestion.eu". Have a look at the posters in PDF: poster1.
26-28 Oct. 2022	Constanta, Romania and online	International MARBLUE Conference "Blue Growth: Challenges and opportunities for the Black Sea".	yes (poster)	A	RBINS with NIMRD, IO-BAS, TSU and MARIS had a Poster Presentation at MARBLUE – **Session IV: Observing the Black Sea**. This second poster showcases key achievements of the project so far and focuses on three success stories collected from Romania, Bulgaria and Georgia. It is entitled "Your data work at EMODnet-Ingestion.eu". Have a look at the poster in PDF: poster2.
26-28 Oct. 2022	Constanta, Romania and online	International MARBLUE Conference .	yes (oral)	A	IFREMER presented "SeaDataNet - Delivering marine and ocean data from the Cloud" and its relationship with EMODnet .
26-28 Oct 2022	Constanta, Romania and online	International MARBLUE Conference .	yes (oral)	A	MARIS (EMODnet Ingestion Coordinator) gave an oral presentation about Blue-Cloud, also mentioning EMODnet Ingestion.

28 Oct 2022	Online; Neth.	NODC-NL meeting	Yes	O	RWS, Deltares and NIOZ: NODC-NL discussion on future plans and role of Emodnet-portals etc.
Oct – Dec 2022	Deltares, Delft, Neth. / Online	Workshops, webinar and/or symposia	yes	O	Deltares: During the Deltares Software Days (DSD), attended by different stakeholders from Europe and beyond, it is planned to further promote the activities of EMODnet Ingestion.
Oct 2022		International Conference	yes	A	TSU: submitted a paper and presentation on Marine Litter and EMODnet for the proceedings of the conference (using inter alia data from EMODnet databases). International Scientific-Practical Conference "The development of mining and geology is the precondition for the revival of economy"
Oct 2022	Online meetings	Online meetings	yes	O	ENEA: Contacts with colleagues involved in the Blue Lakes project that collected microplastics data in the main Italian lakes.
3-4 Nov 2022	Wageningen, The Netherlands	External meeting: North Sea Days	yes (poster)	A	Deltares presented a poster on the EMODnet data ingestion and EMODnet Biology data products work done in the last years, stressing the importance of combining routine monitoring and project-based monitoring for the completion of distribution maps for Benthos and Plankton.
3-4 Nov 2022	Wageningen, Neth.	Dutch North Sea days with 350 people	Yes	A	RWS and Deltares attend the yearly North Sea days; promoting of european data centres and added value of Emodnet, especially for North Sea activities
7 Nov - 7 Dec 2022	Msida, Malta	IOI course	Yes	O	UM: Training programme on regional ocean governance for the Mediterranean, Black, Baltic, and Caspian seas. Includes a unit about tools and processes to manage the oceans and regional seas, in which EMODnet is presented to the participants.
7-8 Nov 2022	Physical meeting in	EMODnet SC17 meeting	Yes	A	Periodic meeting of the EMODnet Steering committee - To discuss the EMODnet Ingestion update and the centralization

	Brussels & online				
7-11 Nov	Varna, Bulgaria	EMODnet Geology project meeting	Yes	A	GTK: Discussions related to the progress of the EMODnet Geology project and the EMODnet collaboration
8 Nov 2022	Online meeting	Meeting for the LabMare activity	No	A	ENEA promoted the use of EMODnet Data Ingestion during the meeting related to the LabMare observatory activity including the data management.
9 Nov 2022	Online	EOOS-OC meeting	No	A	RWS: Attending EOOS-OC meeting; promoting the use of EMODNET-ingestion for additional oceanographic and ecological data
9-10 Nov 2022	Online	Workshop	yes	A	SMHI: Presenting at Arctic data workshop “Opportunities and challenges for in situ ocean observing in the Arctic”
10 Nov 2022	Varna, Bulgaria	EuroGeoSurveys Marine Geology Expert Group meeting	Yes	A	GTK: EMODnet Geology and EMODnet Ingestion projects were advertised in the presentation (by Kotilainen A.)
10 Nov 2022	Split, Croatia	Presentation about Data Management	yes	O	EmodNET Ingestion project, tools and main principles (including general SeaDataCloud infrastructure) to students of “Marine biology and technology”, university of Split
11 Nov 2022	Online	MEDIN OGC API Workshop	Yes	A	BGS: Improving access to marine environmental data using an Application Programming Interface (API) standard (https://ogcapi.bgs.ac.uk/)
14 Nov 2022	Lisbon, Portugal	Meeting with MARE, University of Lisbon	Yes	O	Organised with researchers that coordinates, during the last decades, several projects that collect oceanographic data from the North Atlantic Ocean. Data Ingestion tools and the SEANOE portal were presented.
14-15 Nov 2022	İstanbul / Türkiye	International Forum	yes (poster)	O	METU-IMS: Marine Litter Action Forum was organised by EU H2020 Black Sea CONNECT CSA that METU-IMS leads.

14-15 Nov 2022	Istanbul, Turkiye	International Marine Litter Forum	no	A	TSU participated in Marine Litter Action Forum organised by EU H2020 Black Sea CONNECT CSA that METU-IMS leads.
17-18 Nov 2022	Puerto Montt, Chile	Workshop	yes	A/O	ULiège gave a data analysis workshop (with DIVAnd). 10 participants.
21-25 Nov 2022	Puerto Montt, Chile	Conference	yes	A	Keynote presentation about in situ data analysis methods (about 150 participants)
20-21 Nov 2022	Florence, Italy	Workshop	Yes	O	ETT: HFR TT – MONGOOS WS and GA
21 Nov 2022	Online	MEDIN Standards Meeting	No	A	BGS: MEDIN Standards Meeting including BGS, BODC and other DACs
22 November 2022	Stellendam, Netherlands	Offshore Expertise Centre - Visit of former minister of Foreign Affairs	Yes	O	RWS: Presentation of the complete Marine European Landscape, inclusive EMODNET for former minister of Foreign Affairs by visiting the Offshore Expertise Centre in Stellendam. Promoting the Dutch Digital North Sea Initiative
22 Nov 2022	online	Blue Cluster annual bathymetric consultation	Yes	A	VLIZ: Event organised for actors involved in collecting and exploring bathymetric data in the Belgian part of the North Sea. More details in Dutch can be found in (https://www.blauwecluster.be/nieuws/eerste-jaarlijks-overleg-rond-bathymetrische-data-zit-erop) Presentation can be found via https://www.blauwecluster.be/presentaties-van-het-eerste-jaarlijkse-overleg-bathymetrie-22-november-2022 . Presentation 4.1 focuses on submitting bathymetry data via EMODnet Ingestion

22-24 Nov 2022	Florence, Italy	AM	Yes	A	SMHI: MONGOOS AM
23 Nov 2022	online	Conference/Master Class Title: Infraestructuras de Datos Espaciales: EMODnet, ejemplo de IDE continental.	Yes	O	EMODnet at the University of Granada (Spain) by Javier Valencia.. Forum: Master's Degree in Geology applied to mineral and energy resources (GEOREC). https://canal.ugr.es/evento/video-presentacion-de-la-infraestructura-de-datos-espaciales-marinos-de-europa/
25 Nov 2022	Online	Internal meeting MARIS and Deltares	No	O	To discuss how to improve and complete Deliverable D4.4 – Inventory of offshore license stakeholders
Dec 2022	Online	Meetings with the DLTM partners involved in the Levante Canyon measurements in the Ligurian Sea	No	A	ENEA promoted the EMODnet Data Ingestion as well as SeaNOE during meetings held in the framework of the DLTM activity related with the measurements sampled in a stand-alone mooring, at about 600 m depth along the Levante Canyon of the Eastern Ligurian Sea. The data sets have been published in SeaNOE.
2 Dec 2022	Riga, Latvia	LHEI internal scientific/administrative meeting	yes	O	LHEI: Overview of scientific and administrative activities of LHEI project leaders, presentation of projects . EMODnet DI (as well as SEANOE) was presented for all level scientists in LHEI.
6 Dec 2022	Online	Meeting in the framework of the MedFever project	Yes	A	ENEA promoted the EMODnet Data Ingestion activity as well as SeaNOE with colleagues involved in the MedFever project.
6-8 Dec 2022	Monaco	HYDRO2022 Conference	yes	A	SHOM attended a conference organized by the International Federation of Hydrographic Societies (IFHS). Shom made a presentation : *EMODnet Bathymetry: current status of the European bathymetric Digital Terrain Model*
6-9 Dec 2022	Antalya, Türkiye	National Marine Monitoring and Assessment Symposium	yes (poster)	A	The Symposium is organised in “Turkish National Integrated Marine Pollution Monitoring Program” implemented by the Ministry of Environment, Urbanization and Climate Change

13 Dec 2022	On-line	Internal meeting	no	O	HCMR+MARIS+BODC: to finalise metadata mapping and set up the implementation plan for the metadata exchange between EMODnet Data Ingestion - Marine Data Exchange (MDE) archive
14 Dec 2022	Madrid, Spain	Univ. Complutense Madrid. Master's class at "Master en Meteorologia y Geofisica".	yes	A	IEO: "El Sistema para la Observación del Océano (IEOOS) del Instituto Español de Oceanografía y las iniciativas europeas de gestión de datos".
16 Dec 2022	Lisbon, Portugal	Workshop about Data Management	yes	O	IHPT: EMODnet Ingestion presented with a focus on the data sharing and its benefits
20 Dec 2022	Brussels, Belgium	Internal meeting with the communication department	no	O	Guidelines for the self production of videos presenting the 12 Ingestion use cases
SUM				**O**	**Total # of meetings organised = 17**
SUM				**A**	**Total # of meetings attended = 39**

Date	Location	Type event (meeting, training (workshop), etc.)	Meeting to be attended (A) / organised (O)	Short description and main expected outcomes
16 Jan 2023	Southampton, UK / Online	MEDIN Data Archive Centres Meeting		BGS: MEDIN DAC Meeting including BGS, BODC and other DACs
17 Jan 2023	Southampton, UK / Online	MEDIN Standards Meeting		BGS: MEDIN Standards Meeting including BGS, BODC and other DACs
17 Jan 2023	Southampton, UK / Online	MEDIN Joint Working Group meeting		BGS: MEDIN Joint Working Group Meeting including BGS, BODC and other DACs
7 Mar 2023	London, UK	UK CSM Showcase	A	UK Centre for Seabed Mapping Showcase event
April 2023	Larnaka, Cyprus	Internal plenary meeting	A/O	Annual plenary meeting of EMODnet Ingestion consortium
2022-2023	The Netherlands/Online	Meeting	A	Deltares: Regular meetings with the Directorate-General for Public Works and Water Management (Rijskwaterstaat) which is part of the Ministry of Infrastructure and Water Management of the Netherlands are planned. These meetings are intended to discuss making data available.

TBD	TBD	Workshop on data management for offshore license related data collection in EU member states	O	Deltares: A workshop will be organised together with representatives of stakeholders and EMODnet Ingestion members to present and discuss the findings on current practices and approaches in different Member State countries. This will help to refine the understanding of EMODnet Ingestion and stakeholders about data acquisition and management in the framework of governmental license procedures in their countries. This should drive a discussion whether a more harmonised approach between and possibly also within Member States might be desirable and feasible. This could lay the basis for support from stakeholders for initiating development of a roadmap for a more harmonised approach.
TBD	Online	Online meetings	O	ENEA: Contacts with a team of a racing boat that is going to collect oceanographic data.
TBD	Online	Online meetings	O	ENEA: Contacts with colleagues involved in the Blue Lakes project that collected microplastics data in the main Italian lakes.
TBD	Riga, Latvia	Lecture	O	LHEI: University of Latvia: lectures to students about marine sample preparation and analysis, as well as data processing, FAIR principles, data depositories, SEANOE and EMODnet DI

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)
17 Oct 2022	Tweet	Reminder of the ongoing inventory of datasets for inclusion in EMODnet-INGESTION III.		@MarianneBMDC
18 Oct 2022	Tweet	Announcement of the two posters on EMODnet Ingestion finalised for the MARBLUE conference		@MarianneBMDC
20 Oct 2022	Web page on the portal	Presentation of the full package of contributions on EMODnet Ingestion during the MARBLUE Conference (posters and oral presentations)		
25 Oct 2022	Tweet	Reminder deadline registration for the MARBLUE conference (on site and online)		@MarianneBMDC
28 Oct 2022	Use Case #12	Case 12. Mare Nostrum NGO contribution to the European Marine Litter database (prepared with NIMRD)		Twitter, inclusion in compilation of success stories, publication on Chemistry portal
28 Oct 2022	Poster	Poster entitled “Your data work at EMODnet-Ingestion.eu” showcasing the MARBLUE conference participants key achievements of the project so far and focus on three success stories collected from around the Black Sea (Romania, Bulgaria and Georgia).		MARBLUE conference + Ingestion website + Chemistry website (TBC) + Twitter
28 Oct 2022	Poster	Poster entitled “Wake up, safeguard and share your marine data with EMODnet-Ingestion.eu” to Inform the MARBLUE conference participants of the practice in EMODnet-Ingestion.		MARBLUE conference + Ingestion website + + Twitter
01 Oct to 31 st Dec 2022	Tweets	Various tweets about published datasets that were submitted via EMODnet Ingestion		@EuroBIS_VLIZ
23 Nov. 22	Twitter post	#GeoINT #IDEs #geomatica #intelligence #inteligencia Hoy me toca participar en un evento que me hace mucha ilusión: Videoconferencia en el Máster en Geología aplicada a los Recursos Minerales y Energéticos de la UGR. De la mano de Claudio Marchesi y de Jesús Galindo, vamos a hacer una presentación de la Infraestructura de Datos Espaciales Marinos de Europa. Esta base de datos se ha convertido en un importante repositorio de consulta y descarga de información con componente geográfica sobre el ambiente marino para cualquier rama	Visibility of the EMODnet dataset inventory and potential data providers	Javier Valencia @LYRAingeneria

		del conocimiento. En particular, EMODnet da acceso a datos de Batimetría, Biología, Química, Geología y Geofísica, Actividades humanas, Física, Hábitats de los fondos marinos. Su acceso es abierto y está perfectamente estandarizado para poder trabajar con sus datos en cualquier formato, tanto Web como GIS. E intentaremos hacer soñar a los alumnos con sus posibilidades de futuro... https://lnkd.in/dfqDR4iR		
December 2022	Tweets	**Series of 12 tweets** to advertise the 12 EMODnet Ingestion success stories already available.		@MarianneBMDC
Dec/Jan	PDF document	Updated and expanded compilation of 12 Ingestion success stories		Ingestion portal "Join our success stories"

B. Planned communication products			
Date	Communication material	Short description (of the material, title, …) and/or link to the asset	Main results expected
Jan. 23	News Digest	Contribution to EMODnet News Digest + Ingestion website	Visibility of the dataset inventory + stakeholders inventory results + enlarged use cases compilation
Jan Feb 23	Leaflet A4 R/V	Update leafletA4 R/V with two new use cases in support of the objectives of WP4.2 and 4.3 (Off-shore licensing data)	printed version disseminated to partners at the plenary meeting (11-12 April 2023)
Jan-March	Video production #1	- Prepare guidelines with RBINS COM; Feed a YT playlist with Ingestions videos + invite colleagues to present their case studies in a series of self recorded presentations with Zoom. A good briefing will be prepared.	
Feb. 22	Use case #13	Offshore wind parks ecological monitoring data - Biology (Fish and Benthos monitoring)	
Feb. 22	Use case #14	Swedish marine beach litter data and data from the Baltic marine litter project MARLIN	
March. 22	Use case #15	Learning by doing: How starting with the ingestion of a small dataset can lead to promising collaborations	BODC (UK) & European Marine Energy Center (EMEC)
March. 22	Use case #16	Can the EMODnet network deal with raw data? (with VLIZ)	

2023	ResearchGate	Publication of EMODnet Ingestion posters	Visibility of the project in Science Social Media (several EMODnet publications available)
2023	Academia.edu	Publication of EMODnet Ingestion posters	Visibility of the project in Science Social Media (several EMODnet publications available)
21-25 August 2023	Baltic Sea Science Congress 2023	EMODnet Ingestion poster(s) and other publications	AU-DCE:Presentation of the EMODnet Ingestion for potential users and stakeholders.

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
2022	Paper	D.Demetrashvili, K.Bilashvili, N.Machintadze, N.Tsintsadze, V.Gvakharia, N.Gelashvili, V.Trapapaidze, I.Kuzanova "Numerical modelling of Marine Litter distribution in Georgian coastal waters of the Black Sea, Journal of Environmental Protection and Ecology, Vol. 23, No 2 (2022), p.p. 531-542.	ISSN 1311-5065		Yes
2022	Paper	D. González-Fernández1, G. Hanke, M. Pogojeva, N. Machitadze, Y. Kotelnikova6 , I. Tretiak, O. Savenko, K. Bilashvili, N. Gelashvili, A. Fedorov, D. Kulagin, A. Terentiev, J. Slobodnik. Floating marine macro litter in the Black Sea: toward baselines for large scale assessment, Journ. Of Environmental Pollution, ELSEVIER, Volume 309, 15 September 2022, 119816		https://www.sciencedirect.com/journal/environmental-pollution	no

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
May 2022	Abstract Volume	Kotilainen, A.T., Kotilainen, M.M., Jokinen, S., Virtasalo, J.J., Kaskela, A.M, 2022. Coastal estuaries – Baltic Sea habitat types under threat. In: The GeoHab 2022 Conference: marine geological and biological habitat mapping, 16-20 May, 2022, Venice, Italy: Abstracts, 65.			Yes

		https://geohab.org/wp-content/uploads/2022/05/Abstract_Volume_GEOHAB2022.pdf			
8 June 2022	The Prime Minister's Office's publication (Finland)	Prime Minister's Office, 2022. National Implementation Plan for the UN Decade of Ocean Science (in Finnish). 25 pages. https://urn.fi/URN:ISBN:978-952-383-122-3 The Actions include developing uniformity and usability of marine data flows, where key areas include e.g. cooperation between EMODnet	978-952-383-122-3		Yes
14 Oct 2022	paper	Zodiatis, G., Brenner, S., Gertman, I., Ozer, T., Simoncelli, S., Ioannou, M., and Savva, S., (2022) Twenty years of in-situ monitoring in the south-eastern Mediterranean Levantine basin: basic elements of the thermohaline structure and of the mesoscale circulation during 1995-2015. Frontier Marine Science, topic: Climate Change impacts on Mediterranean Coastal and Transitional Areas: Assessment, Projection, and Adaptation.			yes
26-28 October, 2022	1st Joint International Conference MARBLUE 2022	Marianne Schlesser, Luminita Buga, Asen Stefanov, Kakhaber Bilashvili, Sissy Iona, Dick Schaap, · YOUR DATA WORK AT EMODnet-INGESTION.EU, Abstract, Poster session at International Joint Conference MARBLUE 2022 / 26-28 October 2022, Constanta, Romania			Yes
26-28 October, 2022	1st Joint International Conference MARBLUE 2022	Marianne Schlesser, Sissy Iona, Dick Schaap; WAKE UP, SAVEGUARD AND SHARE YOUR DATA WITH EMODnet-INGESTION.EU, Abstract, Poster session at International Joint Conference MARBLUE 2022 / 26-28 October 2022, Constanta, Romania			Yes

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
1A) Volume and coverage of available data	Submission Viewing service	The total number of new phase 1 + phase 2 submissions in the current quarter is 57 and of this 28 were elaborated to phase 2. The overall number of published submissions went from 1119 to 1176.
1B) Usage of data in this quarter	Cloud storage of Submission Viewing service	The total number of download transactions and volume is comparable to the previous quarter.
3) Organisations supplying/ approached to supply data and data products	Submission Viewing service	There is a good mix in organisation types and countries. The total number of data providers has increased with 6 in the last quarter to 193.
9. Visibility & Analytics for web pages	Grafana	The number of daily page views is low, but could be expected. Most users consider the homepage and the data submission service. There is still no indicator given for the data viewer service page views. It is also visible that the Data Wanted service has been halted.
10. Visibility & Analytics for web sections	Grafana	These stats indicate that mose users go to the Data Viewing service and then much less to the Data Submission service and Guidance pages.
11. Average visit duration for web pages	Grafana	These stats indicate the average viewing time per section which is quite low. The idea is that these pages are interesting for already really interested users, while many other just are browsing.

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

Attached are:

D4.1: Inventory updated of potential data sources and providers in European countries and priorities"

D4.4: Inventory of identified stakeholders for licensing data – 2nd Release

EMODnet - Ingestion and safe-keeping of marine data

CINEA/EMFAF/2021/3.4.10/02/SI2.868290

Start date of the project: 30/03/2022 (24 months)

Centralisation Phase

D4.1 Inventory updated of potential data sources and providers in European countries and priorities" (M8)

November 2022

Contents

Disclaimer

Document info

Title	D4.1 Inventory updated of potential data sources and providers in European countries and priorities
Work Package	WP4 – Marketing and Outreach
Authors [Affiliation]	Marianne Schlesser [RBINS], Ruth Lagring [RBINS], Hong Mingh Le [RBINS], Nicolas de Ville de Goyet [RBINS]
Dissemination level	Internal
Due Date	30/11/2022
Date	30/11/2022
Version	V1.0

1. Introduction

To stimulate all partners and countries to stay on the same line, the WP4.1 coordinated action that was done at the start of the EMODnet Ingestion 1 and 2 projects was repeated during the summer 2022. Instructions and way forward were presented by RBINS during the kick-off meeting of the project on June, 16th. During the kick-off meting, each partner was also invited to report on national progress about potential data sources, progress on ingestion of datasets and local marketing activities undertaken since the closing plenary of DIP2 (21-22/09/2022). Like other tasks, also this task had not really halted end of September 2021 but continued.

For the preparation of Deliverable 4.1 of the third phase of EMODnet Data Ingestion, each data centre was invited by partner RBINS to analyse and update its national situation and identify potential data sources of possible interest to EMODnet which could then be used as a list for follow-up under WP4.2. For that purpose each EMODnet "Data ambassador" was sent on August, 24th an excel survey form and an updated guidance note with lessons learnt, useful hints and reminder on thematic data priorities. There were also announcements made as reminder on LinkedIn and Twitter with a visual was created on this occasion. The deadline to compile this national overview was set to October, 25th.

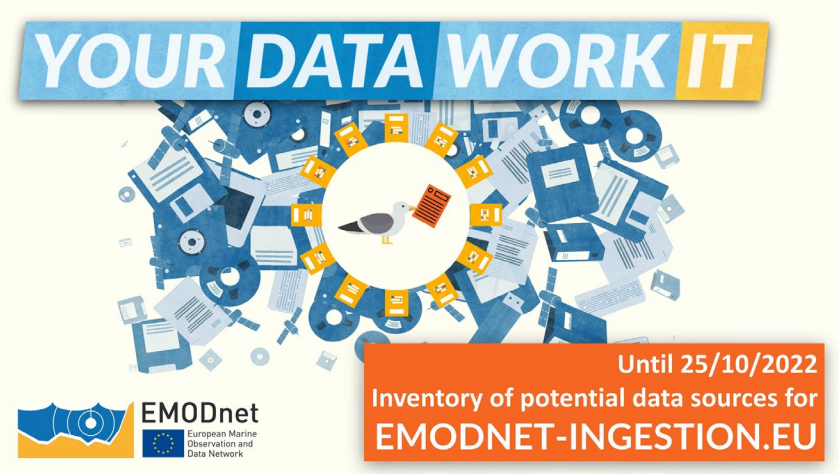


Image: visual designed by RBINS to announce the survey on social networks.

Regarding the information requested in the survey, the national overviews had to be concise and at the same time provide sufficient information to allow for the prioritising per theme and thereafter for the follow-up actions as part of WP4.2. As a trade-off the following items were gathered in the reporting spreadsheet:

- Record number: the collection of each EMODnet Ingestion contact should start with 1;
- Country: indicating your country by ISO 3166 code;
- Reporting consortium member: indicate your centre by its EDMO code;
- EMODnet Theme: indicating Bathymetry, Geology, Chemistry, Physics, Biology, Human Activities, or Seabed Habitats;
- Potential data provider contact;

- Potential data sets in DIP3: indicating data types, possible volume of data sets and possibly further descriptive information on geographical and temporal coverage;
- Opportunity: indicating your initial judgement how the data provider might be motivated to cooperate and release its data sets for EMODnet;
- Comments: any relevant supplementary information;
- Sea area: geographical information on the location where the data was collected ;
- Estimated size: indicate the estimated size of the dataset (small, medium, large, huge) and give estimate and type (points, line, polygons).

Like in 2020, this exercise could build upon the earlier achievements, insights and lessons learned during the preceding years. In completing the survey, partners were invited to pay attention to two main lessons learned from phases I and II:

> 1) As contacting and convincing external potential data providers turns out to be time consuming with often limited benefits, partners were encouraged to look for data sources from other departments within their own Institute which has proved to give more satisfying results. Therefore, to seek for potential data sources inside and outside their organization, the consortium members were invited to firstly exploit their own organization network to find holders that are not yet involved in European data sharing and secondly concentrate efforts on building upon already existing relationships.
>
> 2) Many national authorities/data providers do not give a high priority to share data in international context, and many data providers are busy with other activities. To lower the threshold of effort for data providers, it was recommended that consortium members act as 'EMODnet ambassadors' to help data providers undertaking the submission. It even can be that the consortium members make the submissions themselves on behalf of the data providers as originator and/or data holding organisation.

By the deadline of October 25th, about half of the consortium members had completed the survey. The deadline had to be extended to November, 15th and again to November 25th for few who had not yet completed the survey or had further questions .

The national submissions were compiled by RBINS and an overview is presented below. In consultation with the project coordinators, it was decided not to make any prioritisation effort as this had been done as a group in an on-site meeting during phase 1 and 2 of the project and it was impossible for RBINS to do this remotely. It was also considered that this prioritisation was hardly used in the two previous phases of the project. Instead, the consortium members made a self-assessment, indicating the level of opportunity from low to high.

An analysis of the submissions shows a slight discrepancy between themes and opportunity. It is advised that data centres try to focus their efforts on datasets that are underrepresented on the whole but that have a lower opportunity level. On the other hand, 'low hanging fruit' datasets should not be put aside, especially if they are large or come from an underrepresented marine area.

2. Summary of survey results and inventory of potential data sets

This survey resulted in 230 data sources from 25 countries and 35 institutes. All members responded to the survey. A similar survey was launched in the phase 1 and 2 of the project. In March 2017, the survey resulted in 117 data sources and 2020 it resulted in 342 data sources. Assuming members reported every data set they had in 2017 and 2020 and that the same dataset doesn't appear in the 2022 survey, we can therefore deduce that the recent survey has a closer-to-reality coverage of nationally available datasets that can reasonably be ingested in the project. We can then expect the number of future Phase I submissions to be more in step with the numbers reported in this survey. Like in 2020, the results of the survey show that the strategy to let members look at more local and internal (and less commercial/external) datasets did work out positively and that their networks have continued to matured their approach to sharing data.

Country	Nb Submissions	Country	Nb Submissions
BE	19	**IS**	10
BG	8	**IT**	26
CY	3	**LV**	4
DK	9	**MT**	6
EST	2	**NL**	5
FI	8	**NO**	15
FR	9	**PT**	4
GB	40	**RO**	4
GE	1	**SE**	14
GR	8	**SI**	4
HR	9	**SP**	8
IE	6	**TR**	5
IL	3		

Table 1.: Number of expected submissions per country

The number of submissions per country shows that having multiple members per country helps in reaching higher numbers. This is the case for the Great Britain and for Italy. Norway and Sweden have the most submissions in absolute terms (15 from the Public Roads Administration of Norway; 14 from various providers).

Themes	Number of expected submissions (update Nov. 2022)	Number of expected submissions (update Oct. 2020)
Bathymetry	17	19
Chemistry	62	111
Physics	92	145
Biology	43	91
Geology	32	40
Human activities	19	22
Seabed habitats	19	25
Marine litter	2	4
Total	286	457

Table 2.: Repartition of themes over the expected submissions

Table 2 shows the repartition of themes over the submissions. Compared to 2020, the numbers have decreased, perhaps to what can be a realistic effort of ingestion by the partners, also including less datasets with low opportunity? A fair amount of submissions (39/230) belongs to more than one theme. Physics, Chemistry are the most common (>25%), followed by Biology (17%) and Geology (14%). There are two datasets dealing with Marine Litter but formally they would be considered Chemistry datasets.

'Opportunity' expresses the availability of the data (how easy it is to get, through willingness, leverage, good contacts,...) and the effort willing to be given related to the data size, quality and resolution itself. Inherent data qualities cannot be improved, but it might be possible to increase the likelyhood of receiving the data, via more extensive contacts, if the data is really interesting or rare over the whole project. Based on all submissions, there are 151/230 datasets with high (medium to high) opportunity (66%), 51/230 with medium (medium to low) opportunity (22%) and 28/230 with low opportunity (12%).

The current inventory is shared as a collaborative Google spreadsheet to provide a dynamic survey follow-up. Partners will use the inventory to give a follow-up in their countries. The latest inventory at the end of November 2022 is included in this Deliverable. The following pages give the inventory as collated at the end of November 2022.

Record	Country	Reporting con-sortium mbr (EDMO code)	EMODnet Theme	Potential data provider contacts	Potential data sets in DIP3	Opportunity	Sea area
1	**BE**	1578, BMDC, Hong Minh LE	Chemistry	ILVO - Flemish Institute for Agriculture, Fisheries and Food – 1478	PAHs, PCBs, heavy metals, TOC, grain size in sludge (harbours and dredging disposal sites)	high	North Sea
2	**BE**	1578, BMDC, Hong Minh LE	Chemistry	ILVO - Flemish Institute for Agriculture, Fisheries and Food – 1478	Oxygenated PAHs in mussels	high	North Sea
3	**BE**	1578, BMDC, Hong Minh LE	Biology, Chemistry	RBINS – MARECO – 3327	Biomass and abundance (Belgian Part of the North Sea - Epi-, hyper- and macrobenthos, fish, ...), Experiments data (nutrients concentrations, DIC, oxygen, alkalinity, ...), stable isotopes data	high (partly, only in situ part)	North Sea
4	**BE**	1578, BMDC, Hong Minh LE	Physics	RBINS – SUMO – 3327	MOMO Tripod data (Part 2)	high	North Sea
1	**BE**	422, VLIZ, Joana Beja	Biology, Seabed habitats	EEA	EU species and habitats data (Article 17 of the Habitats Directive)	High	North Sea
2	**BE**	422, VLIZ, Joana Beja	Biology, Geology	EEA	Time series for invertebrates and sediments	High	North Sea
3	**BE**	422, VLIZ, Joana Beja	Biology	ILVO	Evaluation of by-catch in the Belgian brown shrimp (Crangon crangon L.) fishery since 1996		North Sea
4	**BE**	422, VLIZ, Joana Beja	Biology	VUB (ESA)	Phytoplankton of the Belgian Continental shelf gathered by the ULB	Low	North Sea
5	**BE**	422, VLIZ, Joana Beja	Biology	Green Balkans NGO, Bulgaria and TUDAV Foundation, Turkey	Flora and fauna inhabiting the Black Sea	Low	Black Sea
6	**BE**	422, VLIZ, Joana Beja	Biology	INBO	Bird countings on the Belgian Continental Shelf	Low	North Sea
7	**BE**	422, VLIZ, Joana Beja	Biology	INBO	Distribution of seabirds on the Belgian Continental Shelf	Low	North Sea

8	**BE**	422, VLIZ, Joana Beja	Biology	INBO	Flemish waterbird counts	Low	North Sea
9	**BE**	422, VLIZ, Joana Beja	Biology	IRScNB/KBIN, INBO	Crgulls: Observations of Belgian color ring-marked gulls from 1999 until 2010	Low	North Sea
10	**BE**	422, VLIZ, Joana Beja	Biology	MARBIOL	Meiobenthos of the Southern Bight of the North Sea, Western Scheldt and also Greenland, Antarctica and the Kenyan mangroves	Low	North Sea
11	**BE**	422, VLIZ, Joana Beja	Biology	VLIZ	LifeWatch observatory data: long term collections of macrobenthos in the Belgian Part of the North Sea	Low	CC-BY
12	**BE**	422, VLIZ, Joana Beja	Biology	VLIZ	Baseline inventory of echinoderms and decapod crustaceans of rocky shores in the Arrabida Marine Park (Portugal)	Medium	Coastal Atlantic, off Portugal
13	**BE**	422, VLIZ, Joana Beja	Chemistry	VLIZ	Beach litter data collected by iSea Greece	High	Aegea, Cretan and Ionian Seas
14	**BE**	422, VLIZ, Joana Beja	Chemistry	MareNostrum	Marine litter from aerial surveys	Medium	
15	**BE**	422, VLIZ, Joana Beja	Human Activities	VLIZ	Belgian recreational fisheries	Medium	Belgian part of the North sea
1	**BG**	692, IO-BAS, Asen Stefanov	Human activities, Chemistry	Black Sea Basin Directorate, bdvarna@bsbd.org ,https://www.bsbd.org	T,S, Silicate, Phosphate, Nitrite, Nitrate, Ammonium, DO	High. There is existing cooperation which will facilitate further data provition	Black Sea
2	**BG**	692, IO-BAS, Asen Stefanov	Physics	IO-BAS, http://io-bas.bg	Buoy data (Varna , Burgas)	High. The data are iavailble in IO-BAS	Black Sea
3	**BG**	692, IO-BAS, Asen Stefanov	Human activities	NAFA Bulgaria ; http://iara.government.bg/	Aquaculture	Low. they are not willing to share data but now we have new contacts	Black Sea
4	**BG**	692, IO-BAS, Asen Stefanov	Physics	National Institute of Geophysics Geodesy and Geography - BAS	Sea-Level	High	Black Sea

5	**BG**	692, IO-BAS, Asen Stefanov	Chemistry, Human activities	MARINE ANTIPOLLUTION ENTERPRISE JSCO, http://www.pchmv-bg.com/	Oil spils - since 1972; New history after 1992	Low. Previous experience indicated that they are not willing to share data	Black Sea
6	**BG**	692, IO-BAS, Asen Stefanov	Chemistry, Physics	Pudos - Enterprise for the management of environmental protection activities ,https://pudoos.bg/	T,S, Silicate, Phosphate, Nitrite, Nitrate, Ammonium, DO	High. There is existing cooperation	Black Sea
7	**BG**	692, IO-BAS, Asen Stefanov	Physics	Executive Agency "Maritime administration"	Meteo stations, T/S	High	Black Sea
8	**BG**	692, IO-BAS, Asen Stefanov	Physics	**Institute of Biodiversity and Ecosystem-BAS**	T,S, Silicate, Phosphate, Nitrite, Nitrate, Ammonium, DO	High	Black Sea
1	**CY**	4537, ORION, George Zodiatis	Physics	ORION	time series for sea temperatures	High	East MedSea-Levantine basin
2	**CY**	4537, ORION, George Zodiatis	Physics	ORION	time series for sea level	High	East MedSea-Levantine basin
3	**CY**	4537, ORION, George Zodiatis	Chemistry	MEYDAN SOLUTIONS Ltd	sediments: Naphthalene, acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene	High	East MedSea-Levantine basin
1	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Chemistry	The Danish Environmental Protection Agency	National monitoring data for beach litter	High	North Sea, Baltic Sea
2	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Chemistry	The Danish Environmental Protection Agency	National monitoring data for microlitter particles in water surface	High	Danish waters, North Sea, Baltic Sea
3	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Chemistry	Danish Centre for Environment and Energy	Microplastic-like particles in sediments from Danish waters	High	North Sea, Baltic Sea
4	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology, Chemistry	Aarhus University, Department of Ecoscience	Data from North-West Greenland	Medium	Artic Sea
5	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology, Chemistry	Femern A/S	Data from the Femern Belt EEA	Low	Baltic Sea

6	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology, Chemistry	Rambøll	Data from the North Stream project	Low	Baltic Sea
7	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology	Aarhus University, Department of Ecoscience	Stone reef data from the monitoring program	Medium	North Sea, Baltic Sea
8	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology	Aarhus University, Department of Ecoscience	Coastal vegetation data from the Danish monitoring program	Low	North Sea, Baltic Sea
9	**DK**	729, AU-DCE, Mihail-Constantin Carausu	Biology	University of Copenhagen	Galathea III Expedition data	Low	Atlantic Ocean, Pacific Ocean, Arctic Ocean
1	**EST**	713, TalTech, Villu Kikas	Chemistry	Estonian Environment Agency	Beach litter	Medium	Baltic Sea
2	**EST**	713, TalTech, Villu Kikas	Chemistry	MSI TalTech	Nutrients; hazardous substances	Medium	Baltic Sea
1	**FI**	1544, GTK, Aarno Kotilainen	Bathymetry	Nord Stream 2 AG	DTM: XYZ format	High	Baltic Sea
2	**FI**	1544, GTK, Aarno Kotilainen	Geology	Nord Stream 2 AG	SBP (Sub-bottom profile): SEGY; Side-Scan Sonar Mosaics: tif files; Geotechnical reports: pdf	High	Baltic Sea
1	**FI**	1725, FMI, Kimmo Tikka	Physics	University of Helsinki, Tvärminne Zoological Station	CTD	Medium to High	Baltic Sea
2	**FI**	1725, FMI, Kimmo Tikka	Physics	FMI, Utö station	T,S,CO2, currents, waves	Medium to High	Baltic Sea
3	**FI**	1725, FMI, Kimmo Tikka	Physics	FMI	CTD	High	Baltic Sea
4	**FI**	1725, FMI, Kimmo Tikka	Biology, Chemistry	FMI	O2, Chl-a, Backscattering, C/FDOM	High	Baltic Sea

5	**FI**	1725, FMI, Kimmo Tikka	Physics	Traficom	Temperature profiles	low	Baltic Sea
6	**FI**	1725, FMI, Kimmo Tikka	Physics	Navy	Temperature profiles	low	Baltic Sea
1	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Physics	National Institute for Universe Sciences (INSU, CNRS) https://www.insu.cnrs.fr/ http://charon.dt.insu.cnrs.fr/daufin/ Céline Laus Heyndickx: celine.heyndrickx@cnrs.fr	Raw data ASCII files: Singlebeam data (coastal bathymetry) Pressure, air temperature and humidity, wind direction and speed, water conductivity, salinity and temperature, fluorescence	High	
2	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Human activities, Geology	"Grands Ports Maritimes", French autonomous harbours, (Le Havre, Marseille, Bordeaux,…)	Multibeam, singlebeam, sidescan, wrecks, obstructions, sediments	Medium to High	French Coastal waters
3	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Human activities, Geology	Regional councils Departmental Directorate of Territories (DDT)	Multibeam, singlebeam, sidescan, wrecks, obstructions, sediments	Medium to High	French Coastal waters
4	**FR**	540, SHOM, Ronan Pronost	Bathymetry	ENSTA Bretagne http://www.ensta-bretagne.fr/ Roderick Moitié: roderick.moitie@ensta-bretagne.fr	Multibeam, Singlebeam, sidescan	High	Coastal Waters of Brittany
5	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Geology	INTECHMER http://www.intechmer.cnam.fr/l-institut/presentation/ Emmanuel Poizot: emmanuel.poizot@lecnam.net	Multibeam, grain size	Medium	English Channel
6	**FR**	540, SHOM, Ronan Pronost	Bathymetry	Institut Paul-Emile Victor https://www.institut-polaire.fr/language/en/ Héléne Leau: helene.leau@ipev.fr	Multibeam	High	South Indian Ocean, Arctic
7	**FR**	540, SHOM, Ronan Pronost	Bathymetry	Local industries and every kind of private organizations	Multibeam, singlebeam, etc.	Low to medium	French EEZ
9	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Geology, Seabed habitats, Chemistry, Biology, Physics, Human activities	ETR-Every Foreign data collector in French waters	Various	High	French EEZ

10	**FR**	540, SHOM, Ronan Pronost	Bathymetry, Geology, Seabed habitats, Chemistry, Biology, Physics, Human activities	US-National Centers for Environmental Information (NCEI, NOAA) https://www.ncei.noaa.gov/ Jennifer Jenks: jennifer.jencks@noaa.gov	Wide range of raw data in climate, coastal, oceanographic and geophysical (variety of formats)	Medium	
1	**GB**	2746, JNCC, Helen Lillis	Biology, Seabed Habitats, Geology	Scottish Association for Marine Science (SAMS), EDMO id. 44	Deep Sea Benthic Biodiversity (Arctic, North Atlantic & Rockall Trough, Off Barra, Portuguese coast) - Habitat extent, zoobenthos counts and abundance, sediment grain-size - Several datasets since 1973. EDIOS programme ID 10239	Medium	Arctic, North Atlantic & Rockall Trough, Off Barra, Portuguese coast
2	**GB**	2746, JNCC, Helen Lillis	Biology, Seabed Habitats	Scottish Association for Marine Science (SAMS), EDMO id. 44	Outputs of MARPAMM project	Medium	Celtic Seas
3	**GB**	2746, JNCC, Helen Lillis	Bathymetry, Biology, Seabed Habitats, Geology	NAFC Marine centre, University of the Highlands and Islands, EDMO Id. 2485	Habitat mapping for the Shetland Islands' Marine Spatial Plan (SIMSP) - multibeam surveys, dropdown video surveys and priority marine feature data	Medium	Greater North Sea
4	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	Marine Scotland Science, EDMO Id. 2135	Habitat maps classified in National habitat classification or Annex I from 2000-present Scottish waters inshore and offshore, from research activities	Medium	Scotland inshore and offshore
5	**GB**	2746, JNCC, Helen Lillis	Biology, Seabed Habitats	University of Ghent, EDMO Id 2376	Bivalve reefs in Belgium	Small	Greater North Sea
6	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	National Oceanography Centre So, Marine Geoscience group, EDMO Id. 17	Marine habitat maps from recent NOCs cruises (e.g. CODEMAP project)	Medium	
7	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	EU ATLAS project	Unpublished outputs of EU ATLAS project (2016-2020)	Small	North Atlantic
8	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	Mission Atlantic project	Outputs of Mission Atlantic project (2020-2025)	Small	North Atlantic
9	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	Various	Individual datasets from the OSPAR threatened and/or declining habitats database	High	Northeast Atlantic
10	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	Various	England national seagrass layer	Medium	English inshore waters

11	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	ESRI	Ecological Coastal Units	Medium	Global
12	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	NatureScot; EDMO Id. 5368	Potential suitable habitat for spawning herring; maybe other essential fish habitat maps too?	Medium	Scotland
13	**GB**	2746, JNCC, Helen Lillis	Seabed Habitats	Swansea University; EDMO Id. 4053	Habitat suitability model of Zostera marina in Wales	Medium	Wales
1	**GB**	42, BGS, Mary Mowat	Geology	University of Plymouth; EDMO Id. 47	Particle Size Analysis data and carbonate data from NERC BLUECoast project	Medium	
2	**GB**	42, BGS, Mary Mowat	Geology	Wessex Archaeology; EDMO Id. 5120	Geophysics	Medium	
3	**GB**	42, BGS, Mary Mowat	Geology	Marine Scotland Science (MSS); EDMO Id. 2135	Geology, geophysics	Medium	
4	**GB**	42, BGS, Mary Mowat	Geology	Scottish Association for Marine Science (SAMS); EDMO Id. 44	Geology, geophysics	Medium	
5	**GB**	42, BGS, Mary Mowat	Geology	Agri-Food and Biosciences Institute (AFBI), EDMO Id. 1385	Geology, geophysics	Medium	
6	**GB**	42, BGS, Mary Mowat	Geology	The Crown Estate (Marine Data Exchange); EDMO Id. 1604	Celtic Arrray Geotechnical data and other geotechnical data from Marine Data Exchange	Medium	
7	**GB**	42, BGS, Mary Mowat	Geology	The Crown Estate (Marine Data Exchange); EDMO Id. 1604	Geotechnical data from Marine Data Exchange	Medium	
8	**GB**	42, BGS, Mary Mowat	Geology	The Crown Estate (Marine Data Exchange); EDMO Id. 1604	Geophysical data from Marine Data Exchange	Medium	
9	**GB**	42, BGS, Mary Mowat	Geology, Biology	Hartley Anderson (on behalf of BEIS); EDMO Id. 2280	Strategic Environment Assessment data	Low	

10	**GB**	42, BGS, Mary Mowat	Geology	University of St Andrews; EDMO Id. 2770	Seabed Sample analysis data	Low	
15	**GB**	42, BGS, Mary Mowat	Geology	Cefas; EDMO Id. 28	Backscatter data	Medium	
16	**GB**	42, BGS, Mary Mowat	Geology	Cefas; EDMO Id. 28	Seabed samples	Medium	
16	**GB**	42, BGS, Mary Mowat	Geology	Scottish Environment Protection Agency (SEPA), EMOD id. 4554	Backscatter data	Medium	
17	**GB**	42, BGS, Mary Mowat	Geology	Welsh Goverment; EDMO Id. 5181	Sidescan sonar	Low	
18	**GB**	42, BGS, Mary Mowat	Geology	IMARDIS/Bangor University; EMOD Id. 1468	Geophysics, backscatter, grab samples	Medium	
19	**GB**	42, BGS, Mary Mowat	Geology	EMEC (European Marine Energy Centre); EDMO Id. 2758	Geology, geophysics	Low	
20	**GB**	42, BGS, Mary Mowat	Geology	National Oceanography Centre (Southampton) (NOC); EDMO Id. 17	Geophysics	Medium	
21	**GB**	42, BGS, Mary Mowat	Geology	National Oceanography Centre (Southampton) (NOC); EDMO Id. 17	Geological core data	Medium	
21	**GB**	42, BGS, Mary Mowat	Geology	University of Sheffield	Geological core data	Medium	
1	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics	Plymouth Marine Laboratory; EDMO Id. 47	Western Channel Observatory, Stations E1 and L4 (near real time data as delayed mode already at BODC). Temperature, Salinity and possibly other variables.	Medium	English Channel
2	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics, Chemistry	AFBI, Northern Ireland; EDMO Id. 1385	North of Ireland Joint Agency Coastal Monitoring Programme (NIJACMP) - 11 coastal stations (temperature, salinity, fluoresence. Some moorings also measure turbidity and DO) – BODC has test data from have one station; need further metadata.	Medium/High	Irish Sea and St Georges Channel

3	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics, Chemistry	Marine Scotland Science; EDMO Id. 2135	Offshore Standard Oceanographic Sections (3 sections); profiles of temperature, salinity and nutrients. 2020 and/or 2021 data.	High	Inner Seas off the West Coast of Scotland, North East Atlantic, North Sea.
4	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics	The European Marine Energy Centre Limited (EMEC), EDMO Id. 2758	Two data sets FoW-SMADCP-3, Seabed Mounted ADCP survey at EMEC tidal test site at Fall of Warness, Orkney, UK, and BC-DWR-E-2017, EMEC Datawell Waverider data at full scale wave test site at Billia Croo, Orkney, UK.	High	North Sea, North East Atlantic
5	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics	Data from Environment Agency, but held by BODC, EDMO Id. 43	UK tide gauge data from last 10 years, initially data from 2 sites but further sites are available.	High	North Sea, North East Atlantic, Inner Seas off the West Coast of Scotland, Irish Sea and St Georges Channel, Bristol Channel, English Channel, Celtic Sea
6	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Bathymetry	The Crown Estate (Marine Data Exchange); EDMO Id. 1604	Bathymetry dataset collected by GEMS Survey Limited contracted by Forewind Limited to undertake bathymetric and geophysical surveys.	HIgh	North Sea
7	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Physics, Chemistry	Isle of Man Government Laboratory; EDMO Id. 1371	Isle of Man Marine Water Monitoring Programme	Low/medium	Irish Sea and St Georges Channel
8	**GB**	43, BODC, Mark Hebden / Lesley Rickards	Biology	BODC, EDMO Id. 43	Biodiversity/biological data held at BODC from various UK sources.	High	Various
1	**GE**	693, TSU, Kakhaber Bilashvili	Geology	Institute of Geography	Bathymetric survey datasets	High	Black Sea coastal zone, Georgia
1	**GR**	269, HCMR, Sissy Iona	Chemistry	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR / IO) 164	CO2, alkalinity	High	East Mediter.
2	**GR**	269, HCMR, Sissy Iona	Chemistry	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR / IO) 164	CO2, alkalinity	High	Ionian, Aegean Sea.
3	**GR**	269, HCMR, Sissy Iona	Chemistry, Biology	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR / IO) 164	Plastics in fish, mussel	High	Ionian, Aegean Sea

4	**GR**	269, HCMR, Sissy Iona	Physics, Chemistry	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR / IO) 164	Nutrients, Cs137, optic data	high	Aegean Sea
5	**GR**	269, HCMR, Sissy Iona	Physics, Chemistry, Biology	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR / IO) 164	CTD data, zooplankton, Chl, nutrients, Dissolved ocygen, Beach Litter, Hydrocarbons	high	Aegean Sea, Ionian Sea
6	**GR**	269, HCMR, Sissy Iona	Physics	HCMR/Institute of Oceanography	Optic data	medium to high	Eastern Med.
7	**GR**	269, HCMR, Sissy Iona	Physics	Univ. of Aegean	CTD data, drifters, moorings	medium	Aegean Sea
8	**GR**	269, HCMR, Sissy Iona	Physics	HCMR/Institute of Oceanography	current meters	high	Aegean Sea, Ionian Sea
1	**HR**	700, IOF, Vlado Dadic	Physics	IOF	Sea level data time series	medium	Adriatic Sea
2	**HR**	700, IOF, Vlado Dadic	Physics	IOF	Current data series	high	Adriatic Sea
3	**HR**	700, IOF, Vlado Dadic	Physics	IOF	Current profiles data series	high	Adriatic Sea
4	**HR**	700, IOF, Vlado Dadic	Physics, chemistry, biology	Ministry of economy and sustainable develpment	Classical oceanographic cruise data (temperature, salinity, nutrients, phyto and zooplankton)	high	Adriatic Sea
5	**HR**	700, IOF, Vlado Dadic	Physics, chemistry, biology	IOF	Classical oceanographic cruise data (temperature, salinity, nutrients, phyto and zooplankton)	high	Adriatic Sea
6	**HR**	700, IOF, Vlado Dadic	Physics, Chemistry, biology	Croatian waters	Classical oceanographic cruise data (temperature, salinity, nutrients, phyto and zooplankton)	high	Adriatic Sea
7	**HR**	700, IOF, Vlado Dadic	Physics	IOF	Currents profiles from moving vessel - MSFD monitoring	high	Adriatic Sea
8	**HR**	700, IOF, Vlado Dadic	Physics	IOF	Underwater noise data	high	Adriatic Sea

9	**HR**	700, IOF, Vlado Dadic	Physics	IOF	CTD data	high	Adriatic Sea
1	**IE**	396, MI, Andrew Conway	Physics	BIM - Ireland's Seafood Development Agency	ADCP and drifter deployments	Medium	NE Atlantic
2	**IE**	396, MI, Andrew Conway	Physics	Marine Institute	Surface drifters	High	NE Atlantic
3	**IE**	396, MI, Andrew Conway	Physics	Marine Institute	Mace Head COMPASS buoy	High	NE Atlantic
4	**IE**	396, MI, Andrew Conway	Physics	University College Cork	Seal tag data from the SeaMonitor project	High	NE Atlantic
5	**IE**	396, MI, Andrew Conway	Biology	Atlantic Technical University	Invasive Species eDNA EMFF Project data	High	NE Atlantic
6	**IE**	396, MI, Andrew Conway	Human Activities	Department of Housing, Local Government and Heritage	MSP related datasets to inform decision making	High	NE Atlantic
1	**IL**	963, IOLR, Isaac Gertman	Physics, Chemistry, biology	Haifa University	Classical oceanographic cruise data (temperature, salinity, oxygen, fluorescence, turbidity)	High	
2	**IL**	963, IOLR, Isaac Gertman	Physics, Chemistry, biology	Ruppin Maritime College	Classical oceanographic cruise data (temperature, salinity, oxygen, fluorescence, turbidity)	High	
3	**IL**	963, IOLR, Isaac Gertman	Physics, Meteo	Nobel Energy Tamar Platform	Waves, Currents, Water temperature, Wind, Air Temperature, Atm. Pressure	Low	
1	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Chemistry, Physics	MFRI - Marine and Freshwater Research Institute	T,S, Silicate, Phosphate, Nitrite, Nitrate, Ammonium, DO, Phytoplakton (biomass, abundance) - Icelandic Waters, 1950-present	High	Arctic, North Atlantic
2	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Physics	MFRI - Marine and Freshwater Research Institute	CTD from pelagic fisheries	High	Arctic, North Atlantic
3	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Physics	The Icelandic Road and Coastal Administration - IRCA	Real time surface T data on wave bouys	High	North Atlantic

4	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Physics	MFRI - Marine and Freshwater Research Institute.	2 new sites for continous real time sea surface T data	High	Icelandic coast
5	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Bathymetry	MFRI - Marine and Freshwater Research Institute	Seabed mapping	Medium	North Atlantic
6	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Chemistry	Umhverfisstofnun - The Environment Agency of Iceland.	OSPAR and WFD monitoring data, including heavy metals and priority substances	High	North Atlantic
7	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Marine Litter	BioPol, Marine Biotechnology Science Hotel in Skagaströnd.	Marine litter, marine biotechnology and microplastic	Small	North Atlantic
8	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Chemistry	Háskólasetur Suðurnesja - The University of Iceland's Research Center in Sudurnes	Contaminants	Medium	North Atlantic
9	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Biology	MFRI - Marine and Freshwater Research Institute.	Data sets of zooplankton biomass and species composition.	Medium	North Atlantic
10	**IS**	583, MFRI, Sólveig Rósa Ólafsdóttir and Eygló Ólafsdóttir	Human activities	MAST - Icelandic Food and Veterinary Authority.	Locations and metadata for aquaculture sites and production in sea water and freshwater aquaculture farms	Medium	North Atlantic
1	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	OSPAR Commission	Beach Litter Dataset	Medium to High	
2	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	ICES	Marine litter data from DATRAS trawl surveys	Medium to High	
3	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	COISPA – Tecnologia & Ricerca (M.T. SPEDICATO)	MEDITS - International bottom litter trawl survey	Medium to High	
4	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	Department of Chemical Sciences, University of Trieste, Via Giorgieri 1, Trieste, Italy;Gianpiero Adami;gadami@units.it	Contaminants	Medium to High	

5	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	Department of Geological, Environmental and Marine Sciences, University of Trieste, Trieste, Italy;Stefano Covelli;covelli@units.it	Contaminants	Medium to High	
6	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	PANGAEA® Data Publisher	Italian Chemical Dataset	Medium to High	
7	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	EU Member States	Beach, seafloor and micro-litter data	Medium to High	
8	**IT**	120, OGS, Alessandra Giorgetti	Chemistry	EU Member States	Contaminants	Medium to High	
1	**IT**	136, ENEA, Leda Pecci / Andrea Bordone	Physics	MedFever project team	Time series of temperature sampled during 2022	High	Tyrrenian Sea
2	**IT**	136, ENEA, Leda Pecci / Andrea Bordone	Chemistry	Blue Lakes project team	microplastics data in the main Italian lakes	High	Some Italian Lakes
3	**IT**	136, ENEA, Leda Pecci / Andrea Bordone	Physics	The Ligurian DLTM Consortium (CNR, ENEA, IIM, INGV, etc.)	Time series of temperature, pressure, water conductivity and salinity	High	the Eastern Ligurian Sea in the S. Teresa Bay (La Spezia)
4	**IT**	136, ENEA, Leda Pecci / Andrea Bordone	Biology	Some CNR colleagues	biodiversity data	High	Mediterranean Sea
1	**IT**	2276, OGS, Paolo Diviacco / Mihai Burca	Physics	National Institute of Oceanography and Applied Geophysics - OGS, Section of Geophysics	Underwater noise	High	Gulf of Trieste (Northern Adriatic Sea)
1	**IT**	251, INGV, Simona Simoncelli	Physics	INGV	reprocessed dataset of XBTs	High	Ligurian and Tyrrhenian Sea
1	**IT**	251, INGV, Simona Simoncelli	Physics	INGV	EMSO delay mode time series	High	Western Ionian node
1	**IT**	251, INGV, Simona Simoncelli	Chemistry	INGV	BGC data at Panarea geothermal observatory	High	Panarea (Tyrrhenian Sea)

1	**IT**	251, INGV, Simona Simoncelli	Physics	INGV	Sea Level data at Thule station (Arctic)	High	Thule
1	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Hellenic Hydrocarbons and Energy Resources Management Company S.A. (HEREMA S.A.), Greece	Oil and gas wells (points), licences (polygons), platforms (points)	High	Ionian Sea and the Central Mediterranean Sea, Aegean-Levantine Sea
2	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	**Geodata.gov.gr, Greece**	Oil and gas wells (points), licences (polygons), platforms (points)	High	Ionian Sea and the Central Mediterranean Sea, Aegean-Levantine Sea
3	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Ministry of Environment and Energy - GENERAL DIRECTORATE OF ELECTRONIC GOVERNANCE & GEOGRAPHIC INFORMATION, Greece	Oil and gas wells (points), licences (polygons), platforms (points)	High	Ionian Sea and the Central Mediterranean Sea, Aegean-Levantine Sea
4	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Black Sea Oil & Gas	Oil and gas wells (points), licences (polygons), platforms (points)	High	Black Sea
5	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Agentia Nationala pentru Resurse Minerale, Romania	Oil and gas wells (points), licences (polygons), platforms (points)	High	Black Sea
6	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	BRGM (Bureau de Recherches Géologiques et Minières), France	Oil and gas wells (points), licences (polygons), platforms (points)	Medium to High	Western Mediterranean Sea, Bay of Biscay and the Iberian Coast
7	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Ministère de la transition écologique et solidaire/Ministère de l'économie et des finances - DGEC (Direction Générale de l'Énergie et du Climat) - Bureau Ressources Énergétiques du Sous-Sol (BRESS), France	Oil and gas wells (points), licences (polygons), platforms (points)	Medium to High	Western Mediterranean Sea, Bay of Biscay and the Iberian Coast
8	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Hydrographic institutes (in general)	Cables (Lines)	High	All European seas
9	**IT**	4530, Cogea, Alessandro Pititto	Human Activities	Hydrographic institutes (in general)	Pipelines (Lines)	High	All European seas

1	**LV**	698, LHEI, Rita Poikane	Seabed Habitat	**Nature Conservation Agency (DAP)**	Habitats data	high	Baltic Propper
2	**LV**	698, LHEI, Rita Poikane	Physics	**Ministry of Environmental Protection and Regional Development (VARAM)**	- physical oceanography data	high	Gulf of Riga
3	**LV**	698, LHEI, Rita Poikane	Chemistry	**Ministry of Environmental Protection and Regional Development (VARAM)**	- chemical oceanography data	high	Gulf of Riga
4	**LV**	698, LHEI, Rita Poikane	Chemistry	SELGA / Master thesys	Data collection of micro-/mezo- plastic in beach sediments	high	Coastline of Latvia of the Baltic Sea and Gulf of Riga
1	**MT**	708, UoM, Audrey Zammit	Physics	University of Malta	Drifter trajectories	High	Mediterranean Sea, mostly central
2	**MT**	708, UoM, Audrey Zammit	Chemistry	University of Malta	Beached Marine Litter	High	Maltese Islands coastal waters
3	**MT**	708, UoM, Audrey Zammit	Chemistry	MEPA (now known as ERA)	Physico-Chemical data for bathing water	High	Maltese Islands coastal waters
4	**MT**	708, UoM, Audrey Zammit	Chemistry	MEPA (now known as ERA)	Physico-Chemical data and trophic status for selected coastal areas	High	Maltese Islands coastal waters
5	**MT**	708, UoM, Audrey Zammit	Seabed Habitats?	MEPA (now known as ERA)	Macroalgal assemblages in Maltese coastal waters	High	Maltese Islands coastal waters
6	**MT**	708, UoM, Audrey Zammit	Physics / Chemistry	MEPA (now known as ERA)	Physico-Chemical data for coastal area close to landfill	High	Maltese Islands coastal waters
1	**NL**	1528, Deltares, Willem Stolte	Biology	Rijkswaterstaat	Macrobenthos and phytoplankton long term monitoring	every year (phytoplankton) and every third year (macrobenthos), new monitoring data come available. Very valuable for emodnet biology. Open data	North Sea, Wadden Sea

2	**NL**	1528, Deltares, Willem Stolte	Biology	Wageningen Marine Research	Macrobenthos, birds, fish from project monitoring	irregular flow of e.g. offshore wind research monitoring data. Usually open data	North Sea, Wadden Sea
3	**NL**	1528, Deltares, Willem Stolte	Chemistry	Rijkswaterstaat	Water quality including contaminants and metals dissolved and particulate fractions	Long term series. Right now only metadata in SeaDataNet. Open data	North Sea, Wadden Sea
4	**NL**	1528, Deltares, Willem Stolte	Chemistry	Rijkswaterstaat	CTD observations, Ferry boxes, Scan fish	unclear how much there is, and unclear what is already in EMODnet via e.g. GOOS.	North Sea.
1	**NL**	630, NIOZ, Taco de Bruin	Physics/Chemistry	NIOZ	CTD observations, including bottle files with nutrients	High	North Sea, NW Atlantic Ocean, Caribean Sea
1	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Wave: Station BFA1, 2015 - 2020	High	North Sea: Bjørnafjorden
2	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station BFA1, 2015 - 2020	High	North Sea: Bjørnafjorden
3	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Wave: Station BFA2, 2015 - 2020	High	North Sea: Bjørnafjorden
4	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station BFA2, 2015 - 2020	High	North Sea: Bjørnafjorden
5	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Wave: Station BFA3, 2015 - 2020	High	North Sea: Bjørnafjorden
6	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station BFA3, 2015 - 2020	High	North Sea: Bjørnafjorden
7	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Wave: Station BFA4, 2015 - 2020	High	North Sea: Bjørnafjorden
8	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station BFA4, 2015 - 2020	High	North Sea: Bjørnafjorden

9	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Wave: Station BFA5, 2015 - 2020	High	North Sea: Bjørnafjorden
10	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station BFA5, 2015 - 2020	High	North Sea: Bjørnafjorden
11	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station 1, 2020 - 2021	High	North Sea: Sørfjorden - Tetteneset
12	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station 2, 2020 - 2021	High	North Sea: Sørfjorden - Slåtteskallen
13	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station 3, 2020 - 2021	High	North Sea: Sørfjorden - Fossmark
14	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station 4, 2020 - 2021	High	North Sea: Sørfjorden - Langhelle
15	**NO**	612, IMR, Øyvind Angelskår	Physics	Statens vegvesen (Public Roads Administration)	Current: Station 5, 2020 - 2021	High	North Sea: Sørfjorden - Herlander
1	**PT**	590, IHPT, Sara Almeida	Physics	CESAM - UA	Data collected from scientific projects	Medium	North of Portugal
2	**PT**	590, IHPT, Sara Almeida	Physics and Chemistry	FC - UL	Historical data collected since 1980	High	IBI area
3	**PT**	590, IHPT, Sara Almeida	Physics	IPMA	Data collected from scientific projects	Medium	North Atlantic ocean
4	**PT**	590, IHPT, Sara Almeida	Physics	LNEC	Data from project CONPRAR	Medium	Algarve
1	**RO**	697, NIMRD, Luminita Buga	Bathymetry	NIMRD	Bathymetric surveys	High	Black Sea

2	**RO**	697, NIMRD, Luminita Buga	Chemistry	Mare Nostrum NGO	Beach litter	High	Black Sea
3	**RO**	697, NIMRD, Luminita Buga	Physics	RONODC/NIMRD	Sea level data 1984 - 2021	High	Black Sea
4	**RO**	697, NIMRD, Luminita Buga	Chemistry	NIMRD	Seafloor litter 2020 -2021	High	Black Sea
1	**SE**	752, SMHI, Lotta Fyrberg	Physics	Bohusläns vattenvårdsförbund . Www.bvvf.se	Sond data	High	Kattegat
2	**SE**	752, SMHI, Lotta Fyrberg	Physics	SMHI	MVP (Moving vessel profiler) - 2021	High	Skagerrak, Kattegat, The Gulf of Bothnia and the Baltic Sea.
3	**SE**	752, SMHI, Lotta Fyrberg	Physics/chemistry	Waters project (2012-2013)	CDOM, SPM, SPIM = Suspended Inorganic Particulate matter.	Medium	Fjords in Skagerrak & Kattegat
4	**SE**	752, SMHI, Lotta Fyrberg	Chemistry	Transpaper (2011-2015)	CDOM	Medium	Kattegat, the Baltic Sea and the Gulf of Bothnia
5	**SE**	752, SMHI, Lotta Fyrberg	Biology	Jerico - Tångesund	IFCB - pictures - 2021	Low	Skagerrak
6	**SE**	752, SMHI, Lotta Fyrberg	Biology	DNA -Barcoding	Phytoplankton species - 2021	Low	Skagerrak, Kattegat, The Gulf of Bothnia and the Baltic Sea.
7	**SE**	752, SMHI, Lotta Fyrberg	Chemistry	Ferrybox - R/V Svea	pH, pCO2, CDOM, Turbidity - 2021	High	Skagerrak, Kattegat, The Gulf of Bothnia and the Baltic Sea.
8	**SE**	752, SMHI, Lotta Fyrberg	Physics	Umea University, 2021-	CTD	High	The Gulf of Bothnia
9	**SE**	752, SMHI, Lotta Fyrberg	Physics	Stockholm Universit, 2021-	CTD	High	The Baltic Sea
10	**SE**	752, SMHI, Lotta Fyrberg	Physics/chemistry	SMHI	CTD - Oxygen & Flourescence	High	Skagerrak, Kattegat, The Gulf of Bothnia and the Baltic Sea.

11	**SE**	752, SMHI, Lotta Fyrberg	Physics	VOTO, Voice of the Ocean, http://voiceoftheocean.org/sv/ -2021?	T, S, waves and more	High	The Baltic Sea
12	**SE**	752, SMHI, Lotta Fyrberg	Physics	SMHI	River data/flow	High	Skagerrak, Kattegat, The Gulf of Bothnia and the Baltic Sea.
13	**SE**	752, SMHI, Lotta Fyrberg	Physics/Chemistry/Biology/Bathymetry/Human activities	Nord Stream	Bathymetry, currents, fish, algae, marine mammals, noice, plankton, sediment,..	High	The Baltic Sea
14	**SE**	752, SMHI, Lotta Fyrberg	Physics	COINS/COPERNICUS	CTD	High	ARCTIC
1	**SI**	1229, NIB, Branko Cermelj	Chemistry	ARSO	Nutrients,Contaminants, Monitoring 2021 results	High	Mediterranean, Adriatic
2	**SI**	1229, NIB, Branko Cermelj	Physics	NIB	Currents profiles from moving vessel	High	Mediterranean, Adriatic
3	**SI**	1229, NIB, Branko Cermelj	Physics	NIB	Currents measurement time series from different campaigns-MSFD	High	Mediterranean, Adriatic
4	**SI**	1229, NIB, Branko Cermelj	Biology	NIb	Soft bottom Benthic Invertebrates along the Slovenian Coast (2005 - 2012)	High	Mediterranean, Adriatic
1	**SP**	26, CSIC, Gemma Ercilla	Bathymetry	Ingeconsul.sl	Bathymetries	High	Spanish waters
2	**SP**	26, CSIC, Gemma Ercilla	Geology	CSIC, University of Vigo, IGME	Seismic profiles	High	NE Atlantic
3	**SP**	26, CSIC, Gemma Ercilla	Geology	University of Granada	Seismic profiles	High	SW Mediterranean
4	**SP**	26, CSIC, Gemma Ercilla	Geology	CSIC (Continental Margins Group)	Seafloor-geology (geomorphology)	High	SW Mediterranean and Atlantic
5	**SP**	26, CSIC, Gemma Ercilla	Marine litter	CSIC (Functioning and Vulnerability of Marine Ecosystems Group & Continental Margins Group)	Seasfloor marine litter from ROVs	High	SW Mediterranean and Atlantic
1	**SP**	353, IEO, Elena Tel	bathymetry	SGP + IEO	underway singlebeam bathymetry data	High	
2	**SP**	353, IEO, Elena Tel	Physics	SGP + IEO	underway meteo data	High	

3	**SP**	353, IEO, Elena Tel	Physics	IEO	underway data (TSG, meteo)	High	
1	**TR**	696, METU, Devrim Tezcan	Physics	Mersin Metropolitan Municipality	CTD	High	NE Mediterranean
2	**TR**	696, METU, Devrim Tezcan	Chemistry	Mersin Metropolitan Municipality	Temp, Sal, Nutrients	Medium	NE Mediterranean
3	**TR**	696, METU, Devrim Tezcan	Geology	Erdemli Municipality	Grain Size	High	NE Mediterranean
4	**TR**	696, METU, Devrim Tezcan	Physics	Mersin Soda Industry Inc	CTD	Medium	NE Mediterranean
5	**TR**	696, METU, Devrim Tezcan	Habitat	Kyrenia University	Sonar map, seafloor photos	Medium	Northern Cyprus coast

EMODnet Ingestion and Safe-Keeping of Marine Data - Phase III

D4.4 Inventory of identified stakeholders for licensing data – 2nd Release

Technical Report

February 2023

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund and its predecessor, Regulation (EU) No. 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund.

EMODnet Ingestion III Project Information	
Project full title	EMODnet Ingestion and Safe-Keeping of Marine Data - Phase III
Project coordinator	Dick Schaap (MARIS)
Project start date and duration	01-04-2022 (24 months)
Project website	https://www.emodnet-ingestion.eu/

Deliverable Information	
Work package number	4
Work package title	Marketing and Outreach
Deliverable number	4.4
Deliverable title	Inventory of identified stakeholders for licensing data
Description	To ensure a proper representation of the regional/country situation and the needs in terms of data on coastal and offshore activities all relevant stakeholders (e.g. public authorities) have been identified. This was done through the stakeholder survey in close collaboration with all EMODnet Ingestion III partners. The aim was to identify and engage with public authorities and relevant organisations who receive data from licensing procedures for coastal or offshore activities with particular emphasis on aquaculture and offshore energy, in order to get more insights in related monitoring data management, to promote use of common standards, and start a path towards a more harmonised approach, by means of a workshop at the end of the project.
Lead beneficiary	Deltares
Lead Author(s)	Sonja Wanke
Contributor(s)	Dick Schaap (MARIS) and all national consortium members
Revision number	2nd Release
Revision Date	February 2023
Status	Final
Dissemination level	Public

Table of Contents

1 Introduction

A partnership of over a hundred and twenty European organisations work together under EMODnet in seven thematic groups to assemble marine data from diverse sources and resources in order to make them more accessible and more interoperable. Part of their work involves building gateways to national, regional or thematic repositories and creating products based on marine and maritime data held by public bodies.

However, many data collected by public authorities, researchers and private operators of coastal or offshore facilities still do not arrive to these national or regional repositories and are thus unavailable to potential users. This creates additional costs for those working on marine issues who will have the choice of accepting lower confidence in their analysis than would otherwise be the case, or being compelled to needlessly repeat observations. There is therefore the need to streamline the data ingestion process so that data holders from public and private sectors can easily release their data for safekeeping and subsequent distribution through EMODnet or other means.

The general objective of EMODnet Ingestion III is to facilitate and streamline the process whereby marine data from whatever source (including national monitoring programmes, research projects, licensing data and private companies) be delivered on a voluntary basis for safekeeping to data repositories from where it can be freely disseminated.

Task 9 (Improve and document the availability of data provided for coastal and offshore licensing) which falls under WP4 – Marketing and outreach activities will tackle the challenge of licensing procedures for coastal and offshore activities. The aim is to identify and engage with public authorities who receive data from licensing procedures for coastal or offshore activities with particular emphasis on aquaculture and offshore energy, in order to get more insights in related monitoring data management, to promote use of common standards, and start a path towards a more harmonised approach, by means of a workshop. The first task deals with **identifying stakeholders that give out licences/permits for coastal and offshore activities, do monitoring or collect data**. Later on, these stakeholders will be asked about their processes.

An example of how marine data flows in the Netherlands is given below. The project data that is collected and/or maintained by different institutes are channelled to a national portal for open data access. Then suitable data are transposed to a format suitable for uptake in EMODnet (Figure 1.1).

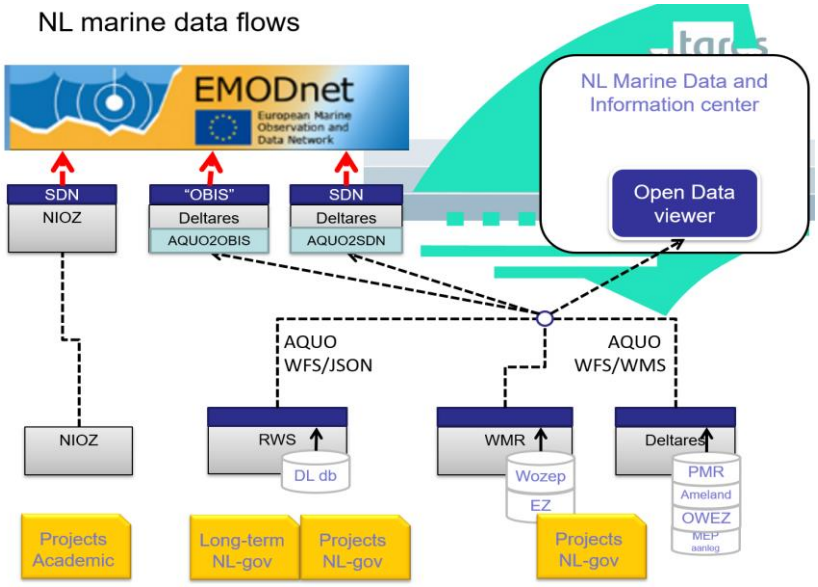


Figure 1.1: Example of marine data flows in the Netherlands

2 Approach

Besides national monitoring programs, marine data are collected for other purposes, e.g. to determine ecological effects of offshore activities like wind farms, aquaculture, sand mining etc. These collected data may come available publicly, but more often, they are kept at organisations responsible for data collection or licensing processes. In EMODnet Ingestion III the aim is to get a better picture of each country's procedures around such data collection. The first step is to identify all relevant stakeholders (e.g. public authorities). Therefore, a stakeholder mapping process has been set up. The purpose is to identify relevant stakeholders, specify their interests and determine their roles and mandates and their desired involvement in the different phases of the project.

Deltares will lead this process, but each local EMODnet Ingestion partner will be closely involved in this process as they have local connections. The purpose is to identify relevant stakeholders, specify the interests and determine their roles and mandates as well as their desired involvement in the different phases of the project. A stakeholder analysis table will facilitate this process.

It should be noted that not all stakeholders need, want and/or can participate in the same degree and should be involved in the same intensity throughout the project. This very much depends on the stakeholders' interest, their role and influence, their capacity to participate and the specific purpose of the different stages.

3 Stakeholders per Country

In total 128 stakeholders were identified by 27 countries (an overview can be found in Appendix II). An additional four countries have indicated that they are in contact with potential stakeholders, but were not able to fill in the provided survey at the time of submission. The survey will be kept open, so as soon as other stakeholders are identified, they can be added to the list and included in all relevant activities. More than half (52%) of the identified stakeholders are national governments from different ministries such as the Ministry of Energy, Ministry of Renewable Energy, Ministry of Environment and Water and the Ministry of Agriculture. This is followed by agencies (19%) and education such as universities and scientific institutes (9%) (Figure 3.1).

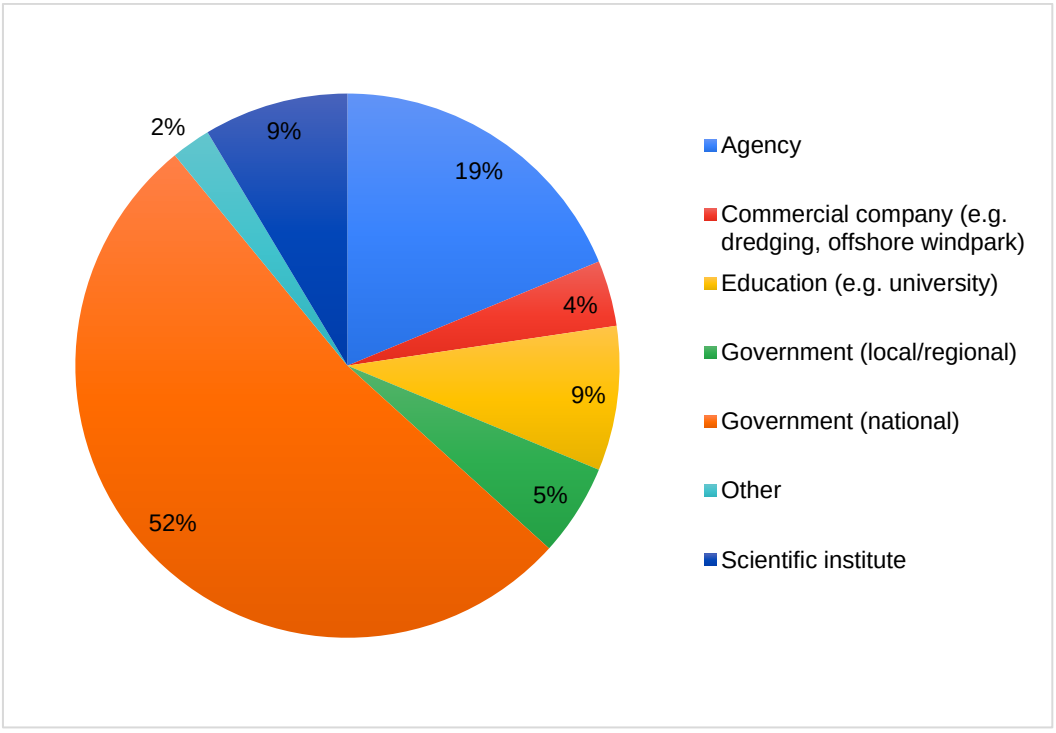


Figure 3.1: Different types of stakeholders responsible or involved in the offshore licensing process

When asked about their role concerning data, the majority of stakeholders had three roles: data producers, data owners and data holders (52%), followed by data owners (15%) and data owners and data holders (9%) (Figure 3.2).

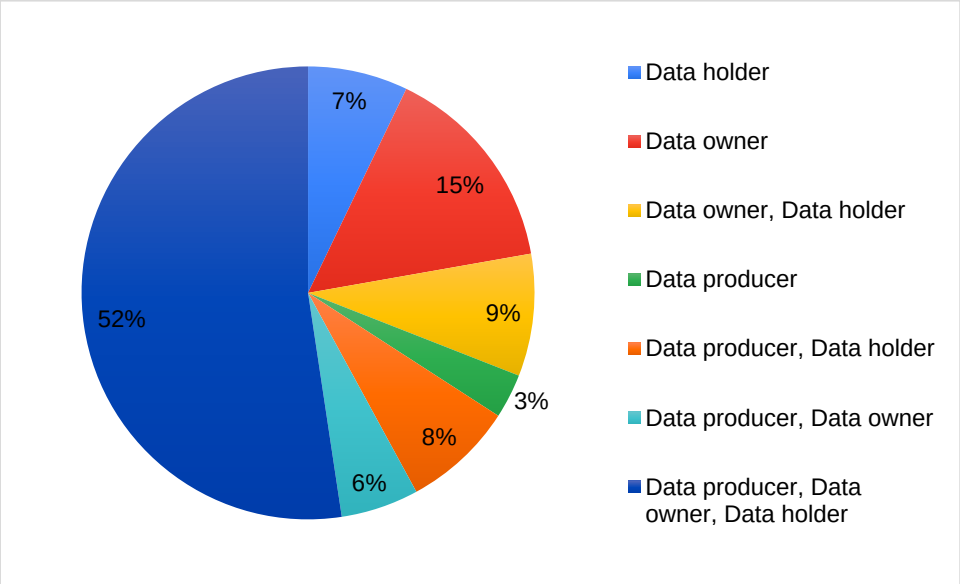


Figure 3.2: Stakeholders according to their current role concerning data (i.e. data holder, data owner, data producer)

Additionally, some specific EMODnet Ingestion questions were asked to check whether potential stakeholders already know about the project or would like to be involved more which is important information for the following phase. Many of the asked stakeholders already know about EMODnet Ingestion, while there is only a few that are not yet aware of it. On the other hand, when asked about wanting to collaborate with EMODnet Ingestion, only 25% said yes, while the majority did not know yet (Figure 3.3).

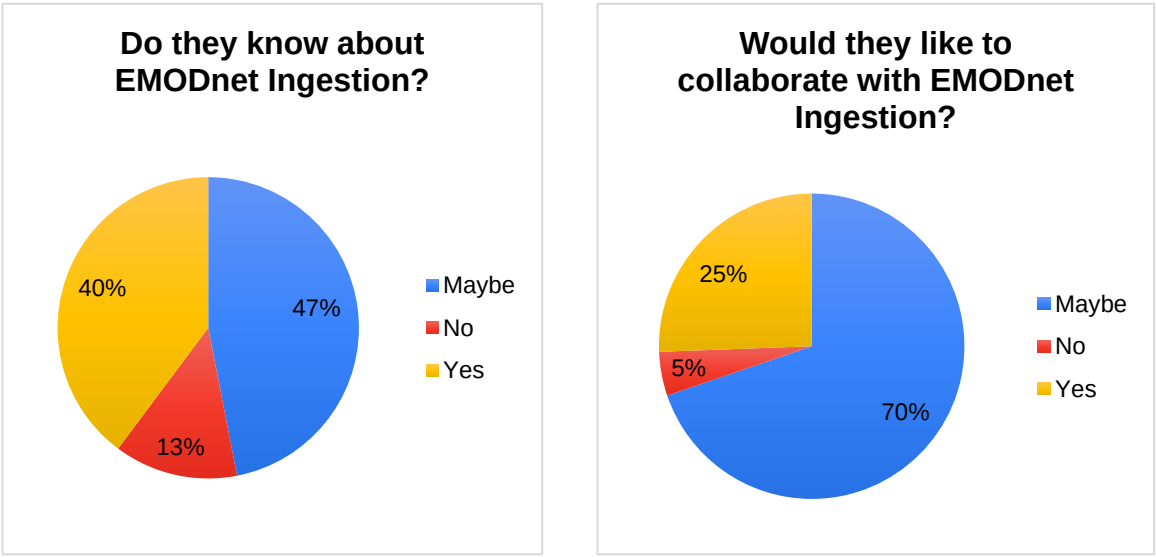


Figure 3.3: Stakeholders' knowledge on (a) and potential to collaborate (b) with EMODnet Ingestion

The following sections provide a detailed breakdown of all stakeholders per country. Seven different types of stakeholders were identified as follows:

Type	Code
Agency	
Commercial company	
Education	
Government (local/regional)	
Government (national)	
Other	
Scientific institute	

3.1 Belgium

1	**Federal Public Service Economy / General Directorate Energy / Offshore cel**			
	Responsibilities Give out licenses, do the monitoring, collect data			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
2	**MUMM-RBINS (Scientific Service Management Unit of the Mathematical Model of the North Sea of the Royal Belgian Institute of Natural Sciences)**			
	Responsibilities Do the monitoring, collect data, and environmental impact assessment			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
3	**ILVO - Flanders Research Institute for Agriculture, Fisheries and Food**			
	Responsibilities Do the monitoring, collect data, and environmental impact assessment			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
4	**Colruyt / Project Value@Sea**			
	Responsibilities and activities R&D tests of mussel aquaculture in the offshore windfarms			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
5	**UGent, Faculty of Bioscience Engineering**			
	Responsibilities and activities Offshore aquaculture			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.2 Bulgaria

6	**Ministry of Environment and Water**			
	Responsibilities Responsible for integrated water management in order to achieve their good environmental status in the Black Sea region for basin water aquaculture. They give permissions for building or installing "installations" in, on, up, below or over the bottom of the Bulgarian part of Black Sea. Examples are constructions for fish breeding or the entrance of mussel seed, the installation of windmills and other large constructions, or the excavation of pipelines and cables. Used Legislation - Water Law, Environmental protection Law			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
7	**Ministry of Regional Development and Public Works**			
	Responsibilities and activities Responsible for Coastal and offshore licenses. Responsible for Maritime Spatial Planning for Black Sea – Bulgaria. Maritime Spatial Planning (MSP) is a public process for the analysis and planning of human activities in marine areas to achieve ecological, economic, and social objectives. The goal is to develop spatial plans which define the effective use of marine areas for different marine activities and the sustainable use of marine and coastal resources. Used Legislation - Water Law, Law on the development of the Black Sea Coast, Environmental protection Law			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
8	**Ministry of Energy**			
	Responsibilities and activities Responsible for oil and gas production licenses. Permits for search and exploration or for exploration of underground resources on the territory of the Republic of Bulgaria, including in the continental shelf and in the exclusive economic zone in the Black Sea, issued by the Council of Ministers and the Minister of Energy. Used Legislation - Underground wealth law			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
9	**Ministry of Agriculture (Executive Agency for Fisheries and Aquaculture)**			
	Responsibilities and activities Fisheries are bound by the Common Fisheries Policy of the EU and therefore to strict measures and rules. These relate to areas, catches (quotas), seasons and sea days, engine power and regulations for the fishing gear. Used Legislation- Fisheries and Aquaculture Law			
	Role	✓ Data producer	✓ Data owner	✓ Data holder

	Data policy in place	Yes

3.3 Croatia

10	**Hrvatske Vode (Croatian Waters)**			
	Responsibilities and activities Legal entity for water management, giving out specific licences, monitoring, collecting data, responsible for WFD performed by consultant institutes. Some activities: Preparation of planning documents for water management, water regulation and protection from adverse effects of water, Amelioration drainage, Water use, Water protection, Irrigation, Expert supervision, Management of special projects.			
	Role	✓ Data producer	Data owner	Date holder
	Data policy in place	Yes		
11	**OIKON Ltd. – Institute of Applied Ecology**			
	Responsibilities and activities Monitoring, data collection; licensed and accredited consulting company / research institute in the field of applied ecology in Croatia among other activities provides services in the fields of nature and environmental protection. Contracted by the Ministry of economy and sustainable development for some specific projects on temporary base.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
12	**Ministry for Economy and Sustainable Development**			
	Responsibilities and activities Give out licenses: Energy approvals, Environmental permit, Environmental impact assessment, Strategic environmental impact assessment, Assessment of the need for an environmental impact assessment, Ecological network Natura 2000...). Responsible for implementation of MSFD Directive in Croatia through nominated consultants (Institute of oceanography and fisheries and Institute Ruđer Boskovic). Owner of MSFD data. Gives permission for publishing data for wide users.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	No		
13	**Ministry of Agriculture - Directorate for Fisheries and Aquaculture**			
	Responsibilities and activities Give out licenses related fisheries and aquaculture. Require collection of fisheries and food web related data though subcontracts.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
14	**Institute Ruđer Bošković, Zagreb**			

	Responsibilities and activities Research, monitoring, assessment of marine environment, data collecting physical oceanography, chemistry and biology to collect data for the licenses for assessment of marine environment. Contracted by the Ministry of Science and Education, Ministry of Economy and Sustainable Development.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
15	**Hydrographic Institute of the Republic of Croatia**			
	Responsibilities and activities Monitoring, data collection (i.e. bathymetry, seabed, physical oceanography and chemistry). Contracted by the Ministry of the Sea, Transport and Infrastructure, Ministry of Economy and Sustainable Development.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
16	**Institute for Marine and Coastal Research, University of Dubrovnik**			
	Responsibilities and activities Marine research and monitoring, assessment of the marine environment, and data collection. Contracted by the Ministry of Science and Education, Ministry of Economy and Sustainable Development.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
17	**The Blue World Institute of Marine Research and Conservation, Mali Lošinj**			
	Responsibilities and activities Collection of the marine sensitive species (dolphins and sea turtles). Contracted by the Ministry of economy and sustainable development on temporary base.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
18	**Institute of Oceanography and Fisheries**			
	Responsibilities and activities Research, monitoring, assessment of marine environment, data collecting of physical oceanography, chemistry, biology, fisheries and aquaculture to collect data for the licenses. Contracted by the Ministry of Science and Education, Ministry of Economy and Sustainable Development (MSFD implementation).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.4 Cyprus

19	**Hydrography Section, Department of Lands and Surveys, Nicosia**			
	Responsibilities and activities Collect and manage data (i.e. bathymetry and sea level)			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, https://eservices.dls.moi.gov.cy/#/national/inspiregeoportalmapviewer		
20	**Department of Fisheries and Marine Research**			
	Responsibilities and activities Give out licenses, do monitoring, collect data			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
21	**Mer- Marine and Environmental Research Lab ltd**			
	Responsibilities and activities Do monitoring			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Unknown		
22	**AKTI Project and Research Centre**			
	Responsibilities and activities Monitoring			
	Role	✓ Data producer	Data owner	Data holder
	Data policy in place	Unknown		
23	**Marine and Carbon Lab, University of Nicosia**			
	Responsibilities and activities Education and research, collect data			
	Role	✓ Data producer	Data owner	Data holder
	Data policy in place	Yes		

3.5 Denmark

24	**The Danish Environmental Protection Agency**			
	Responsibilities and activities Give out licenses, do the monitoring and to some extent collect data			
	Role	✓ Data producer	✓ Data owner	Data holder

	Data policy in place	Yes, https://eng.mst.dk/about-us/the-personal-data-policy-of-the-environmental-protection-agency/		
25	**Aarhus University, Department of Ecoscience**			
	Responsibilities and activities Do the monitoring, collect the data, analyses the data			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes, https://international.au.dk/about/profile/privacy-policy		

3.6 Estonia

26	**Environmental Agency**			
	Responsibilities and activities Field of activity is the fulfilment of the national environmental monitoring programme, the preparation of national and international reports in the field of environment, evaluating environmental status, ensuring vital services, including weather forecasts, and the maintenance and renewal of monitoring stations and equipment. Information that can be downloaded from the Estonian Environment Agency's webpage is for public use. The source must be referred to. Belongs under Ministry of Environment.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
27	**Ministry of Environment**			
	Responsibilities and activities Issuer of a marine scientific research permit to foreign research bodies for investigations in Estonian territorial sea or exclusive economic zone and associated entry clearances for research vessels.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
28	**Ministry of Economic Affairs and Communications**			
	Responsibilities and activities Gives out all permissions to operate or build related to harbours, sea traffic and hydrography service (Transport Administration), sea cables deployed, energy (wind parks) etc.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
29	**Tallinn University of Technology - Department of Marine Systems**			
	Responsibilities and activities Marine monitoring, collecting data and analysing collected data.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder

	Data policy in place	Yes		
30	**Estonian Marine Institute**			
	Responsibilities and activities Marine monitoring, collecting data and analysing collected data.			
	Role	✓Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.7 Finland

31	**Defence Command, The Finnish Defence Forces**			
	Responsibilities and activities They give out of the licenses to execute seabed surveys including acoustic-seismic surveys and seabed sampling in territorial sea areas and in internal waters. In the EEZ area, permission for seabed survey is granted by the Finnish Government on the presentation of the Ministry of Economic Affairs and Employment (TEM), but those permits are actually sought from TEM.			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	Yes, https://puolustusvoimat.fi/merenmittaus1		
32	**The Ministry of Economic Affairs and Employment of Finland**			
	Responsibilities and activities In the EEZ, the right to explore, exploit, preserve and manage abiotic and biotic natural resources, as well as other activities aimed at the economic exploitation and exploration of the zone, belongs to the Finnish State. The permission applications to use the Finnish Economic Zone should be sent to the Ministry of Economic Affairs and Employment of Finland. The permit requires the approval of the Government.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
33	**The Regional State Administrative Agency (Aluehallintovirasto in Finnish)**			
	Responsibilities and activities The protection of the Baltic Sea marine ecosystem is based on international agreements, EU Community law and national legislation. The reconciliation of human activities and natural values is regulated by permitting processes based on these laws. Along with water and marine management, the most essential laws for environmental impact assessment of projects in marine areas in Finland are the Water Act, the Environmental Protection Act and the Land Use and Construction Act. The Water Act guides the use and construction of water bodies. The Water Act regulates permitting matters for projects related to, for example, piers, land extraction, sea cables, extension of the environmental permit for offshore wind farm, water pipes and pressure sewer systems, the construction of floating dwellings, marine refills, edge embedding/boundary bank for constructions, waterway maintenance, and dredging and dumping. Dredging and dumping activities exceeding 500 m^3 of volume are authorised and instructed. However, the absolute need for permits does not apply to waterway maintenance dredging, but a permit must be applied for if dredging can change, among other things, the aquatic environment. Smaller dredging is carried out by a notification procedure.			

	Also, extraction of marine sand and seabed mineral requires always a permit under the Water Act. Treatment and further processing of resources, for example the processing of sand and gravel into concrete gravel, may also require an environmental permit. An environmental permit is needed if there is a risk that planned activities may pollute the environment. An environmental permit is needed for activities such as fish farming, mining of ores and minerals, wastewater treatment, disposal of waste, utilization of waste material for marine refilling, shipyards, and ports and harbours. Depending on the activity, the authorization process may require permits under both — or more — laws. The Land Use and Construction Act applies to issues related to coastal or marine zoning, construction, or having landscape altering effects. The Nature Conservation Act has been of limited importance so far in relation to the permit processes carried out along the coast and at sea, as the Act has not included a sufficient number of marine habitats and species. To check whether the planned marine and coastal activities need, for example, an environmental permit or a permit under the Water Act, permit needs are assessed by the Centre for Economic Development, Transport and the Environment (ELY- keskus in Finnish). Permit applications should be sent to the Regional State Administrative Agency (Aluehallintovirasto in Finnish) for the region where the project is located, well in advance of the planned start date of the project. Permit applications under the Water Act are processed by the Regional State Administrative Agencies for Southern Finland, Eastern Finland, Western and Inland Finland and Northern Finland. If the planned project is in the region of Southwestern Finland, application will be processed by the Regional State Administrative Agency for Southern Finland. If the planned project is in Lapland, the application will be processed by the Regional State Administrative Agency for Northern Finland. The Regional Administrative Agency usually informs about the application by means of public notice. Authorities will issue a statement on the application. Participants will be allowed to make reminders and residents within the catchment area of the project will be able to give their opinion. After consulting the applicant on opinions and reminders, the Regional Administrative Agency shall take a decision in the case. The decision can be appealed to the Administrative Court of Vaasa and its decision further to the Supreme Administrative Court (KHO). You can only appeal to the Supreme Administrative Court if you have obtained leave to appeal. A fee is charged to the applicant for processing the licence application In the case of minor environmental impacts (e.g., small dredging), only notification to the supervisory authority may be sufficient to initiate operations. *Note* They are supervisory authority, rather than data producer, owner or holder.*			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		

3.8 France

34	**BRGM - Bureau de recherches géologiques et minières** **(French National Geological Service)**			
	Responsibilities and activities Even though their activities are mainly conducted inland, they have some activities in the Marine environment. They may conduct survey for their own research (e.g. risk assessments, core samplings, etc.). BRGM is consulted before any permit is granted for mining activities in French territory and they usually have access to data collected during such activities (prospection and exploitation).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder

	Data policy in place	Yes, https://www.brgm.fr/en/activities/knowledge-dissemination-open-science		
35	**CEREMA - Centre d'études et d'expertise sur les risques, l'environnement, la mobilité et l'aménagement**			
	Responsibilities and activities CEREMA has a dedicated mission on Environmental risks and another in the Sea and Littoral areas. They are one of the main institutions providing expertise to the French Ministry for the Environment (for instance on the attribution of wind farms permits) and to local administrations. They also operate a network of coastal Swell buoys (CANDHIS).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
36	**OFB - Office français pour la biodiversité (French Biodiversity Agency)**			
	Responsibilities and activities OFB coordinates national information systems on biodiversity, water and both aquatic and marine habitats. It manages French protected areas (both marine and inland). It is consulted before the attribution of permits for most activities on French territory: wind farms, fisheries, marine mining activities.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
37	**Météo-France (French meteorological office)**			
	Responsibilities and activities Météo-France collects and disseminates meteorological data (observations, predictions, climatology, etc.), including at sea. They are consulted before the attribution of permits for most activities at sea, and data collected by the permit-owner must be transmitted to Météo-France.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, https://donneespubliques.meteofrance.fr/		
38	**Shom - Service hydrographique et océanographique de la marine (French Hydrographic Office)**			
	Responsibilities and activities Shom is consulted prior to the attribution of authorization for Marine Research activities.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, https://data.shom.fr, https://diffusion.shom.fr		
39	**Ifremer - Institut français de recherche pour l'exploitation de la mer**			
	Responsibilities and activities Acts as a scientific and technical advisor for the attribution of permits for exploration or exploitation of marine material (mineral or living resource).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder

	Data policy in place	Yes		
40	**DGEC - Direction générale de l'énergie et du climat (Directorate General for Energy and Climate)**			
	Responsibilities and activities Marine Wind farms: definition of areas and permits attribution.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
41	**DGAMPA - Direction générale des affaires maritimes, de la pêche et de l'aquaculture (Directorate General for Maritime Affairs, Fisheries and Aquaculture)**			
	Responsibilities and activities Issuing of permits			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
42	**Préfectures Maritimes (Channel & North Sea, Atlantic, Mediterranean Sea)**			
	Responsibilities and activities Authorization for Marine research and other activities in French waters			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
43	**DDTM - Direction départementale des territoires et de la mer (a total of 26 directions in the coastal "Départements")**			
	Responsibilities and activities Issuing of authorizations to occupy the Maritime Public Domain (Territorial Sea)			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		

3.9 Georgia

44	**The National Environment Agency (NEA)**
	Responsibilities and activities The National Environment Agency is a legal entity of public law within the system of the Ministry of Environmental Protection and Agriculture of Georgia. The following activities are carrying out by Agency: Plan and project marine infrastructure facilities and conduct researches needed for these works; developing sea and river bank-protection projects; conducting monitoring and ichthyological, hydrobiological, microbiological studies and study of marine mammals in Georgia's Black Sea continental shelf, territorial waters and special economic zone; Authorization of vessels sailing under the flag of Georgia engaged in fishing or fishing activities in territorial seas and exclusive economic zones (EEZ) of foreign country, also in

	high seas; At the request of the applicant, verification of catch certificates for vessels sailing under the flag of Georgia for the export of fishing products; Validation of notification on catch certificates issued by foreign countries and keeping records of the states and their competent authorities from which the relevant notification was received; Assess fish stocks at the Black Sea coast and inland waters of Georgia and establish quotas. The Agency is guided by the Constitution of Georgia, international treaties of Georgia, decrees of the President of Georgia, resolutions and directives of the Government of Georgia, orders of the Minister of Environmental Protection and Agriculture of Georgia, its Statutes, other legislative and by-law normative acts and individual administrative-legal acts of the head of the Agency.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		
45	**Iv.Javakhishvili Tbilisi State University (TSU)**			
	Responsibilities and activities ADU of IODE/IOC/UNESCO, collator ADU of IODE/IOC/UNESCO is not contracted by the governmental authorities. It is a unit within the IODE system and network and designated as National Coordinator for oceanographic data management.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
46	**Laboratory Research Centre, Poti**			
	Responsibilities and activities Monitoring			
	Role	✓ Data producer	Data owner	Data holder
	Data policy in place	Yes		
47	**State Hydrographical Service of Georgia**			
	Responsibilities and activities Do the monitoring, collect data They are legal entity of public law within the system of Ministry of Economy and Sustainable Development of Georgia. The corresponding screenshot of the website will be sent.			
	Role	✓ Data producer	Data owner	Data holder
	Data policy in place	No		
48	**Ministry of Economy and Sustainable Development of Georgia**			
	Responsibilities and activities leads facilitation of issuance of licenses and permits and reform of the system of technical regulation; Law of Georgia on Licenses and Permits regulates spheres of licenses and permits and determines the comprehensive list of licenses and permits, including types of import and export products. Also defines rules on issuance of licenses and permits, making changes and revoking them. There are no restrictions of licensing requirements or other			

	non-tariff barriers, except for necessity to protect public health, national security and environment. There are number of state regulation acts, as follow: The Law of Georgia on Environmental Protection regulates legal relations in the field of environmental protection and the use of natural resources between state bodies and natural and legal persons in the field of environmental protection and nature use throughout Georgia, including its territorial waters, airspace, continental shelf and exclusive economic zone. The Law on the Regulation and Engineering Protection of the Banks of the Sea, Ponds and Rivers of Georgia establishes the status of comprehensive and rational use of the sea coasts, waterbodies and rivers of Georgia and ensures sustainability of coastal engineering protection zones; it establishes forms of state control and liability for activities resulting in erosion and abrasion processes in the coastal engineering protection zone. The Maritime Code of Georgia regulates relations with maritime navigation. 'Maritime navigation' means the use of ships for carrying passengers, cargo, luggage, and mail for fishing and other offshore operations; for exploring and extracting minerals for towage and rescue operations, and for other economic, scientific and cultural purposes. Law on Water regulating the protection of water bodies (including the Black Sea of Georgia) and the rational use of water resources, taking into account the interests of present and future generations and the principles of sustainable development. Law on Licenses and Permits, which regulates the procedure for issuing licenses for mining and fishing in Georgia's territorial sea and inland waters. The Law on Wildlife refers to the basic legal relations on protection, reproduction and conservation of wild animals and wildlife objects permanently or temporarily inhabiting the land, soil, water, atmosphere, territorial waters, continental shelf and special economic zone, in naturally free, semi-free or artificially created environmental conditions in the field of protection, reproduction and/or use of wildlife objects. This Law also regulates fishing issues. On the establishment and management of Kolkheti Protected Areas. Kolkheti Protected Area includes both terrestrial territory and sea water with an area of 15,276 hectares. The Law provides for the care, protection, restoration and rational use of land, water, fauna, flora and other natural resources within the Kolkheti Protected Areas; protection of sea water with a width of 5 nautical miles to maintain ecological balance on the adjacent coastline; create favourable conditions for education and scientific research; The environmental Assessment Code regulates matters related to strategic documents and public or private activities, which may have significant effects on the environment, human life and/or health. The procedures for environmental impact assessment, strategic environmental assessment, transboundary environmental impact assessment, and public participation in decision-making, as well as the conduct of expert examinations, fall within the scope of this Code.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.10 Germany

49	**Federal Maritime and Hydrographic Agency (BSH)**	
	Responsibilities and activities	

	The BSH is a higher federal authority within the portfolio of the Federal Ministry for Digital and Transport (BMDV). It is the public institution for maritime tasks. This concerns tasks such as averting dangers at sea, issuing official nautical charts and surveying tasks in the North Sea and Baltic Sea, as well as forecasting tides, water levels and storm surges. In addition, the BSH is responsible for the surveying of ships, flag law, the testing and approval of navigation and radio equipment and the issue of certificates for seafarers. With regard to construction projects in the North and Baltic Seas, the BSH is responsible for spatial planning and for the testing and approval of power generation systems (offshore wind turbines), cables and other systems within the scope of federal responsibility.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, www.govdata.de/dl-de/by-2-0		
50	**LKN.SH**			
	Responsibilities and activities NLWKN is an Agency of the local Government of Niedersachsen and responsible for coastal protection and conservation of nature.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
51	**NLWKN**			
	Responsibilities and activities NLWKN is an Agency of the local Government of Niedersachsen and responsible for coastal protection and conservation of nature.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
52	**Federal Waterways and shipping administration (WSV)**			
	Responsibilities and activities To enable economical shipping traffic, WSV operates and maintains the federal waterways and the associated facilities (locks, weirs, ship lifts, bridges, etc.) and expands them as required.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, www.govdata.de/dl-de/by-2-0		
53	**Alfred Wegener Institute (AWI)**			
	Responsibilities and activities AWI conducts research on climate change in all forms and across the globe.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
54	**Baltic Sea Research Warnemünde (IOW)**			
	Responsibilities and activities The Leibniz Institute for Baltic Sea Research Warnemünde (IOW) is a non-university marine research institute. In its four departments, the basic disciplines of marine research are represented. Its research programme is directed towards coastal and marginal seas with a special focus on the Baltic Sea ecosystem. In addition to its research activities, the IOW pursues a transfer concept and operates research infrastructures for the scientific community. The IOW is a member of the Leibniz Association (WGL). Its institutional budget is jointly funded by the Federal Government and the Länder. The IOW			

	is a foundation under public law. (https://www.io-warnemuende.de/kurzvorstellung-lageplan.html, 12.01.23)			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		

3.11 Greece

55	**Hellenic Hydrocarbons and Energy Resources Management Company S.A. (HEREMA S.A.)**			
	Responsibilities and activities HEREMA S.A is a state-owned company with the Hellenic State being the sole stakeholder (100%), however it operates independently as a private-sector economic entity. It gives out licenses, do monitoring, collect data (https://www.greekhydrocarbons.gr/gr/CompanyOverview_gr.html). The company besides the hydrocarbon projects is broadening its scope to new energy technologies that can support the country's energy transition to renewable sources. Since May 2022 the company has signed a memorandum of Cooperation with HCMR (https://www.greekhydrocarbons.gr/news_en/PR_REL_120522_EN.html).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
56	**Ministry of Rural Development and Food, Directorate General of Fisheries**			
	Responsibilities and activities The Directorate General of Fisheries is the administrative sector of the Ministry of Rural Development and Food, which manages the sectors of fisheries, aquaculture and marketing-processing of fisheries products. The Directorate General of Fisheries aim is to promote the primary sector through the development of fishery and aquaculture, with the objectives of optimum management of fishery resources, implementation of activity control and promotion of issues within the EU and international organisations. The Directorate is contracting: - **HCMR** (Research Organization) to collect fisheries data in the framework of EU data Collection Framework - **Fisheries Research Institute (FRI) (Research Organization)** to collect aquaculture data (mainly capacity, economics) including environmental data			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
57	**Hellenic Statistical Authority, Agriculture, Livestock, Fishery and Environment Statistics Division**			
	Responsibilities and activities			

	The Agriculture, Livestock, Fishery and Environment Statistics Division of the Hellenic Statistical Authority collects data (through surveys) for assessments of fishery production, values of catches, professional employments (https://www.statistics.gr/en/statistics/agr).			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
58	**Ministry Environment & Energy**			
	Responsibilities and activities Responsible among others for the water resources management, WFD, MSFD. It cooperates with consulting companies and contracts privates or research institutes (like HCMR) to collect marine data incl. data related to aquacultures.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
59	**Independent Power Transmission Operator (IPTO)**			
	Responsibilities and activities Get licenses from the state for underwater cable root surveys. It cooperates with privates or research institutes (like HCMR) to collect marine data.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
60	**Hellenic Telecommunications Organisation S.A. (OTE Group)**			
	Responsibilities and activities Get licenses from the state for underwater cable root surveys. It cooperates with privates or research institutes (like HCMR) to collect marine data.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		

3.12 Iceland

61	**The Environment Agency of Iceland**			
	Responsibilities and activities The Environment Agency operates under the direction of the Ministry for the Environment and Natural Resources. Its role is to promote the protection as well as sustainable use of Iceland's natural resources, as well as public welfare by helping to ensure a healthy environment, and safe consumer goods.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Unknown		

3.13 Ireland

62	**Socio-Economic Marine Research Unit**			
	Responsibilities and activities Generate marine economic related data used in the monitoring of marine planning and development			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
63	**National Biodiversity Data Centre**			
	Responsibilities and activities Generate and hold data on marine species and habitats			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
64	**DHLGH - Foreshore Licensing Team**			
	Responsibilities and activities License foreshore activity, collect data through application and statory legislative processes			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
65	**DHLGH - Marine Area Regulation Authority**			
	Responsibilities and activities License offshore activity, monitor compliance, hold related data			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
66	**DECC - Petroleum Affairs Division**			
	Responsibilities and activities Hold data, monitor compliance with offshore development license terms			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
67	**DHLGH - National Monuments Service**			
	Responsibilities and activities Maintain data related to marine archaeological sites (e.g. shipwrecks)			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
68	**Geological Service Ireland**			
	Responsibilities and activities			

	Generate and hold data on marine geological environment data			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
69	**DHLGH - National Parks and Wildlife Service**			
	Responsibilities and activities Generate and hold data on marine species and habitats			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		

3.14 Israel

70	**Ministry of Energy**			
	Responsibilities and activities Give out licenses, define the data necessity, collect selected data			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
71	**Ministry of Environmental Protection**			
	Responsibilities and activities Give out licenses, define monitoring of water quality in Israel EEZ, define data to be observed, define observations periodicity, define oil spill forecasting necessity			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
72	**Israel Oceanographic & Limnological Research**			
	Responsibilities and activities Give out licenses, define monitoring of water quality in Israel EEZ, define data to be observed, define observations periodicity, define oil spill forecasting necessity			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.15 Italy

73	**Coast Guard that depends on the Ministry of Infrastructure and Transport**			
	Responsibilities and activities To give out specific permission for offshore installation.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Unknown		

3.16 Latvia

74	**Latvian Environmental, Geology and Meteorological Centre**			
	Responsibilities and activities Collect data, did the monitoring Can provide data for EIAs when developer is applying for license (in case of OWF). Do not participate in decision making.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		
75	**Institute of Food Safety, Animal Health and Environment (BIOR)/Fish Resource Research Department**			
	Responsibilities and activities collect data, do the monitoring and research Can provide data for EIAs when developer is applying for license (in case of OWF). Provide evidence for decision (data, scientific justification) if license is fisheries related.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		

*Note: *Licenses for exploration and exploitation of offshore energies and aqua farming in Latvia are the responsibility of the Ministry of Economics and Ministry of Agriculture. But a new ministry has been created since 1st January 2023- the Ministry of Climate and Energy. According to the law, it seems that this ministry will take over some responsibilities.*

3.17 Malta

76	**Continental Shelf Department**			
	Responsibilities and activities CSD is responsible for regulating activities on Malta's continental shelf. It also acts as the Geological Survey of Malta. It is the entity that issues licences for oil exploration, marine scientific research, laying of cables and pipelines and the construction of artificial structures on the continental shelf.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
77	**Department of Fisheries and Aquaculture**			
	Responsibilities and activities DFA is responsible for regulating fishing and aquaculture activities in Malta. It gathers biological and economic information which it uses in decision making related to sustainable fishing. The Aquaculture Directorate is a branch of the DFA, which is responsible for the			

	implementation of the Aquaculture Strategy for the Maltese Islands. All fishers are licenced by the MFA.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
78	**Environment Resources Authority**			
	Responsibilities and activities ERA is the national regulator on the environment. The authority is responsible for the issuing of environmental permits which are required for a number of activities, such as industrial and waste management activities, quarries and combustion plants. It has a robust data gathering structure which is important in its role as advisor to the Government on environment-related policy making. ERA is also responsible for the implementation of assessments required by the MSFD.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		

3.18 Netherlands

79	**Ministry of Infrastructure and Water Management** **Rijkswaterstaat - Directorate Sea and Delta**			
	Responsibilities and activities On behalf of the Ministry of Infrastructure and Water Management, Rijkswaterstaat - **Directorate Sea and Delta** gives out (parts) of the offshore sea bottom licenses related to dredging, sand extractions, cables, wrecks etc. They ask for that two "types" of monitoring data and reporting of the initiator a) during the operation itself (for safety reasons, noise and environment limits etc) and b) environmental/ecological impact monitoring (local and far distance) during and after the activity. Besides that, Directorate Sea Delta has its own (WOZEP)Team for ecological impact studies for "spatial policy planning choices of Windmills areas". They define ecological research studies and specify requirements for Open marine Data.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
80	**Ministry of Agriculture, Nature and Food Quality (LNV)**			
	Responsibilities and activities The Ministry of Agriculture, Nature and Food Quality issues permits licenses under the Nature Conservation Law. The handling of license applications, enforcement requests and the question of the presence of a possible license obligation in relation to marine activities falls under the authority of LNV. These are, for example, gas and salt extraction, aquaculture Fish- and Defence activities.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.19 Norway

81	**Fiskeridirektoratet (Directorate of Fisheries)**			
	Responsibilities and activities The Directorate of Fisheries' shall promote profitable economic activity through sustainable and user-oriented management of marine resources and the marine environment.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.20 Poland

82	**Department of Maritime Economy, Ministry of Infrastructure**			
	Responsibilities and activities Supervising activities carried out in offshore areas, also in the field of wind farms, granting licenses.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.21 Portugal

83	**DGRM (Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos)[1]**			
	Responsibilities and activities Develop maritime safety and services, including the maritime-port sector, the implementation of policies on fisheries, aquaculture, the processing industry and related activities, the preservation and knowledge of marine resources, as well as to ensure the regulation and control of activities in these areas.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, https://www.dgrm.mm.gov.pt		
84	**APA (Agência Portuguesa do Ambiente)[2]**			
	Responsibilities and activities APA is a state agency whose mission is the integrated management of environmental and sustainability policies. Is responsible for monitoring, planning and evaluation, licensing and inspection, and is therefore the main environmental regulator in Portugal			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes, https://apambiente.pt/		

[1] depends on Minister of Economy and the Sea, together with the Minister of Infrastructure and Housing and the Minister of Agriculture and Food

[2] depends on Minister of Environment and Climate Action

85	**DGEG (Direção-Geral de Energia e Geologia)[3]**			
	Responsibilities and activities DGEG, state administration body, which pursues the definition, implementation and evaluation of public policies related to energy and geological resources.			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	Yes, https://www.dgeg.gov.pt/pt/servicos-online/informacao-geografica/		
86	**AMN (Autoridade Maritima Nacional)[4]**			
	Responsibilities and activities Coordinate the activities in public and maritime domain spaces under national sovereignty and jurisdiction.			
	Role	Data producer	Data owner	Data holder
	Data policy in place	Yes, https://www.amn.pt/		

3.22 Romania

87	**Ministry of Environment Waters and Forests**			
	Responsibilities Responsible, through subordinated institutions (Department of Water management, National Environment Protection Agency, Romanian Waters National Administration, regional authorities), for implementation of MSFD, WFD directives and for the National Monitoring programme for Romanian Black Sea waters. It issues environmental permits or licenses for on/offshore developments. It is responsible for the implementation of the Coastal Protection works. Used Legislation - Water Law, Environmental protection Law, ICZM Law			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
88	**Ministry of Development, Public Works and Administration**			
	Responsibilities and activities Responsible (together with the MSP Committee) for the implementation of MSP Directive, elaboration, and monitoring of national MSP. Used Legislation - Water Law, ICZM Law, Environmental protection Law			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
89	**Ministry of Energy**			
	Responsibilities and activities			

[3] depends on Minister of Environment and Climate Action

[4] depends on Minister of Defence

	Issues the authorization act regarding offshore works for the holders of oil / gas agreements related to offshore perimeters. Used Legislation – Law regarding relating to offshore petroleum perimeters, Environmental protection Law			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
90	**National Agency for Mineral Resources**			
	Responsibilities and activities Negotiates and establish together with the other conceding authorities of the state public domain, the clauses, and conditions for exploration/exploitation of offshore oil and gas agreements and concludes such agreements. It regulates the oil and gas operations and mining activities and monitors the application of the measures established for environmental protection, during and after oil and gas operations and mining activities. Used Legislation - Mining law, Petroleum law			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
91	**Ministry of Agriculture and Rural Development (National Agency for Fisheries and Aquaculture)**			
	Responsibilities and activities Elaborates and implements the Romanian Operational Programme for Fisheries. Elaborates regulations regarding access to living aquatic resources for commercial and recreational/sports fishing; technical characteristics and conditions of use of fishing gear, as well as commercial fishing methods in natural fish habitats; annual establishment of the total allowable catch (TAC), fishing quotas and fishing effort; prohibition periods; biological recovery areas/resource as well as the preventive measures; fishing of protected species; minimum individual sizes per species that can be captured; Fleet Adaptation Plan and the Fishing Effort Adjustment Plan. Used Legislation- Law regarding Fishery and aquaculture, Water Law, Environmental protection Law			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.23 Slovenia

92	**Ministry of the Environment and Spatial Planning**	
	Responsibilities and activities The Ministry of the Environment and Spatial Planning helps provide a healthy living environment for all inhabitants of the Republic of Slovenia and promotes and coordinates efforts towards sustainable development based on the efficient and economical use of natural resources and ensuring social wellbeing.	

	Give out licenses: Energy approvals, Environmental permit, Environmental impact assessment, Strategic environmental impact assessment, Assessment of the need for an environmental impact assessment, Ecological network Natura 2000...). Responsible for implementation of WFD and MSFD Directive in Slovenia. Owner of WFD and MSFD data. Gives permission for publishing data for wide users.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
93	**Slovenian Environment Agency (ARSO)**			
	Responsibilities and activities Slovenian Environment Agency performs expert, analytical, regulatory and administrative tasks related to the environment at the national level. Our primary objective is to become a leading, effective and trustworthy environmental institution, capable of disseminating knowledge to other related institutions around the world. The Environment Agency is a body of the Ministry of the Environment and Spatial Planning. Monitor public policies for the environment and sustainable development.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
94	**Ministry of Agriculture, Forestry and Food**			
	The Ministry of Agriculture, forestry and Food is in charge for the Effective fisheries policies and measures help ensure sustainable and competitive fisheries that will sustain the balance between available resources and the environment and increase the competitiveness of Slovenian aquaculture on national and European markets. Responsibilities and activities Fisheries is bound by the Common Fisheries Policy of the EU and therefore to strict measures and rules. These relate to areas, catches (quotas), seasons and sea days, engine power and regulations for the fishing gear. Used Legislation- Marine Fisheries Act (ZMR-2) Owner of Fishery data.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
95	**Institute for Water of the Republic of Slovenia (IZVRS)**			
	Within IZVRS the Sector for Marine Waters covers the regulation, use and protection of the sea, prepares expert bases for the Sea Management Plan pursuant to the Decree on Detailed Content of Marine Environment Management Plan as well as development tasks and expert bases for marine environment impact assessments. *Responsibilities and activities* In the area of protection IZVRS determines the impact of pressures on the individual elements of the environmental state pursuant to the requirements of the Marine Strategy Framework Directive and prepare expert bases for assessing the hydromorphological pressures (for coastal waters and lakes). IZVRS also prepares expert bases and methodologies for waste pollution management, for assessing the individual elements of			

	the environmental state with regard to coastal waste and micro-plastics pollution in water and for content linked to managing the impact of underwater noise on the marine environment Monitor public policies for the environment and sustainable development			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Unknown		
96	**National Institute of Biology (NIB)**			
	Responsibilities and activities The Marine Biological Station (MBS) of NIB in Piran was established in 1969 in response to growing public interest in the sea. Although initially focused on the study of local flora and fauna, it has gradually evolved into a larger research centre focusing on ecological and pollution issues. As part of its research activities, MBS develops studies on the oceanography of coastal waters and operates a research vessel (12 m), an oceanographic buoy, field instruments (e.g., ADCP, CTD with fluorescence and PAR sensors) and a HF radar, and has established the National Oceanographic Data Centre (NODC) for Slovenia.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

3.24 Spain

97	**Ministry for the Ecological Transition and the Demographic Challenge. General Director of the Coast and the Sea**			
	Responsibilities and activities The proposal for the granting and processing of authorizations, permits and concessions their monitoring and control for: the exploitation of hydrocarbons; the actions in terms of research and use of mineral deposits and other geological and hydrogeological resources, within the framework of the powers of the General Administration of the State**;** the execution of works or installations in marine waters, its bed or its sub bottom, or the placement or deposit of materials on the seabed, as well as the discharges.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		

3.25 Sweden

98	**Swedish Agency for Marine and Water Management**			
	Responsibilities and activities The responsible Government agency tasked to protect, restore and ensure sustainable use of freshwater resources and seas including fisheries management Collect data, licensing fishing permits in Swedish EEZ.			

	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
99	**Swedish University of Agricultural Sciences**			
	Responsibilities and activities Monitor and collect data. Contracted by SWAM to perform the national fish monitoring. Not involved in licensing procedures.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
100	**Stockholm University, Department of Ecology, Environment and Plant Sciences**			
	Responsibilities and activities Monitor national data and collect regional data. Contracted by SWAM to perform parts of the national monitoring. Not involved in licensing procedures.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
101	**Tjärnö Marine Laboratory, Gothenburg University**			
	Responsibilities and activities Monitor and collect data. Contracted by SWAM to perform parts of the national monitoring. Not involved in licensing procedures.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
102	**Department of Biological and Environmental Sciences, Gothenburg University**			
	Responsibilities and activities Monitor and collect data. Contracted by SWAM to perform parts of the national monitoring. Not involved in licensing procedures.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
103	**Umea Marine Sciences Centre, Umea University**			
	Responsibilities and activities National and regional monitoring. Contracted by SWAM to perform parts of the national monitoring.			

	Not involved in licensing procedures.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
104	**Geological Survey of Sweden**			
	Responsibilities and activities Monitor, collect data and give out licences Give permission for sand, gravel or stone quarrying within a general water area in the sea, is normally granted by SGU. Monitor hazard substances. Permission to explore the continental shelf is normally issued by the Geological Survey of Sweden (SGU), but sometimes by the government (valid from 1 July 2022). Contracted by SWAM to perform parts of the national monitoring.			
	Role	✓ Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		
105	**Swedish Coast Guard**			
	Responsibilities and activities The Coast Guard is a civilian government agency that belongs to the Ministry of Defence's area of activity. The overall goals for the authority's activities are decided by the parliament and the government decides on the more detailed governance. The Coast Guard's task is to conduct maritime surveillance and rescue services at sea. The coast guard must also coordinate civilian needs for maritime surveillance and convey civilian maritime information to relevant authorities. Not involved in licensing procedures.			
	Role	Data producer	Data owner	X Data holder
	Data policy in place	Unknown		
106	**Swedish Land and Environmental court**			
	Responsibilities and activities Permit examinations for installations at sea After evaluations by the Swedish County administration boards they are often the authority that examine the Natura 2000 permits. In order to build wind turbines in Sweden's sea territory, a permit for environmentally hazardous activities and water activities is required according to the Environmental Code. A permit is also required on the continental shelf (continental shelf law) as well as the municipality's approval and notification according to the Planning and Building Act. Permits for the establishment of wind power in water are normally reviewed by the Land and Environmental Court.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
107	**Swedish Government**			
	Responsibilities and activities			

	Licencing wind farms in Swedish EEZ. Permission to lay out cables and wires on the seabed or to build offshore wind farms is issued by the government. Give permission to extract natural resources from the continental shelf. Permissions for Wrecks before 1850 are handled by the Department of Culture.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		

3.26 Turkey

108	**Ministry of Environment, Urbanisation and Climate Change**			
	Responsibilities and activities The ministry is responsible to implement the Turkish National Integrated Marine Pollution Monitoring Program covering the Turkish coastal areas that is designed according to the Regional Marine Conventions such as Barcelona and Bucharest Conventions, related EU directives (MSFD and WFD) and according to the national legislation. The other responsibility of the ministry is to prepare and update Integrated Coastal Zone Plans in Turkey.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
109	**Mersin Metropolitan Municipality**			
	Responsibilities and activities They are monitoring the Mersin coastal areas for water quality in collaboration with the METU.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	No		
110	**University of Kyrenia**			
	Responsibilities and activities They have a monthly time series dataset off the Kyrenia between 2014-2016. They will start another time series monitoring in 2023.			
	Role	✓ Data producer	✓ Data owner	Data holder
	Data policy in place	No		

3.27 United Kingdom

111	**Environment Agency**			
	Responsibilities and activities England only. The Environment Agency work to create better places for people and wildlife, and support sustainable development. EA is an executive non-departmental public body,			

	sponsored by the Department for Environment, Food & Rural Affairs. The Environment Agency licenses industry, business and individuals to carry out certain activities that have the potential to pollute the environment.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
112	**Maritime and Coastguard Agency (MCA)**			
	Responsibilities and activities The Maritime & Coastguard Agency (MCA) has overall responsibility for the UK's hydrographic obligations under the Safety of Life at Sea Convention (SOLAS). The MCA manages a multi-million-pound budget to systematically survey the waters around the UK. This programme is known as the "UK Civil Hydrography Programme" (UK CHP). Under the UK CHP, commercial contracts are let to ensure accurate hydrographic information is gathered for updating the nation's nautical charts and publications.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	Yes		
113	**Scottish Environmental Protection Agency (SEPA)**			
	Responsibilities and activities Scotland only. As Scotland's principal environmental regulator, SEPA issue a range of authorisations designed to control activities that could lead to pollution or environmental damage. e.g. Aquaculture. Although remit in the marine environment extends to three miles offshore, have no direct regulatory role in marine renewable generation. However, they act as a designated consultation authority for Marine Scotland, a Directorate of Scottish Government, and work closely with partners in marine licensing and monitoring.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
114	**Harbour Authorities**			
	Responsibilities and activities Manage harbours. MMO issue the Harbour Orders in England, so not exactly sure the role they play in licencing.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	No		
115	**Crown Estate Scotland**			
	Responsibilities and activities Crown Estate Scotland's purpose is investing in property, natural resources and people to generate lasting value for Scotland. This includes maintaining and seeking to enhance income from, and the value of, the Scottish Crown Estate while supporting delivery of the Scottish Government's purpose.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		

116	**United Kingdom Hydrographic Office**			
	Responsibilities and activities Hydrographic data from renewables licence applications required to be sent here. (also data collected as part of the Civil Hydrography Programme)			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		
117	**Department for Business, Energy and Industrial Strategy**			
	Responsibilities and activities They are involved in renewables licensing.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	No		
118	**Offshore Petroleum Regulator for Environment and Decommissioning (OPRED)**			
	Responsibilities and activities All UK. The part of BEIS to deal with oil and gas, regulated under the Energy Act. Issue licences for oil and gas operations. Publish all the paperwork related to Nationally Significant Infrastructure Projects (licences, consent orders, environmental statements (includes EIA - contain processed data such as sediment types, species and habitats), not raw data)) on their website. Licence conditions. For monitoring and enforcement, they get sent information on returns from marine mammal observers, pipeline survey data, where rock has been laid to stabilise pipelines, etc. as part of 'Close Out Reports'.			
	Role	Data producer	✓ Data owner	Data holder
	Data policy in place	No		
119	**Cefas**			
	Responsibilities and activities Don't issue licences but might receive returns as part of licence conditions, e.g. contaminants.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
120	**North Sea Transition Authority (NSTA)**			
	Responsibilities and activities The NSTA regulates the licensing of exploration and development of the UK's offshore and onshore (England) oil and gas resources, carbon storage, gas storage and unloading activities.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
121	**Marine Management Organisation**			
	Responsibilities and activities			

	Supports Planning Inspectorate (advising on licence conditions, depending on type of licence) but also have a regulatory role issuing licences for smaller projects, such as building harbours, aggregate extraction, cable laying. Monitoring and enforcement of Marine Licences.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
122	**Planning Inspectorate**			
	Responsibilities and activities Reviews and gives out Deemed Marine Licence. Publishes all the paperwork related to Nationally Significant Infrastructure Projects (licences, consent orders, environmental statements (includes EIA - contain processed data such as sediment types, species and habitats), not raw data)) on their website. Probably don't get sent any raw data.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	No		
123	**Department for Agriculture, Environment and Rural Affairs**			
	Responsibilities and activities Like MMO for England, have a regulatory role issuing licences for smaller projects, such as building a harbour, aggregate extraction, cable laying. Monitoring and enforcement of Marine Licences.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		
124	**Natural Resources Wales**			
	Responsibilities and activities Like MMO for England, they have a regulatory role issuing licences for smaller projects, such as building a harbour, aggregate extraction, cable laying. Monitoring and enforcement of Marine Licences. Might be sent raw data along with paperwork, but not sure.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	No		
125	**Marine Scotland**			
	Responsibilities and activities Marine Scotland is responsible for the integrated management of Scotland's seas, working closely with delivery partners Scottish Natural Heritage (SNH) and the Scottish Environment Protection Agency (SEPA). This covers: • marine renewable, fishing vessel, freshwater fisheries and seal licensing • ensuring compliance with fisheries regulations • promoting sustainable, profitable and well-managed fisheries and aquaculture industries • ensuring a sound scientific evidence base exists to inform our marine policies • the sustainable management of freshwater fish and fisheries resources			

	• promoting sustainable economic growth from the marine renewables industry Marine Scotland is similar to the Planning Inspectorate and MMO but just covers Scotland. They publish all the paperwork related to Nationally Significant Infrastructure Projects (licences, consent orders, environmental statements (including EIA - containing processed data such as sediment types, species and habitats, but not raw data) on their website.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
126	**Marine Scotland Science**			
	Responsibilities and activities Marine Scotland Science (MSS), the scientific division of the Marine Scotland Directorate, plays an integral part in supporting the Scottish Government's vision of marine and coastal environments that are clean, healthy, safe, productive, biologically diverse and are managed to meet the long-term needs of both nature and people.			
	Role	✓ Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
127	**The Crown Estate including Marine Data Exchange**			
	Responsibilities and activities The Crown Estate has a property portfolio encompassing many of the UK's cityscapes, ancient forests, farms, parkland, coastline and communities, The Crown Estate's role as employer, influencer, manager, guardian, facilitator and revenue creator is unique. It has two main objectives: to benefit the taxpayer by paying the revenue from our assets directly to the Exchequer; and to enhance the value of the estate and the income it generates. The estate extends throughout Britain and includes extensive marine assets throughout the UK, including 55% of the foreshore and all of the seabed out to the 12 nautical miles limit. Since 2018 Crown Estate Scotland was established as a separate organisation including responsibility for the seabed out to the 12 nautical mile limit. Seabed Survey Licence -Within the 12 nautical mile limit, all survey activity that interacts with the seabed requires a Seabed Survey Licence, unless the works fall within the public rights of navigation or fishing. Outside of 12 nautical mile (i.e. beyond the territorial limit) survey activity only requires a licence if it relates to an activity over which The Crown Estate holds rights, such as offshore renewable energy, marine mineral extraction, or gas and carbon storage. Non-commercial research activity outside 12 nautical miles does not require a licence. Coastal Survey licences provide permission to undertake a range of small scale commercial survey activities, interfering with the foreshore or seabed, usually for a period of up to 12 months. Marine Data Exchange, part of The Crown Estate, established in 2013, provides access to survey data and reports collected by offshore renewable and marine aggregates customers.			
	Role	Data producer	✓ Data owner	✓ Data holder
	Data policy in place	Yes		
128	**Marine Environmental Data and Information Network (MEDIN)**			
	Responsibilities and activities			

	MEDIN is a partnership of UK organisations committed to improving access to marine data. Partners are both public and private sector. MEDIN reports through the UK Marine Monitoring and Assessment Strategy to the UK Marine Science Coordination Committee (MSCC). MEDIN does not hold produce, own or hold any data directly but its discovery metadata portal provides information about 15,000 marine datasets. MEDIN delivers data through a network of accredited Data Archive Centres. It is responsible for the United Kingdom Directory of Marine Observing Systems (UKDMOS), a unique internet-based searchable database of marine monitoring conducted by UK organisations. In addition, MEDIN promotes the use of standardised field names and controlled vocabularies so that datasets are described in a consistent way for every type of marine data. NOTE: in the next question "What is their current role?", since a response is required, I have put "Data holder" as the MEDIN Data Archive Centres hold data. Coastal Survey licences provide permission to undertake a range of small scale commercial survey activities, interfering with the foreshore or seabed, usually for a period of up to 12 months. Marine Data Exchange, part of The Crown Estate, established in 2013, provides access to survey data and reports collected by offshore renewable and marine aggregates customers.			
	Role	Data producer	Data owner	✓ Data holder
	Data policy in place	Yes		

A. Appendix I Stakeholder Questionnaire

Country

What is the name of the stakeholder/organisation/institute?

What type are they?

What are the main responsibilities of the stakeholder in relation to marine monitoring and research data (e.g. give out licenses, do the monitoring, collect data, etc.)?

What is their current role?

- Data producer
- Data owner
- Date holder

Do they have a data policy (if yes, please insert a link to the document if available)?

Do they know about EMODnet Ingestion?

Would they like to collaborate with EMODnet Ingestion?

Do they have the capacity to participate?

Should they be invited to the final workshop?

B. Appendix II Overview of Identified Stakeholders per Country

Country	Questionnaire filled in	Number of stakeholders identified
Belgium	✓	4
Bulgaria	✓	4
Croatia	✓	9
Cyprus	✓	5
Denmark	✓	2
Estonia	✓	5
Finland	✓	3
France	✓	10
Georgia	✓	5
Germany	✓	6
Greece	✓	6
Iceland	✓	1
Ireland	✓	8
Israel	✓	3
Italy	✓	1
Latvia	✓	2
Malta	✓	3
Netherlands	✓	2
Norway	✓	1
Poland	✓	1
Portugal	✓	4
Romania	✓	5
Slovenia	✓	5
Spain	✓	1
Sweden	✓	16
Turkey	✓	3
UK	✓	18
Total		**128**