



**EMODnet**



European Marine  
Observation and  
Data Network

# **EMODnet Ingestion and safe-keeping of marine data n.2**

**EASME/EMFF/2018/1.3.1.8/01/SI2.810021**

**Start date of the project: 11/10/2019 - (24 months)**

**EMODnet Phase IV – Quarterly Progress Report**

**Reporting Period: 1/10/2020 – 31/12/2020**



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## Disclaimer

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## 1. Highlights in this quarter

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### **Task 1. Maintain and further develop the existing web portal and its services:**

The EMODnet Ingestion portal has been maintained in the reporting period, whereby also care is taken that all services keep functioning as required, while also bugs were fixed and improvements implemented. As part of harmonisation of the EMODnet visualization, changes were made to the width of the topbar and the menu of the lower bar of the EMODnet Ingestion website.

### **Task 2. Implement pathways for delivering data to final repositories, on condition that they are made freely available and that open access to the data is ensured:**

EMODnet Ingestion 2 has a network of 50 data centres which act as 'assigned data centres' for processing received data submissions. In the reporting period 32 new submissions have been recorded of which 21 are SEANOE entries. For the new submissions, data centres have been assigned. Moreover, HCMR as scientific coordinator has interacted with several data centres to progress with the processing and publishing process which has resulted in 47 phase I publications and 33 phase II publications. More details about population can be found in Chapter 6.

Most common interactions concern the change of the Data Centre contact person responsible for a submission due to retirement, internal institutional change of roles or movement of the person to another Organization. More than 55 such re-assignments took place in this reporting period. For that purpose, a new module called "Re-Assignment" has been developed allowing the appropriate Data Centre persons to make these changes on their own and not addressing the request to the administrators of the service. This module is now in test mode. There was also a close cooperation with IFREMER as publisher of the SEANOE entries, because these submissions sometimes needed special treatment such as fixes of the non-complete file transfer in case of big data, to correct wrong licenses (to open data licenses), or to delete SEANOE submissions when their data already existed in EMODnet portals. Some data centres were not yet familiar with the management of the marine litter, biological or other kind of data from the Data Centre level up to their publishing at the EMODnet central and thematic portals, and in such cases proper guidance was given.

### **Task 3. Facilitate machine-to-machine transfers:**

Progress was made in the cooperation between EMODnet Ingestion and EMODnet Physics towards identifying and convincing more Near Real Time operational oceanography sources (operators, platforms, sensors) to get connected to the European ocean data exchange which is organised together with CMEMS-INSTAC for NRT data and SeaDataNet for archived data. The following datasets were added/linked and are available under the EMODnet Physics and EMODnet Physics ERDDAP catalogue:

- Rivers:
  - PoRiver (Italy), MinoTeaenpontearreas, MinoOurense, CallosaDeEnsarriaAlgar, FuenteDelBanoPalancia, HuertoDeMuletJucar, LaPresadeVillarrealMijares, LaPresaturia, VillalongaSerpis (Spain)
- Sea Level
  - Fast data from University of Hawaii Sea Level Center
  - JRC Tsunami Alert Device network – the first package of TAD stations (7 stations @08/01/2020) data is start flowing into the system
- Marine Institute - SmartBay observatory

### **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 a total of 3 questions were received and answered. Details can be found in Chapter 3.

### **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. Moreover, a dynamic exchange was established between the SeaDataNet SEANOE data citing

service and EMODnet Ingestion service, resulting in additional scientific data submissions which can be elaborated for use in EMODnet.

**Task 6. Include a "data wanted" function that allows users seeking certain types of information to specify their needs:**

This function is offered by the Data Wanted service which facilitates users to submit post-its, which are then matched with published datasets. Users will receive alert messages every time new matches have been established.

**Task 7. Participate in discussions with EMODnet partners in order to improve the efficiency of the whole collection, assembly and dissemination process. Including participating to EMODnet Steering Committee meetings and EMODnet stakeholder conferences:**

Coordination mostly took place by e-mail and short web conferences, and a full project group meeting was joined by all partners of the consortium at the begin of the reporting period. The EMODnet Ingestion 2 consortium also comprises the coordinators of each of the thematic lots, which allows for tuning with their project activities. The coordination team participated in the EMODnet Steering Committee and TWG meetings.

**Task 8. 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 has been added as a new search facet. Editing activities take place aimed at replacing so-called orphan data for organisations from free text into controlled EDMO terms and orphan data for projects into controlled EDMERP terms in order to improve the integrity and richness of the metadata. See Chapter 6 for statistics.

**Task 9. Engage in outreach activities towards significant holders of marine data whose data are not already available:**

Several events were cancelled / postponed due to COVID-19 while others went to remote mode. Despite these difficulties, multiple meetings and web presentations have taken place which are instrumental for increasing data submissions. These events and meetings are listed in Chapter 4. For instance, EMODnet-Ingestion was promoted and presented by RBINS at the World Ocean Council Sustainable Ocean Summit, session on the U.N. Decade of Ocean Science - Data Collection and sharing by industry (more information in the December EMODnet Newsletter). The PPT aiming at the business sector was jointly prepared with the EMODnet Secretariat and is available to partners on the EMODnet forum.

Data centres have been requested by partner RBINS to analyse again their national situation and identify potential data sources of possible interest to EMODnet which then can be used as lists for follow-up. Each data centre was sent an excel survey form and a guidance note with lessons learnt and useful hints. The reported national overviews have been collated by RBINS in an inventory with indication of themes and assessment of potential (low, medium, high). The full inventory of 343 entries has been included as an Annex in the Interim Report, which was submitted 11 November 2020.

Furthermore, RBINS started activities for updating and expanding the material as used for promoting EMODnet Ingestion. The ideas were discussed at the Plenary Project meeting and are to be worked out in the coming months, tuning with the EMODnet Secretariat. Ideas concern: 1) updating leaflets; 2) new stickers; 3) updating the EMODnet Ingestion movie, in particular with achieved results in numbers and examples; 4) A0 poster; 5) pins; and 6) Digital background for web conferences. For the movie already a draft scenario and script were prepared as addendum and with the production studio a release in early April 2021 was discussed. The new A0 poster design has been posted on the EMODnet Portal in October 2020. Identification of new cases for presentation on the updated leaflet was done in December 2020. A survey will be sent early January 2021 to inform the needs of partners for outreach material (poster, reprint of stickers, leaflets, pins) and place the production order accordingly before dissemination to all partners. The digital backgrounds for web conferences were also uploaded on the forum in October 2020 and used for subsequent meetings. See also Chapter 5.

**Task 10. Service continuity:**

Coordination of the consortium is undertaken by MARIS and HCMR to ensure the continuity of the EMODnet Ingestion portal and its array of services. End September – begin October the EMODnet Ingestion 2 plenary meeting was organised over 2 days with all partners. In November 2020 the annual Interim Report was produced and submitted, which was accepted by EASME in December 2020, followed by payment of the 1st invoice. Since then, MARIS has informed and requested all partners to submit their invoices for payment.

## 2. Identified issues: status and actions taken

| <b>A. Priority issues identified and communicated by EASME/ DG MARE/ SECRETARIAT</b>   |                           |  |          |
|--|---------------------------|--|----------|
| Priority issue   | Status (Pending/Resolved) | Action(s) taken / remaining actions planned  | Date due |
| Connect EMODnet Ingestion to Matomo for web statistics   | Done                      | Both the main portal as the subservice for data submissions have been registered with EMODnet MATOMO service.                                    |          |
| Consider the implementation of an INSPIRE compliant Catalogue Service for the Web (CSW) for for the datasets submission database | Done                      | MARIS had a discussion with EMODnet Secretariate about the why and feasibility of this action. Following the discussion, the action was dropped. |          |
| Consider how to promote the use of the 'data wanted' function as use is very limited.  | Pending                   | No action yet.   |          |
|  |                           |  |          |
|  |                           |  |          |
|  |                           |  |          |

| <b>B. Issues / challenges identified by the thematic assembly group itself</b>   |                           |  |            |
|--|---------------------------|--|------------|
| (Priority) issue / challenge   | Status (Pending/Resolved) | Action(s) taken / remaining actions planned  | Date due   |
| Awareness and fostering a more open and collaborative environment sharing information through infrastructures as the EMODnet | Pending                   | Further promotion of EMODnet and creating more understanding of the benefits of open data. For instance: CSIC has created a white paper about future challenges in science: "Open Science: transparency, reproducibility and reliability". | No enddate |
| Awareness and foster to the scientific groups with which we collaborate to ingest data coming from future national projects  | Pending                   | More promotion and dissemination internally at organisations from EMODnet partners, as these are mostly major institutes with many project and data observation involvements   | No enddate |

### 3. User feedback (Contact Us form, online chat & other communication means)

*[For the reporting period, please provide a list, in chronological order, of all user feedback received on your portal. Indicate the type of the feedback received, a provide a clear description of the query, as well as the actions undertaken to resolve the issue (e.g., update of metadata, fixing a particular issue with the map viewer, etc.). Indicate the status of the query (i.e., has the query been resolved or not yet), and if not provide an explanation as to why not. List any feedback received by you on the portal so that it can be used to build EMODnet use cases.]*

| Overview of user feedback and/or requests received in this quarter |                       |   |                  |               |  |   |   |
|--|-----------------------|---|------------------|---------------|--|---|---|
| Date   | Organisation          | Type of user feedback (e.g. technical, case study, etc.) and short description of the feedback received | Means of contact | Response time | Status of user query: resolved/pending | Measures taken to resolve the query   | Status: if not (yet) resolved/pending, explain reason why and expected timeline |
| 12/10/2020   | DFMR, Cyprus          | Wanted to edit a submission after publication   | Helpdesk email   | Next day      | resolved                               | Edit made and feedback by email   |   |
| 1/12/2020  | Biorea, France        | Wanted to know how to register its company, a microalgae producer                                       | Helpdesk email   | Same day      | resolved                               | The user was together with EMODnet Human Activities referred to EU-JRC who keeps overview of microalgae producers |   |
| 8/12/2020  | ?, Russian Federation | Question if Marine-ID could be used on Central portal   | Helpdesk email   | Same day      | resolved                               | Answer sent by email with explanation of Marine-ID use.   |   |

## 4. Meetings/events held/attended & planned

| A. Meetings/events organised and attended |          |  |  |                                      |   |
|---|----------|--|--|--------------------------------------|---|
| Date                                      | Location | Type event (internal or external meeting, training/workshop) | Indicate if a ppt was given (yes/no + short description) | Meeting attended (A) / organised (O) | Short description and main results (# participants, agreements made, etc.)  |
| 30/9/2020 – 1/10/2020                     | Remote   | Internal – Full Project Group meeting                        | Yes  | O                                    | EMODnet Ingestion full Project Group meeting with all consortium members participating for monitoring progress and contributions to reporting   |
| 1/10/2020                                 | Remote   | Meeting with the ENI Chief Financial Officer                 | Yes  | O                                    | Present activities under EMODnet Physics and Data Ingestion and try and involve ENI to share data by ETT  |
| 2/10/2020                                 | Remote   | VOTO, Voice of the Ocean                                     | Yes  | O                                    | VOTO are launching a number of smart autonomous platforms into the Baltic Sea. This was the first meeting by SMHI with this new Baltic initiative to initiate discussion on data sharing with EMODnet Physics and Ingestion.  |
| 12/10/2020                                | Remote   | IODE International data sharing workshop                     | No   | A                                    | Workshop for non-UN IGOs, Global and Regional organisations and projects, NGOs and private sector. SMHI promoting EMODnet Ingestion to a new initiative in the Baltic seeking guidance on how to share data to EMODnet and other EU data aggregators. Three participants. |
| 15/10/2020                                | Web      | EU Polar Board Plenary                                       | Yes  | A                                    | SMHI promoting EMODnet Ingestion to the Board of the EU Polar Board. Approx. 18 participants  |
| 12-16/10/2020                             | Remote   | SeaTech Week   | Yes  | A                                    | UM described their role in the collection of data locally within the context of international collaborations, including EMODnet Ingestion.  |

|                      |        |   |     |   |  |
|----------------------|--------|---|-----|---|--|
| <b>20-21/10/2020</b> | Remote | Marine data to support aquaculture in the North Atlantic Workshop                     | No  | A | The event was jointly organized by EATIP, DG MARE, DG DEFIS, Copernicus Marine and EMODnet with the goal to discuss and link new marine data in support to aquaculture activities  |
| <b>27/10/2020</b>    | Remote | Follow up meeting with VOTO   | No  | O | Further discussions of SMHI with VOTO  |
| <b>28.10.2020</b>    | Remote | The workshop dedicated to the International Black Sea Day.                            | Yes | O | TSU TSU organized the “Information day” as part of the International Black Sea Day to ensure close collaboration between the ongoing EU projects within the EU Black Sea Synergy Initiative. TSU promoted aims and objectives of EMODnet Ingestion. Participation by circa 60 persons from governmental agencies, scientific and public education (universities and schools)   |
| <b>28-29/10/2020</b> | Remote | Conference Black Sea 2020   | No  | A | The conference was organized by Varna Scientific and Technical Unions in cooperation with Technical University – Varna, Bulgarian National Association of Shipbuilding, Naval Academy, Institute of Oceanology, Bulgarian Ship Hydrodynamics Centre. The Emodnet ingestion poster was presented by IO-BAS during discussion time. Promotional materials were sent by e-mail to interested participants. As a result, some human activities data can be provided. About 50 people related to the maritime industry and science attended the conference. |
| <b>29-30/10/2020</b> | Remote | 50 <sup>th</sup> Anniversary of NIMRD’s establishment and International Black Sea Day | Yes | O | Romanian National Oceanographic and Environmental Data Center (RoNODC); EMODnet Ingestion portal was presented by NIMRD, along with EMODnet Chemistry and SeaDataCloud, as one of the main European Initiatives where RoNODC is  |



|                      |        |   |     |   |  |
|----------------------|--------|---|-----|---|--|
|                      |        |   |     |   | participating. Representatives of international organisations (CIESM, GFCM, BSC), national and local authorities, R&D Institutions and Universities, NOGOs, main Black Sea projects (BS CONNECT, EO4SIBS, EO4BSP, ANEMONE, LitOUTer, etc) were participating along with more than 50 other participants from Black Sea and Europe countries. |
| <b>3-5/11/2020</b>   | Remote | SO-CHIC Annual meeting  | Yes | A | Discuss about interoperability between the project and EMODnet Physics and Data Ingestion by ETT   |
| <b>4-6/11/2020</b>   | Remote | BOOS AM   | No  | A | Annual meeting. Presenting on EMODnet, EMODnet Physics progress, Data Ingestion, initiate a BOOS river task, new possible data sources by ETT and SMHI. Approx. 35 participants  |
| <b>9-10/11/2020</b>  | Remote | EMODnet SC  | Yes | A | Periodic meeting. Brainstorming, common standards, joint activities, etc. involving MARIS and HCMR for Ingestion   |
| <b>11-12/11/2020</b> | Remote | EMODnet TWG   | Yes | A | Periodic meeting. Brainstorming, common standards, joint activities, etc. involving MARIS and HCMR for Ingestion   |
| <b>17/11/2020</b>    | Remote | Introducing the EMODnet Arctic Data Portal  | Yes | O | Full webinar. SMHI and ETT promoting EMODnet Ingestion and Physics Arctic Data Portal for more than 100 attendees (~150 registered)  |
| <b>20/11/2020</b>    | Remote | Lecture of "Sampling. Sample treatment and preparation before chemical analyses" for master students at University of Latvia, Faculty of Chemistry. | Yes | A | Apr. 20 students participated in the lecture. LHEI promoted EMODnet Ingestion - possibilities to submit data about any regular (or simple) observations in the sea, for example Secchi depths or floating microplastic observations. Presentation and EMODnet DI video were shown.   |

|               |        |  |     |     |  |
|---------------|--------|--|-----|-----|--|
| 20/11/2020    | Remote | Arctic Data Portal KO                        | Yes | A/O | Following the SOOS experience, EMODnet Physics will host a dedicated data portal for the Arctic community. The goal of the workshop was to define actions (EMODnet Physics, Ingestion, CMEMS INSTAC, SeaDataNet, etc) to unlock and link new and more arctic data. By ETT and SMHI. Circa 8 participants                                   |
| 19-20/11/2020 | Remote | FINAL INTERNATIONAL OCEANGO V Conference     | Yes | A   | INGV was guest speaker: Marine Open Data, a way forward to increase multi-disciplinary ocean knowledge and support the Blue Growth.  |
| 24/11/2020    | Remote | MEDIN Data Archive Centres Meeting           | No  | A   | MEDIN DAC meeting including BGS, BODC and other DACs   |
| 24/11/2020    | Remote | Newly developed consortia for future project | No  | A   | SMHI promoted EMODnet Ingestion for new project consortia.   |
| 26/11/2020    | Remote | MEDIN Joint Meeting                          | No  | A   | MEDIN cross working group meeting including BGS, BODC and other DACs   |
| 23-25/11/2020 | Remote | Conference (external)                        | Yes | A   | EVOLMAR: 1 <sup>st</sup> Italian conference on Marine Evolution:<br>- Oral session where a presentation on "How can EMODnet Biology be used for marine biodiversity studies?" was given<br>- Book of abstracts can be accessed via the <a href="#">link</a><br>- Social media presence in both Twitter and Facebook<br>- 200+ participants |
| 26/11/2020    | Remote | Meeting                                      | No  | O   | Meeting of the UK inter-agency working group on habitat mapping – Brought together government conservation agencies collating benthic habitat data in UK waters (with representatives from Nature Scot, Natural England, Natural   |

|               |        |   |     |          |  |
|---------------|--------|---|-----|----------|--|
|               |        |   |     |          | Resources Wales, and Northern Ireland Department of Agriculture, Environment and Rural Affairs)- Promotion of EMODnet Ingestion portal and ingestion activities by JNCC.   |
| 8/12/2020     | Remote | World Ocean Council Sustainable Ocean Summit, | Y   | A        | EMODnet-Ingestion was promoted and presented by RBINS in session on the U.N. Decade of Ocean Science - Data Collection and sharing by industry. PPT aiming at the business sector was jointly prepared with the EMODnet Secretariat and is available to partners on the EMODnet forum. |
| 10/12/2020    | Remote | External                                      | Yes | O        | SMHI and MARIS promoting EMODnet Ingestion to US colleagues  |
| 14-15/12/2020 | Remote | SHAREMED First Capitalisation Workshop        | No  | O        | The workshop brought together leading experts and representatives of major international projects and initiatives relevant to the Mediterranean Sea in the framework of ocean observing systems intended to address major marine environmental threats. UM promoted EMODnet Ingestion. |
| 17/12/2020    | Remote | Sea and Society Day                           | No  | A        | SMHI promoting EMODnet Ingestion at Sea and Society Day organised by Gothenburg University with International participants   |
| 12/2020       | Remote | Clean Sea Adana Project Meeting               | No  | O        | METU-IMS has promoted EMODnet Ingestion. Meeting is about new monitoring stations in Mersin bay  |
|               |        |   |     |          |  |
| <b>SUM</b>    |        |   |     | <b>O</b> | <b>Total # of meetings organised = 12</b>  |
| <b>SUM</b>    |        |   |     | <b>A</b> | <b>Total # of meetings attended = 18</b>   |

| <b>B. Meetings/events planned in the future</b> |                                       |   |  |   |
|---|---------------------------------------|---|--|---|
| Date  | Location                              | Type event (meeting, training (workshop), etc.)   | Meeting to be attended (A) / organised (O) | Short description and main expected outcomes  |
| <b>01/2021</b> or <b>02/2021</b>                | Remote / Constanta or Tulcea, Romania | NIMRD Meeting with Danube Delta Biosphere Reserve Authority                                     | O  | Meeting between NIMRD and DDBRA with the aim to unlock some data from Integrated Monitoring Program of the biosphere reserves and to publish them through EMODnet Data Ingestion                        |
| <b>06/01/2021</b>                               | Remote                                | RevOcean / Centre for the 4th Industrial Revolution   | O  | SMHI, ETT and EMODnet secretariat promoting EMODnet Ingestion to RevOcean. 5 participants.  |
| <b>12-14/01/2021</b>                            | Remote                                | EuroGOOS Tide Gauge Task Team Workshop  | A  | SMHI and ETT will promote EMODnet Ingestion activities for operational oceanography data sharing  |
| <b>14-15/01/2021</b>                            | Remote                                | QUITEMED2 annual meeting  | A  | ETT will promote EMODnet Ingestion activities for operational oceanography data sharing   |
| <b>11 -20/01/2021</b>                           | Remote                                | Joint IHO-IOC Guiding Committee for GEBCO and Sub-committees: TSCOM and SCRUM. GEBCO symposium. | O (co-organized by IOC and Shom)           | Shom will promote EMODnet Data Ingestion.   |
| <b>18-22/01/2021</b>                            | Remote                                | EuroSEA annual meeting  | A  | ETT will promote EMODnet Ingestion activities for operational oceanography data sharing   |
| <b>20/01/2021</b>                               | Aalborg, Denmark / Remote             | DANSKE HAVFORSKERMØDE/ The Danish Marine Research Meeting –Conference, meeting                  | A  | AU-DCDE plans to participate with a poster and dissemination of EMODnet brochures   |
| <b>26/01/2021</b>                               | Remote                                | Blue Data Conference 2021   | A  | UKHO and experts across marine industries addressing the big marine questions <a href="https://discover.admiralty.co.uk/blue-data-conference">https://discover.admiralty.co.uk/blue-data-conference</a> |
| <b>25-28/01/2020</b>                            | Remote                                | EMOD-PACE annual assembly   | A  | EMODnet Ingestion will be promoted by MARIS as part of the interoperability discussions.  |

|                           |  |  |   |  |
|---------------------------|--|--|---|--|
| <b>16/02/2021</b>         | Remote                                   | Arctic ROOS  | A | SMHI promoting EMODnet Ingestion at Arctic ROOS  |
| <b>02/2021</b>            | Arkhangelsk, Russian Federation / Remote | Meeting with Northern regional office Roshydromet  | O | RIHMI-WDC plans this meeting to discuss EU data management projects (SeaDataCloud, EMODNet Ingestion, and Chemistry) and data access opportunities. Will discuss options for access to data obtained during the International Polar Year (2007-2008).  |
| <b>03/03/2021</b>         | Remote                                   | InnovOcean Conference  | A | InnovOcean Conference: EMODnet-DIP poster & Video presentation during the day. Gathering of Belgian marine scientists, students, Business sector). Participants: 500 (Physical gathering hence event to be confirmed according to Covid circumstances) |
| <b>23-25/03/2021</b>      | Gothenburg, Sweden / Remote              | FerryBox Workshop  | O | SMHI and ETT will promote EMODnet Ingestion activities for operational oceanography data sharing   |
| <b>23-25/03/2021</b>      | Gothenburg, Sweden / Remote              | HFR Workshop   | O | SMHI and ETT will promote EMODnet Ingestion activities for operational oceanography data sharing   |
| <b>12-14/4/21</b>         | Amsterdam, Netherlands / Remote          | International Conference on Marine Data and Information Systems, organised by SeaDataNet | A | EMODnet Ingestion will be promoted by several partners   |
| <b>Spring 2021</b>        | Helsinki, Finland / Remote               | Lectures (Remote)  | A | GTK to give lectures to master level students at Helsinki University, Department of Geosciences and Geography,   |
| <b>Spring 2021</b>        | Helsinki, Finland / Remote               | FINMARI Researcher Day   | O | GTK to present and advertise EMODnet Data Ingestion 2 portal and services for new national data providers and data users   |
| <b>Spring/summer 2021</b> | Venice, Italy / Remote                   | Conference   | A | GeoHab 2020 was postponed to 2021 due to Covid19 lockdown. GeoHab is a well attended conference on seabed habitat mapping – JNCC plans promotion of EMODnet Ingestion and  |

|                           |                            |  |     |  |
|---------------------------|----------------------------|--|-----|--|
|                           |                            |  |     | Invitation to share habitat data to a large community of habitat mappers   |
| <b>05/2021</b>            | Genoa, Italy / Remote      | Fishing for Data 2nd workshop                    | O   | SHMI and ETT will organise the 2nd edition as part of EMODnet Ingestion  |
| <b>05/2021 or 06/2021</b> | Brest, France / Remote     | EuroGOOS International conference                | A   | SHMI and ETT will promote EMODnet Ingestion  |
| <b>14-17/06/2021</b>      | La Spezia, Italy / Remote  | Sea Future -exhibition                           | A   | ENEA usually rents a booth during this event and will promote EMODnet Ingestion  |
| <b>14-18/06/2021</b>      | Oostende, Belgium / Remote | EMODnet Open Conference and Jamboree 2nd Edition | A   | EMODnet Ingestion will be promoted   |
| <b>16-18/06/2021</b>      | Vigo, Spain / Remote       | MARETECH Workshop                                | A/O | SMHI will promote EMODnet Ingestion  |
| <b>TBC</b>                | Gandia (Spain)             | Master class at Univ Polit. Valencia             | A   | IEO giving lecture to master students and their professors at university   |
| <b>TBC</b>                | Madrid (Spain)             | Master class at Univ Compl. Madrid               | A   | IEO giving lecture to master students and their professors at university   |
| <b>TBC</b>                | Hatay, Turkey              | Clean Sea Hatay Project Meeting                  | O   | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Iskenderun bay  |
| <b>TBC</b>                | Antalya, Turkey            | Clean Sea Antalya Project Meeting                | O   | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Antalya bay   |
| <b>TBC</b>                | Strandbúnaður, Iceland     | Aquaculture Conferenc                            | A   | Annual conference with discussion between all those who are involved in the aquaculture industry in Iceland. MFRI will give presentation including EMODnet Ingestion and data sharing. |
| <b>TBC</b>                | Iceland                    | The Icelandic Biology conference                 | A/O | MFRI will distribute flyers and poster introducing EMODnet Ingestion. Targeted against the science community.  |
| <b>TBC</b>                | Reykjavik, Iceland         | MFRI annual public meeting                       | A/O | MFRI will promote EMODnet Ingestion  |

|            |                  |  |   |   |
|------------|------------------|--|---|---|
| <b>TBC</b> | Vitoria, Spain   | 10 <sup>th</sup> Spanish Geological Congress | A | CSIC plans to present EMODnet and EMODnet Ingestion to the Marine Geoscience Community in Spain   |
| <b>TBC</b> | La Spezia, Italy | 33 <sup>rd</sup> Mariperman                  | A | It is the annual event of the Italian Navy to PA services presentation and demonstration. The event hosts a scientific/dissemination session to present relevant projects and programs. ETT plans to present EMODnet Physics and Data Ingestion |
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## 5. Communication assets

[Please list all of the communication assets you have developed during this period, as well as those which are planned, (e.g. brochures, videos, press releases, newsletters, blogs). At the bottom of the table, provide the total number of every type of communication product you have developed (e.g. total # of press releases, etc.) or provide a summary from the actions on Twitter from (e.g. Twitter Analytics: number of Tweets and followers of Twitter account).]

| A. Communication products |                                  |  |  |  |
|---------------------------|----------------------------------|--|--|--|
| Date                      | Communication material           | Short description (of the material, title, ...) of the asset                                     | Main results   | Name of event at which material was disseminated (if applicable) |
| 21/10/2020                | Poster A0 – Portrait & Landscape | New poster A0 available on digital format and for print (based on the pull up Wake up your data) | Can be used in printed version at physical meetings or shown in background during videoconferences | World Ocean Council Sustainable Ocean Summit,                    |
| 01/11/2020                | EMODnet digital background       | Digital background of EMODnet-DIP project  | For use by partners participants during Zoom/Teams online conferences                              |  |
| 15/12/2020                | Video                            | Scenario for Updated video Wake up your data   | Input for updating the Video   |  |
| 15/12/2020                | Leaflets                         | New use cases identified   | Input for updating of leaflet  |  |
|                           |                                  |  |  |  |
|                           |                                  |  |  |  |
|                           |                                  |  |  |  |

| B. Planned communication products |   |  |   |
|-----------------------------------|---|--|---|
| Date                              | Communication material                    | Short description (of the material, title, ...) and/or link to the asset | Main results expected   |
| 02/2021                           | Enamel Pins                               | EMODnet logo to wear at any occasion, and for online meetings / webinars | Branding  |
| 01/2021                           | Video                                     | Storyboard for Updated video Wake up your data                           | Input for updated video   |
| 15/04/21                          | Video                                     | Final updated video <b>Wake up your data for the blue society</b>        | Publication on Youtube and advertisement on website, by mails, shown at conferences (Jamboree in June 2021) |
| 02/2021                           | Leaflet A4 r/v                            | Updated leaflet "Wake up your data" with two new use cases               |   |
| 1/2021-03/2021                    | Publish at least one use case per country | Work out use cases   | New online use cases published on the DIP portal, identification of some cases to promote further.          |





*[For the reporting period, please list all publications, e.g. peer-reviewed journals, book chapters, conference papers, etc.) of which you are aware, within the reporting period, including a reference to the EMODnet data or data products which is being discussed.]*

| List of known publications using EMODnet data or data products |  |   |                                |                                   |
|--|--|---|--------------------------------|-----------------------------------|
| Date   | Type and name of journal, conference, ...  | Publication title including DOI (if known)  | Author(s)                      | Organisation(s)                   |
| TBC  | Geotemas Journal. 10 <sup>th</sup> Spanish Geological Congress. Edition is pending of Congress celebration | EMODNET project, the Ingestion Portal and the relevance of the Database and Spatial Data Infrastructure | Javier Valencia, Gemma Ercilla | Institute of Marine Science. CSIC |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |
|  |  |   |                                |                                   |

## 6. Monitoring indicators

### Portal statistics:

All EMODnet Thematic portals and the Central EMODnet portal have included references and links to the EMODnet Ingestion portal. The portal statistics illustrate that the COVID-19 crisis still has a major effect on the number of visitors and visits. Normally being used to at least 10.000 visitors per month, these statistics have largely decreased since March 2020 to no more than 700 - 1.000 visitors per month.

| Month    | Unique visitors | Number of visits | Pages   | Hits    | Bandwidth |
|----------|-----------------|------------------|---------|---------|-----------|
| Jan 2020 | 17,873          | 76,507           | 84,538  | 98,382  | 1.06 GB   |
| Feb 2020 | 11,708          | 47,943           | 61,344  | 70,574  | 1.08 GB   |
| Mar 2020 | 2,909           | 11,340           | 92,592  | 103,103 | 1.73 GB   |
| Apr 2020 | 1,096           | 32,546           | 57,386  | 66,624  | 1.57 GB   |
| May 2020 | 1,085           | 22,807           | 197,560 | 205,591 | 3.29 GB   |
| Jun 2020 | 678             | 1,034            | 28,211  | 35,450  | 1.11 GB   |
| Jul 2020 | 651             | 1,355            | 7,035   | 15,301  | 824.44 MB |
| Aug 2020 | 636             | 957              | 8,708   | 16,843  | 948.72 MB |
| Sep 2020 | 775             | 1,250            | 6,879   | 20,040  | 1.26 GB   |
| Oct 2020 | 914             | 1,389            | 6,336   | 17,888  | 1.16 GB   |
| Nov 2020 | 993             | 1,452            | 8,716   | 20,414  | 1.30 GB   |
| Dec 2020 | 1,054           | 1,579            | 17,001  | 27,045  | 1.40 GB   |

*Table: portal statistics as collected with AWStats*

The webstatistics are collected with AWStats. During the reporting period also a connection has been made with EMODnet MATOMO both for the main portal and the submission service. The indicators as derived from MATOMO - Grafana will be used in the next quarterly report, under the condition that EMODnet Ingestion is activated in Grafana.

### Statistics of submissions.

In the reporting period, the number of **Submissions** went **from 822 to 853**, the number of **published data submissions 'as is'** in the View Submissions service increased **from 674 to 721** (metadata forms and related data sets), while the number of **submissions** that have been elaborated **to phase II**, implicating uptake in national and European marine data infrastructures, feeding into EMODnet, increased **from 286 to 315**. The following figures give characteristics of those published submissions.

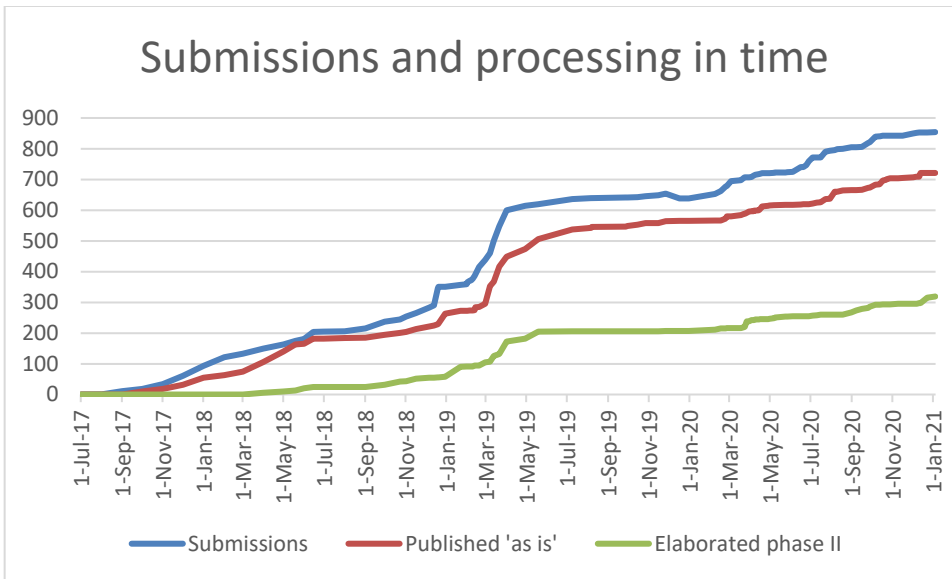


Image: Submissions and processing in time

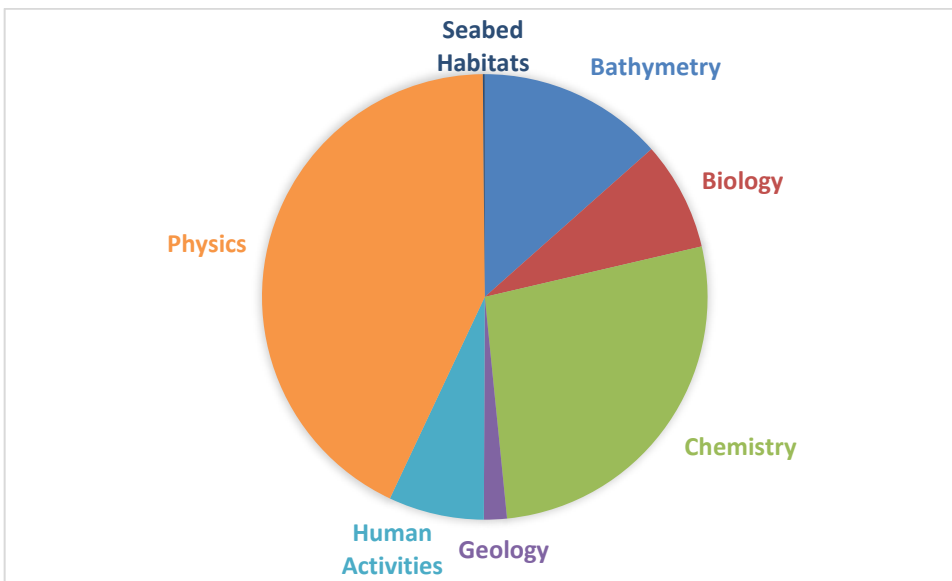


Image: Published submissions (721) by theme

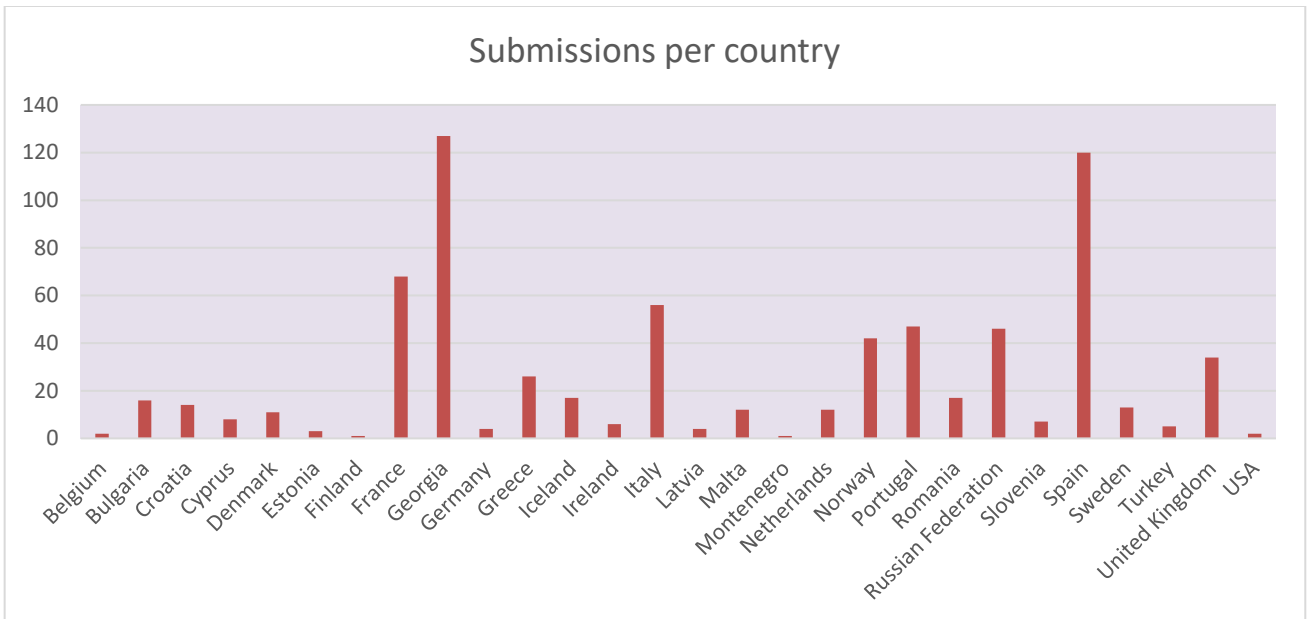


Image: Published submissions (721) by country of submission

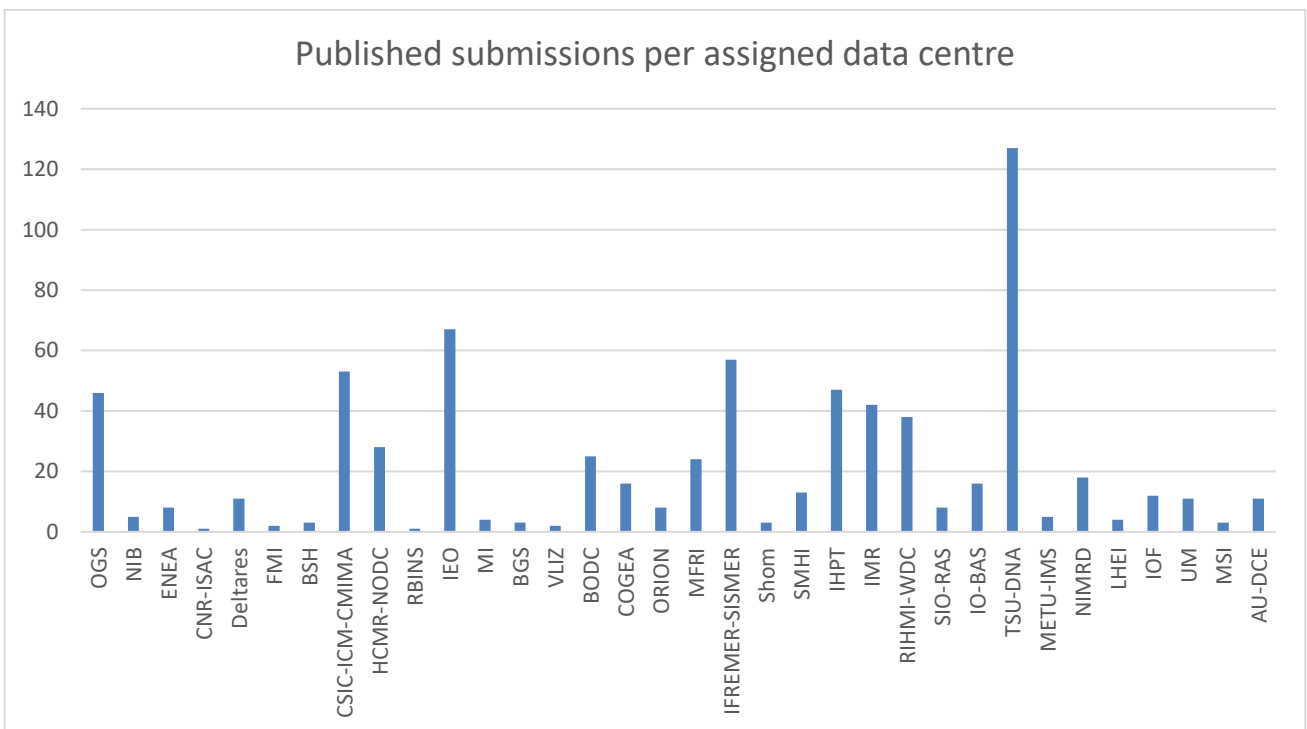


Image: Published submissions (721) by assigned data centres

| EDMO | DATA ORIGINATOR / HOLDING CENTRE                  | No | SECTOR     | COUNTRY        |
|------|---|----|------------|----------------|
| 4882 | AQUA4C  | 1  | Company    | Belgium        |
| 4730 | GeoMarine Ltd.                                    | 1  | Company    | Bulgaria       |
| 5031 | Petro Celtic Varna Office                         | 3  | Company    | Bulgaria       |
| 5231 | Berring Data Collective                           | 1  | Company    | Denmark        |
| 1265 | Scientific - Research Firm "GAMMA"                | 18 | Company    | Georgia        |
| 4877 | Laboratory research centre LTD                    | 85 | Company    | Georgia        |
| 4999 | Napirdatsva Ltd                                   | 9  | Company    | Georgia        |
| 5066 | Black Sea Aquaculture Company LLC                 | 15 | Company    | Georgia        |
| 2764 | ETT S.p.A.  | 1  | Company    | Italy          |
| 4750 | Water Services Corporation                        | 3  | Company    | Malta          |
| 5151 | AquaBioTech Group                                 | 1  | Company    | Malta          |
| 1357 | NoordzeeWind BV                                   | 5  | Company    | Netherlands    |
| 1528 | Deltares  | 8  | Company    | Netherlands    |
| 5045 | Bureau Waardenburg BV                             | 2  | Company    | Netherlands    |
| 1746 | ESGEMAR/ Esgemar S.A. Estudios geologicos marinos | 7  | Company    | Spain          |
| 5043 | Eco-Dive  | 2  | Company    | Spain          |
| 4916 | Holmen Papper Ab                                  | 2  | Company    | Sweden         |
| 2657 | GEMS Survey Ltd                                   | 1  | Company    | United Kingdom |
| 3006 | SSE Renewables                                    | 1  | Company    | United Kingdom |
| 4171 | Partrac - Head office                             | 1  | Company    | United Kingdom |
| 2857 | Fugro GeoConsulting Limited                       | 1  | Company    | United Kingdom |
| 5209 | Saildrone   | 2  | Company    | USA            |
| 1032 | Black Sea Basin Directorate                       | 4  | Government | Bulgaria       |

|      |   |    |            |                |
|------|---|----|------------|----------------|
| 4729 | Black Sea-Danube Coastal Association for Research and Development                   | 1  | Government | Bulgaria       |
| 249  | Department of Fisheries and Marine Research, Division of Marine Biology and Ecology | 2  | Government | Cyprus         |
| 3308 | Department of Transport, Tourism and Sport  | 1  | Government | Ireland        |
| 1130 | ARPA Emilia-Romagna - Struttura Oceanografica Daphne                                | 2  | Government | Italy          |
| 3009 | ISPRA-Institute for Environmental Protection and Research                           | 17 | Government | Italy          |
| 4938 | Portofino Marine Protected Area   | 2  | Government | Italy          |
| 5046 | ARPA Liguria  | 1  | Government | Italy          |
| 179  | Malta Environment and Planning Authority - Environment Protection Directorate       | 1  | Government | Malta          |
| 706  | Transport Malta - Maritime Division (ex. Malta Maritime Authority)                  | 1  | Government | Malta          |
| 4751 | Environment and Resources Authority   | 6  | Government | Malta          |
| 574  | Royal Netherlands Navy, Hydrographic Service  | 1  | Government | Netherlands    |
| 1526 | Rijkswaterstaat Water, Traffic and Environment                                      | 9  | Government | Netherlands    |
| 3348 | Portuguese Environment Agency   | 4  | Government | Portugal       |
| 4609 | Directorate-General for Territorial Development                                     | 6  | Government | Portugal       |
| 5047 | Director General of Health - Information and Analysis Services Directorate          | 33 | Government | Portugal       |
| 1755 | Environmental Agency of the Republic of Slovenia                                    | 1  | Government | Slovenia       |
| 4879 | Ministry of Agriculture, Forestry and Food of Republic of Slovenia                  | 2  | Government | Slovenia       |
| 354  | PdE/ Harbours Authority. Physical Environment Department                            | 1  | Government | Spain          |
| 28   | Centre for Environment, Fisheries and Aquaculture Science, Lowestoft Laboratory     | 3  | Government | United Kingdom |
| 1604 | The Crown Estate  | 8  | Government | United Kingdom |
| 1165 | Black Sea NGO Network   | 2  | NGO        | Bulgaria       |
| 4727 | NGO MARINE SOUND  | 4  | NGO        | Bulgaria       |
| 4537 | ORION   | 6  | NGO        | Cyprus         |
| 4844 | Keep the Estonian Sea Tidy Association  | 1  | NGO        | Estonia        |

|      |  |    |                    |          |
|------|--|----|--------------------|----------|
| 5079 | Non-governmental environmental organization "Mare Nostrum"                                     | 1  | NGO                | Romania  |
| 4840 | The Keep Sweden Tidy Foundation  | 3  | NGO                | Sweden   |
| 422  | Flanders Marine Institute  | 1  | Research Institute | Belgium  |
| 3429 | Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences                | 1  | Research Institute | Bulgaria |
| 692  | Bulgarian National Oceanographic Data Centre , Institute of Oceanology                         | 1  | Research Institute | Bulgaria |
| 700  | Institute of Oceanography and Fisheries  | 14 | Research Institute | Croatia  |
| 3979 | Estonian Environmental Research Centre   | 1  | Research Institute | Estonia  |
| 1104 | Finnish Environment Institute  | 1  | Research Institute | Finland  |
| 1725 | Finnish Meteorological Institute   | 1  | Research Institute | Finland  |
| 486  | IFREMER / IDM / SISMER - Scientific Information Systems for the SEA                            | 45 | Research Institute | France   |
| 1054 | IFREMER Head Office  | 21 | Research Institute | France   |
| 3187 | CNRS Paris Institute of Earth Physics, Marine Geoscience Laboratory                            | 1  | Research Institute | France   |
| 4536 | Ocean Physics and Satellite oceanography laboratory (LOPS) - UMR 6523 CNRS-Ifremer-IRD-UBO     | 2  | Research Institute | France   |
| 100  | Leibniz Institute for Baltic Sea Research Warnemünde   | 1  | Research Institute | Germany  |
| 116  | Baltic Sea Research Institute Warnemuende, Marine Geology Department                           | 1  | Research Institute | Germany  |
| 2947 | GEOMAR Helmholtz Centre for Ocean Research Kiel  | 1  | Research Institute | Germany  |
| 164  | Hellenic Centre for Marine Research, Institute of Oceanography (HCMR/IO)                       | 22 | Research Institute | Greece   |
| 269  | Hellenic Centre for Marine Research, Hellenic National Oceanographic Data Centre (HCMR/HNODC)  | 3  | Research Institute | Greece   |
| 4766 | Marine and Freshwater Research Institute   | 17 | Research Institute | Iceland  |
| 396  | Marine Institute   | 5  | Research Institute | Ireland  |
| 5229 | CNR, Institute for the study of anthropic impacts and sustainability in the marine environment | 1  | Research Institute | Italy    |
| 134  | CNR, Institute of Marine Sciences S.S. of Lerici (SP)  | 3  | Research Institute | Italy    |



|      |  |    |                    |                    |
|------|--|----|--------------------|--------------------|
| 136  | ENEA Centro Ricerche Ambiente Marino - La Spezia   | 14 | Research Institute | Italy              |
| 642  | Joint Research Centre (JRC)  | 10 | Research Institute | Italy              |
| 4809 | National Research Council of Italy - Institute for Marine and Coastal Environment (IAMC) (Sezione Capo Granitola)                          | 1  | Research Institute | Italy              |
| 698  | Latvian Institute of Aquatic Ecology   | 2  | Research Institute | Latvia             |
| 4762 | Foundation for Environmental Education - Latvia  | 1  | Research Institute | Latvia             |
| 5017 | Institute of Electronics and Computer Science  | 1  | Research Institute | Latvia             |
| 2432 | Institute of Marine Biology (IMBK)   | 1  | Research Institute | Montenegro         |
| 1340 | Wageningen Marine Research, IJmuiden   | 2  | Research Institute | Netherlands        |
| 612  | Institute of Marine Research - Norwegian Marine Data Centre (NMD)  | 1  | Research Institute | Norway             |
| 1212 | Norwegian Meteorological Institute   | 28 | Research Institute | Norway             |
| 1417 | Norwegian Institute of Water Research (NIVA)   | 4  | Research Institute | Norway             |
| 697  | National Institute for Marine Research and Development "Grigore Antipa"  | 16 | Research Institute | Romania            |
| 686  | P.P.Shirshov Institute of Oceanology, Southern branch  | 1  | Research Institute | Russian Federation |
| 681  | All-Russia Research Institute of Hydrometeorological Information - World Data Centre (RIHMI-WDC) National Oceanographic Data Centre (NODC) | 36 | Research Institute | Russian Federation |
| 682  | Atlantic Scientific Research Institute for Marine Fishery and Oceanography   | 12 | Research Institute | Russian Federation |
| 684  | Arctic and Antarctic Research Institute, Roshydromet (Saint-Petersburg)  | 1  | Research Institute | Russian Federation |
| 685  | P.P.Shirshov Institute of Oceanology, RAS  | 12 | Research Institute | Russian Federation |
| 949  | World Data Centre-B For Oceanography   | 7  | Research Institute | Russian Federation |
| 1229 | National Institute of Biology - Marine Biology Station   | 1  | Research Institute | Slovenia           |
| 4878 | Institute for Water of the Republic of Slovenia  | 3  | Research Institute | Slovenia           |
| 2157 | CSIC-ICM-CMIMA/ Institute of Marine Sciences. Mediterranean Marine and Environmental Research Centre. Department of Marine Science.        | 6  | Research Institute | Spain              |
| 280  | CSIC-ICM/ Institute of Marine Sciences   | 28 | Research Institute | Spain              |

|      |  |    |                    |                |
|------|--|----|--------------------|----------------|
| 310  | IGME, Geological Survey of Spain   | 11 | Research Institute | Spain          |
| 353  | IEO/ Spanish Oceanographic Institute   | 39 | Research Institute | Spain          |
| 1396 | IACT-UGR-CSIC / Andalusian Earth Sciences Institute  | 5  | Research Institute | Spain          |
| 1402 | IEO/ Santander Experimental Aquaculture Facilities   | 1  | Research Institute | Spain          |
| 1404 | IEO/ Vigo Oceanographic Centre   | 10 | Research Institute | Spain          |
| 1405 | IEO/ Malaga Oceanographic Centre   | 1  | Research Institute | Spain          |
| 1408 | IEO/ Murcia Experimental Aquaculture Facilities  | 19 | Research Institute | Spain          |
| 1623 | AZTI - Tecnalía, Headquarters Pasaia(Gipuzkoa)   | 1  | Research Institute | Spain          |
| 2550 | Institute of Marine Sciences, Barcelona  | 7  | Research Institute | Spain          |
| 3497 | PLOCAN/ Oceanic Platform of the Canary Islands   | 4  | Research Institute | Spain          |
| 4883 | ULPGC-IOCAG/ Institute of Oceanography and Global Change   | 1  | Research Institute | Spain          |
| 545  | Swedish Meteorological and Hydrological Institute  | 8  | Research Institute | Sweden         |
| 2696 | Turkish Marine Research Foundation (TUDAV)   | 1  | Research Institute | Turkey         |
| 42   | British Geological Survey, Edinburgh   | 3  | Research Institute | United Kingdom |
| 44   | Scottish Association for Marine Science  | 1  | Research Institute | United Kingdom |
| 2135 | Marine Scotland Science  | 21 | Research Institute | United Kingdom |
| 449  | Ghent University, Faculty of Sciences, Department of Biology, Marine Biology Section   | 1  | University         | Belgium        |
| 729  | Aarhus University, Department of Bioscience, Marine Ecology Roskilde   | 4  | University         | Denmark        |
| 3037 | Aarhus University, Danish Centre for Environment and Energy  | 6  | University         | Denmark        |
| 713  | Marine Systems Institute at Tallinn University of Technology   | 1  | University         | Estonia        |
| 3324 | University of Leipzig  | 1  | University         | Germany        |
| 3453 | University Bayreuth  | 2  | University         | Germany        |
| 302  | University of Athens, Department of Chemistry, Division of Inorganic and Environmental Chemistry, Environmental and Marine Chemistry Group (EMCG/UATH) | 1  | University         | Greece         |

|      |   |    |            |                |
|------|---|----|------------|----------------|
| 774  | NUI Galway  | 1  | University | Ireland        |
| 1631 | University of Tuscia-Viterbo  | 3  | University | Italy          |
| 4881 | University of Rome Tor Vergata  | 1  | University | Italy          |
| 708  | International Ocean Institute - Malta Operational Centre (University Of Malta) / Physical Oceanography Unit | 11 | University | Malta          |
| 4595 | University of Bergen / Geophysical Institute  | 9  | University | Norway         |
| 2516 | University of Algarve, Marine Sciences Centre   | 2  | University | Portugal       |
| 4880 | Marine and Environmental Sciences Centre - Faculty of Sciences of the University of Lisbon                  | 4  | University | Portugal       |
| 342  | ULPGC/ Las Palmas University. Department of Physics   | 1  | University | Spain          |
| 2163 | UVIGO/ University of Vigo   | 6  | University | Spain          |
| 4937 | IISTA/ Andalousian Interuniversity Institute for the Reseach on the Earth System                            | 1  | University | Spain          |
| 2172 | UB/ Barcelona University  | 3  | University | Spain          |
| 2209 | Stockholm University, Department of Meteorology   | 1  | University | Sweden         |
| 696  | Institute of Marine Sciences, Middle East Technical University  | 4  | University | Turkey         |
| 4748 | University of Kyrenia   | 4  | University | Turkey         |
| 2817 | University of St Andrews, School of Biology   | 1  | University | United Kingdom |

Table: Overview of data originators and holding centres with number of related submissions

### NUMBER OF ORGANISATIONS (ORIGINATOR + DATA HOLDER) PER SECTOR

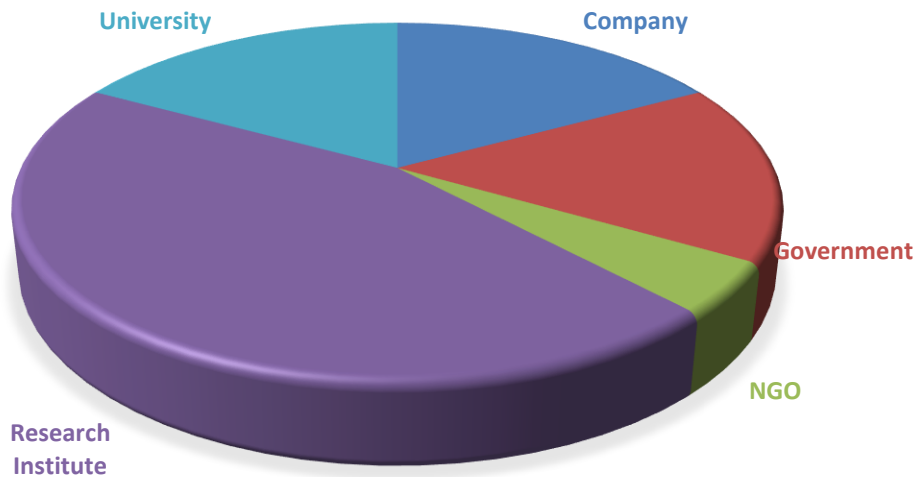


Figure: Division by sector of organisations (129) for data originators and holding centres

### NO OF SUBMISSIONS PER SECTOR TYPE

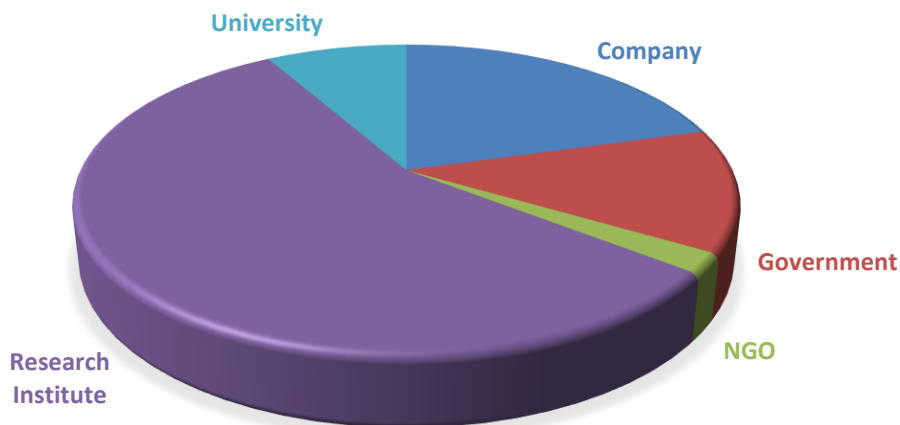


Figure: Division of number of submissions (721) by sector of data originators and holding centres

The above reported Ingestions all concern submissions of data sets made to the Submission service and then completed for publishing at the View Submission service of which 721 records are now at Phase I publication and 315 records are at Phase II publication.