



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: 01/01/2021 – 31/03/2021



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1. Highlights in this quarter

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.

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 49 new submissions have been recorded, bringing the total of submissions at 903 at the end of March 2021. 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 23 phase I publications and 26 phase II publications. Of the 903 submissions, now 770 have been processed and published as phase 1 (429) and phase 2 (341) records. More details about population can be found in Chapter 6. A technical meeting was held 8th February 2021 between BODC, HCMR, and MARIS to discuss a possible coupling of the Marine Data Exchange of Crown Estate in United Kingdom with the EMODnet Ingestion Submission service in a comparable way as the earlier coupling of the SeaDataNet SEANOE service. It seems to be feasible and actions have been agreed to analyse it deeper and make specifications, after which an implementation might be developed.

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:
 - o links established with the Direccion General de Infraestructuras del Agua, Junta de Andalucia, for Andalusian river data that completed the provision for the Iberian Peninsula;
 - o 50 operational river stations in the Scandinavian area (organized by SMHI) are now included in the ERDDAP service of EMODnet Physics;

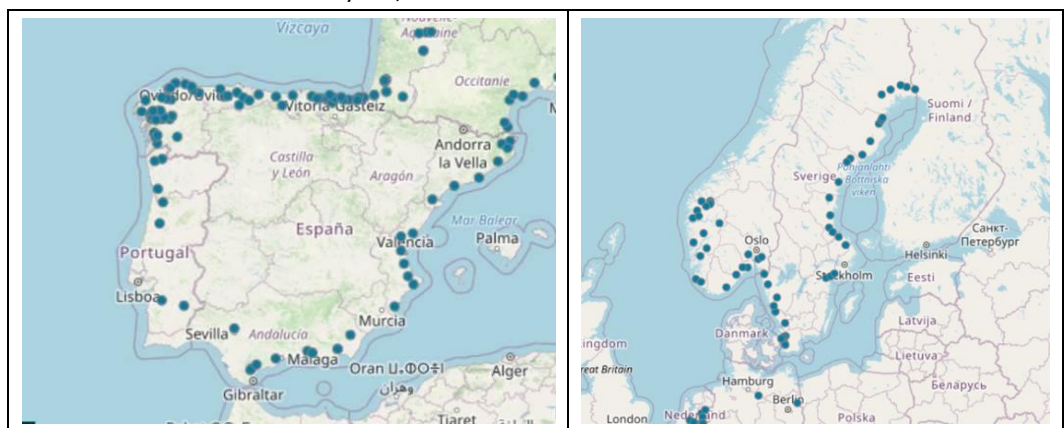


Image: overview of new NRT stations in Spain and Scandinavia

- Sea Level:
 - o JRC Tsunami Alert Device network – the inclusion of TAD stations (64 stations) has been completed;
 - o NMDIS monthly sea level means – under the EMOD-PACE umbrella it was possible to link a NMDIS sea level dataset;
- EMSO – direct real time link interoperability with EMSO stations was also updated and completed;
- A new dataset from Swiss Polar Institute was linked.

On-going actions:

- Arctic Data – as a follow up of the Arctic Data Workshop it was possible to set up links and interactions with some new data providers, one is the ARICE project (<https://www.arice.eu/>) and in coming months there will be more interaction to identify both operational and delayed mode datasets to be ingested;
- EuroFleets+ project – further progress is made with the configuration of the underway data dashboard, using SWE, and with roll-out of the system towards multiple research vessels.

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 one question was received and answered the same day.

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. 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 conference. The EMODnet Ingestion 2 consortium also comprises the coordinators of each of the thematic lots, which allows for tuning with their project activities.

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, following a lead by DG-MARE, a meeting took place with the RGI – Renewable Grid Initiative to explore options for data sharing from e.g. marine windfarms and how to adopt best practices for data management for streamlining the data sharing to EMODnet Ingestion. This contact will be followed up with a Workshop, involving several of the RGI members, which are active operators of renewable energy plants. Data centres have made further actions to follow-up the potential leads that they had indicated earlier in the inventory of national potential. RBINS made progress with updating and expanding the material as used for promoting EMODnet Ingestion, tuning with the EMODnet Secretariat. Most activity was undertaken towards updating the EMODnet Ingestion movie, in particular with achieved results in numbers and examples. Release of the movie addendum to the existing movie is planned provisionally around end of May 2021. RBINS also started an action to identify and collate more use cases for use in promotion. 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.

2. Identified issues: status and actions taken

A. Priority issues identified and communicated by EASME/ DG MARE/ SECRETARIAT

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

| (Priority) issue / challenge | Status (Pending/Resolved) | Action(s) taken / remaining actions planned | Date due |
|---|---------------------------|--|------------|
| 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 |
| 10/02/2021 | Wikimedia Italia | Request to include attribution to OpenStreetMap in the mapviewer on the Ingestion portal | Helpdesk email | Same day | resolved | Included an OSM copyright to map | |
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4. Meetings/events held/attended & planned

| A. Meetings/events Organized 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.) | |
| 6th January 2021 | online | Tech meeting - ODP/C4IR with ETT | Yes – presentation of EMODnet, Ingestion and Physics | A | Discuss bidirectional interoperability between EMODnet and ODP/C4IR (5 people) | |
| 11 th January 2021 | online | NAUTILOS project – progress meeting with ETT | No | A | NAUTILOS is developing ocean new sensors and new products. NAUTILOS DMP considers to share/links its products with EMODnet (more than 40 people) | |
| 12 th January 2021 | online | EMOD-PACE WP3-4-5 meeting with several EMODnet Ingestion partners | No | A | To progress on EU-China interoperability on ocean observing systems – further discussion on data flow | |
| 12 th -14 th January 2021 | online | EuroGOOS Tide Gauge Task Team Workshop with ETT and SMHI | Yes – update on how EMODnet Physics is managing TG data and how Ingestion contribute to link new platforms | A | The WS discussed the status of TG data management and how to improve it (about 40 people worldwide) | |
| 18 th -22 nd January 2021 | online | EuroSEA annual meeting with ETT | No | A | Annual general assembly. EMODnet represents one of the EuroSEA community stakeholders | |
| 21st January 2021 | online | Environmental Science Department. Univ. Bologna meeting with INGV | Yes, see description | A | Lecture by INGV on Marine Open Data - a way forward to increase multi-disciplinary ocean knowledge and support the Blue Growth | |
| 25 th -29 th January 2021 | online | EMOD-PACE annual assembly with several EMODnet Ingestion partners | No | A | Annual general assembly | |
| 26th January 2021 | online | Blue Data Conference 2021 with BGS | No | A | UKHO and experts across marine industries addressing the big marine questions https://discover.admiralty.co.uk/blue-data-conference | |

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|---|--------|--|---|---|--|
| 26 th -28 th January 2021 | online | CMEMS General Assembly with ETT and SMHI | No | A | General assembly reviewing the achievements of the 2015-2021 Copernicus Marine Service and make future plans. over 635 unique participants, from more than 77 countries, and for a total of 16 hours of broadcast. |
| 8 th February 2021 | online | Tech meeting about coupling Marine Data Exchange of Crown Estate to EMODnet Ingestion with BODC, MARIS, and HCMR | No | O | Explore options between BODC, HCMR, and MARIS |
| 4 th February 2021 | online | SO-CHIC progress meeting with ETT and SMHI | No | A | EMODnet Physics contributes to the project looking after data interoperability and data ingestion |
| 9 th February 2021 | online | EMODnet Physics meeting with ETT, SMHI, IFREMER, and MARIS | Yes, internal docs | O | Internal annual core team meeting |
| 9 th February 2021 | online | 5 th EMODnet-CMEMS coordination meeting with ETT and SMHI | Yes. Update on the collaboration between INSTAC, EMODnet Physics and Ingestion | A | Updates on the status of the collaboration between CMEMS and EMODnet, including progress made so far and planning of future activities |
| 9 th – 10 th February 2021 | online | EOOS Operation Committee meeting | No | A | RWS joined the start and follow-up meetings of the Operation Committee meetings of EOOS as national representative and GOOS focal point. The collaboration with EMODNET activities was promoted and stimulated. |
| 16 th February 2021 | online | Arctic ROOS General Assembly with ETT and SMHI | Yes. Presentation about data ingestion and the EMODnet Arctic ocean data portal | A | Presentation about data ingestion and the EMODnet Arctic ocean data portal; planning of joint Arctic ROOS activities |
| 18 th February 2021 | online | SO-CHIC progress meeting with ETT and SMHI | No | A | EMODnet Physics contributes to the project looking after data interoperability and data ingestion |
| 24 th February 2021 | online | EuroFleets+ WP3 meeting with MARIS, CSIC, RBINS, and 52North | No | O | Discussing progress with implementing SWE for transfer of underway data from research vessels |

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|---|--------|--|--|-----|--|
| 25th February 2021 | online | 4° Convegno dei Geologi Marini Italiani, Italian Marine Geologist Conference with INGV | Yes, see description | A | INGV presented EMODnet in "Dati marini rapidamente accessibili per una maggiore competitività scientifica a servizio della società" doi.org/10.3301/ABSGI.2021.01 |
| 3 rd March 2021 | online | VLIZ Marine Science Day Conference with VLIZ and RBINS | Yes, see description | A | Conference: EMODnet-DIP poster & Video presentation during the day. Gathering of Belgian marine scientists, students, Business sector). Participants: 500 |
| 9 th March 2021 | online | AtlantOS Ocean Hour with ETT and SMHI | No | A | Review of some of the new approaches - in Storms and Boundary Currents - that take advantage of gliders to offer new ocean observations for better serving user needs and robust information products. |
| 10 th March 2021 | online | Civil Hydrography Annual Seminar (CHAS) | No | A | CHAS represents the main opportunity for the MCA to present its proposed survey plans for the forthcoming year |
| 10 th -12 th March 2021 | online | EMODnet Geology meeting with BGS, GEUS, and GTK | Yes, internal docs | A | EMODnet Geology plenary meeting |
| 12 th -14 th March 2021 | online | Hack the Arctic with ETT and SMHI | No | A | The event brought together science and society representatives to identify innovative solutions for key environmental challenges in the Arctic. The hackathon focused on topics such as mapping Arctic data, making scientific data available for policy-making, developing services for Arctic communities, addressing environmental changes, and fighting air pollution. |
| 16 th March 2021 | online | EMODnet – HFR Network with ETT, SMHI, and RWS | No | O | Internal meeting to check activities on HFR data flow in EMODnet Physics and Ingestion |
| 17 th -18 th March 2021 | online | EuroGOOS - FerryBox and High Frequency Radar virtual workshops with ETT, SMHI, and RWS | Yes – brief intro on EMODnet with a focus on Physics and Ingestion | A/O | The workshop brought together the two European (EuroGOOS) communities that are working on HFR and FB to discuss about systems, data flow and data processing. A lot of other Emodnet-Ingestion |

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|---|--------|---|----------------------|---|--|
| | | | | | partners joined and promoted EMODNET during Wonder-me breaks. |
| 23 rd March 2021 | online | Blue-Cloud Workshop with MARIS | Yes, see description | A | Presenting EU landscape for marine data management including role of EMODnet |
| 24 th March 2021 | online | EMODnet Biology workshop - Data Solutions for a Changing Ocean with VLIZ, RWS, Deltares and others | Yes, see description | A | Deltares presented the past and future challenges of using EMODNET data and products and promoted the use of EMODNET ingestion for getting more data. |
| 24 th -25 th March 2021 | online | Marine data to support aquaculture in the Mediterranean Sea Workshop with MARIS, ETT, SMHI, HCMR, COGEA | No | A | The event is 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 |
| 25 th March 2021 | online | Meeting with RGI – Renewable Grid Initiative with MARIS and HCMR | Yes, see description | O | To discuss with RGI and DG-MARE possible data sharing |
| 25 th March 2021 | online | Meeting with LAMMA with ETT and SMHI | No | O | Support to develop new M2M and facilitate the federation of new data from Tyrrhenian Sea |
| 26 th March 2021 | online | Meeting with Northern regional office Roshydromet with RIHMI-WDC | Yes, see description | O | Meeting to discuss EU data management projects (SeaDataCloud, EMODNet Ingestion, and Chemistry) and data access opportunities. RIHMI-WDC received permission on access to data obtained during the International Polar Year (2007-2008). |
| 30 th March 2021 | online | NL Copernicus Marine conference with MARIS | Yes, see description | A | Presented the European data management landscape with roles of SeaDataNet and EMODnet |

| A. Meetings/events planned in the future | | | | |
|---|----------------------------|---|--|---|
| Date | Location | Type event (meeting, training (workshop), etc.) | Meeting to be attended (A) / organised (O) | Short description and main expected outcomes |
| 1 st April 2021 | online | Blue-Cloud – EuroSea synergy meeting with MARIS | A | To discuss potential synergy between the 2 projects. Includes role of EMODnet Ingestion in the European data exchange. |
| 8 th April 2021 | online | Internal meeting with MSI | A | Meeting with Ministry of the Environment – Marine Environment Department. Introducing and promoting ongoing projects ie. JERICO, EMODnet Physics and Ingestion. |
| 12 th -14 th April 2021 | online | IMDIS Conference with many partners of EMODnet Ingestion | A | Many EMODnet lots will be presented during this Conference which is fully focussed on marine data management initiatives, standards, and infrastructures. EMODnet Ingestion will be presented by HCMR |
| 19 th April 2021 | online | Thematic Webinar WOZEP on Ecosystems effects by extend of future large windfarms in the North sea | O | RWS and Deltares organize this WOZEP thematic webinar on Ecosystems effects that is part of the WOZEP program, where a lot of data are delivered (and promoted) to EMODnet. |
| 20 th April 2021 | online | Blue-Week with MARIS | A | Will present European landscape of marine data management with role of EMODnet and participate in panel discussions |
| 19 th - 21 st April 2021 | Online | EMODnet SC and TWG with all EMODnet thematic contacts | A | EMODnet Steering Committee and Technical Working Group meetings |
| 19 th - 21 st April 2021 | Rovini - online | H2020 JERICO S3 GA | A | Annual General Assembly – JERICO S3 is developing and organizing the data flow from coastal platforms and EMODnet is one key project stakeholder. |
| 28 th April 2021 | online | Ingestion Workshop with RGI with MARIS, HCMR, IFREMER, ETT, and SMHI | O | To explore further possible data sharing and adoption of best practices with RGI stakeholders |
| Spring 2021 | Helsinki, Finland / Remote | Lectures (Remote) | A | GTK to give lectures to master level students at Helsinki University, Department of Geosciences and Geography, |

| | | | | |
|--|----------------------------|---|---|---|
| Spring 2021 | 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 |
| Spring/summer 2021 | 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 |
| 3 rd -5 th May 2021 | online | EuroGOOS International conference with ETT, SMHI, MARIS | A | The conference provides a forum for a broad range of implementers and users of operational oceanography services, including marine scientists and technologists, private companies, and policymakers. The conference reviews the present ocean monitoring and forecasting capacities and oceanographic services, and identifies new science and technology priorities. It facilitates dialogue, experience sharing and future planning with both European and international partners and stakeholders, towards a more coordinated response to global challenges and societal needs related to seas and oceans https://eurogoos.ifremer.fr/ . Last day will feature a panel discussion about marine RIs. |
| 6 th May 2021 | online | MEDIN Data Archive Centres Meeting with BGS and BODC | A | MEDIN DAC meeting including BGS, BODC and other DACs |
| 20 th - 21 st May 2021 | online | European Maritime Day 2021 with COGEA, MARIS, and possible others | A | Will include a session on European marine data exchange |
| 3 rd – 4 th June 2021 | online | All-Atlantic Forum with MARIS | A | Major international conference organised by EU about ocean governance, including focus on data exchange and digital twin of the ocean |
| 14 th -18 th June 2021 | online | EMODnet Open Conference and Jamboree | A | Event bringing together EMODnet partners, data providers and users |
| 14 th -17 th June 2021 | online | Sea Future -exhibition | A | ENEA usually rents a booth during this event and will promote EMODnet Ingestion |

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|--|------------------------|--|-----|---|
| 16 th -18 th June 2021 | online | MARETECH Workshop | A/O | Due COVID-19 situation the has decided to postpone the IX International Workshop on MARine TEChnology |
| October 2021 | online | B-Blue meeting | O | ENEA is going to promote the EMODnet Data Ingestion portal in the B-Blue project towards Blue Biotechnology community of the Mediterranean area, including sharing of informative material |
| TBC | Gandia (Spain) | Master class at Univ Polit. Valencia | A | IEO giving lecture to master students and their profesors at university |
| TBC | Madrid (Spain) | Master class at Univ Compl. Madrid | A | IEO giving lecture to master students and their profesors at university |
| TBC | Hatay, Turkey | Clean Sea Hatay Project Meeting | O | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Iskenderun bay |
| TBC | Antalya, Turkey | Clean Sea Antalya Project Meeting | O | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Antalya bay |
| TBC | 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. |
| TBC | Iceland | The Icelandic Biology conference | A/O | MFRI will distribute flyers and poster introducing EMODnet Ingestion. Targeted against the science community. |
| TBC | Reykjavik, Iceland | MFRI annual public meeting | A/O | MFRI will promote EMODnet Ingestion |
| TBC | Vitoria, Spain | 10 th Spanish Geological Congress | A | CSIC plans to present EMODnet and EMODnet Ingestion to the Marine Geoscience Community in Spain. An abstract has been submitted. |
| TBC | La Spezia, Italy | 33 rd 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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|--------------------|------------------|--------------------------------------|---|---|
| TBC | Gandia (Spain) | Master class at Univ Polit. Valencia | A | IEO giving lecture to master students and their profesors at university |
| TBC | Madrid (Spain) | Master class at Univ Compl. Madrid | A | IEO giving lecture to master students and their profesors at university |
| TBC | Hatay, Turkey | Clean Sea Hatay Project Meeting | O | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Iskenderun bay |
| TBC | Antalya, Turkey | Clean Sea Antalya Project Meeting | O | METU-IMS will promote EMODnet Ingestion. Meeting is about new monitoring stations in Antalya bay |
| Spring/summer 2021 | Tbilisi, Georgia | Master classes and meetings | O | TSU will promote the EMODnet Data Ingestion project through number of lectures to the students and stuff of the university and events organized within EU funded marine projects, that are under implementation at TSU using Black Sea Synergy initiative instrument. |
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5. Communication assets

| A. Communication products | | | | |
|----------------------------------|------------------------|--|--------------|--|
| Date | Communication material | Short description (of the material, title, ...) of the asset | Main results | Name of event at which material was disseminated (if applicable) |
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| B. Planned communication products | | | |
|--|------------------------|--|---|
| Date | Communication material | Short description (of the material, title, ...) and/or link to the asset | Main results expected |
| 04/2021 | Enamel Pins | EMODnet logo to wear at any occasion, and for online meetings / webinars | Branding |
| 05/21 | Video | Final updated video Wake up your data for the blue society | Publication on Youtube and advertisement on website, by mails, shown at conferences (Jamboree in June 2021) |
| 06/2021 | Publish more use cases | Work out use cases | New online use cases published on the DIP portal, identification of some cases to promote further. |
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[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) |
| September 2020 | ENVIROMIS 2020. IOP Conf. Series: Earth and Environmental Science 611 (2020) 012054 IOP Publishing. doi:10.1088/1755-1315/611/1/012054. (https://iopscience.iop.org/article/10.1088/1755-1315/611/1/012054/pdf) | Standardization of Forms and Tools for Inter-machine Interaction in the Exchange of Hydrometeorological Data | Evgenii Viazilov, Alexander Vikheev | RIHMI-WDC |
| TBC | Geotemas Journal. 10 th Spanish Geological Congress. New date for the celebration: July 5th to 7 th, 2021. | EMODNET project, the Ingestion Portal and the relevance of the Database and Spatial Data Infrastructure | Javier Valencia, Gemma Ercilla | Institute of Marine Science. CSIC |
| | Marine Pollution Bulletin | Marine macrolitter on the Greek coasts (in preparation) | Kaberi H., Zeri C., Tsangaris C., Papathanassiou V., Vlachogianni T | Hellenic Centre for Marine Research (HCMR) |
| February 2021 | The Handbook of Environmental Chemistry | Geomorphology, Geological Structure, Active Tectonics, and Basin Formation in the Aegean Sea. In: . The Handbook of Environmental Chemistry. Springer, Berlin, Heidelberg. https://doi.org/10.1007/698_2020_729 | D. Sakellariou, G. Rousakis, P. Drakopoulou, K. Tsampouraki-Kraounaki, I. Morfis, I. Panagiotopoulos, I. Livanos, V. Loukaidi, C. Kyriakidou, K. Manta, V. Lykousis | Institute of Oceanography, Hellenic Centre for Marine Research (IO/HCMR) |
| May 2021 | XVII International scientific conference "The modern methods and tools for oceanographic research". Moscow SIO RAS. | Modern means for oceanographic data Exchange | Evgenii Viazilov, Alexander Vikheev | RIHMI-WDC |
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6. Monitoring indicators

| Comments on the progress indicators in the excel template | | |
|---|---|---|
| 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 last quarter is 49 which is conform the earlier quarter with 47 new phase 1 + 2 submissions. The overall number of published submissions went from 721 to 770. |
| 1B) Usage of data in this quarter | Cloud storage of Submission Viewing service | The total volume of downloads went considerably down, while the number of downloads went down relatively less from 367 to 119 transactions. |
| 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 133 |
| 9. Visibility & Analytics for web pages | Grafana | The grafana application has just been configured for Ingestion so there is not much yet to report in trends. Also it seems that not all requested sections are reported. |
| 10. Visibility & Analytics for web sections | Grafana | The grafana application has just been configured for Ingestion so there is not much yet to report in trends. Also it seems that not all requested sections are reported. |
| 11. Average visit duration for web pages | Grafana | The grafana application has just been configured for Ingestion so there is not much yet to report in trends. Also it seems that not all requested sections are reported. |

Some additional statistics on Submissions.

In the reporting period, the number of **Submissions** went **from 853 to 903**, the number of **published data submissions 'as is'** in the View Submissions service increased **from 721 to 770** (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 315 to 341**. The following figures give characteristics of those published submissions.

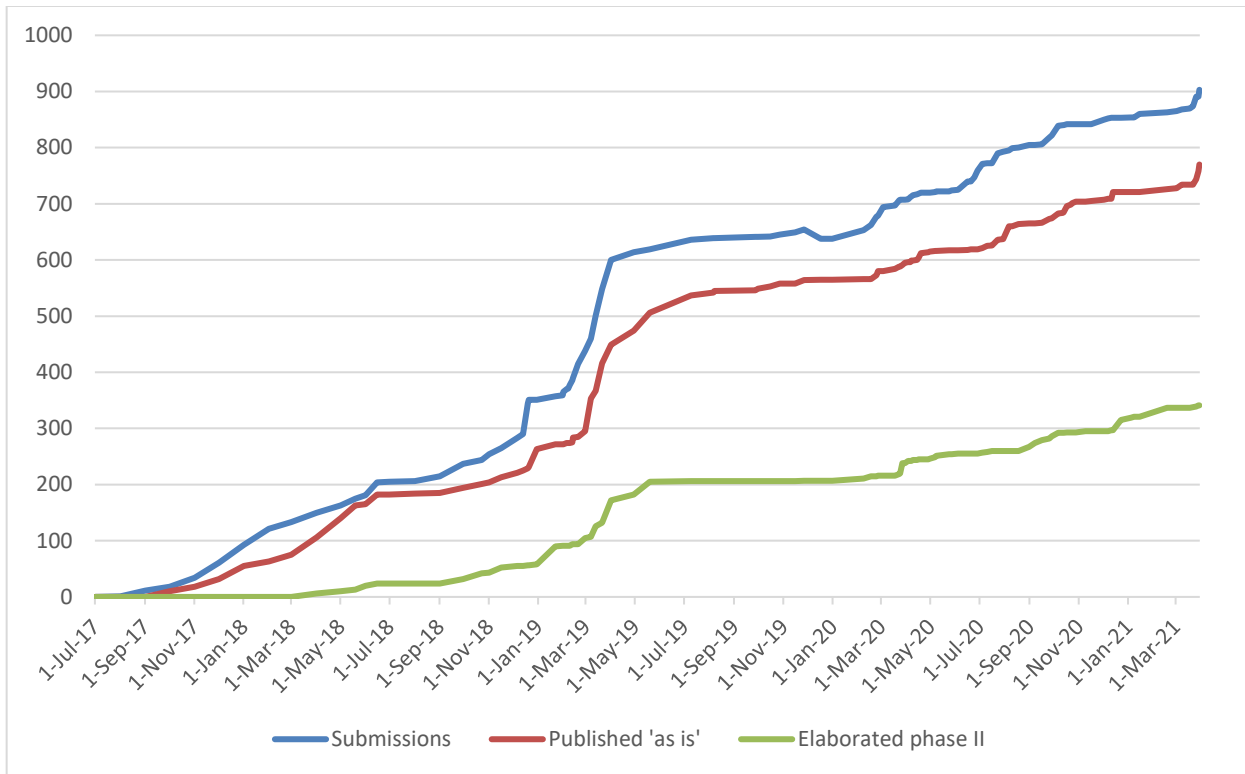


Image: Submissions and processing in time

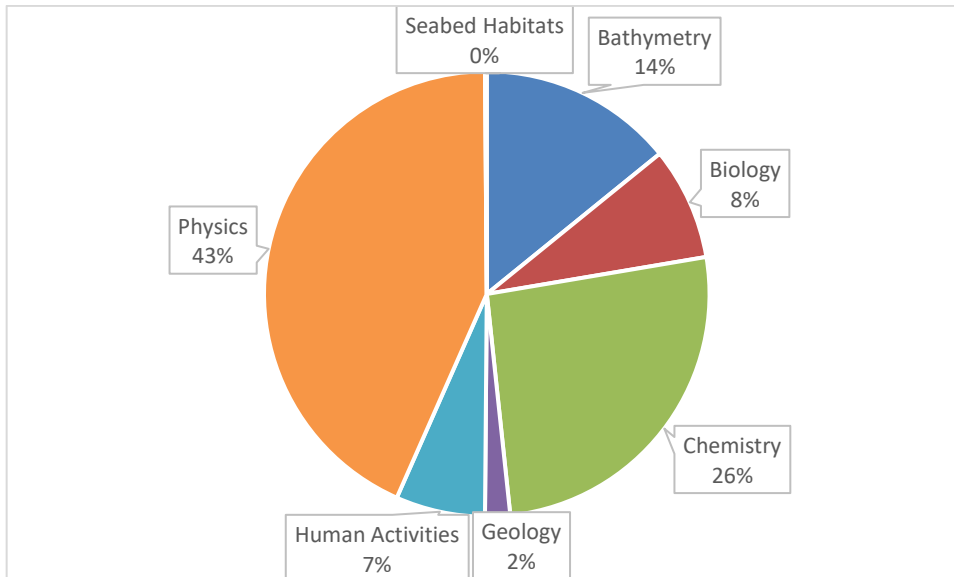


Image: Published submissions (770) by theme

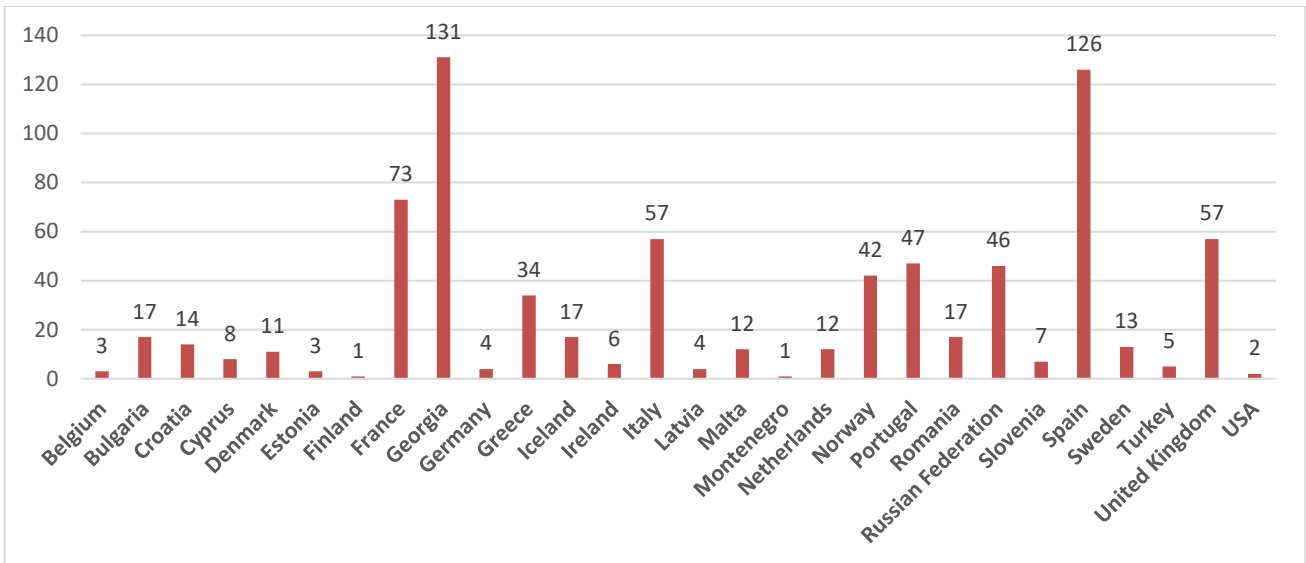


Image: Published submissions (770) by country of submission

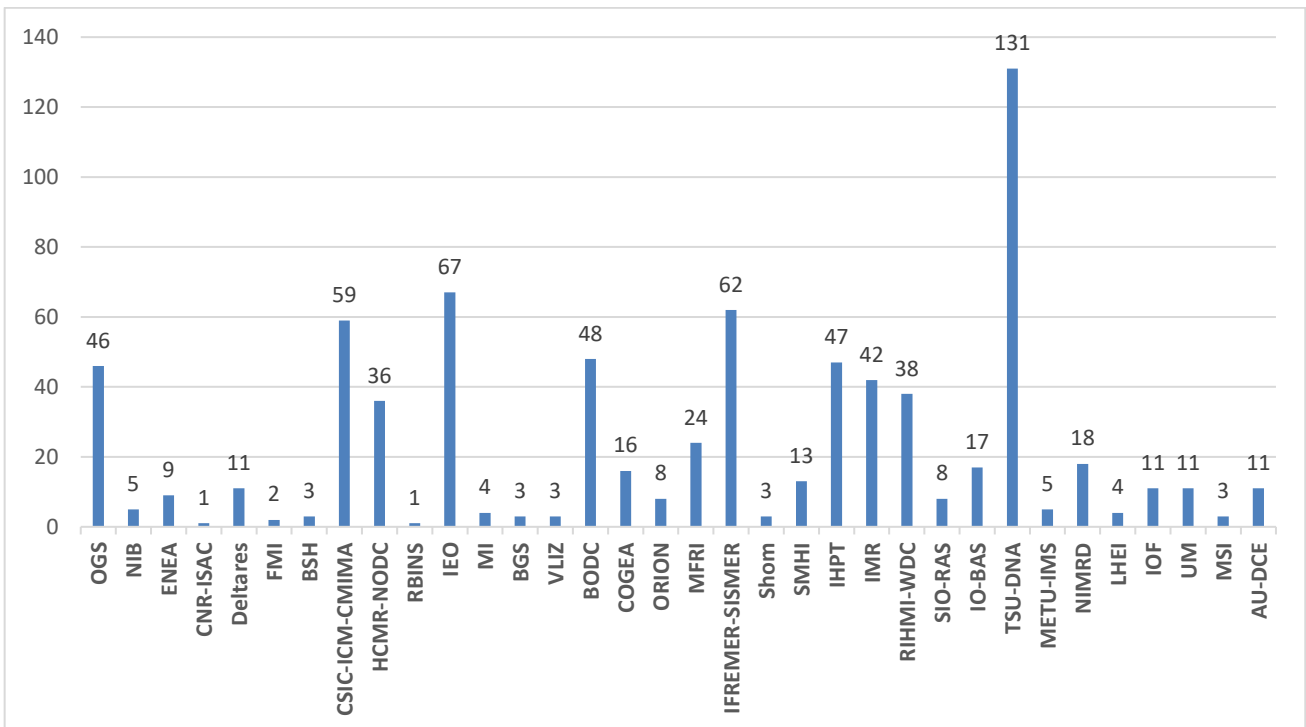


Image: Published submissions (770) by assigned data centres

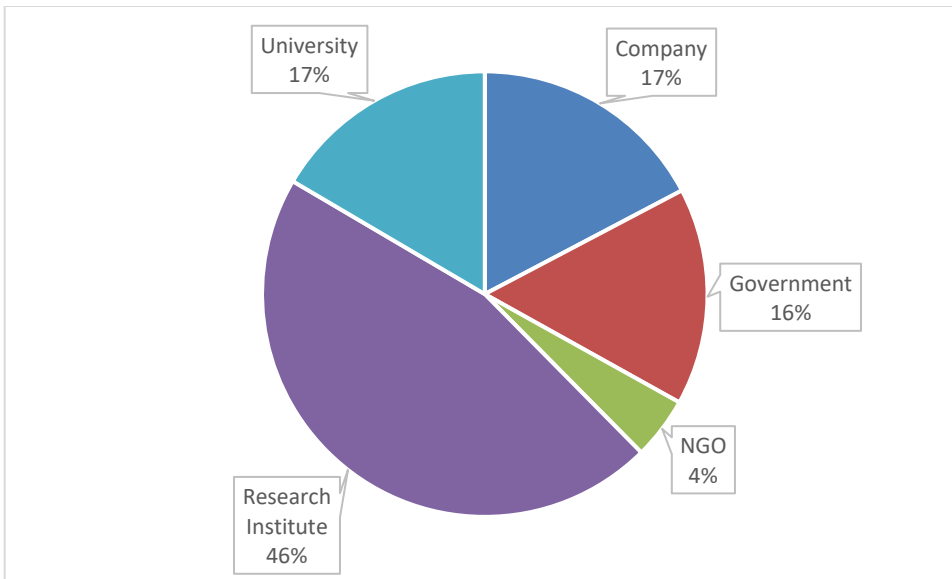


Figure: Division by sector of organisations (133) for data originators and holding centres

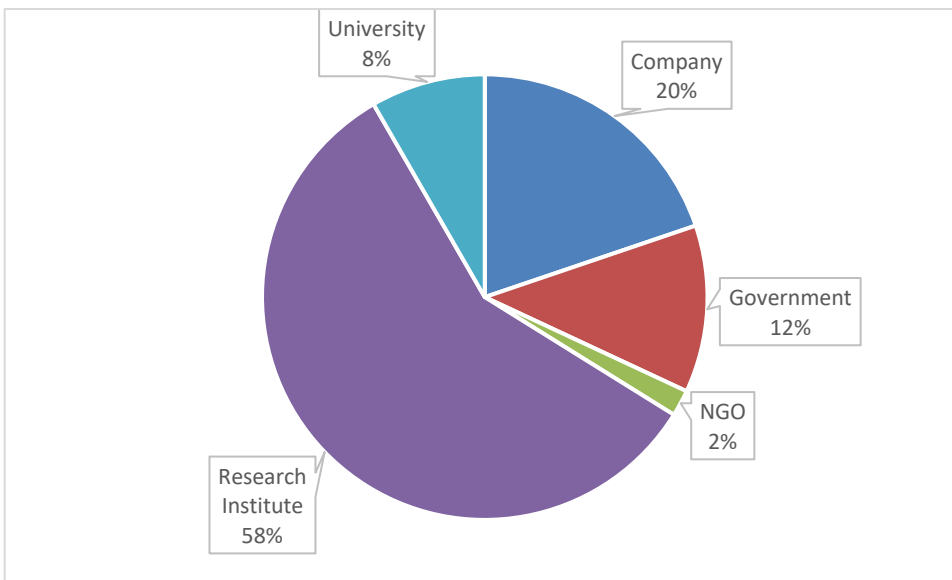


Figure: Division of number of submissions (770) by sector of data originators and holding centres

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 which total 770 records with 429 records at Phase I publication and 341 records at Phase II publication.

Differences over previous quarter and current quarter:

| | Begin Q1 2021 Phase 1 | End Q1 2021 Phase 1 | Begin Q1 2021 Phase 2 | End Q1 2021 Phase 2 | Total Begin Q1 2021 | Total End Q1 2021 |
|------------------|-----------------------------|---------------------------|-----------------------------|---------------------------|---------------------------|-------------------------|
| Theme | | | | | | |
| Bathymetry | 74 | 74 | 23 | 35 | 97 | 109 |
| Biology | 48 | 48 | 9 | 15 | 57 | 63 |
| Chemistry | 69 | 68 | 126 | 132 | 195 | 200 |
| Geology | 11 | 13 | 1 | 1 | 12 | 14 |
| Human Activities | 43 | 43 | 7 | 7 | 50 | 50 |
| Physics | 160 | 182 | 149 | 151 | 309 | 333 |
| Seabed Habitats | 1 | 1 | 0 | 0 | 1 | 1 |
| | | | | | | |
| TOTAL | 406 | 429 | 315 | 341 | 721 | 768 |

Table: number of submissions in phase 1 and 2 per theme at begin and end of reporting quarter

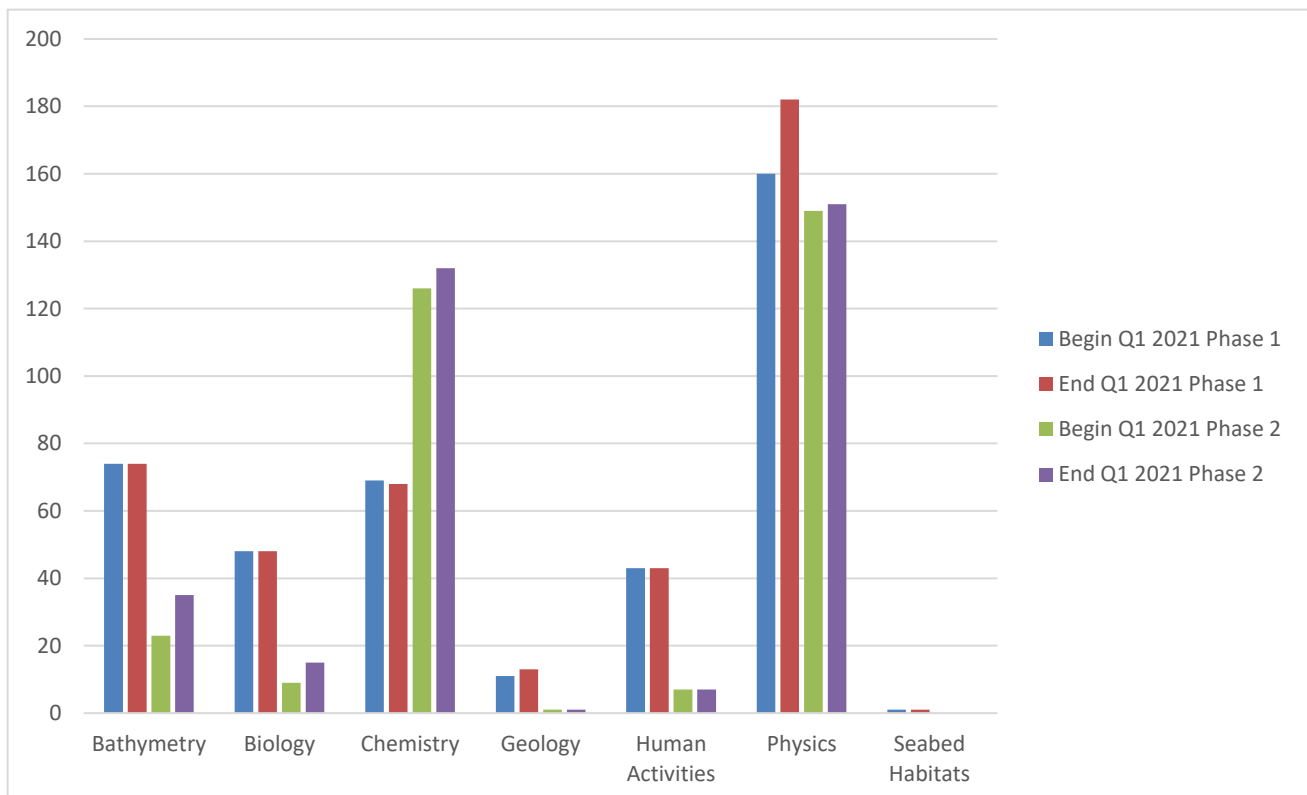


Image: number of submissions in phase 1 and 2 per theme at begin and end of reporting quarter