

Copernicus Marine and EMODnet coordination meeting

Online, 2 February, 2023

14:00-16:15 CET

Participants:

European Commission: Zoi Konstantinou, Rémy Dénos (DG MARE), Fabienne Jacq (DG DEFIS)

EMODnet Secretariat: Kate Larkin, Jan-Bart Calewaert, Conor Delaney, Pieter Torrez

Mercator Ocean International (MOi): Pierre-Yves Le Traon, Laurence Crosnier, Antonio Reppucci, Angélique Melet, Enrique Alvarez, Alain Arnaud

The meeting was held remotely (online) on 2 February, 2023 and was co-chaired by Pierre-Yves Le Traon (MOi) and Kate Larkin (EMODnet). The agenda is given in the annex below.

Representatives from the European Commission opened the meeting:

Fabienne Jacq (FJ) gave opening remarks from EC DG Defis concerning the Copernicus Marine Service. She noted it was business as usual for Copernicus Marine Service with evolutions also in development, including Copernicus thematic hubs as portals as a new approach where users could access data and information from one thematic across multiple Copernicus services (e.g., across marine, land, climate etc). This new way to access was a response to user needs since many Copernicus users require access across multiple services. She noted that in this proof-of-concept phase initially four new such thematic hubs would be produced, namely Energy, Health, Coastal and Arctic. Pending successful implementation and feedback from the users, future thematic hubs may be developed for Cultural Heritage, Extreme Events and others. She finished by noting that there would be a new contract for Copernicus access, noting that whilst the WEkEO (EU Copernicus DIAS reference service for environmental data) had secure funding until 2027, there was a decision to replace the four existing DIAS data access services by one data access service that would federate all Copernicus data with cloud computing resources for users to better access data.

Zoi Konstantinou (ZK) provided opening remarks from EC DG MARE. She congratulated the EMODnet team on completing the delivery of the unified EMODnet thematic services in January 2023, noting that further to this, EMODnet Data Ingestion would be also centralised in the course of 2023. She confirmed the EMODnet priorities have not changed since the last meeting and that DG MARE and EMODnet continue the active collaboration with Copernicus Marine Service towards common developments towards the European Digital Twin Ocean (DTO). She added that EMODnet maintains the interest to further develop its offer of data and data products for coastal areas and that this would be discussed later on in the agenda, together with ongoing collaborations between EMODnet and Copernicus Marine Service.

Copernicus Marine and EMODnet 2022 status and 2023/2024 plans

Pierre-Yves Le Traon (P-Y LT) presented a status update for the Copernicus Marine Service (*see Copernicus Marine presentation*). In 2022 new Consortia were set up, including for the Copernicus thematic assembly centre, modelling centre, and other elements of the marine data service. In 2022 there were also two new releases of the Copernicus marine data portfolio and work on the Ocean State Report 7 which he noted will move to publish in the Copernicus EGU 'State of the Planet' publication. He added that Copernicus is moving forward towards more reinforced governance for Copernicus Marine and noted the Copernicus Marine User Forum, specifically designed for dialogue with Member States, which kicked off in October 2022 and would meet again in May 2023 (to be confirmed).

He noted that Copernicus Marine Service 2.0 continues with service evolution on the coastal area (as well as the Arctic), with the coastal bathymetry developments to be presented later on in the agenda. New releases included existing product quality improvement and new products. Service evolution was also being developed on the way to access the Copernicus Marine products. He added that due to Brexit, Copernicus Marine has had to remove all UK partners from their contracts. Copernicus is working with ECMWF to set up a new organisation for the reprocessing e.g., from 2023 the climate reprocessing by Copernicus Climate Service (CCS) would be managed by MOi and ECMWF.

He also referred to Copernicus Marine's work in a number of external (including Horizon Europe) projects that were contributing to the evolution of Copernicus Marine. On activities to expand the Copernicus Marine "offer" related to marine biology, he noted that the NECCTON project was an important one for Copernicus Marine for developing the green component and linking existing Copernicus models in this domain.

For digital aspects, he noted that Copernicus Marine Service were working on the link between the Marine Data Store and the WEkEO and that activities related to the Digital Twin Ocean and collaboration with EMODnet on this would be presented later on in the agenda.

He finished by inviting EMODnet to actively take part in the Copernicus Marine General Assembly in Brussels, taking place 5-9 June 2023. There were no questions at this point in the agenda.

Kate Larkin (KL), Conor Delaney (CD) and Jan-Bart Calewaert (JBC) jointly presented a status update for EMODnet (*see EMODnet overview presentation*)

JBC and CD presented on the landmark unification of EMODnet services that was finalised and externally communicated on 23 January 2023, noting there had been a progressive technical development during 2022 and before to enable the full centralisation and unification of all EMODnet thematic services, building on the repatriation of EMODnet to the Europa domain achieved in June 2021. They noted the new features and functionalities of the single EMODnet Portal, including a common map viewer to discover, visualise and download all EMODnet data and data products, underpinned by a central metadata catalogue. Web services had also been

further streamlined and harmonised, with a new common ERDDAP service, amongst others. They concluded noting that the unification of EMODnet services was a game-changer for marine data interoperability with already good user feedback on the upgrade. EMODnet Data Ingestion would be centralised during the course of 2023.

KL presented on external communications on the upgraded and unified EMODnet services. She noted that external communication continued to be crucial to ensure user awareness and buy-in. This had been a step-wise process to ensure smooth user migration. During the transition period, all thematic portals added a banner announcing the upcoming centralisation, amongst other communication activities. The external communication of the completed unification of services took place on 26 January 2023 when all thematic portals were switched off, redirecting to the EMODnet Central Portal as the single Portal for EMODnet services going forward. A communication pack had been produced including an infographic and social media assets and guidelines that had been shared amongst the EMOD-network and with other key European stakeholders, including Copernicus Marine Service. She noted that the external communication of EMODnet service unification would continue, including at an upcoming public webinar “One Ocean, One EMODnet” on 16 February 2023 which would demonstrate the new EMODnet Portal and hear from thematic experts on the added value for users in accessing multi-disciplinary thematic data and data products in one place.

In addition, she noted that EMODnet has two flagship events coming up in 2023, namely the Open Sea Lab III (OSL III) Hackathon coordinated by EMODnet in collaboration with Copernicus Marine Service and others. The key aim of these events was for users to stress-test the new EMODnet services, accessing data and data products to produce new applications and solutions to societal challenges. She noted that EMODnet had invited (as in previous editions) the collaboration with Copernicus Marine Service and acknowledged the strong engagement of Copernicus Marine Service, including as coaches and mentors. A reception to celebrate the recent EMODnet unification would be held in Brussels on 8 February 2023 afternoon, held back-to-back with a OSL III planning meeting for coaches and mentors and MOi and EC colleagues were invited to join EMODnet colleagues at this event. She concluded that the third EMODnet Open Conference would take place the week of 27 November to 1 December 2023 in Brussels, as part of the EMODnet Jamboree and that as in previous editions, Copernicus Marine Service would be invited to actively participate.

Questions for EMODnet included the topic of user migration monitoring and impact considering the recent EMODnet service unification.

CD confirmed that following EMODnet unification all thematic services were centralised and there were no log-ins required for users or forms to complete to access the data and data products. In terms of monitoring users, he noted that following the migration of EMODnet to the EC domain in 2021, EMODnet uses Europa analytics as the EC web metrics tracking tool to track the number of website visits. He noted this migration, enforced by the EC, migration had helped to provide guidelines for the technical and design development during the centralization process. He noted that although some tracking of data download remained distributed, all users were

now accessing EMODnet centrally making the tracking unique visitors to the EMODnet Central Portal a lot simpler using Europa Analytics. He added another advantage was that the EU domain significantly reduced the possibility of privacy violations.

In terms of numbers of users, he noted that centralisation had only been launched a few days on 26 January 2023 but the team were tracking daily and the user numbers were already going up. He reflected this is expected in the sense that the thematic portals are now switched off and all users go centrally through EMODnet. However, the increase in users is expected to continue rising well beyond the 'launch effect', also thanks for communication efforts across the EMOD-network, external communication to wider stakeholders and upcoming flagship events which mobilised the community to access and test the services.

For user migration, **CD** referred to **KL's** presentation on the communications plan adding that in addition to banners communicated on thematic portal homepages, the EMODnet Central Portal had been updated progressively with the new features so that it would operate in soft launch mode, in conjunction with thematic portals, until the time when centralization was fully completed and the portals had been switched off, redirecting to the EMODnet Central Portal.

User feedback for EMODnet is submitted to a Jira service desk which is the focal point for user support, managed by the EMODnet Secretariat who mobilise the wide network of EMODnet experts depending on the specific question.

Laurence Crosnier (LC) noted that Copernicus Marine Service has a Level 1 user service desk.

When asked about Bathymetry users, CD noted that positive feedback had already been received in the past few days since centralization congratulating EMODnet retaining the pre-existing features of the Bathymetry data service which offers the Digital Terrain model and offering additional features.

Copernicus Marine *in situ* TAC (INSTAC) and EMODnet

Antonio Reppucci (AR) presented a status update of the Copernicus *in situ* Thematic Assembly Centre (*see Copernicus INSTAC presentation*), with a focus on the collaboration with EMODnet. He noted there are over 170 data providers pushing from 7000 active platforms. He noted that the main use for Copernicus INSTAC is the near real-time global product for assimilation into models.

He noted the close collaboration between INSTAC and EMODnet, notably the Physics and Chemistry thematics. He explained that to further strengthen the operational exchange a dedicated Working Group on Marine *in situ* (MIC) had been initiated by Copernicus Marine Service and EMODnet in 2022 to collaborate across data services on *in situ* data. In 2022 the main action had been to compare the differences and complementarities between the two services. He noted the ongoing plan is to upgrade the interaction with data providers and work on the

homogenisation of information across both data services and to explain the differences of the services.

Regarding collaboration on specific data and data products, AR noted the delayed mode sea level data product, with the plan being in 2023-2024 to add the GLOSS Platform and to tag these. There is discussion between the two data services on this, also in dialogue with GLOSS.

He added that INSTAC is a member of JERICO Research Infrastructure (RI) with activities including the tagging of JERICO *in situ* data to Copernicus INSTAC. AR closed noting that MOi, INSTAC and EMODnet are partners in European projects such as EuroSea, Blue-Cloud which further extends the potential for collaboration in the European marine data space.

EMODnet and Copernicus INSTAC

KL provided an overview (see *EMODnet overview presentation*) of the status of EMODnet thematics, noting firstly that EMODnet Human Activities is a unique service of EMODnet that continues to grow as an EU focal point for data and information related to human activities at sea, including hosting National Maritime Spatial Plans (MSP).

She added that all seven thematics have joined previous dialogues with Copernicus Marine and many have ongoing joint activities and potential areas for collaboration and she would present updates directly from the EMODnet thematic Coordinators on these partnership activities.

The longest standing collaboration is between EMODnet Physics and Chemistry with the Copernicus Marine INSTAC. She noted that EMODnet Physics co-led the setting up of the MIC Working Group (WG), which has representatives from EMODnet Physics, Chemistry and Data Ingestion. She noted that EMODnet finds this WG very useful to look at operational data flows and the Data Ingestion workflow, to ensure interoperability across Copernicus Marine, EMODnet and EuroGOOS. The MIC WG had developed a new common citation statement for data providers, agreed between Copernicus Marine and EMODnet Physics, in addition to ongoing dialogue on data standards with European projects e.g., EuroSea.

For EMODnet Physics, the main parameters currently being discussed within the MIC WG are related to river, wind, sea level and underwater noise. EMODnet Physics reported that an agreement had been reached with Copernicus Marine for EMODnet Physics to coordinate European *in situ* marine data for parameters of river, wind and sea level. She added that EMODnet Physics also supports Copernicus INSTAC in providing *in situ* data for a new Copernicus reprocessed product on sea level, and she noted that EMODnet Geology also have relevant sea level data and data products.

In terms of the emerging area of citizen science, EMODnet Physics already has some citizen science data streams, including from fishing vessels. Now, a more direct dialogue with Copernicus Marine is being held via MIC WG on the management and harmonisation of citizen science data.

P-Y LT added that citizen Science data are also included in INSTAC with the issue that the data are QC'd before being distributed to users.

KL noted that in terms of biogeochemistry (BGC), EMODnet Chemistry was collaborating with Copernicus INSTAC to supply EMODnet harmonised and integrated eutrophication and acidification datasets for input to Copernicus BGC products.

It was highlighted that although for Copernicus Marine the interactions with EMODnet and the MIC WG are funded activities, for EMODnet thematics the MIC WG and continued collaborations are very useful but there is no associated budget in the EMODnet thematic or other workplans for this.

All agreed the interactions between EMODnet and Copernicus INSTAC remain very important with the dialogues now being mature and well organised and regular between the two data services at an operational level.

Copernicus Marine and EMODnet collaborations on coastal related activities

Angelique Melet (AM) presented on Copernicus Marine Service developments in the areas of coastal bathymetry (*see presentation Copernicus Marine coastal bathymetry*). AM noted that as part of the evolution of Copernicus Marine Service to meet user and policy needs the coastal domain is a top priority for the service and these are developed typically via European Horizon Europe projects based on priority and budget constraints. At the end of 2022 the EC gave the green light for Copernicus to develop the coastal service extension and to strengthen the links with Member States (MSs) including national marine user forum in their short-term activities they are working with contractors to produce coastal satellite bathymetry products and to include more and more processes in the models, more dedicated data assimilation on shelf-seas, with new observations being assimilated and higher resolution etc and to contribute to a new Copernicus coastal thematic hub. Copernicus is also moving towards more *in situ* coastal observations and access to coastal data INSTAC, EMODnet and JERICO.

She noted that a major evolution is planned for interfaces with regional forecasting and operational systems and Member States. Copernicus Marine also envisions having improved river forcing and new pan-European satellite-derived bathymetry, with the Copernicus evolution in part being developed via Horizon Europe projects e.g., NECCTON.

She explained that regarding satellite derived bathymetry, a user needs and market analysis had already been carried out. A Copernicus Marine call for tender would be issued by Q2 2023 for activities on satellite-derived coastal bathymetry which would include the request to develop a roadmap for the evolution of dynamic-derived bathymetry.

It was confirmed that the call topic remains confidential and EMODnet partners were only involved in the scientific requirements setting to ensure complementarity between EU data services.

It was agreed that further discussions with EMODnet Bathymetry and Copernicus Marine would be useful with regards to standards and metadata and *in situ* data for calibration and validation.

Action: Further discussion is proposed between Copernicus and EMODnet Bathymetry on the satellite-derived coastal bathymetry products and ongoing input of EMODnet Bathymetry in terms of standards, metadata and *in situ* data for calibration and validation.

Joint coastal actions (follow up from coastal workshop held in September 2022)

KL presented updates from EMODnet thematics:

- EMODnet Biology and Seabed Habitats had joined the Copernicus biodiversity coastal workshop in Autumn 2022, with the invitation for Copernicus Marine to consider potential further collaborations with EMODnet in the biodiversity and wider biological domain areas;
- EMODnet Chemistry and Copernicus INSTAC had held a meeting in 2022, with a further one planned for 2023 (date to be confirmed). She also extended the invitation of EMODnet Chemistry for Copernicus Marine to participate in-person and online at an upcoming EMODnet Chemistry stakeholder event on 10 March;
- EMODnet Bathymetry and Copernicus INSTAC had also met, with some core experts from EMODnet Bathymetry were involved in the defining of scientific requirements for future Copernicus Bathymetry coastal activities (as reported above).

It was noted that EMODnet and Copernicus Marine Service are both involved in the JPI Oceans Knowledge Hub on Sea Level Rise, with EMODnet Secretariat co-Chairing a Task Group on communications and outreach, with contributions by the EMODnet Secretariat, EMODnet Physics and Copernicus Marine Service / MOi to the Assessment Report 1 which would be finalized in 2023 with a view to scientific peer-reviewed publication.

In terms of input to global coastal initiatives, EMODnet are also advisors to the UN Ocean Decade COAST Predict (see below for full global collaborations).

European Ocean Observing System (EOOS)

P-Y LT noted that the new (2023-2027) European Ocean Observing System (EOOS) Strategy and Implementation Plan would be launched on 2 March 2023, with representation from DG MARE and potentially other EC services. Copernicus Marine Service and EMODnet are represented on the EOOS Steering Group and continue to work together with the European Ocean Observation community to further coordinate and strengthen these efforts for more sustained *in situ* ocean observations.

ZK underlined the importance of bringing in the Member States into the discussion, both in terms of the event on 2 March and the implementation of EOOS. **P-Y LT** responded that at a national level in France, a French ocean observation coordination was being set up and the EC Ocean Observation initiative would provide further framework and motivation.

It was noted that **P-Y LT** and **KL** had presented at the EOOS Resource Forum where they had presented Copernicus and EMODnet respectively in terms of the data services, user demand and requirements had been presented.

ZK explained that the EC recognize the anticipation on the EC Ocean Observation initiative however they could not share any further information at this stage, with further updates to come at the EOOS event and other events in Spring 2023.

Digital Twin Ocean

P.Y. LT gave a short presentation on the EDITO project, noting that it had recently started with the objective to connect the European marine data assets Copernicus Marine and EMODnet, with EDITO providing the architecture for connecting these components, the development of a data lake with data supplied by Copernicus and EMODnet and the engine that would bring together models, noting there would be a separate project called EDITO Model Lab to further develop this area. The project was a design phase, to be delivered by the end of 2024.

It was recognised that MOi, VLIZ and EMODnet Secretariat are in regular (weekly) technical dialogue regarding interoperability and upgrading of Copernicus Marine Service and EMODnet marine data infrastructures to be future fit for DTO.

It noted that EDITO experts were in dialogue with Research Infrastructures and relevant EU projects including Iliad towards creating a truly interoperable EU marine data space.

CD remarked that the communication efforts related to EDITO were being co-developed step by step to ensure buy-in from the community.

FJ commended the EDITO team on their regular dialogues and progress so far. She added that DG Defis have met with DG CONNECT and the next step would be to organize further dialogue with EDITO and trusted entities of Destination Earth as this was also in design phase.

EMODnet and Copernicus Marine Service joint activities of user activities and engagement

LC gave a presentation on the Copernicus Marine Service activities on user uptake, including participation of MOi/Copernicus Marine Service in recent EMODnet events and activities. She noted that Copernicus Marine Service participated in the two online EMODnet workshops on Offshore Renewable Energy (ORE) in Autumn 2022, and that a number of MOi colleagues were actively involved in the EMODnet Open Sea Lab III Hackathon as coaches, mentors and other

roles. She updated the participants that MOi is organising a hackathon in June 2023 which would involve EMODnet and further details would follow.

European Atlas of the Seas

LC noted the two Copernicus Marine Service indicators featured in the European Atlas of the Seas Global Sea Level Trend and Global Sea Surface Temperature Trends and she noted Copernicus Marine were interested to discuss other potential data layers of interest. She remarked that the visibility from Copernicus Marine Service in the European Atlas of the Seas is very poor and wondered if this could be improved.

KL responded with a demonstration of the European Atlas of the Seas, showing how to search, access and visualise the two Copernicus Marine Service data layers. She noted they can be found for searching under specific parameters and under Climate Change thematic. For each data layer it notes the data provider, the source and an explanation of the parameter itself. You can click on the parameter and look at the metadata with the layer where it clearly states Copernicus Marine Service as the source and provider. She added this is a standard way for the >250 existing data layers in the EU Atlas. In terms of users and visitors for 2022 there are now up to 7000-8000 visitors each month to the EU Atlas. She noted the Copernicus surface ocean acidification trend Ocean Monitoring Indicator (OMI) has been identified as a societally relevant data layer for the European Atlas of the Seas and she noted dialogue on this was ongoing.

Data catalogues

LC noted recent updates had been made to the Copernicus Marine Service data catalogue, with a new development to allow the possibility to view *in situ* data within the existing viewer, with a proof of concept planned in 2023 and a launch in 2024.

She noted that for the MSFD joint catalogue for the Baltic Sea, produced by Copernicus Marine and EMODnet in 2021 is now largely obsolete from the Copernicus side since the links are now broken due to updates in Copernicus Marine Services. Since updating Copernicus Marine Service links would need to be done by hand which would be very time-consuming, Copernicus Marine Service decided to instead remove the MSFD joint catalogue from their website.

KL noted that EMODnet links in the MSFD joint catalogue remain valid since all old links pre-centralisation have been redirected. For this reason the catalogue would remain on the EMODnet Central Portal, but a disclaimer could be added to make it clear the Copernicus Marine Service links are now inactive.

Action: Copernicus Marine and EMODnet to follow up accordingly regarding the joint Baltic Sea MSFD catalogue (removing from the website or adding disclaimers, as relevant)

It was discussed that in the future, to further simplify the user experience and data discovery, the tagging of data relevant for different EU policies, sea-basins etc could be implemented allowing data to be filtered e.g., for MSFD relevance.

LC noted that Copernicus Marine are preparing a large user migration to thematic hubs which would have the advantage that users would no longer be restricted by a data volume threshold so it will be easier and faster to view and download data, including the visualisation of *in situ* data and static data such as bathymetry, also with machine-machine APIs. She also noted there are a number of trainings planned for Copernicus Marine Services, WEkEO etc. In terms of capacity development, MOi would attend a Conference on Ocean Innovation in Africa in February 2022, and there was dialogue between MOi Communications and EMODnet to also contribute relevant information for this event.

LC mentioned that MOi also have ocean literacy activities including an ‘explainer’ section on their web portal also developing an ocean climate portal which would highlight ocean monitoring indicators worldwide and will be launched later in 2023. Translation across Copernicus Marine services are also planned.

KL added that for use cases, EMODnet has integrated all use cases into the Central Portal and there is a searchable database where a user can search for different user sectors and also across all EMODnet thematic domains. Joint use cases with Copernicus Marine Service are visibility communicated as such.

International collaborations and contributions to the UN Ocean Decade

Enrique Alvarez (EA) gave a presentation as Coordinator of the UN Ocean Decade Collaborative Centre (DCC) for Ocean Prediction and the wider context of the UN Ocean Decade (UN OD) ‘ecosystem’ of programmes, actions and collaborative initiatives. He noted that the aim of the UN DCC for Ocean Prediction aimed to set the course to a scenario of more connected systems at a technical and human level. This would include a global transversal community, building on existing initiatives, support the UN Ocean Decade action on ocean forecasting identify gaps and ways forward and work on capacity development. Advocate for implementation of best practices, standards and tools. The community was launched at the kick-off meeting to which over 1000 people registered. A technical framework is also needed to connect existing dis-connected initiatives in a robust way towards interoperable core ocean prediction services. An Ocean Prediction co-design team will start in March 2023 to design a new architecture, standards, tools and best practices to future fit-for-use global ocean prediction services. He noted Antonio Novellino (EMODnet Physics, ETT) has been invited to join and represent EMODnet in the co-design team.

It was noted that Copernicus Marine INSTAC is also part of the EMODnet UN OD Data Coordination Group and the first EU-Canada Partnership Forum.

JBC presented achievements of EMODnet during the past year(s) related to International partnerships, which included the successful completion of the EMOD-PACE project at the end of 2022. He also updated participants on EMODnet's multiple contributions to the UN Ocean Decade, including as co-Chair of the UN Ocean Decade Data Coordination Group and noting that EMODnet had applied to be an Implementing partner of the UN Ocean Decade, which was currently in finalization and would be communicated in Spring 2023.

JBC explained that EMODnet are advisors to specific UN Ocean Decade activities including COAST Predict, the Collaborative Centre on ocean prediction and the Digital Twin Ocean (DITTO). The role includes providing technical advice on the EMODnet *in situ* data services and data interoperability with the global digital data ecosystem. EMODnet representation is spread across the Secretariat and wider network, including thematic and data ingestion Coordinators and partners. EMODnet regularly shares updates with the wider EMODnet community to identify the best placed experts for specific advisory roles. He noted that since EMODnet is a large network, the EMODnet Secretariat communicated regularly to the network to assess potential advisory roles/inputs of EMODnet and the most appropriate representation. To coordinate this, EMODnet had initiated an EMODnet UN Ocean Decade Coordination Group. In addition, he noted that EMODnet is supporting IODE to set up a UN Ocean Decade Coordination Office, approved by IOC and placed under the coordination of IODE, which would become a data and information service for the UN OD with the Ocean InfoHub being set up for international interoperable data sharing. Another Coordination Office on Ocean Observation would be coordinated by GOOS, complimenting the Coordination Office on Ocean Prediction.

It was stressed that EMODnet's activities supporting UN Ocean Decade are largely done in-kind as there is no specifically funded work strand for these activities, beyond specific activities e.g., EU – China that was funded by EMOD-PACE (which ended in December 2022).

P-Y LT noted that GEO Blue Planet would be applying to be an implementing partner of the UN Ocean Decade. **P-Y LT** and **KL** closed the meeting by thanking participants for the productive meeting and exchanges. The next meeting would be organised in Autumn 2023 inviting all relevant Copernicus Marine INSTAC and EMODnet thematic and data ingestion coordinators and representatives for more discussion on thematic collaborations and joint activities including for the coastal zone and EU contribution to global activities.

Action: EMODnet and Copernicus Marine Service to jointly organise the next coordination meeting (Autumn 2023, to be confirmed)

Annex

Agenda of the EMODnet and Copernicus Marine coordination meeting – 2 February 2023

- Introduction from EC (DG DEFIS and DG MARE)
- Copernicus Marine and EMODnet 2022 status and 2023/2024 plans
 - Copernicus Marine Service
 - EMODnet
- Copernicus Marine in situ TAC and EMODnet (Physics, Chemistry)
- Copernicus Marine and EMODnet collaborations on coastal (follow up of the September workshop)
- European Ocean Observing (EC Ocean Observation initiative; EOOS)
- EU DTO and EU marine data space (EDITO Infra) status and joint plans Joint areas of activity on user uptake and user engagement
- European Atlas of the Seas / status
- International collaborations and contributions to the UN Ocean Decade (EMODPACE/ASIA, GMES Africa, Coordination Group on Data; Decade Collaborative Centre for Ocean Prediction, ...)
- Copernicus Marine – EMODnet wider thematic collaborations
- Main joint events for 2023
- Any Other Business