

2021: A milestone year for EMODnet



Dear EMODnet partners, users, colleagues and friends,

At the onset of each New Year, we invite you to take a moment to reflect with us on the past, to consider our main achievements and to look forward to what the coming year will bring for our evolving network of partners and users.

2020 was an extraordinary year for EMODnet – not only because of the global health crisis which has affected us all – but mostly because it marked EMODnet’s first decade and the end of its third phase of development (2017-2020). We can be very proud of our collective achievements, leading to the successful delivery of the [Marine Knowledge 2020](#) vision objectives producing a high-resolution multi-parametric map of European seas. Over the years, EMODnet has become a unique provider of multidisciplinary marine data, data products and services fostering a diverse and expanding user base. It is now an essential tool for scientists, engineers, managers and policy-makers to generate the information necessary to improve our knowledge of the seas and to support sustainable economic growth and employment. But we also went well beyond: just think of the [EMODnet Checkpoints](#) which have assessed the data adequacy at sea-basin level by stress-testing the system; or the [EMODnet data ingestion Portal](#) which enables data holders to unlock their data. Together these provide a real opportunity to assess both the ocean health and its many and varied human pressures, providing a holistic view of our shared Ocean and expanding our knowledge about our Ocean and our influences on it.

A quick look back

Despite the important challenges that 2020 has brought to us, such as the COVID19 pandemic and its impact on our way of working and living, the collective efforts of the EMODnet consortium led to the achievement of impressive successes. We saw the release of many exciting new products and datasets from EMODnet’s seven thematic portals (<https://www.emodnet.eu/portals>). Whilst too numerous to mention all, some highlights include the new [EMODnet Chemistry maps for contaminants](#) which show the widespread, yet largely invisible, problem of contaminants in European seas while contributing to the evaluation of data quality and adequacy for environmental quality assessment. This was followed by the release of [webODV](#), a new tool for the online exploration and extraction of [EMODnet Chemistry](#) data in a fast and easy way.

The [new integrated product for Blue Economy and marine operators](#) from [EMODnet Physics](#) integrates global winds at sea level/ground and in situ data. It provides data for the latest 60 days from Global Forecasting System (nowcast) and *in situ* platforms. Throughout the year, [EMODnet Biology’s](#) team

released new datasets, amounting to a total of 709.934 records. An example of these datasets includes 4000 occurrence records from the Irish Sea. The total number of records currently available via EMODnet Biology is now just over 25 million. [EMODnet Seabed Habitats](#) has recently published 36 new individual habitat maps from surveys and 10-point datasets from seven different European countries. Users can easily find this information in the [new product summary page](#) to see how much data exists in their basin of interest, with new data published every quarter. One year after the much anticipated release of new [digital vessel density maps](#) in March 2019, [EMODnet Human Activities](#) has mapped [how COVID19 is affecting the Blue Economy](#), more specifically the fisheries sector.

The EMODnet Bathymetry's new [World Base Layer Service \(EBWBL1\)](#), released in June 2020, is the highest resolved bathymetric worldwide layout currently available. It provides fast and easy access to bathymetric information, enabling marine knowledge users to access high-resolution worldwide representations of seabed features from their own computer. Shortly after, EMODnet Bathymetry released the [2020 version of the EMODnet Bathymetry Digital Terrain Model](#), one of EMODnet's most downloaded products, with over 33.000 individual tiles downloaded in 2020. At the same time, [EMODnet Geology](#) worked on improving many of its layers and created a [new update of harmonised seabed substrate data](#) which was release in January 2021.

By providing a gateway for public and private data holders who wish to share their data but were previously unable to do so, [EMODnet Data ingestion](#) is an essential strand of EMODnet's wide range of services. The EMODnet Data Ingestion process is gaining more and more momentum and reached a new milestone in September 2020 with [more than 650 data submissions published](#) on the portal.

[EMODnet's Central Portal](#) provides the single entry point to all of EMODnet's thematic activities and resources, as well as news on new EMODnet data and product releases, use cases, videos and events, so it's well worth a visit. This year, a new section on the [EMODnet Partnership for China and Europe \(EMOD-PACE\)](#), available in English and Chinese, has been added to the Central Portal, with support from [VLIZ](#). The [EMODnet Checkpoints](#) webpages have also been repatriated under a dedicated section.

EMODnet's expanding number of datasets continue to power the [European Atlas of the Seas](#), making our network the main data provider of this important ocean literacy tool which now contains almost 300 maps. Since September 2017, the EMODnet Secretariat took on the maintenance and further development of the Atlas with the mission to further expand its content and features, as well as amplify its use, in particular towards schools and educational institutions. Exciting collaborations with [Escola Azul](#) in Portugal, the aquarium [Nausicaá](#) in France and the [EU4Ocean Coalition for Ocean Literacy](#) led to the organisation of various workshops with students and teachers to demonstrate the value of the Atlas as an educational tool, nurturing a more ocean literate society. To further improve the accessibility of this tool to all EU citizens, the EMODnet Secretariat launched, in September 2020, a [fully revamped European Atlas of the Seas \(version 6\)](#) which includes translated content in the 24 official EU languages, as well as a number of new features. The release of the new version was accompanied by a communication campaign with well-known public figures from around the European Union, highlighting in their own language what the ocean means to them and why you should [#ExploreYourOcean](#)! This has led to an increasing number and diversity of Atlas users with up to 9000 visits a month by the end of 2020, further exposing EMODnet data and products to a growing audience across Europe and the World.

Extending our network and reaching new communities

Over the years, EMODnet has developed into an open and inclusive network. Close collaboration with other key European initiatives such as [Copernicus Marine Service \(CMEMS\)](#) has led to cross-validation of satellite and *in situ* datasets, user-driven data products and complimentary developments to further add value to the user experience. Such partnerships are continuously strengthened to optimise the synergies between ocean observation and modelling data, to capitalise fully on the public investment in these initiatives. In June 2020, a technical workshop with EMODnet, CMEMS, inter-DG representation and the [European Environment Agency](#) took place to [discuss marine data, data products and information on Coastal behaviour](#), with the objectives to assess existing capabilities and emerging areas for collaboration across EMODnet themes and between EMODnet and CMEMS, with a regional focus.

EMODnet's data coverage and scope are increasingly extending beyond Europe, and enhancing our international partnerships is a major focus of our work for the coming years. In February 2020, the [EMOD-PACE project](#), 'EMODnet Partnership for China and Europe' [kicked off](#) officially with a meeting at the headquarters of the European External Action Service in Brussels. This project is a direct outcome of the EU-China Blue Partnership, signed in 2018, and aims to support EU's ocean diplomacy with China by fostering international collaboration between EMODnet and the [National Marine Data and Information System \(NMDIS\)](#) in China. First results of cooperation includes the bilingual [EMOD-PACE CEMDnet project web portal](#) on the EMODnet Central Portal and a [CMOC/China](#) website launched at NMDIS. A first map layer that presents the trends of sea-level changes is now being tested and will be available in 2021. The collaboration which has resulted in the [signing of a Memorandum of Understanding between EMODnet and NMDIS](#) which confirms the commitment to cooperate in the marine data domain, in areas spanning strategy, research, and operation, where mutually beneficial and desirable and thereby consolidating the operational, technical and scientific collaboration which is already well underway.

But that is not all, EMODnet partners have further expanded global collaborations with other key partners such as the [International Council for the Exploration of the Sea \(ICES\)](#), the [Global Earth Observation System of Systems \(GEOSS\)](#) and the [International Oceanographic Data and Information Exchange \(IODE\)](#) of the Intergovernmental Oceanographic Commission (IOC). This includes contributions to [IODE's Ocean Data and Information System catalogue \(ODIS-cat\)](#) and the Inter-sessional Working Group on Strategy on Ocean Data and Information Stewardship (IWG-SODIS) for the UN Decade of Ocean Science for Sustainable Development, and acting as a focal point and component of the European node of the developing [IOC Ocean Information Hub](#), together with European initiatives such as EurOcean.

Other important collaborations include the development and release of the [Arctic Data Portal](#), a joint initiative of [EMODnet Physics](#), [CMEMS](#), [INSTAC](#), [Copernicus In Situ Coordination Group](#) and [EuroGOOS](#) to improve the availability, quality, timeliness, and accessibility of essential marine *in situ* data from the Arctic region. Moreover, the role of [EMODnet Bathymetry](#) as a global actor in the provision of bathymetric data was recognised by the [Seabed 2030 initiative](#), led by the [IHO-IOC GEBCO](#) under the financial sponsorships of the [Nippon Foundation](#). As an example, the first edition of the [EMODnet Bathymetry World Base Layer Service](#) released in 2020 combines gridded data from IHO-IOC GEBCO and the [EMODnet Bathymetry Digital Terrain Model](#).

EMODnet's visibility and reach continue to grow, in Europe and beyond. In 2020, EMODnet was showcased at various international meetings of the global ocean observation community such as the [EMSO Conference: preparing for UN Decade of Ocean Science](#), the [G20 Workshop on harmonised monitoring and data compilation of marine plastic litter](#) and the [WOC Sustainable Ocean Summit](#). Other relevant meetings included the participation in a panel discussion about Digital Twin Ocean at the [7th](#)

[European Marine Board \(EMB\) Forum: Big Data in Marine Science](#) and the online event “[Marine Data to Support Aquaculture in the North Atlantic](#)”, organised by the European Commission’s general directorates for Maritime Affairs and Fisheries ([DG MARE](#)) and Defence, Industry and Space ([DG DEFIS](#)), the European Aquaculture Technology and Innovation Platform ([EATIP](#)), Copernicus Marine Service ([CMEMS](#)) and EMODnet. The workshop was the first co-designed event to explore how Open Data can be used to support sectors of the Blue Economy.

EMODnet continues to take into account the needs of businesses, and deliver to the Blue Economy. The [4th Marine Knowledge Expert Group \(MKEG\) meeting](#) took place in November 2020 with the aim to collect feedback from MKEG members (composed mostly of industry representatives) on EMODnet status, recommendations for future developments, and on related projects and initiatives such as the EMOD-PAACE project. Moreover, we have been delighted to welcome new EMODnet [Associated Partners](#) this year such as [dotOcean](#), [Racex Ltd.](#), [Dcarbonx](#) and the [Society for Underwater Technology](#) (SUT). We call upon you all to continue informing us of potential organisations, associations or companies that might be interested in this opportunity.

EMODnet and a decade of progress

The global pandemic forced us to rethink [EMODnet’s 10th anniversary celebrations](#). A virtual gathering took place on the 22 September 2020 with over 250 participants and an impressive number of data providers, users and partners happy to testify on the impact of EMODnet in their work and for society. This [10-year webinar](#) was an opportunity to take stock of key EMODnet achievements and to set the stage for the EMODnet Open Conference 2021 with emotion, passion and humour. We even tried to make the impossible possible: to [put 10 Years of history & achievements... in a 10 minutes documentary](#)! We invite you to watch (or watch again) this short film that tracks our journey from its launch, to where we are now and where we will go next. A [10-year infographic](#) was also produced to highlight in one image the impressive achievements of our network over the last decade.

As other important communication material developed this year, we released a number of video interviews with personalities who were instrumental in the early years of EMODnet, such as [Hans Dahlin](#), [Alan Edwards](#) and [Niamh Connolly](#). A series of eight short films is also in production, illustrating the fundamental role of EMODnet in different fields and for a variety of target groups. Two of them are already available: [EMODnet for science](#) and [EMODnet for business](#).

From communication to events organisation, from the reporting of progress to technical coordination, the [EMODnet Secretariat](#) can count on a dedicated group of experts to support its operations. We were delighted to welcome many new faces at the Secretariat this year. In addition to our well-established pillars Kate Larkin, Tim Collart, Andrée-Anne Marsan, Nathalie Tonné and Xiaoyu Fang, we had the pleasure to welcome in our team Julie Auerbach, Conor Delaney, Francis Strobbe, Nathalie Van Isacker and Maxime Depoorter.

EMODnet 2021 and a vision for the future

As we enter a new and exciting decade for all things ocean with the [UN Decade of Ocean Science for Sustainable Development \(2021-2030\)](#), EMODnet is ready to take up the challenge as a mature pan-European, cross-thematic, operational data service, providing a trusted focal point for *in situ* observations spanning bathymetry, biology, chemistry, geology, human activities, physics and seabed habitats of European seas, and beyond. More than ever, EMODnet will reinforce its contribution to a more transparent and accessible ocean through its open, free and Findable, Accessible, Interoperable and

Reusable (FAIR) data and data products, for research, policy, blue economy and society, increasing its coverage, and growing its diverse user base worldwide in the coming decade. We will jointly work with all our partners to contribute to underpinning IOC's efforts in relation to the UN Decade of Ocean Science, because we can and because we must. EMODnet has the capacity and is relevant to all Ocean Decade themes: A safe ocean; A sustainable and productive ocean; A clean ocean; A healthy and resilient ocean; A predicted ocean; and most particularly the cross-cutting theme "A transparent and accessible ocean. We will need to work together to support this once in a lifetime opportunity to make a difference towards meeting our shared objectives and rise up to global Ocean challenges.

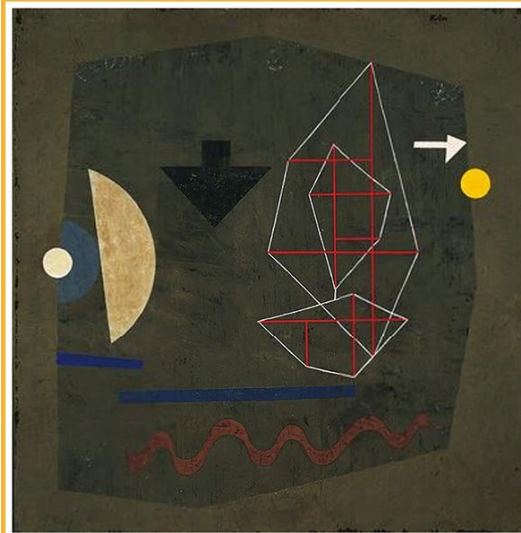
As we move into the next phase, EMODnet will continue to evolve to improve and provide better services for our users. Based on user feedback, including through the recent [Open Sea Lab hackathons](#), DG MARE has set new vision targets for the coming years, announcing the further integration of services and [web centralisation of EMODnet](#). With this centralisation, all EMODnet data and data products will be findable, accessible and downloadable in one place, i.e. via the [EMODnet Central Portal](#). This task, starting in 2021 and to be finalised in 2022, requires analysing the thematic portals infrastructures and their fitness for the planned centralisation, as well as assessing and implementing technical solutions for the centralisation process, in close collaboration with the EMODnet Secretariat, the [thematic lots](#), and [VLIZ](#). Before this important transformation that will simplify the access to all EMODnet data, data products and services for the users, the EMODnet Central Portal will undergo a major face-lift with its repatriation under the Europa domain, marking a clear connection between EMODnet and the EU family.

Last but not least, something very exciting is on the horizon in 2021: with the slogan '**Connecting Open Data, Delivering Marine Knowledge: A Vision for 2030**', the second [EMODnet Open Conference \(and Jamboree\)](#) will take place during the week of the 14 June 2021. It will take stock of the last decade of progress and achievements by EMODnet and look to the future to co-design its next phase to 2030 and beyond. It will be a unique opportunity for the entire EMODnet Community to recognise and further develop existing and emerging partnerships across Europe and worldwide, as well as to listen to the user community on the value of EMODnet and what can be done to further optimise the user experience. We will have sessions on global partnerships, contributions to global initiatives, as well as back-to-back workshops on the effectiveness, efficiency and fitness for purpose of ocean observation, in the context of the [public consultation launched by the European Commission](#), and on ocean literacy, with the European Atlas of the Seas. We very much hope to welcome you at this hybrid event, taking place simultaneously in person in Oostende (Belgium) and online, so stay tuned for more information. We encourage you to [join us on Twitter](#) and to subscribe to our [monthly newsdigest](#) to stay informed of all things EMODnet!

Dear colleagues, dear partners, dear friends. Last year has been difficult, but we have managed to reach our objectives together. We would like to thank all EMODnet project coordinators, Steering Committee members, partners and all other contributors for your relentless efforts to shape EMODnet into what it is today: a growing network of people working together to realise the vision of a pan-European, interoperable, distributed marine data-sharing infrastructure. We do not know if 2021 will be easier, but we will continue with great motivation and perseverance.

We wish you all a fruitful, happy and healthy 2021 and look forward working with you in the year(s) to come.

The EMODnet Secretariat Team



Paul Klee - Possibilities at Sea (1932)

We wish you peace, joy, good health
and prosperity throughout the coming year.

Thank you for your continued support and partnership.
We look forward to working with you in the years to come.

