



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n°6 – Human Activities

EASME/EMFF/2019/1.3.1.9/Lot 7/SI2.835999

Start date of the project: 03/03/2023 (24 months)

Centralisation Phase

Interim Progress Report (1)

Reporting Period: 03/03/2023 – 02/03/2024



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1 Introduction

The contract for the this phase of EMODnet Human Activities was renewed automatically in March 2023 and be in force until March 2025. The consortium that was awarded the contract is the same that developed and managed the portal in the previous phases:

- Cogea (lead company), Italy
- AND International, France
- AZTI Tecnalia, Spain
- CETMAR, Spain
- Eurofish International Organisation, Denmark
- Lovell Johns, UK

EMODnet Human Activities has been a member of the EMODnet family since September 2013. Since it was not included in the first EMODnet phase from 2009 to 2012, in the previous EMODnet phases (2013-2016 and 2017-2021) its main objective was to quickly build a base of data, so as to catch up with the other portals.

With the current phase of EMODnet, the focus is on maintaining and enhancing services where marine data and data products on the spatial extent and intensity of human activities in the ocean are made interoperable and freely available. In addition, one of the core objectives of the current phase is the centralisation process, which was completed in January 2023.

According to the contract, the EMODnet Human Activities thematic group is mandated to build the following data themes:

- Aggregate extraction
- Aquaculture (including freshwater)
- Cultural heritage
- Desalination plants
- Dredging (e.g. navigational)
- Fisheries effort
- Fisheries zones
- Military zones
- Oil and gas exploration and extraction
- Ports
- Ocean energy facilities
- Pipelines and cables
- Protected areas
- Waste disposal
- Spatial planning zones
- Wind farms
- Shipping density

Compared with the previous phase, there are some new datasets, such as desalination plants, fisheries effort and military zones, though fisheries effort and military zones had partially been developed in the previous

EMODnet phase on a voluntary basis. Further, even though not requested by the contract, the Human Activities team have also made available a number of additional datasets, such as:

- Algae production facilities (including spirulina)
- State of bathing water
- Fish catches
- Fishing intensity
- Lighthouses
- Monthly first sales of fish
- MSFD Reporting Units
- Nuclear power plants
- Oil and gas licences
- Urban wastewater treatment

Vessel density maps were made available in the previous EMODnet phase. They quickly became EMODnet Human Activities' most downloaded data set. 4 years after publishing the vessel density maps, the interest in the data product does not seem to be fading away. While the number of downloads decreased compared with the previous year, there is evidence that users are increasingly using web services to consume EMODnet data. This holds true not just for the vessel density maps, but, generally speaking, for all data sets developed by the Human Activities thematic group.

The general objective of EMODnet Human Activities is to become the entry point for maritime data on the spatial extent and intensity of human activity in the ocean. For this reason, the project team paid special attention to collating accurate data from official sources, as well as to making user experience as friendly as possible.

Finally, the core task of this contract certainly was the centralisation process. This proved to be quite challenging, as merging seven different portals and map viewers into a single facility implied considerable effort, not just for the Human Activities team, but for all the other contractors involved. Nevertheless, the centralisation process was completed successfully on 25 January 2023. Human Activities data themes and services are now fully integrated into EMODnet Central Portal. The custom features developed for the Human Activities portal, based on user feedback, were transposed to the new map viewer. Preliminary anecdotal evidence suggests that the radical change has partly disoriented users, who over time had grown accustomed to the Human Activities portal. However, it is believed that the integration of all EMODnet thematic groups into a single, consistent portal will yield enormous benefits in terms of usability and overall experience.

2 Update on the Tasks

Task 1: Maintain and improve a common method of access to data held in repositories

Some entirely new data sets were made available:

- Emerald network sites: this is based on data from the European Environmental Agency. The Emerald Network is an ecological network made up of Areas of Special Conservation Interest designated under Recommendation No. 16 (1989) and Resolution No. 3 (1996) of the Standing Committee to the Bern Convention. The objective of the Emerald Network is the long-term survival of the species and habitats. The Network involves all the European Union member States (the European Union contributes to the Emerald Network with its Natura 2000 sites), some non-EU States and a number of African States. The dataset covers the following countries: Albania, Andorra, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, Iceland, Liechtenstein, Moldova, Montenegro, North Macedonia, Norway, Russian Federation (European part), Serbia, Switzerland, Ukraine, and the United Kingdom. In the web map, the dataset has been filtered in order to show only marine and coastal sites.
- Regional Sea Conventions MPAs: it is based on spatial data provided by HELCOM, SPA/RAC and MedPAN, and OSPAR. The dataset displays all the MPAs as officially reported by the respective Contracting Parties to the Helsinki Convention, the Barcelona Convention and the Convention for the Protection of the Marine Environment of the North-East Atlantic. The RSCs MPAs are established in order to promote cooperation in the management and conservation of natural areas, as well as in the protection of threatened species and their habitats. Each RSC MPA may be established in the marine and coastal zones subject to the sovereignty or jurisdiction of the Parties and in areas situated partly or wholly on the high sea. Thus, the dataset covers the MPAs Beyond National Jurisdiction (ABNJ) and the MPAs in following countries: Albania, Algeria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Iceland, Ireland, Italy, Latvia, Lebanon, Lithuania, Monaco, Morocco, the Netherlands, Norway, Poland, Portugal, Russia, Slovenia, Spain, Sweden, Tunisia, and the UK.
- WFD dataset for shellfish protected areas: the dataset includes shellfish protected areas under the Water Framework Directive (WFD). The Directive (Article 6, paragraphs 1 and 2) requires Member States to designate areas which require specific protection of their surface water and groundwater, or for the conservation of habitats and species directly depending on water. According to Annex IV (ii) of the WFD, these areas should include areas designated for the protection of economically significant aquatic species (shellfish in this case). This dataset compiles the designated areas as provided by national sources, which are the Department of Housing, Planning, Community and Local Government of Ireland, and the Ministry for Ecological Transition and Demography in Spain.

In addition, there were exchanges with DG MARE as to the possibility to make available more fishery-related data. Potentially, the fish catches data set currently available on EMODnet could be enriched with information on TACs (Total Allowable Catches, quotas, and quota uptake), but this information is either restricted or available via pdf files, and full access should be given by DG MARE.

Other notable additions concern the waste disposal dataset, which now includes updated information including the recent study on underwater unexploded munition published by CINEA (https://cinea.ec.europa.eu/publications/study-underwater-unexploded-munition_en), and the MSP data set, which now covers Belgium, Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Netherlands, Poland, Spain and Sweden. More Member States are being added, as they release their MSP data in a geographic format.

The remaining data sets were regularly updated, unless no update was needed (e.g., nuclear power plants).

Task 2: Construct products from one or more data sources that provide users with information about the distribution and quality of parameters in time and space

- Vessel density maps updated to 2023
- Route density maps updated to February 2024

Task 3: Develop procedures for machine-to-machine connections to data and data products

- Completed a seamless transition to a new server (still hosted in Germany). This was required to upgrade GeoServer (Re. notice to all lots concerning vulnerabilities in versions < 2.24.0) which in turn required an upgrade from Java 8 to Java 11. It was decided that provisioning a new server was the best way to do this to reduce risk of downtime. The server has an improved specification and the GeoNetwork was also upgraded at the same time.

We are now running:

- GeoServer v2.24.1
- GeoNetwork v4.4.0.0

Task 4: Contribute data, data products and content to a central portal that allows users to find, view and download data and data products

All data sets and data products are available for viewing and download or through web services.

Task 5: Contribute content to dedicated spaces in the Central Portal

The method for making vessel density maps developed by the Human Activities thematic group was transposed to an official template of the European Commission, so as to get a DOI from the EU Publication Office. As the method is cited extensively in literature, having a DOI should make it easier to track citations. The new publication is available on the EMODnet portal and on the EU Publications office: <https://op.europa.eu/en/publication-detail/-/publication/a2fb211e-7f8c-11ee-99ba-01aa75ed71a1/language-en/format-PDF/source-336064297>

Task 6: Ensure the involvement of Regional Sea Conventions

Upon approaching the Barcelona Convention, they confirm that they are making little use of EMODnet Human Activities data, as they are mostly using data submitted by their Contracting Parties.

In December 2023, a meeting took place with the Black Sea Commission. The main takeaways are:

- The Black Sea Commission (BSC) is familiar with EMODnet activities and is eager to collaborate and join the EMODnet's mission to provide publicly open data, also when it comes to Human Activities. However, in order to provide the datasets available at the BSC, the Secretariat needs an approval from each member country.
- The BSC Advisory Group is currently frozen due to the war in Ukraine.
- Nonetheless, they offered to put EMODnet HA in contact with some of their data sources, e.g. Shipping Activity Centre in Bulgaria, Odessa pollution and biological database – data on aquaculture and waste, Black Sea economic commission (BSEC) cooperation for data on cultural heritage.

- BSC will provide an updated list of the data that they have at their disposal to provide a general and updated overview.
- The BSC proposed that EMODnet HA could be admitted as an observer during BSC meetings. EMODnet HA and the BSC will make contact again in the first quarter of 2024 to assess progress.

Regular contacts with HELCOM on Maritime Spatial Planning, as both Human Activities and HELCOM sit in the Technical Expert Group (TEG) on MSP data, whereas OSPAR will be interviewed in 2024.

Last but not least, ICES joined the EMODnet Human Activities partners meeting during the Open Conference in November 2023. It was agreed that closer dialogue and cooperation should be pursued with the goal of making available more fisheries-related data. This will have to be done in conjunction with DG MARE, who also have plans for releasing more fishery-related data (see Task 1).

Task 7: Contribute to the implementation of EU legislation and broader initiative for open data

- During the EMODnet Human Activities partners meeting in November, it was decided how to progress with the implementation of an INSPIRE-compliant data model as per the concept note developed in 2022. An algorithm is being implemented to automatise the harmonisation process from actual EMODnet HA data models to a unified “Land/marine Use” product – similarly to what has been done for the MSP data set. Subsequently, we started automatising the harmonisation process, and it is believed that the final results will be made available online before the end of the contract.
- A meeting took place in October 2023 aimed at tutoring DG MARE’s staff on how to visualise and extract MSP data from EMODnet. Several suggestions as to how to improve usability were put forward and might be implemented over the coming months. To evaluate feasibility and implications, these suggestions will be discussed in the framework of the Technical Expert Group on MSP data.

In March 2024, the “MSP Data Tools and Guidance Workshop: TEG on Data for MSP” was held in Brussels with online participation and more than 400 attendees. During this event, the EMODnet MSP datasets were introduced and explained to this wide audience during the presentation EU MSP data layer and current state of play. In addition, the use of this dataset was also explained through the developed applications in ongoing projects (e.g. ReMAP). The presentations and the recording of the workshop has been published on the European MSP Platform (available here: <https://maritime-spatial-planning.ec.europa.eu/events/msp-data-tools-and-guidance-workshop-teg-data-msp>)

Task 8: Monitoring quality / performance and deal with user feedback

Nothing to report.

Task 9: Maintain the existing thematic web portal for a maximum of six months from the start of the project

Task now superseded.

Status of the Milestones and Deliverables listed in the workplan					
Milestone/Deliverable in numerical order	WP	Date due	Status (To do/ Delivered/ Delayed)	Date delivered	If Delayed: reason for delay and expected delivery date
e.g. M1: xxx	WP1	Dd/mm/yyyy	Delivered	Dd/mm/yyyy	...
e.g. D1.1: xxx	WP1	Dd/mm/yyyy	Delayed		...

3 Work Package updates

As per the Technical Proposal submitted with the tender, there are no Work Packages in EMODnet Human Activities, other than the project tasks reported in the Tender Specifications.

4 Identified issues: status and actions taken

[

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
Old URL not redirecting to central portal (EM-760)	Resolved	Fixed		Same day
EMODNET-1557	Resolved	Explained how to extract information on fishing vessels from the density maps		Within 8 hours from first response
EMODNET-1551	Resolved	User noted that the status of a wind farm was not up to date. Explained that the data set receives yearly updates, and the new one was just about to be released		Day after
EM-632 Provide input to the Tools & Guidelines section	Pending	This mostly involves a minor update of the method to make the vessel density maps. Most importantly, the method is being transposed to the CINEA's template, so to obtain a DOI from the EU Publication Office. Since, a version of the method (without DOI) is indeed available online, this is not being treated as a top priority		
EM-772 Investigate how to expose vector attribute as time dimension in WMS, without suffering performance impact	Pending	When we added an index there was no improvement in speed, but this will need further investigation. Therefore, we removed the time dimension from the relevant layers. At the moment, it is not critical, as on the CP Viewer we are just filtering the data by date attribute fields (Eg. Port traffic), which seems to work well		
EM-612 EMODnet Catalogue Tags & FiltersEM-532	Pending	Preliminary list of tags has been created, though not yet shared on Jira. There are		

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
HA- EMODnet Catalogue Tags		issues that need to be discussed with the CP team		
EM-867 Provide EMODnet metadata records relevant to Ocean Hackathon 2023	Resolved	Metadata provided		08/11/2023
EM-913 Three Human Activities layers disabled	Pending	Three layers sourced from Marine Regions were disabled due to the delimitation between Ireland and UK not being correct or subject to controversy. Will be restored once an update is provided		
EMODNET-1758 Query re. format / presentation of EMODnet fisheries data	Resolved	Explained what fishing intensity is		
EMODNET-1760 Requesting permission to create graphical image using your 2021 dataset on desalination plants	Resolved	Explained that no permission is needed as long as EMODnet is duly acknowledged		
EMODNET-1762 Database on Desalination plants in the EU	Pending	User reported alleged inconsistencies in the desalination data set. The original provider hasn't yet replied		
EMODNET-1764 Errors in EMODnet database	Pending	User reported errors in the pipeline data set. The data however come from official sources.		

B. Issues / challenges identified by the thematic assembly group itself				
Priority issue / challenge	Status (Pending/ Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved
Minor changes to EMODnet HA dataset names on the map viewer (EM-757)	Pending	Fishing intensity should be updated on the legend to reflect availability of new data. Suggested to rename Marine Spatial Planning to Maritime Spatial Planning to be consistent with the EC nomenclature	Minor changes to EMODnet HA dataset names on the map viewer (EM-757)	Pending

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

5 Allocation of project resources

Information on the allocation of project resources	
Categories	Resource usage ¹ (%)
Making data and metadata interoperable and available	40%
Preparing data products	15%
Preparing web-pages, viewing or search facilities	5.5%
Managing user feedback	2%
Project management	5%
Outreach and communication activities	3%
Others	29.5%

¹ Provide the workings of your calculations, *i.e.* percentage allocation of the total amount awarded.

6 User feedback

Overview of user feedback and/or requests received in this project phase							
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
3/3/2023	Unknown	User sought clarification on wind farm and cable data	Helpdesk	3 days	Resolved	Explained what the data is about	
3/3/2023	Belgian Federal Public Service Health, Food Chain Safety & Environment	User sought clarification on dumped munitions data		7 days	Resolved	Provided an explanation and asked additional questions to the user, who however never came back	
7/3/2023	Marine Analyst	User complained that WMS for vessel density maps had been discontinued	Helpdesk, then e-mail	3 days	Resolved	Explained that web services end point had simply changed	
8/3/2023	Unknown	User asked why a wind farm in the Netherlands was not available on EMODnet	Helpdesk	1 day	Resolved	Explained that the wind farm data set receives updates once or twice a year, and so data is not updated in real time. Explained that the	

Overview of user feedback and/or requests received in this project phase							
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
						wind farm would be visible in the next update	
16/3/2023	Unknown	User asked how to single out fishing vessel traffic from the density maps	Helpdesk	Same day	Resolved	Explained how to do so	
11/7/2023	Unknown	User pointed out that a lighthouse flagged as “removed, relocated or destroyed” on EMODnet was in fact still in use	Through the Atlas	Same day	Resolved	Explained that this would be fixed in the next (shortly due) update	
26/7/2023	SHOM	User complained about France’s maritime boundaries allegedly reported incorrectly on EMODnet	Helpdesk	One month	Resolved	Provided an explanation and a proposal for a way forward. For the record, the boundaries were not reported incorrectly; there is an ongoing controversy. The data set was later deactivated to avoid similar situations	

Overview of user feedback and/or requests received in this project phase							
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27/7/2023	Swansea University	User sought clarification on fisheries swept area ratio	Helpdesk	5 days	Resolved	Provided an explanation and pointed to ICES's website	
1/8/2023	Unknown	User spotted an error in the way power cables were displayed	Helpdesk	1 day	Resolved	Identified and fixed the issue	
16/8/2023	Unknown	Users requested a quote for AIS data	Helpdesk	2 days	Resolved	Explained that EMODnet does not sell data	
31/8/2023	Unknown	User sought clarification on fishing intensity data	Helpdesk	1 day	Resolved	Provided an explanation and pointed to ICES's website	
15/9/2023	BSOG	User pointed out that their company is developing renewable energy projects in the Black Sea and asked how they could make data available through EMODnet	Helpdesk	12 days	Resolved	Pointed user to EMODnet data ingestion	

Overview of user feedback and/or requests received in this project phase							
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22/9/2023	BBC	User was creating a map on wind farms for the BBC and sought instructions	Helpdesk	Closed and then reopened after several months for a new question	Resolved	Explained how to create a user-friendly map	
23/10/2023	Oxford Well Engineering	User was looking for information on oil and gas wells that is not included in EMODnet	Helpdesk	Same day	Resolved	Recommended looking at EMODnet's primary data sources, which might have the data needed	
25/10/2023	VLIZ	User asked why the cable data set is updated to 2014	Help desk	One month	Resolved	Explained that, as stated in the metadata, 2014 is the date when the data set was first created	
15/11/2023	University of the Azores	User asked to perform an analysis on vessels' speed around the Azores	Helpdesk	One day	Pending	Explained that this information is available only in the raw data, which	The issue is still open. It should be communicated to the user that such an

Overview of user feedback and/or requests received in this project phase							
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
						cannot be made available externally. Added that we might look into it, but it would be time consuming.	analysis is outside the remit of EMODnet
22/11/2023	Unknown	User said there was a problem accessing web services	Helpdesk	...	Pending	Looked into the matter, but couldn't reproduce the issue. Web services seemed to work flawlessly	User should be contacted to close the ticket
23/11/2023	Orbis Energy	User asked clarification on vessel density data. It was reported that the values on the map viewer were different from those in ArcMap	Helpdesk	Same day	Resolved	Explained that the difference is due to a feature of the map viewer, which sums certain values. A call helped clarify the matter	
23/11/2023	DG MARE	User recommended improvements to how the MSP data set is rendered on the map viewer	Helpdesk	Two weeks	Pending	In fact, a couple of calls took place in the coming months, so the issue can be closed	Just close the issue

Overview of user feedback and/or requests received in this project phase							
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
28/11/2023	UK Government	User asked permission to use some maps for Northern Ireland's MSP	Helpdesk	One day	Resolved	Explained how to cite	
14/12/2023	Hi-IBERIA	User asked why some wind farms are visible from satellite images, but are not available on EMODnet	Helpdesk	2 weeks	Resolved	Asked to let us know which wind farms user was referring to, but he never replied	
20/12/2023	Intertek	User reported WFS not working	Helpdesk	2 weeks	Pending	Could not reproduce the problem, also because the ticket was received some two weeks after the initial question. It is still open but it should be closed	Just close the issue
27/12/2023	Unknown	User asked clarification on the dumped munitions data set	Help desk	2 weeks	Resolved	Clarification provided	
25/01/2023	ERM	User asked clarification on the fishing intensity data set	Helpdesk	One day	Resolved	Clarification provided and recommended reaching out to ICES	

Overview of user feedback and/or requests received in this project phase							
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
6/2/2023	Climate Alliance	User asked permission to create a map based on the desalination data set	Helpdesk	One week	Resolved	Explained that permission is not needed	
6/2/2023	Spanish Government	User asked clarification on the desalination data set	Helpdesk	Two days	Pending	The primary data provider was contacted but they never replied	Inform the user that no reply has been received and close the issue

7 Meetings/events held/attended & planned

A. Meetings/events organised and attended in this project phase					
Date	Location	Type event (internal or external meeting; training/ workshop)	Was a presentation given? (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
4/4/2023	Online	Internal	Yes	O	Quick meeting with DG MARE to explain what EMODnet has to offer on algae
30/5/2023	Online	Internal	No	O	NextOcean is a project that maps offshore infrastructure through satellite images. The idea was to map aquaculture farms through satellite images, but the quote they provided for the work was judged too expensive by the Contractor and the Commission alike
26-27/9/2023	Online	External	Yes	A	Outlined EMODnet data sets that are relevant for coastal tourism and discussed options for enriching the portfolio
28/9/2023	Online	External	No	A	Regular meeting of the Technical Expert Group on MSP data
23/10/2023	Online	Internal	Yes	A	Meeting with DG MARE to explain what the MSP data set is about
30/01/2023	Online	Internal	No	A	Meeting with the JRC to explore pathways for cooperation
29/02/2024	Online	Internal	No	A	Meeting with Eurostat to explore pathways for cooperation

A. Meetings/events organised and attended in this project phase					
Date	Location	Type event (internal or external meeting; training/ workshop)	Was a presentation given? (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
SUM				O	Total # of meetings organised =
SUM				A	Total # of meetings attended =

B. 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

8 Communication assets

A. Communication products developed				
Date	Communication material	Short description (of the material, title, ...) of the asset	Main results	Name of event at which material was disseminated (if applicable)

B. Planned communication products			
Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected

A. (Co-)Authored peer-reviewed publications in this project phase					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
	e.g. paper; conference proceedings; book chapter; ...				

B. Other/non-peer reviewed types of publications (co-)authored in this project phase					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
09/11/2023	Paper	European Commission, Directorate-General for Maritime Affairs and Fisheries, Falco, L., Pititto, A., Adnams, W. et al., EU vessel density map – Detailed method, Publications Office of the European Union, 2023, https://data.europa.eu/doi/10.2771/518143	978-92-68-09107-4	10.2771/518143	Yes
26/04/2023	International Ocean Data Conference - II (IODC-II)	Integrating the socioeconomic dimensions in the MSP. Jose L. Santiago, Davinia Lojo, Marta Ballesteros. International Ocean Data Conference Session 4: Interdisciplinarity, societal needs, https://oceandataconference.org/programme-2023/ (presentation not available online is attached as an annex). A paper is being prepared.			Yes

For a comprehensive overview of publications referring to/making use of EMODnet data and/or data products, please consult Google Scholar.

9 Monitoring indicators

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
<p>1. Current status and coverage of total available thematic data</p> <p>A) Volume and coverage of available data</p>	<p>Matomo/ Analytics/ other</p> <p>Europe</p> <p>Please specify</p>	<p>Generally speaking, volume and coverage both go up, as a result of ingesting new data and providing regular updates. However, in a few cases, volume goes down. This may be due either to a reorganisation of the data set (e.g. fishing intensity has been streamlined, resulting in fewer features but more attributes) or to the decommissioning of projects (e.g. offshore installation). It is worth reminding that for human activities decreasing data volume does not imply decreasing coverage.</p> <p>When it comes to coverage by sea basin, it should be noted that for most Human Activities data set, the calculation is not straightforward, and in some cases, it is just impossible. Human Activities generally deals with discrete data sets and calculating how much of a sea basin is covered would require having a register or cadastre to benchmark with. At the same time, it should be noted that coverage is always 100% in those cases where a data set is made available as a result of a data reporting obligation. In other cases, it is just impossible to measure coverage. Last but not least, polygon data sets often overlap more than a sea basin (e.g. in MSP) and the calculation is not straightforward.</p> <p>As specifically regards the Caribbean Sea, Human Activities data sets are often sourced from national authorities. When these report data for outermost regions, coverage of non-European waters can also be ensured. Currently, in the Caribbean Seas, the following data sets are available: power cables, telecom cables, shipwrecks, protected areas (CDDA=, state of bathing waters, first sales of fish, main ports, exclusive economic zone, Urban Wastewater Directive discharge points and treatment plans. Data is available only for EU outermost regions and so it is not possible to assess overall coverage of the sea basin.</p>

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
What is your opinion on the data coverage within EMODnet for your thematic?		During the past year we managed to considerably increase coverage for a few data sets, namely telecommunication cables, dumped munitions, dredge spoil dumping, waste at ports, MSP. Other data sets saw an improvement in volume, mostly because of new projects being committed (wind farms), though that does not necessarily imply an improvement in coverage. There remain critical challenges with data sets such as aquaculture, pipelines, and cables.
B) Usage of data since the start of the project phase		
2. Current status and coverage of total number of data products A) Volume and coverage of available data products		Volume of data goes up as a result of regular updates, which add new months and years to the time series. Both data products already cover 100% of EU waters, and, in the case of the vessel density maps, also some areas outside the EU.
B) Usage of data products since the start of the project phase		As is the case with data sets, there is a downward trend (for vessel density maps) when it comes to number of downloads. Once again, it is believed that this could be due to the fact that an increasing number of users are consuming EMODnet data through web services.
3. Internal and external organisations supplying/approached to supply data and data products since start of the project phase		New sources are added every year. Apart from that, there is nothing particularly noteworthy.
4. Online 'Web' interfaces to access or view data		Nothing to report
5.1. Daily number of page views of EMODnet Thematic entry page since the start of the contract		The spike in number of visitors at the end of November coincides with EMODnet Open Conference & Jamboree
5.2. Total number of visitors, page views, unique page views and percentage of returning visitors, since the start of the contract		Slightly downward trend in number of visitors. This is consistent with the assumption that users are increasingly using web services to consume data

The monitoring numbers reported as part of the progress monitoring of EMODnet performance are collected through Matomo and/or Europa Analytics, unless reported otherwise.

10 Recommendations for follow-up actions by the EU

- Maritime Spatial Planning: offer to organise training sessions in the Member States who have not yet adopted or are in the process of revising their plan. It would be a good occasion to make sure that the plan is released in a format that is already compliant with the EMODnet data model. The EMODnet Human Activities team are fully available to participate in these training sessions.
- Vessel density: several users often ask for historical vessel density map. Consider extending the time series. To be noted that this might have budget implications, so pros and cons should be carefully evaluated.
- Reporting obligations: the situation with several data sets (aquaculture, cables, pipelines) has been stable for quite some years, with only little progress being made every once in a while. With no reporting obligations, it is not likely to change any time soon. Introducing reporting obligations would improve data availability considerably.
- Make available more data on fisheries: the EMODnet Human Activities team have always been available to add new data, even outside contractual obligations. Fisheries data sets currently available on EMODnet such as “monthly first sales of fish”, “fish catches” and “fishing effort” were made available years ago voluntarily. A new data set on TACs and quotas is being prepared. However, to further improve availability of fisheries-related data, the Human Activities team should be given access to Data Collection Framework and VMS data.
- Consider improving the legend of Human Activities data on the map viewer.

11 Annex: List of acronyms

AIS	Automatic Identification System
API	Application Programming Interface
BSEC	Black Sea Economic Cooperation
BSC	Black Sea Commission
BSH	Bundesamt für Seeschifffahrt und Hydrographie (Federal Maritime and Hydrographic Agency)
CDDA	Common Database of Designated Areas
EEA	European Environment Agency
EEZ	Exclusive Economic Zone
GDB	GeoDataBase
GFCM	General Fisheries Commission for the Mediterranean
HELCOM	Helsinki Commission
IMAP	Integrated Monitoring and Assessment Programme
INFO/RAC	Information and Communication/Regional Activity Centre
MSP	Maritime Spatial Planning
OGC	Open Geospatial Consortium
OSPAR	Oslo and Paris Conventions
PAP-RAC	Priority Actions Programme/Regional Activity Centre
REMPEC	Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea
SHOM	Service hydrographique et océanographique de la Marine (Hydrographic and Oceanographic Service of the Navy)
SSL	Secure Socket Layer
TACs	Total Allowable Catches
TEG	Technical Expert Group
UNEP-MAP	United Nations Environment Programme - Mediterranean Action Plan
WCS	Web Coverage Service
WFS	Web Feature Service
WMS	Web Map Service
WMTS	Web Map Tile Service

12 Annex: Presentation ad IODC-II

Integrating the socioeconomic dimensions in the Marine Spatial Planning (MSP)

SESSION 4: INTERDISCIPLINARITY, SOCIETAL NEEDS

Jose L. Santiago, Davinia Lojo and Marta Ballesteros



WHAT IS MSP?

Maritime Spatial Planning (MSP) is a fundamental tool for a development of the Sustainable Blue Economy. It allows us to sustainably manage the use of our seas and oceans, to reduce conflicts, create synergies between human activities and ensure they take place in an efficient and safe way.

WHAT'S NEXT?

The next generation of EU MSPs will have a key role in:

- Becoming 'Climate-Smart', in line with the European Green Deal
- Increasing offshore wind capacity in Europe to at least 60GW by 2030
- Establishing protected areas on 30% and restore at least 20% of the EU's sea areas
- Identifying optimal sites for seaweed farming and multi-use

FOR FURTHER INFORMATION
Check the European MSP Platform
(europa.eu)



2012	2014	2016	2020	2021	2022	2023	2026	2030
Establishment of Member States Expert Group on MSP	Adoption of the MSP Directive (MSPD)	Launch of European MSP Platform	Creation of Technical Group on Data for MSP	Implementation of MSP Directive through the Adoption of National Plans	Publication of Commission report on MSPD Implementation	Launch of the Blue Forum: stakeholder dialogue between users of the sea	Publication of Commission report on MSPD Implementation	Achieving the European Green Deal objectives

DIRECTIVES

**DIRECTIVE 2014/89/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 23 July 2014
establishing a framework for maritime spatial planning**

Article 5

Objectives of maritime spatial planning

1. When establishing and implementing maritime spatial planning, Member States shall consider **economic, social** and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses.

Article 6

Minimum requirements for maritime spatial planning



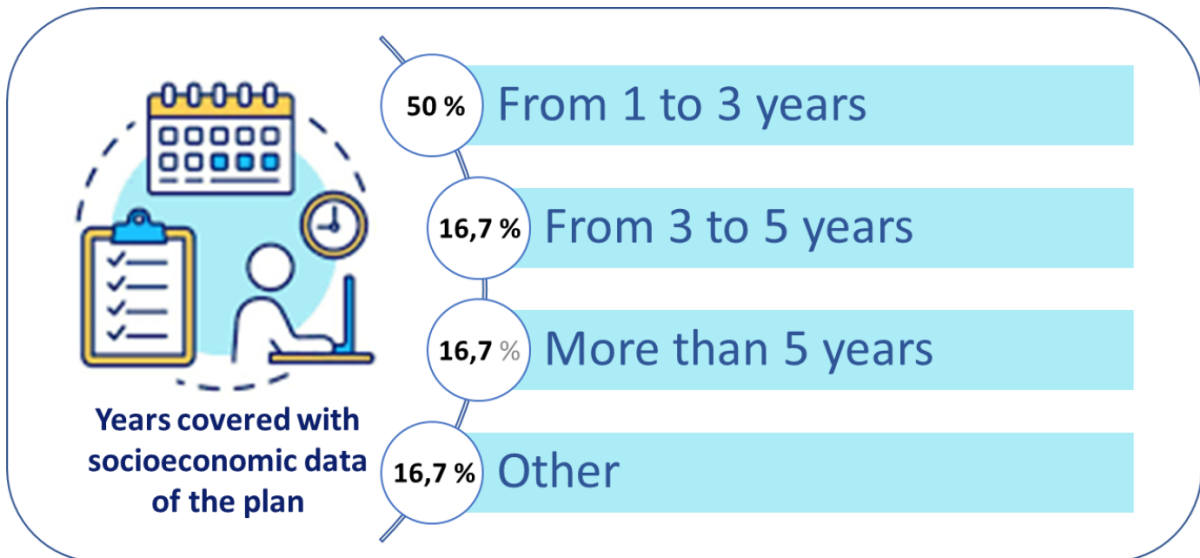
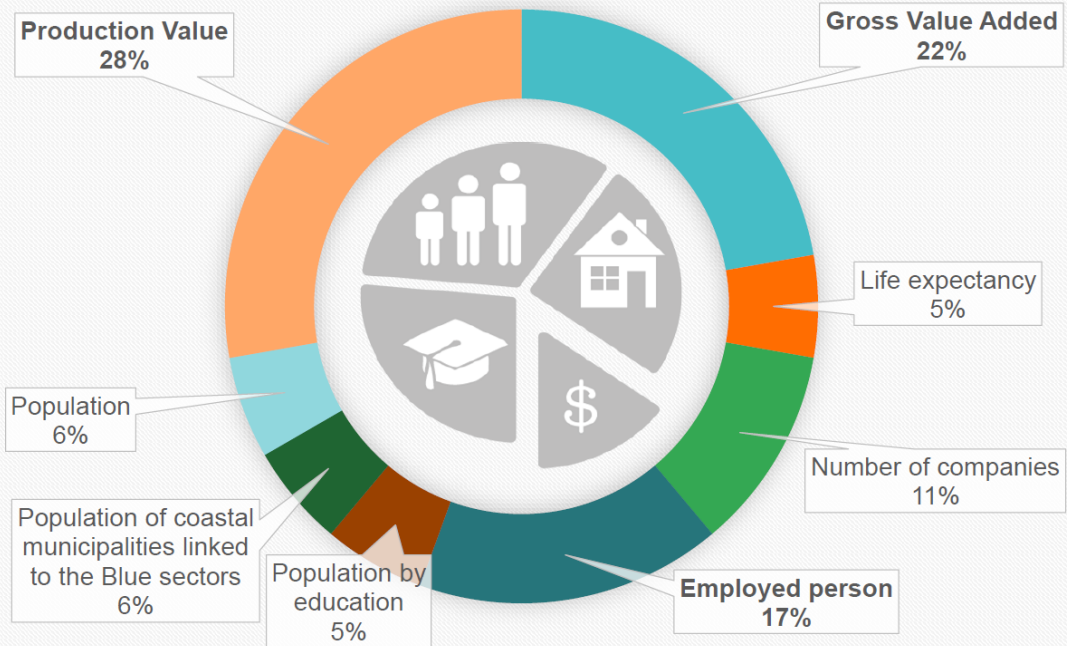
13 references to socio-economy

2. In doing so, Member States shall:
- (a) take into account land-sea interactions;
 - (b) take into account environmental, **economic and social aspects** as well as safety aspects;



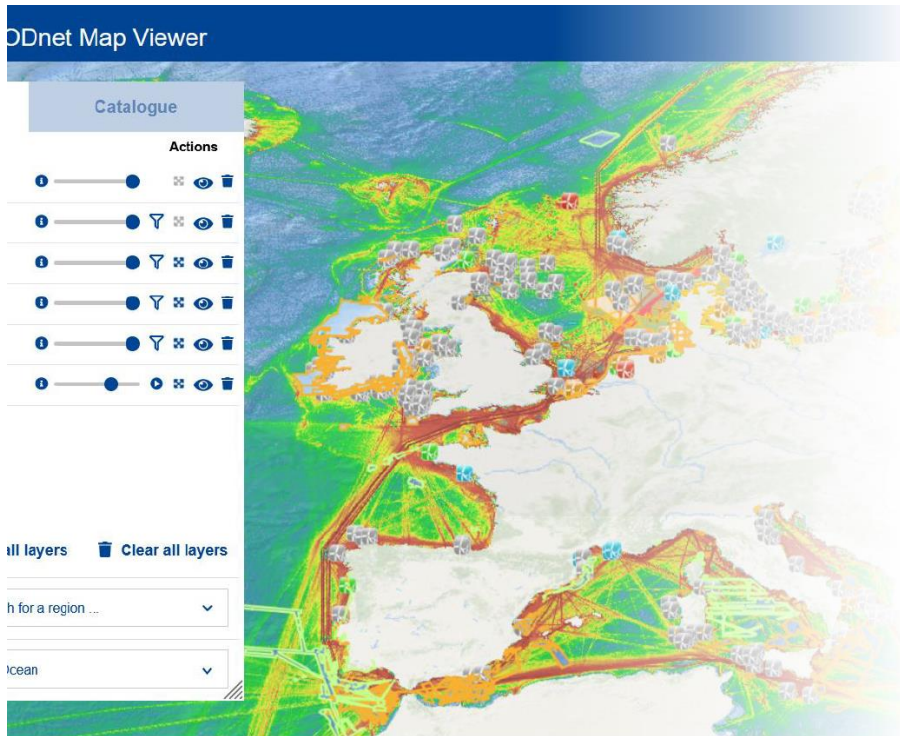
There are not enough socioeconomic considerations in the plans

WHAT ARE THE SOCIOECONOMIC DATA AVAILABLE RELATED TO THE PLAN?

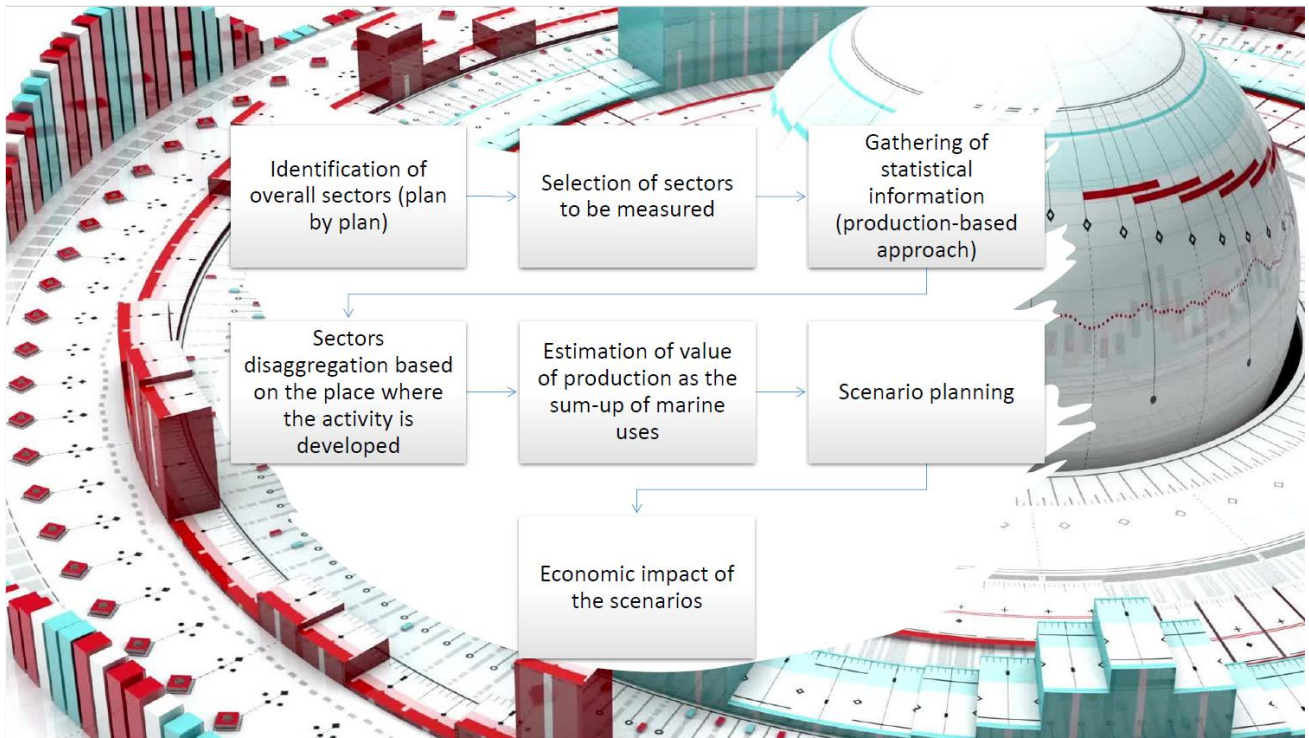


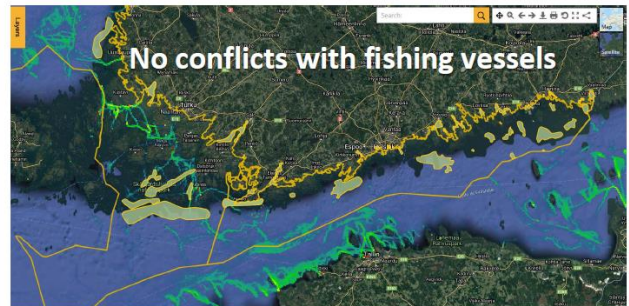
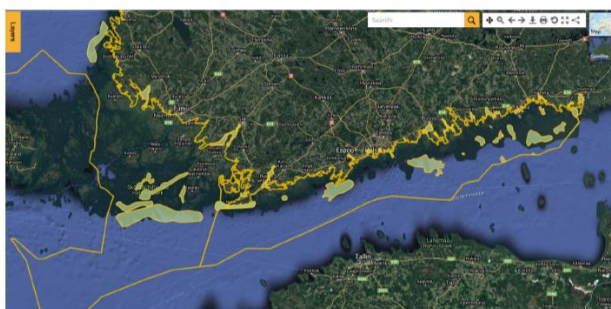
Peer-reviewed articles that examine the quantitative socioeconomic aspects of MSP processes

1. Preparation			
Needs Authority	Financial support	Pre-planning	Stakeholder participation
17%	1%	8%	8%
2. Elaboration			
Existing conditions	Future conditions	Spatial management plan	
20%	9%	5%	
3. Implementation			
Implementing	Monitoring	Adapting	
1%	26%	5%	

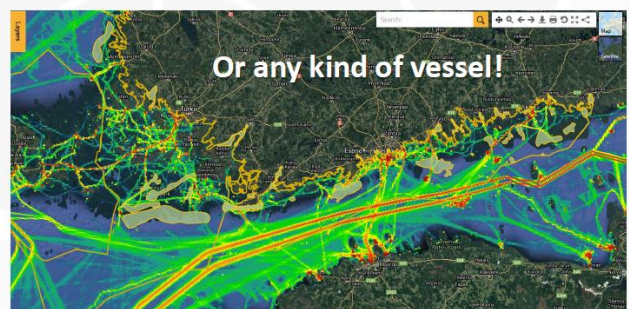
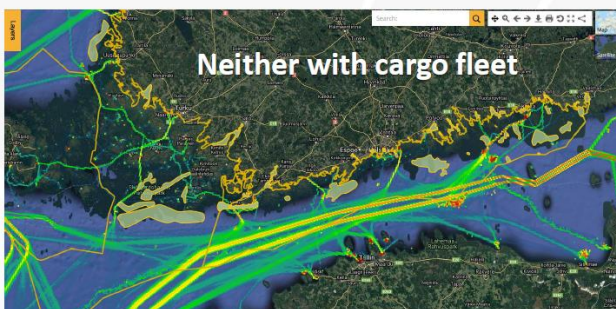


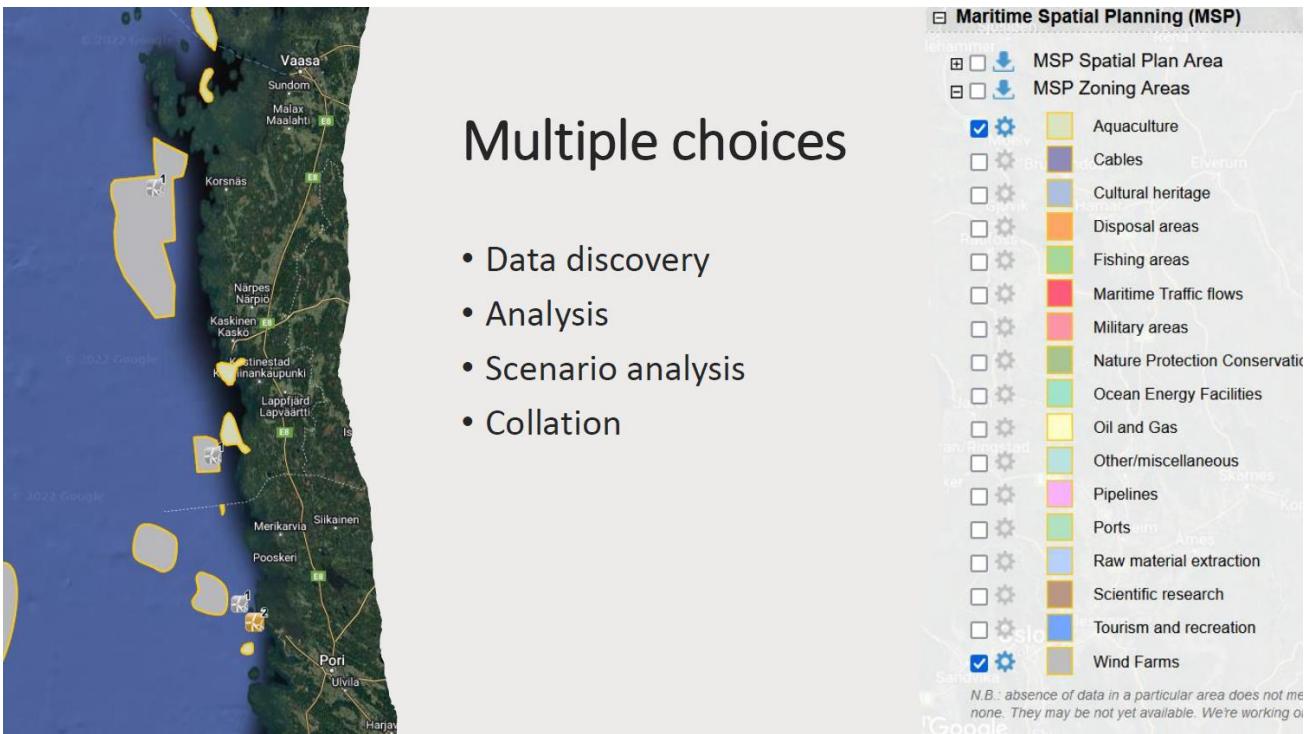
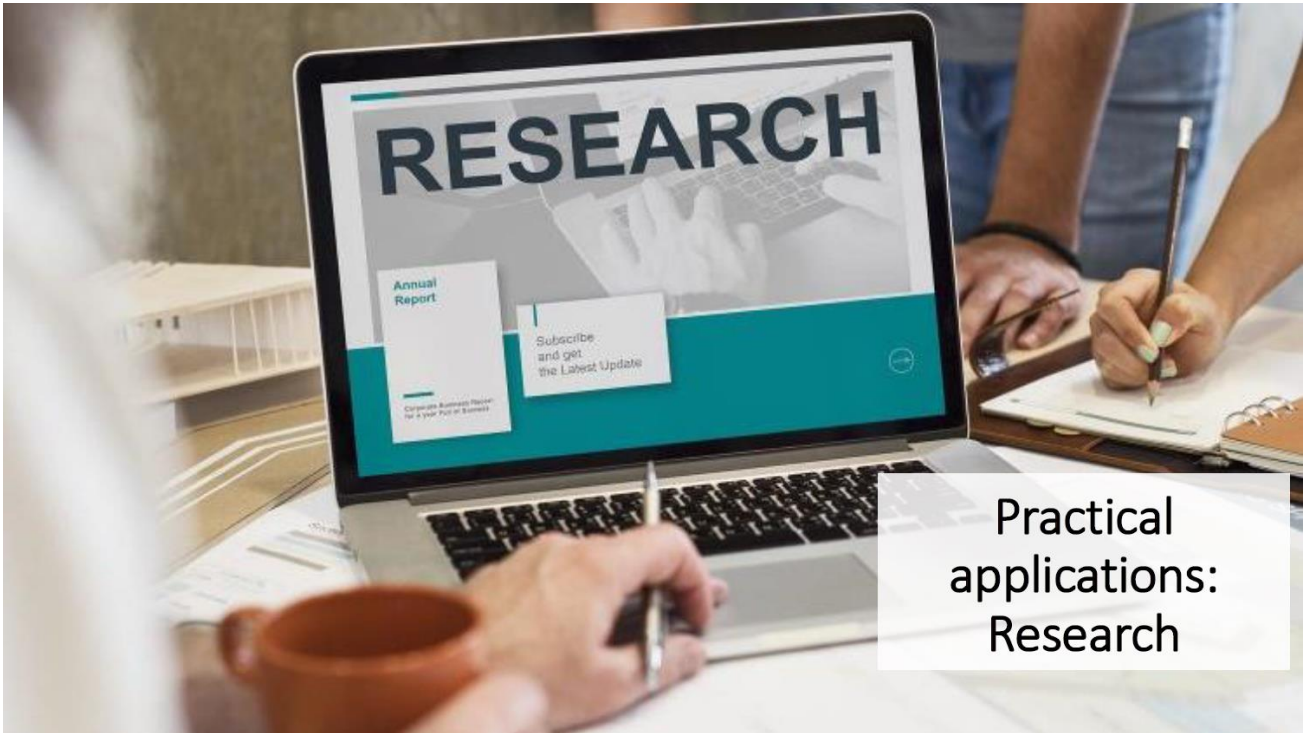
European Marine Observation and Data Network (EMODnet): an EU focal point for National Maritime Spatial Plans (and current Human Activities)

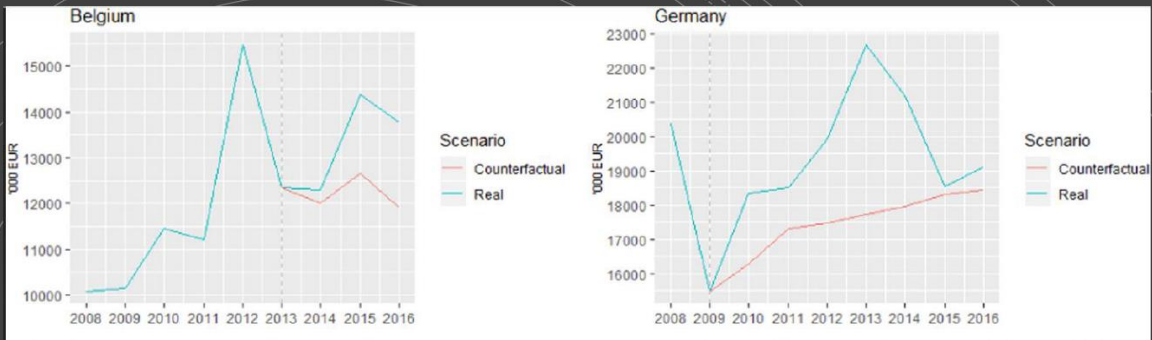




Nature protected areas



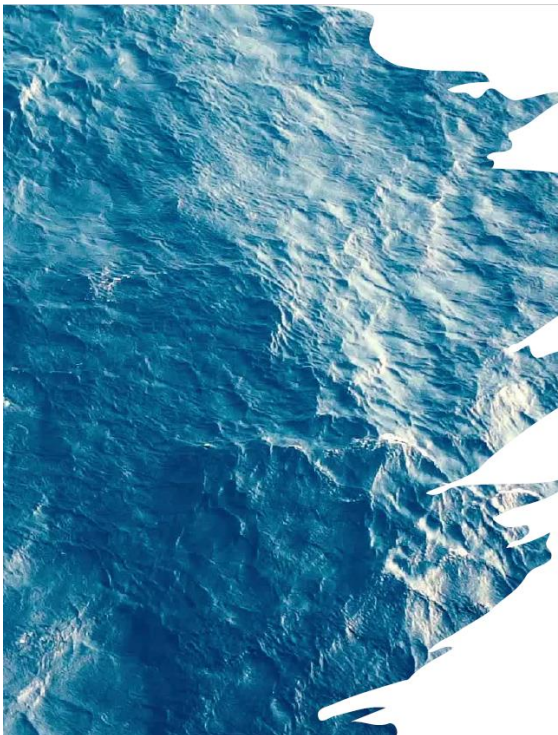




Surís-Regueiro, J., Santiago, J.L and González-Martínez X.M, 2021

Addressing research questions

Are there economic and/or social benefits stemming from the implementation of Marine Spatial Plans?



Take home message



Human dimension needs to be systematically integrated into data collection and ocean data systems



Socioeconomic data are an asset to support the MSP. Yet, they are still mostly missing or limited to descriptive information



Providing evidence on the Human Dimension entails conceptual, methodological and technical developments