

EMODnet



European Marine
Observation and
Data Network

EMODnet Biology

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EMODnet Phase V

D4.2.4: Report on progress for the publication of fisheries survey data



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Overview

Data on the composition of the fisheries of Europe have been systematically collected and curated since the 1960's, although statistical data on capture fisheries, such as landings' weight and species stretches back over [100 years](#). These data are usually targeted towards commercially exploited fish species and the scientific surveys (See [ICES survey protocols](#) and [Mediterranean International Trawl Survey](#)) which are designed to give an estimation of the population structure and distribution of these species over a defined geographic area.

A significant proportion of these data are collected using public funds - either national monitoring programmes or at the EU level. With that in mind, it would follow that such data should be available publicly and openly, to the extent possible, and that Member States should support this as part of their commitment to data access under INSPIRE¹, Marine Strategy Framework Directive (MSFD²) and Public Sector Information (PSI³) Directives. These data are continuously demanded for European Framework Projects in the context of societal challenges including climate change regime shifts and effects, ecosystem based management (of the marine environment), Marine Spatial Planning, to name a few. In addition, the EU has set out a vision to build a Digital Twin of the Ocean (European DTO⁴) which will require harmonised and operational access to marine data of all types, including fisheries, in order to effectively model the marine environment and apply scenarios. This document lays out recommendations that can contribute to alleviate these issues.

In the current conditions, access to these data is uneven geographically and the process for gaining access can be time consuming, needs special knowledge of access procedures and potentially can incur costs to the requester of these data. This can lead to many inefficiencies with requesters making overlapping or identical requests, and data providers/gatekeepers replicating outputs and effort.

¹ https://knowledge-base.inspire.ec.europa.eu/policy-context_en

² [EU MSFD](#)

³ <https://digital-strategy.ec.europa.eu/en/policies/legislation-open-data>

⁴ [EU DTO](#)

Recommendations

- **Resourcing** of data owners to facilitate access/provision of dormant Fisheries Independent Survey data that are currently not considered in the DCF. This could be in the form of targeted micro-grants, a mechanism that has worked effectively in previous Phases of EMODnet Biology
- Taking the example of mandatory scientific surveys (DCF) in Area 27 (NE Atlantic), it would be equitable that Area 37 (Mediterranean and Black Sea) historical scientific survey data (older than 3 years) are made available to **EMODnet Biology**, that can request the data according to the terms of Article 17 of the DCF
- There is a wide discrepancy in **operational public access** to data collected by publicly funded scientific surveys in FAO Area 27 as opposed to FAO Area 37, even though they are both under the EU DCF Regulation. The European Commission should work with Mediterranean and Black Sea stakeholders to address this in a stepwise approach and using the RDBFIS (Regional Database Fisheries Information System) project as a catalyst
- Regarding the RDBFIS project completed in March 2024, EMODnet Biology would like to request a copy of the final report and public deliverables, and recommend that EMODnet Biology is included as a stakeholder in any follow-up action from the Commission

Report on progress for the publication of fisheries survey data

1 Context for EMODnet Biology

EMODnet Biology has been in operation since 2009 and has made a significant advance in making marine biological data available and accessible according to defined standards. The consortium works within the constraints of data access determined by data providers, as such there has been a constant challenge with access and availability of Fisheries data compared to other biological data types. The EMODnet sea basin checkpoints⁵ highlighted the variance in data access by data type in their studies in 2016, for example in the Atlantic checkpoint⁶ accessibility of Fisheries data were generally low compared to other data types.

Data Delivery Mechanisms

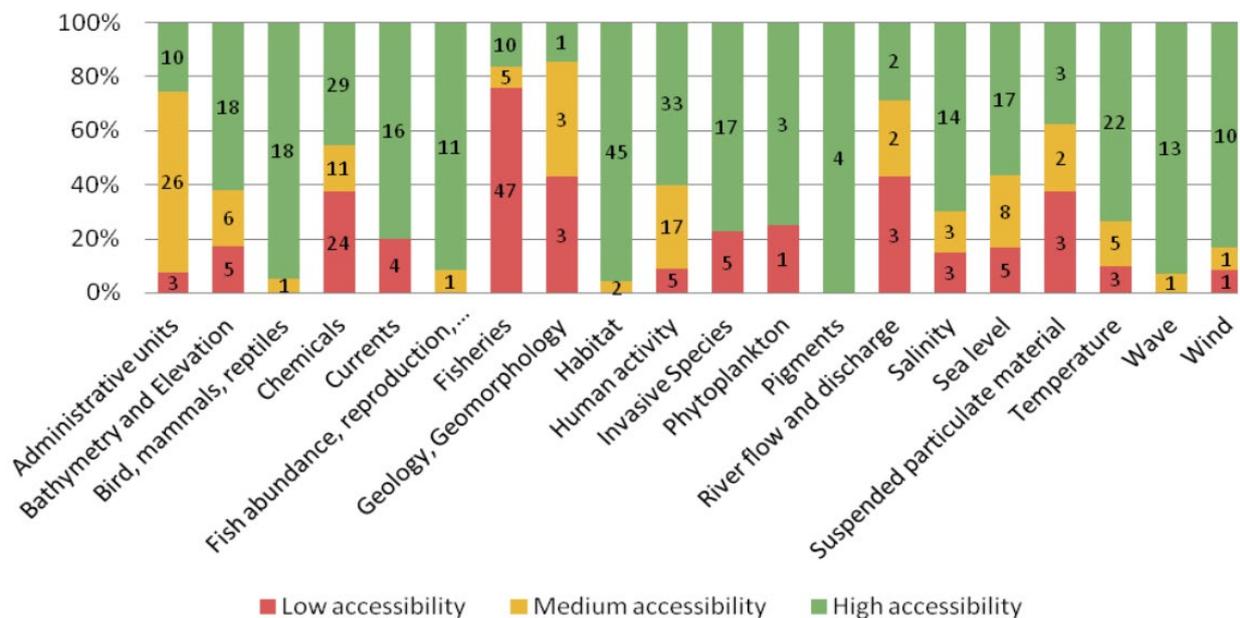


Figure 1. EMODnet Atlantic Seabasin Checkpoint: Data Adequacy Report (2016)

EMODnet Biology has a remit to provide a service that is predisposed to provide access to data from fisheries surveys should these data become available. Specific efforts shall be made in including these data during the duration of the current contract, running from May 2023 to May 2025, reporting on the success and restricting conditions and identifying future actions to progress in making these data available.

⁵ <https://emodnet.ec.europa.eu/en/checkpoints>

⁶ EMODnet: Atlantic First Data Adequacy Report (2016).
https://emodnet.ec.europa.eu/sites/emodnet.ec.europa.eu/files/public/Altantic_DAR1_revised.pdf

2 Fisheries Surveys

A fishery is defined by the FAO⁷ as an “activity leading to harvesting of fish. It may involve **capture** of wild fish or raising of fish through **aquaculture**”. In the context of this report, the focus is on capture fisheries. Within that focus, data are routinely collected through:

- surveys conducted on (or at the landing port of) the commercial vessels exploiting the resource (**Fisheries Dependent Information**).
- surveys conducted on scientific research vessels (**Fisheries Independent Surveys**)

In more recent times in some fisheries, commercial vessels have conducted scientific based surveys as a replacement to, or augmentation of the Fisheries Independent Surveys.

2.1 Fisheries Independent Surveys (FIS)

In the EU context, the majority of FIS data are collected under the EU Data Collection Framework (DCF⁸), article 5- 2a, where “biological data on all stocks caught or by-caught in Union commercial and, where appropriate, recreational fisheries in and outside Union waters” are applicable. The national work programmes (of EU Member States, further designated as MS in this document) include an annex of research surveys that are required under the DCF. The data collected reside within the national institutions/infrastructure of those that have performed the surveys. In addition the DCF requires these data are transmitted to the ‘end user’ of these data for Fisheries Management purposes. The way this is enacted in the FAO major fishing areas⁹ (Area 27 NE Atlantic and Area 37 Mediterranean and Black Sea) differs as a result of existing mechanisms/practices.

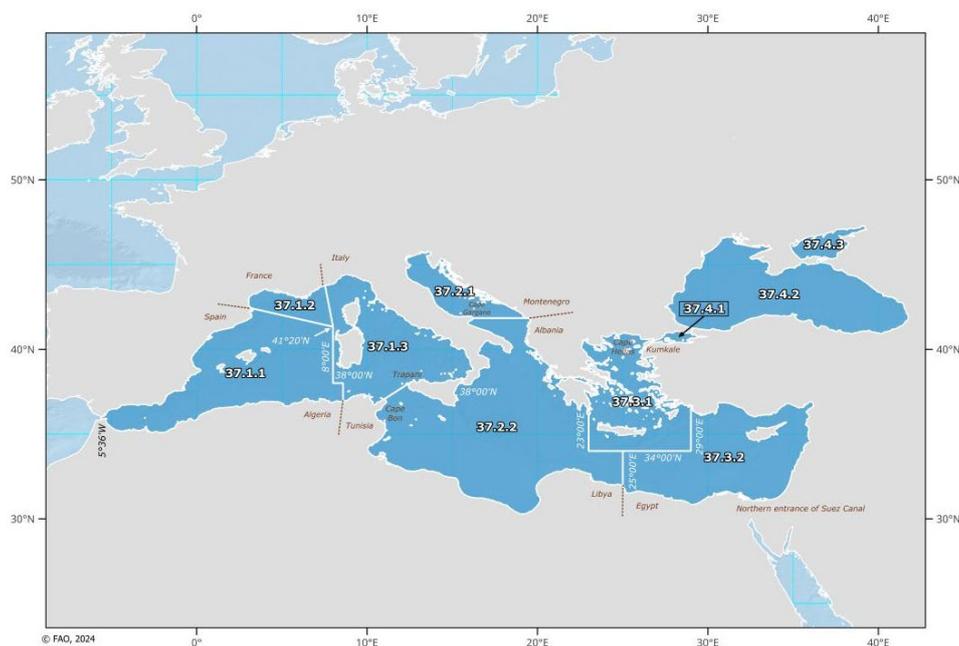


Figure 2. FAO major fishing area 37

⁷ FAO Fisheries and Aquaculture Department, FAO, 2014.

⁸ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1004&from=EN>

⁹ <https://www.fao.org/fishery/en/area/search>

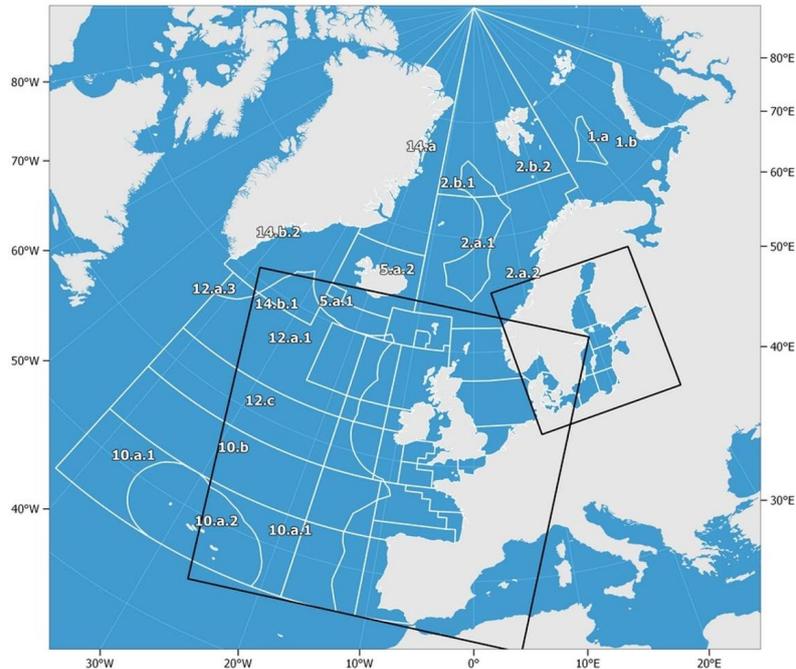


Figure 3. FAO Major Fishing Area 27

Although the majority of FIS fall under DCF/EMFAF, there are various inventories of survey data that show that:

- not all smaller surveys find their way into dataflows that lead up to data aggregators (as they are not included under the DCF target species)
- not all historical data are fully reflected in the dataflows i.e. while data on all species might have been originally collected, in some cases only target species are reported or available in international (and sometimes national) databases.

In both of these cases, **resourcing** is often cited as the limiting factor in their accessibility, rather than a data policy issue. Using these datasets for other indicators towards ecosystem based management would be greatly improved if these data were available.

Within the DCF (regulation 2017/1004) the EU has created **Regional Coordination Groups (RCG's)** with the overall aim of:

"developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data with a view to enabling reliability of scientific advice to be further improved."

In area 27, there are two relevant RCG's, RCG NANSEA¹⁰ (North Atlantic, North Sea and Eastern Arctic) and RCG Baltic¹¹ (Baltic Sea). In area 37, there is a combined RCG Med&BS¹² (Mediterranean and Black Sea).

Each MS is obliged under the DCF to provide a workplan¹³ according to a predefined template that details the data they intend to collect. For FIS, the relevant table (2.6 Surveys-at-sea) provides a full set of metadata for the planned surveys. These data are processed and transmitted to the competent bodies that require the evidence base for assessing the status of fish populations (stocks) in regard to their sustainable exploitation. The International Council for the Exploration of the Sea (ICES¹⁴) is the responsible body for this in the North East

¹⁰ <https://www.fisheries-rcg.eu/rcg-nansea/>

¹¹ <https://www.fisheries-rcg.eu/rcg-baltic/>

¹² <https://www.fisheries-rcg.eu/rcg-medbs/>

¹³ https://dcf.ec.europa.eu/wps-and-ars/work-plans_en

¹⁴ <https://www.ices.dk>

Atlantic including the Baltic Sea, while EU-MARE and the General Fisheries Commission for the Mediterranean (GFCM¹⁵) are the responsible bodies in the Mediterranean and Black Sea.

Area 27 NE Atlantic

FIS data that are proposed in the MS workplans are transmitted to ICES, as the end user of these data for Fisheries Management purposes.

1	F	G	H	I	J	K	L	M	N	O
2	Research survey acronym	Mandatory research survey	Threshold rules used	Regional work plan name	Cost-sharing agreement signed by MS	Type of MS participation	Area(s) covered	Time period (month)	Frequency	Relevant international planning group
3	see WP guidance for Table 2.6	see WP guidance for Table 2.6	MasterCodeList ¹ Threshold rules used	see WP guidance for Table 2.6	see WP guidance for Table 2.6	MasterCodeList ¹ Type of MS participation	see WP guidance for Table 2.6	see WP guidance for Table 2.6	MasterCodeList ¹ Frequency	see WP guidance for Table 2.6; MasterCodeList ¹ RFI/IO/RFQ/O
4	BITS_Q1	Y	None	Baltic RCG	N	Technical	3aS	2,3	annual	https://www.ices.dk/community21
5	BITS_Q1	Y	None	Baltic RCG	N	Technical	3aS	2,3	annual	https://www.ices.dk/community21
6	BITS_Q1	Y	None	Baltic RCG	N	Technical	3aS	2,3	annual	https://www.ices.dk/community21
7	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
8	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
9	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
10	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
11	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
12	BITS_Q1	Y	None	Baltic RCG	N	Technical	3b-d	3	annual	https://www.ices.dk/community16
13	BITS_Q4	Y	None	Baltic RCG	N	Technical	3aS	10,11	annual	https://www.ices.dk/community21
14	BITS_Q4	Y	None	Baltic RCG	N	Technical	3aS	10,11	annual	https://www.ices.dk/community21
15	BITS_Q4	Y	None	Baltic RCG	N	Technical	3aS	10,11	annual	https://www.ices.dk/community21
16	BITS_Q4	Y	None	Baltic RCG	N	Technical	3b-d	11	annual	https://www.ices.dk/community16
17	BITS_Q4	Y	None	Baltic RCG	N	Technical	3b-d	11	annual	https://www.ices.dk/community16
18	BITS_Q4	Y	None	Baltic RCG	N	Technical	3b-d	11	annual	https://www.ices.dk/community16
19	BIAS	Y	None	Baltic RCG	Y	Personnel	3a,3b-d	9,10	annual	https://www.ices.dk/community16
20	BIAS	Y	None	Baltic RCG	Y	Personnel	3a,3b-d	9,10	annual	https://www.ices.dk/community16
21	BIAS	Y	None	Baltic RCG	Y	Personnel	3a,3b-d	9,10	annual	https://www.ices.dk/community16
22	CODS_Q4	Y	None	N	N	Technical	3a	11,12	annual	https://www.ices.dk/community12
23	CODS_Q4	Y	None	N	N	Technical	3a	11,12	annual	https://www.ices.dk/community12
24	CODS_Q4	Y	None	N	N	Technical	3a	11,12	annual	https://www.ices.dk/community12
25	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
26	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
27	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
28	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
29	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
30	IBTS_Q1	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	1,2	annual	https://www.ices.dk/community15
31	IBTS_Q3	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	7,8	annual	https://www.ices.dk/community16
32	IBTS_Q3	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	7,8	annual	https://www.ices.dk/community16
33	IBTS_Q3	Y	None	North Sea and Eastern Arctic R	N	Technical	3a, 4	7,8	annual	https://www.ices.dk/community16

Figure 4. An example from the multi-annual Workplan for Denmark (2022-2024) of planned scientific surveys (FIS)

ICES, with financial support from the EU, manages a system of data submission, quality control and data dissemination through an online portal, the **DA**tabase of **TR**awl **S**urveys (DATRAS¹⁶). All data submitted to ICES come under the ICES Data Policy¹⁷. Unless there are specific conditions in which data are restricted by the provider, the default licence is Creative Commons International Attribution (CC BY 4.0¹⁸). All FIS data are available under this licence, including bottom trawl surveys, acoustic surveys and related biotic data i.e. eggs and larvae, stomach content.

Through the DATRAS portal, data are described and documented according to FAIR principles and all data are available to download through a web based (user orientated) interface, and through machine interfaces (Application Programming Interface¹⁹). There are currently 28 trawl survey time series hosted in DATRAS, most of these within Area 27, but also from the North-West Atlantic. The DATRAS data collection is available through EMODnet Central Stocks Portal viewer, in the Biology theme, under the Occurrence data layer²⁰ following the Darwin Core protocol.

Additionally, portals for acoustic²¹ (pelagic) surveys, eggs and larvae²² and stomach content²³ are also available at ICES and are available under the CC BY 4.0 licence.

¹⁵ <https://www.fao.org/gfcm/en/>

¹⁶ <https://www.ices.dk/data/data-portals/Pages/DATRAS.aspx>

¹⁷ <https://doi.org/10.17895/ices.pub.8883>

¹⁸ <https://creativecommons.org/licenses/by/4.0/>

¹⁹ <https://datras.ices.dk/WebServices/WebServices.aspx>

²⁰ [EMODnet Biology Record](#) alternatively see <https://www.vliz.be/en/imis?module=dataset&dasid=2141>

²¹ [ICES acoustic metadata record](#)

²² [ICES eggs and larvae metadata record](#)

²³ [ICES fish stomach metadata record](#)

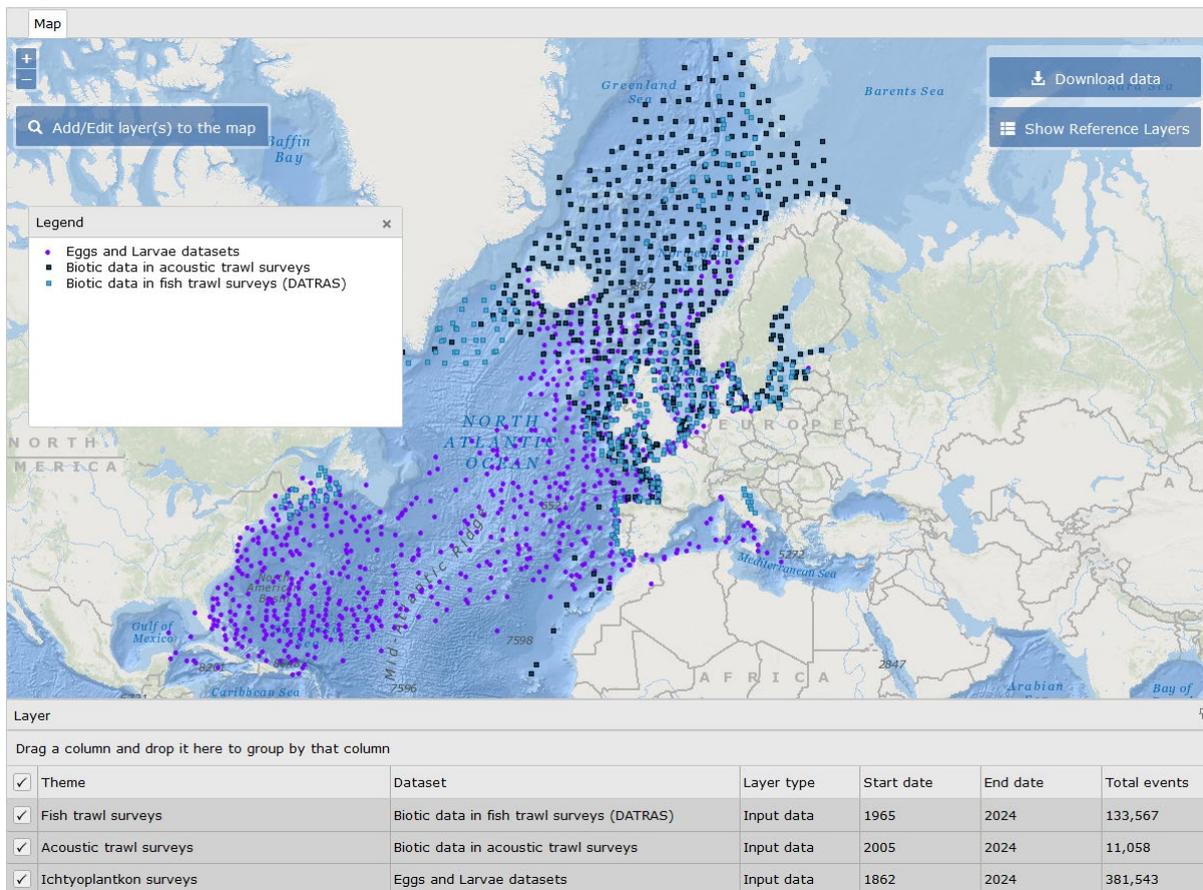


Figure 5. A graphical overview of FIS data available through data.ices.dk²⁴ (excluding stomach content data).

FIS Data Format and Validation (Area 27)

The FIS data follow the ICES format specifications defined by the ICES survey working groups and coordinated by the DATRAS governance group (WGDG²⁵). All surveys follow the same pattern of record types: Haul Information (HI), Haul Length Frequency Distribution (HL) and Size and Maturity Scale Keys (SMALK)²⁶. Each survey has their own dataset version specification - the fields and format are the same, but the data validation and standard species may vary. More detail is available in the DATRAS Data Flow Schematic²⁷.

The biological information is transformed to Darwin Core (DwC) and quality controlled using the tools made available by EMODnet Biology²⁸ before being included in the EMODnet Biology data collection, and made available via the EMODnet Central Portal viewer.

²⁴ ICES Data Portal, [accessed 10.04.2024]. ICES, Copenhagen, Denmark. <https://data.ices.dk>

²⁵ <https://www.ices.dk/community/groups/Pages/WGDG.aspx>

²⁶ International Bottom Trawl Survey (IBTS) format <https://datsu.ices.dk/web/selRep.aspx?Dataset=14>

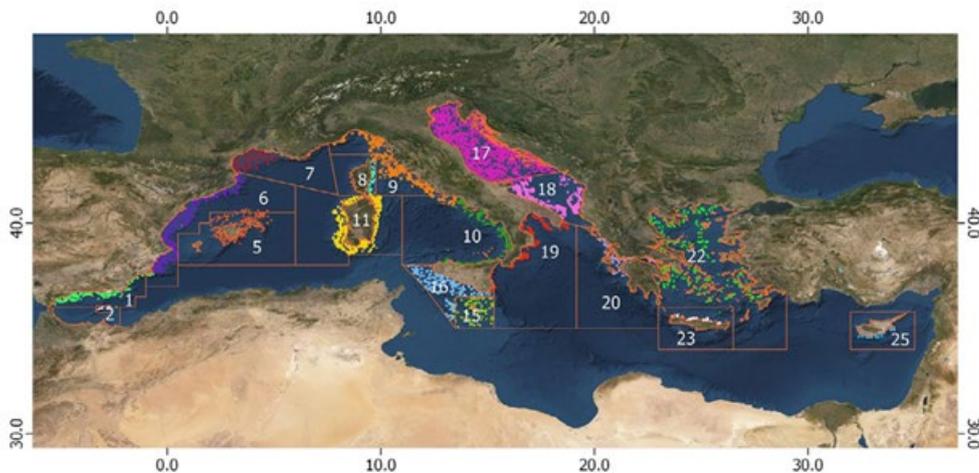
²⁷ ICES (2023). The Database of Trawl Surveys. ICES Data Flow Schematics. Report. <https://doi.org/10.17895/ices.pub.23634315.v1>

²⁸ <https://github.com/EMODnet/EMODnetBiocheck>

Area 37 Mediterranean and Black Sea

FIS data that are proposed in the MS workplans are transmitted to the GFCM/EU Scientific, Technical and Economic Committee for Fisheries (STECF²⁹) (via the data host JRC), with GFCM Data Collection Reference Framework (DCRF) and Stock Assessment Framework, as the end user of these data for Fisheries Management purposes. The data are formally requested by the EU DG MARE under a data call³⁰ that covers FIS/FDI for the entire Mediterranean and Black Sea. The data are uploaded to the JRC data portal, where validation and checks are also performed. All of the data can only be accessed by login, which is granted in connection with data ownership, or rights to use the data for an assessment or other process. The FIS in question are MEDITS, MEDIAS, SOLEMON and Black Sea surveys.

Neither the official data call, nor the JRC data portal have an explicit data policy or data licensing. The legal basis for provision and access to all data under the DCF in Area 37 are defined within the Council Regulation (EU) 2017/1004³¹. Article 17³² describes data access, in brief - requests in relation to Fisheries Management have to deliver data no earlier than one month after the request is received, and no later than the timeline described in the request. Data requested for other purposes should be delivered within "*a reasonable period of time*", which should be communicated to the requester no later than two months from when the request is made. Furthermore, Member states may require a delay of up to three years in publication of requested data to "*protect the professional interests of data collectors*". In addition, Member States may also **charge the costs** of any data processing and preparation needed to answer the request. In summary, although there is a technical infrastructure and data management process in place for FIS data in the Mediterranean and Black Sea, there is **no direct and public access** to these data. Data dissemination³³ reports refer to the outputs of stock assessment, and no input data are accessible from these tools. The geographical overview from MEDITS³⁴ and MEDIAS³⁵ are provided below based on literature.



²⁹ https://stecf.ec.europa.eu/index_en

³⁰

https://datacollection.jrc.ec.europa.eu/documents/d/dcf/mbs_teller-official-call-for-data-2024

³¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1585326950887&uri=CELEX:32017R1004>

³² Procedure for ensuring availability of detailed and aggregated data

³³ https://stecf.ec.europa.eu/data-dissemination_en

³⁴ Spedicato, Maria Teresa & Massutí, Enric & Mérigot, Bastien & Tserpes, George & Jadaud, Angélique & Relini, Giulio. (2020). The MEDITS trawl survey specifications in an ecosystem approach to fishery management. Scientia Marina. 83. 9. 10.3989/scimar.04915.11X

³⁵ RCG Med & BS 2023. Regional Coordination Group for Mediterranean and Black Sea. 2023. 61 pgs. https://datacollection.jrc.ec.europa.eu/documents/d/dcf/2023_rcg-med-bs-tm-report

Figure 6. Study area of the MEDITS bottom trawl surveys, showing the hauls allocated to the geographical sub-areas established by the General Fisheries Commission for the Mediterranean

In 2020, a project sponsored by DG MARE was started, continuing efforts towards a “Development of the regional database for the Mediterranean and Black Seas”³⁶. This project, which had links to the ICES Regional Database and Estimation System (RDBES), aimed to deliver a rudimentary data system for both FIS and FDI in Area 37 (the Regional Database Fisheries Information System - RDBFIS). In the long term, and now under the follow-up project “**Hosting, maintenance and further development of the RDBFIS**”³⁷, this should be the portal where regional FIS are made available and shared with other data platforms. According to the project website, tasks on “Activity 1.6 –RDBFIS security system and data access policy” and “Activity 3.2.3 – MEDITS survey data” and “Activity 3.2.4 – Integration of MEDIAS survey” should have been performed, however there is no report or list of deliverables that clarifies if a data portal is in operation and how to gain access to it.

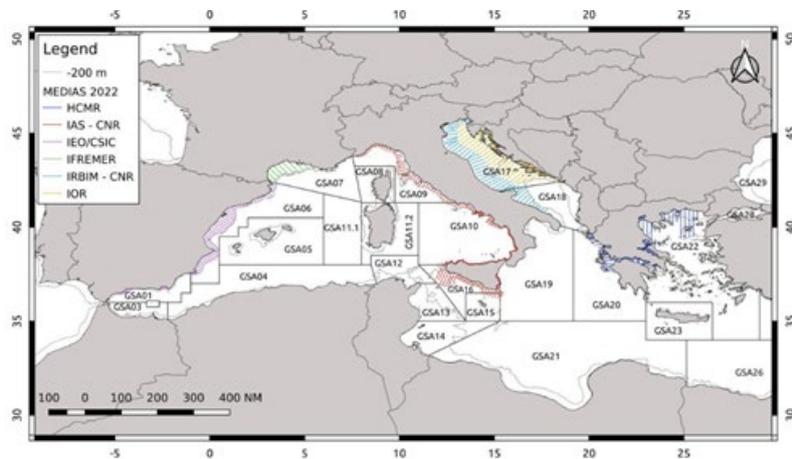


Figure 7. Acoustic surveys performed in DCF-MEDIAS framework during 2022

FIS Data Format and Validation (Area 37)

The FIS data follow the MEDITS format, which is structured in a similar way to the DATRAS format. The survey follows record types: TA (Haul Information), TB (Catch by Haul) and TC (Length, maturity and biological parameters)³⁸. File validation is performed at upload³⁹ when answering to the EU DCF Mediterranean and Black Sea annual Data Call. In addition, public R language scripts⁴⁰ are available that perform common MEDITS quality checks.

Note that for both DATRAS and MEDITS, litter data are also collected in an agreed format, this is not discussed in this document.

³⁶ <https://medbsrdb.eu/>

³⁷ <https://rdbfis.eu/>

³⁸ MEDITS instruction manual, Version 9 (2017)
[https://www.sibm.it/MEDITS%202011/docs/Meditis Handbook 2017 version 9 5-60417r.pdf](https://www.sibm.it/MEDITS%202011/docs/Meditis%20Handbook%202017%20version%209%205-60417r.pdf)

³⁹ https://dcf.ec.europa.eu/data-calls/medbs/validation-tool_en

⁴⁰ <https://github.com/COISPA/RoME>

2.2 Fisheries Dependent Information (FDI)

As described in the previous section, the majority of FDI data are collected under the EU Data Collection Framework (DCF⁴¹). The national work programmes (of EU Member States) include an annex of species, biological and other variables that are required under the DCF. The data collected reside within the national institutions/infrastructure of those that have performed the surveys.

Each MS is obliged under the DCF to provide a workplan⁴² according to a pre-defined template that details the data they intend to collect. For FDI, the relevant table (2.5 Sampling Plan Biological) provides a full set of metadata for the targeted sampling of commercial fisheries activities. These data are generally sampling at port or sampling on vessel (at sea). The data are processed and transmitted to the competent bodies that require the evidence base for assessing the status of fish populations (stocks) in regard to their sustainable exploitation. As previously stated, ICES is the responsible body for this in the North East Atlantic including the Baltic Sea, and GFCM/EU DG MARE/STECF are the responsible bodies in the Mediterranean and Black Sea.

Within the EU DCF, Fisheries activity on commercial vessels are recorded and transmitted to the European Fisheries Control Agency (EFCA⁴³) using an International protocol for Fisheries Language for Universal eXchange (UN/FLUX⁴⁴). This is an XML based protocol that is designed for machine-to-machine querying of operations at a granular level, and thus quite different from the use of EMODnet Biology where Darwin Core is used in practice for describing whole data collection (sampling) events. However, there is information of relevance that is captured directed at the FLUX vessel operations level i.e. Species, Occurrences, gear, position, date and time etc, that can be standardised in Darwin Core if such data were to be made publicly available.

Area 27

FDI data are transmitted to ICES (as the end user) via a series of Data Calls⁴⁵ which run throughout the calendar year. Each data call describes the intended purpose of the data to be requested, formats and data systems to be used, and the data policy/licensing that applies. In ICES there are a number of end points in operation for reception of data (RDBES, RDB and InterCatch), regardless - all of them follow the same data policy and licensing⁴⁶. Data access is largely similar to how it is described in the DCF (see [...Area 37 are defined within the Council Regulation \(EU\) 2017...](#)) although the governance group for these data (Working Group on Governance of the Regional Database & Estimation System- WGRDBES) have made efforts to 'operationalise' as much as possible the access requests by defining rules for data aggregation etc. For both detailed and aggregated data, there is no publicly accessible portal to view the input data. Outputs are available at a processed and aggregated form through various RCG reports, or the ICES Stock Assessment tools such as adviceXplorer⁴⁷ and ICES Stock Assessment Database⁴⁸.

Area 37

Similarly to Area 27, FDI data are transmitted to STECF (as the end user) via a series of Data Calls⁴⁹ which run throughout the calendar year. Each data call describes the intended purpose of the data to be requested, formats and data systems to be used. The data policy and licensing is the same as for FIS data in the Mediterranean and

⁴¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32017R1004&from=EN>

⁴² https://dcf.ec.europa.eu/wps-and-ars/work-plans_en

⁴³ <https://www.efca.europa.eu/en/content/efca-fisheries-information-system>

⁴⁴ <https://unece.org/trade/uncefact/unflux>

⁴⁵ https://ices-library.figshare.com/pubtype_datacalls-dataoutputs_calls

⁴⁶ ICES (2023). Data use license for the Regional Database (RDB) and Regional Database and Estimation System (RDBES). ICES Data Licences and Policies. Report. <https://doi.org/10.17895/ices.pub.22188157.v1>

⁴⁷ <https://www.ices.dk/advice/Pages/adviceXplorer.aspx>

⁴⁸ <https://www.ices.dk/data/assessment-tools/Pages/stock-assessment-graphs.aspx>

⁴⁹ https://dcf.ec.europa.eu/data-calls_en

Black Sea, which is described in the DCF (see [...Area 37 are defined within the Council Regulation \(EU\) 2017...](#)). For both detailed and aggregated data, there is no publicly accessible portal to view the input data. Outputs are available at a processed and aggregated form through various RCG reports, or the DCF data dissemination tools⁵⁰ such as the Stock Assessments⁵¹.

2.3 Other Fisheries Surveys (OFS)

Eel

European Eel (*Anguilla anguilla*) have a wide distribution over the European waters, for that reason a different mechanism is currently used to aggregate and assess these data. A joint data call⁵² is issued by ICES (North East Atlantic), GFCM (Mediterranean and Black Sea) and EIFAAC (European Inland Waters) on an annual basis.

The data calls from 2022 and 2023 have introduced the CC BY 4.0 licence, which applies to any data submitted within the call, with a few exceptions to this denoted in the text of the call. The data are quality controlled and maintained on a database managed by the joint working group on Eel (WGEEL⁵³). As of early 2024, a CINEA EMFAF project "Diaspera" was funded under the European Maritime Fund for Fisheries and Aquaculture (EMFAF)⁵⁴ with the French National Institute for Agriculture, Food, and Environment (INRAE) as the lead beneficiary that will make the dataset into a more operational and widely accessible system.

Salmon

Atlantic Salmon is another widely distributed stock. In the North Atlantic, an ICES data call⁵⁵ that covers Area 27 and Area 21 (North West Atlantic, the NAFO convention area) is made but generally not on an annual basis. This excludes Baltic Salmon, which are requested via an ICES data call⁵⁶ on an annual basis.

2.4 Current availability of FIS and FDI within EMODnet

EMODnet Biology primarily deals with open access data (98% of all datasets have a CC-BY variant licence or are unrestricted), and all derived products are CC BY licensed. There is no prescriptive data policy for EMODnet, rather principles that are promoted and encouraged⁵⁷. EMODnet Biology only shows data that are publicly available under a recognised licence, although the metadata records are fully published. This means the availability of FDI data, and the Mediterranean FIS data are low within EMODnet Biology.

⁵⁰ https://stecf.ec.europa.eu/data-dissemination_en

⁵¹ https://stecf.ec.europa.eu/data-dissemination/medbs_en

⁵² ICES (2023). WGEEL Data call 2023: Joint ICES/GFCM/EIFAAC eel data call. Data Calls. Report. <https://doi.org/10.17895/ices.pub.23309387.v1>

⁵³ <https://www.ices.dk/community/groups/pages/wgeel.aspx>

⁵⁴ https://cinea.ec.europa.eu/funding-opportunities/calls-proposals/emfaf-call-proposals-scientific-advice-fisheries_en

⁵⁵ ICES (2020). Data call for selected stocks of Atlantic salmon in the North Atlantic. Data Calls. Report. <https://doi.org/10.17895/ices.data.18596918.v1>

⁵⁶ ICES (2023). WGBAST-2023 Data call for Baltic Sea salmon and sea trout data. Data Calls. Report. <https://doi.org/10.17895/ices.pub.21908064.v1>

⁵⁷ https://emodnet.ec.europa.eu/en/about_emodnet#inline-nav-5

EMODnet Biology

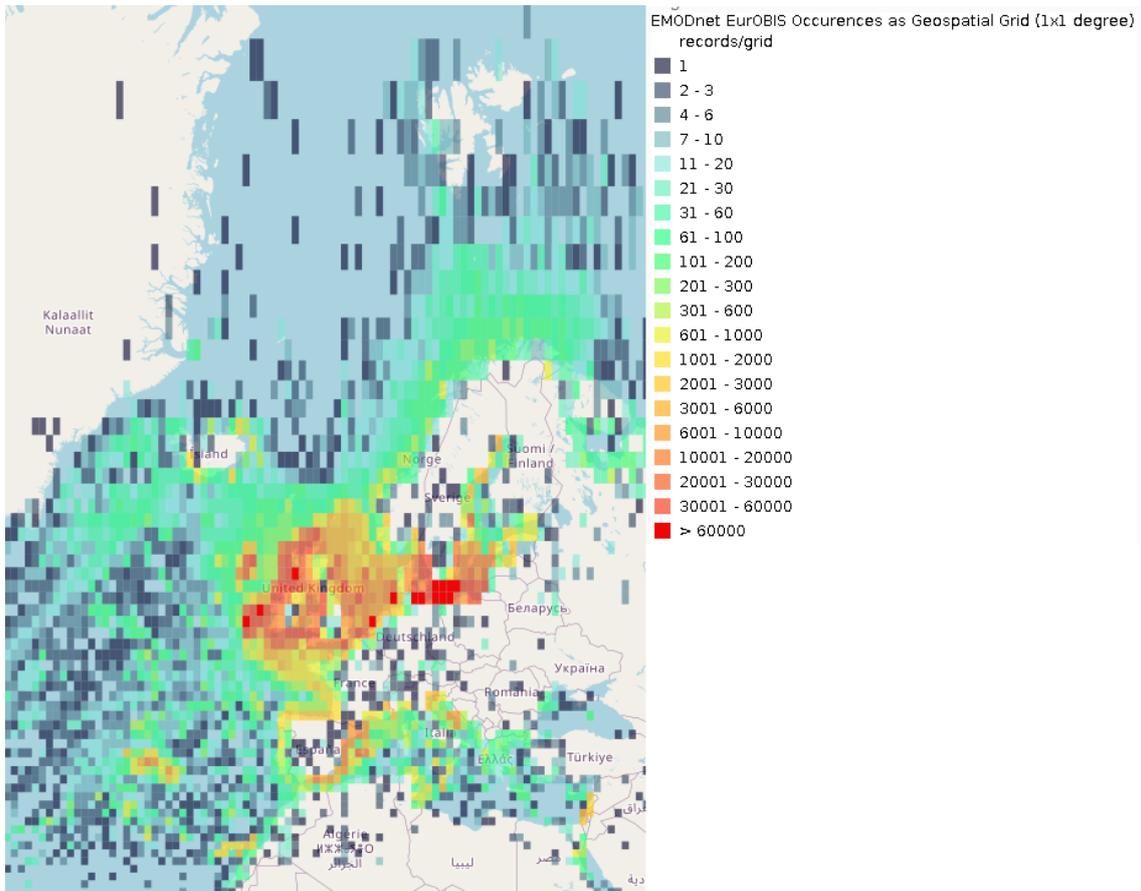


Figure 8. EMODnet Biology Fish Species Occurrences (gridded 1x1 degree). The red pixels denote more records and the blue pixels fewer occurrence records. Note that this overview is limited to the European seas.

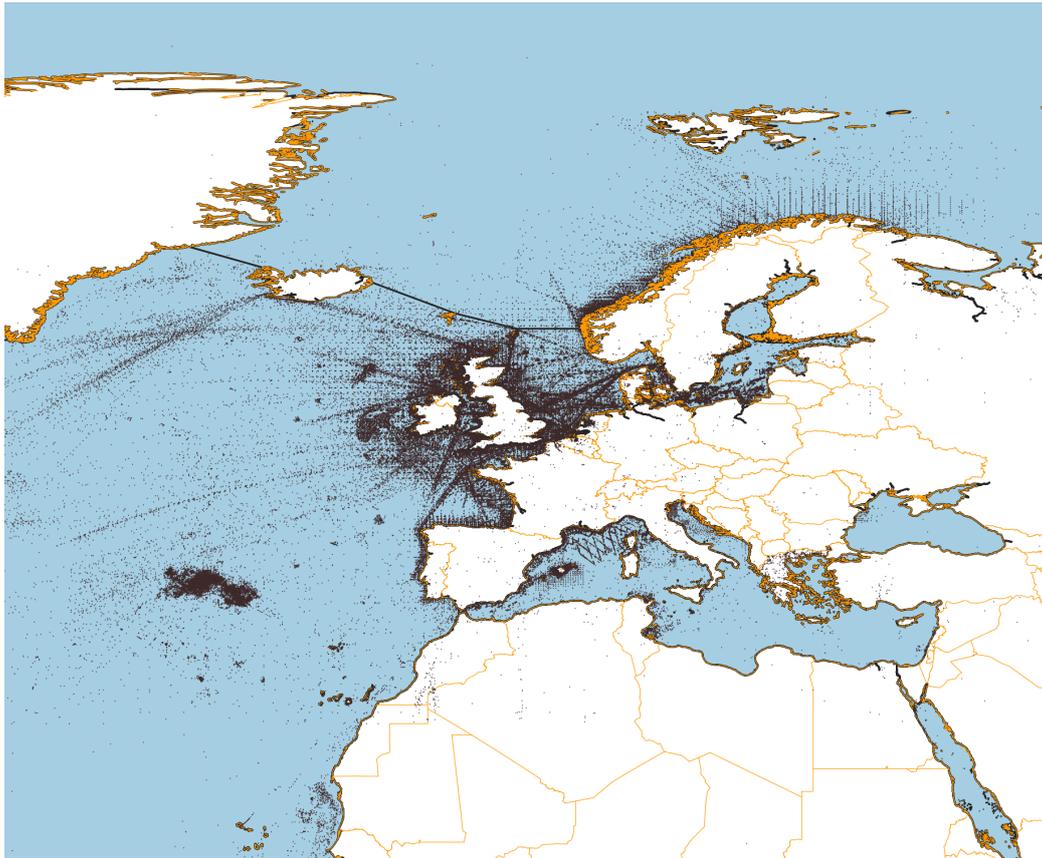


Figure 9. EMODnet Biology position of the Fish species occurrence records. Note that this overview is limited to the European seas. The image was created in QGIS using the following layers Flanders Marine Institute (2021). Global Oceans and Seas, version 1. Available online at <https://www.marineregions.org/>. <https://doi.org/10.14284/542> and EN: © EuroGeographics for the administrative boundaries

EMODnet Chemistry

Although there are no direct biological observations from Fisheries, as well as contaminants data, EMODnet Chemistry also hosts marine litter data collected by scientific bottom trawl surveys. This gives an impression of the footprint of scientific survey data collection, and a proxy for where biological data on fish species is very likely to be collected.

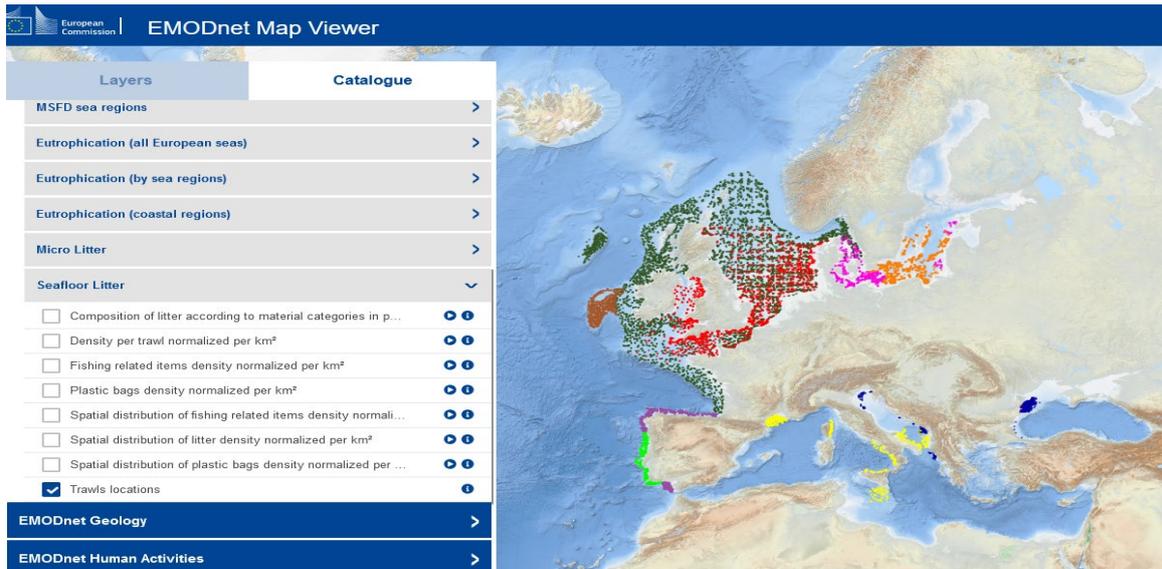


Figure 10. Seafloor litter - Trawls locations 2006/2022 v2023⁵⁸

EMODnet Human Activities

Human activities has sourced a number of data products on fishing activity from ICES, STECF and the JRC. As illustrated, not all the products are available for the entire European marine area.

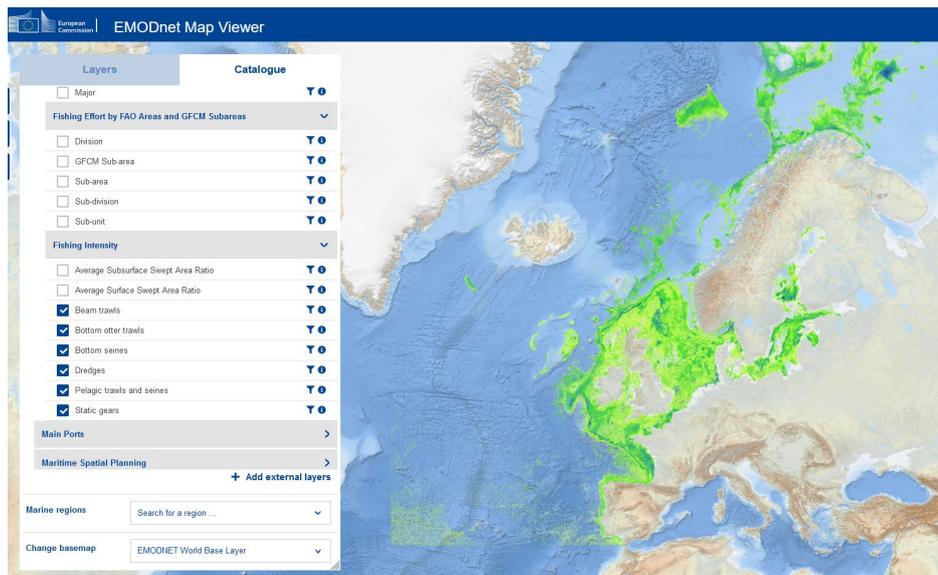


Figure 11. Fishing Intensity in EU waters. The underlying data product is made by ICES, and EMODnet Human Activities (Cogea) process this to a map layer that is available in the EMODnet Central Portal viewer.

⁵⁸ EMODnet Chemistry metadata record: [seafloor litter trawl locations](#)