

North Atlantic, North Sea & Eastern Arctic Regional Coordination
Group



Regional Coordination Group
North Atlantic
North Sea & Eastern Arctic

Regulation (EU) 2017/1004 of the European Parliament and of the
Council of 17 May 2017

on the establishment of a Union framework for the collection, management and use of data in
the fisheries sector and support for scientific advice regarding the common fisheries policy
and repealing Council Regulation (EC) No 199/2008 (recast)

Commission Delegated Decision (EU) 2021/1167 of 27 April 2021

establishing the multiannual Union programme for the collection and management of
biological, environmental, technical and socioeconomic data in the fisheries and aquaculture
sectors from 2022

Commission Implementing Decision (EU) 2021/1168 of 27 April
2021

establishing the list of mandatory research surveys at sea and thresholds as part of the
multiannual Union programme for the collection and management of data in the fisheries and
aquaculture sectors from 2022

Commission Implementing Decision (EU) 2022/39 of 12 January
2022

laying down rules on the format and timetables for the submission of national work plans and
annual reports for data collection in the fisheries and aquaculture sectors, and repealing
Implementing Decisions (EU) 2016/1701 and (EU) 2018/1283

**North Atlantic, North Sea & Eastern Arctic
Regional Work Plan on data collection in
the fisheries and aquaculture sectors**

2025-2027

Version 1.0

**(Revised after STECF 2023 validation and suggestions for
improvement)**

2024/08/22

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SECTION 1: GENERAL INFORMATION

Data collection framework at regional level

General comment: Use this text box to describe how data collection is organised in your region (countries involved, contact information) and what activities, methodologies, standards etc are included in the regional work plan.

As agreed during RCG 2023 decision meeting, this Regional Work Plan (RWP) for the North Atlantic, North Sea & Eastern Arctic (NANSEA) region is the first official regional programme for the period 2025-2027.

Role of RCGs

The Regional Coordination Groups (RCGs) are the main hub for regional coordination and cooperation between Member States within the different regions. The RCGs should in accordance with Council Regulation (EU) 2017/1004 aim at developing and implementing procedures, methods, quality assurance and quality control for collecting and processing data with a view to enabling the reliability of scientific advice to be further improved. It is the role of the RCGs to develop and implement the draft RWPs, supplementing the National Work Plan (NWP) MS submit to the Commission on a regular basis.

The text boxes and tables presented in a RWP are all emanating from RCG Inter-Sessional Sub-Groups (ISSG, see <https://www.fisheries-rcg.eu/intersessional-subgroups/> for more details), agreed at the RCG Technical Meeting and approved at the RCG Decision Meeting with all National Correspondents involved.

Objectives of RWPs

The RWP is a possibility offered in the Regulation EU 2017/10041, where it is stipulated that ‘Regional coordination groups may prepare draft regional work plans [...]. *Those draft regional work plans may include procedures, methods, quality assurance and quality control for collecting and processing data [...], regionally coordinated sampling strategies and conditions for delivery of data in regional databases. They may also contain cost-sharing arrangements for participation in research surveys at sea*. It is also specified that ‘a regional work plan shall be considered to replace or supplement the relevant parts of the national work plans of each of the Member States concerned.’

After years of development in the RCGs leading to the several test run RWPs (RCG NANSEA and Baltic in 2021 and 2022, RCG Med&BS in 2023), comments and suggestions by STECF and developments in DG MARE grant projects such as fishPi², Fishn’Co and Streamline, this RWP 2025-2027 for the NANSEA region is the first agreed RWP and to be integrated in the NWPs of the MS in the NANSEA region.

Linkage between NWP and RWPs

The setting of this RWP one year in advance of NWP for the same period is meant to prepare all MS to integrate the agreed elements from the RWP in their NWP with some basic principles as follows:

Principle 1: RWP should only contain elements agreed at RCGs

Principle 2: RWP will contain information on a more general level so that there will not be a need to update it every year when some numbers in one MS NWP table will change. RWP may be amended during interim years, only if the amendments do not lead to modification and resubmission of all MS NWP in the region, unless all MS agreed to do so.

Principle 3: The legally binding document is the NWP, so elements of RWP are binding only when referred to in the NWPs textboxes and tables. Thereafter, the realisation (AR) is reported only at national level, which will

¹ REGULATION (EU) 2017/1004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

then logically follow both NWP and RWP.

Guidance for MS

Each element of an RWP is a RCG agreement which needs to be reflected in all NWPs in a region. Reporting these agreements in NWPs formalizes these as commitment by each MS. MS should thus copy all relevant information from RWP tables directly into the corresponding table in the NWP to ensure consistency between NWPs and RWPs. For RWP textboxes, MS should make sure that a link is provided to the details of the relevant RWP text box and add national specificities, if any.

The realization of the RWP will not be reported directly through added table columns and text sections. It is the approved NWPs, containing combined information from national and regional initiatives, which will be evaluated within the Annual Report evaluation process.

Contents and MS involved

This document and the related set of tables form the Regional Work Plan for the period 2025-2027 prepared by the RCG North Atlantic, North Sea and Eastern Arctic (NANSEA). These two documents contain only elements of data collection which are regionally coordinated and were agreed at RCG NANSEA. All coordination initiatives that are under development can be found on the RCG webpage (<https://www.fisheries-rcg.eu/level-of-ambitions/>).

The countries contributing to the data collection activities in the NANSEA region are Belgium, Denmark, Estonia, Finland, France, Germany, Ireland, Latvia, Lithuania, the Netherlands, Poland, Portugal, Spain and Sweden.

The RWP NANSEA 2025-2027 contains the following textboxes and tables:

- Section 1: General information
 - Textbox 1A: Test studies description
 - Textbox 1B: Other data collection activities
 - Table 1.2: Regional and International coordination
 - Table 1.3: Bilateral and multilateral agreements
- Section 2: Biological data
 - Table 2.1: List of required species/stocks
 - An addition of a control table is proposed for countries to compare declared landings in the RDB and in EUROSTAT; this is only for information purpose.
 - Textbox 2.3: Diadromous species data collection in freshwater
 - Textbox 2.4: Recreational fisheries
 - Textbox 2.5: Sampling plan description for biological data
 - Textbox 2.6: Surveys-at-sea
 - Table 2.6: Surveys-at-sea
- Section 3: Fishing activity data
 - Textbox 3.1: Fishing activity variables data collection strategy
 - Textbox 3.2: Fishing activity variables data collection strategy (for inland eel commercial fisheries)
- Section 4: Impact of fisheries on marine biological resources

- Textbox 4.3: Fisheries impact on marine habitats
- Annex 1.1: Quality report for biological data sampling scheme
 - Regional stomach content sampling

Text Box 1a: Test studies description

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Within the boundaries of DCF, the following case studies are still under development and not expected to be finalised at the start of the 2025-2027 3-year period. They are given here as information for preparing the ground for future updates of the RWP. Each sub-section of RWP textbox 1A needs to be referred to in all involved MS NWP 2025-27 in order to confirm the listed agreements and commitments. These are, without order of priority:

Name of the study: 1 Genetics

1. Aim of the test study

Incorporation of the different genetic approaches that can be applied to fisheries/ecosystems assessment and monitoring.

2. Duration of the test study

2025-2027

3. Methodology and expected outcomes of the test study

Three main areas are identified concerning the application of genetics to fisheries assessment and which are distinguished by the aim they pursue and by the sample type they require. A preamble to data collection on these fields listed below is to identify clearly the cost estimates and end-user needs.

1. The genetic analyses of collected stomachs contents. This discussion is now included as part of the work of the Stomach sampling ISSG, where several presentations have been made. AZTI has also an EU Map funded test study, whose aim is to “Set the basics of a routine food-web monitoring program through genetic analyses of stomach contents”.
2. The analysis of environmental DNA, that is, that DNA collected by filtering water samples, and which contain traces of the organisms inhabiting the water column, including large ones such as fish and elasmobranchs. This approach, being considered a biodiversity monitoring approach, could be included as part of the Electronic Monitoring Technologies ISSG.
3. The sampling of fish tissue with the purpose of doing stock delimitation and identification studies, close-kin mark-recapture (CKMR) projects for biomass estimation or epigenetic analyses for age determination. It was discussed that this tissue sampling for genetic analyses could be integrated into the Surveys ISSG.

Agreement reached in RCG 2023: No specific ISSG set-up for 2023/24

Agreement and commitment on the inclusion of genetics in data collection programs

MS involved: ALL

- Agreement to collaborate more in the use of genetics in the different fields of data collection

Recommendation that ISSG on stomach sampling, ISSG on Electronic Monitoring Technologies and ISSG on Surveys include a term of reference on the use of genetics in their intersessional work, including clear identification of user needs.

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Name of the study: 2 Regional Sampling Plan Pelagic Freezer trawler

1. Aim of the test study

The EU pelagic freezer trawler fleet uses a mid-water pelagic trawl to target small pelagic fish species. Their most important fishing grounds in European waters are situated on the continental slope west of the British Isles, in the English Channel, along the British eastern coast, the northern North Sea and the Norwegian Sea. The target species of the freezer trawler fleet in European waters differs by season and area.

In 2018, the EU freezer trawler fleet in the North Atlantic and North Sea was identified by the RCG as a potential candidate for the development of a regionally coordinated sampling plan. The current sampling of the fleet, which is largely Dutch-owned and operates mainly under the flags of The Netherlands, Germany, France and the UK (England), is conducted by the Dutch and German research institutes. The aim of sampling is to collect biological information of the target species and monitor incidental bycatches. While there exists an element of cooperation, at present the national sampling schemes differ in extent and methodology and there is no formal arrangement or harmonization. Ultimately, under a regional sampling plan, the two sampling programs are merged or at least completely harmonized and thus interchangeable. In order to do so, methodology must be similar and vessel selection needs to be coordinated regionally rather than nationally.

2. Duration of the test study

The test study is expected to be finalized at the beginning of the next EU financial period 2025-2027. No implication for MS in 2024 when preparing their NWP 2025-2027

3. Methodology and expected outcomes of the test study

Simulation studies have been conducted to investigate annual sampling coverage for a suite of preselected stocks under various sampling schemes including random selection of individual fishing trips and vessels. Furthermore, in 2022, a pilot study was conducted within the Dutch national sampling program during which an observer sampling scheme was tested following the protocol designed by the RCG ISSG. The study focused on the North Sea herring fishery in quarter 3 2022. While the pilot study showed promising results, it focused on only one species*area combination of the European pelagic freezer trawler fleet. In order to extend to the entire fleet, a common practically feasible protocol for all species*area combinations needs to be developed and tested.

Agreement and commitment on the development of a RSP for Pelagic Freezer Trawler

MS involved: NLD, DEU

- Development of a regional protocol that can be implemented by NLD and DEU administrations.
- Test regional protocol by both NLD and DEU during additional pilot studies for different species*area combinations.

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Name of the study: 3 Bay of Biscay and Iberian waters common dolphin (*Delphinus delphis*) case study

1. Aim of the test study

Bycatch of common dolphins in the Bay of Biscay (BoB) has been identified as a major problem by the European Commission. In connection with ICES/WGBYC and ICES/WKPETSAMP, the objective of this case study is to identify which fisheries have the greatest impact. This identification of fisheries should be done at the highest possible resolution. Once the fisheries have been identified, the Member States to which these fisheries belong are detailed, and based on the effort exerted, the importance of each one of them. With this information, the objective is to improve the sampling of these fisheries at the regional level.

2. Duration of the test study

Not expected to be implemented before 2024-2025.

3. Methodology and expected outcomes of the test study

To be developed

Agreement and commitment on common dolphin case study in the BoB and IW

MS involved: ESP, FRA, BEL

MS involved in the Bay of Biscay fisheries to work towards

- Identification and characterization of fisheries/metiers at the right resolution considering bycatch impact.
- Evaluate the sampling coverage of these fisheries/metiers
- Align observers' protocols between countries
- Standardize effort calculation methodologies and identify relevant variables needed to collect under the transversal data to improve bycatch estimates (e.g., number of nets, soak time etc. in the case of passive gears)
- Identify minimum sampling coverage per fishery/metier.
- Ensure minimum sampling coverage for fisheries that currently have no/low coverage.
- Methodologies to collect bycatch data considering different fleet segments.
 - Scientific observers
 - New technologies (e.g., CCTV)
 - Fishermen collaboration

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Name of the study: 4 Diadromous species data collection

The regional coordination of data collection of diadromous species is under development in the RCG ISSG on Diadromous fish species in collaboration with relevant ICES expert groups. The work intends to improve regional coordination and harmonization of sampling methodologies for a best possible end-user need and facilitate the use of central databases to host their specific datasets.

The newly accepted project DIASPORA (DIAdromous Species: moving towards new PARadigms to achieve holistic scientific Advice) will also have major implications on the development of datacollection on Diadromous fish species.

1. Aim of the test study

The recently accepted EMFAF project proposal DIASPARA aims at better aligning data needs and data collection and is set to contribute to the objectives of the DCF and the CFP, which shall bring valuable insights for the future Regional Workplans

2. Duration of the test study

DIASPARA project: 24 months between 2024-2027

3. Methodology and expected outcomes of the test study

DIASPARA will address pre-identified shortcomings in the scientific advice to better support a regionalized and holistic Ecosystem-bases approach to fisheries management of eel and salmon, putting spatial scales and diversity of human impacts at its core. Moreover, DIASPARA aims at aligning collection of biological and anthropogenic impact data with models to “optimise the collection and use of samples and collected scientific data under the Data Collection Framework”, and to “improve methodological aspects of the design, collection and/or management of the data collected”.

By explicitly accounting for the complex spatial structure of the species and providing more holistic advice, DIASPARA has the ambition of improving the regionalised management and as such, to contribute to the future Regional Workplans. Based on the expected results, and in collaboration with the ISSG Diadromous subgroup, DIASPARA aims to better align data needs and data collection, contribute to the objectives of the DCF and the CFP, and thus bring valuable insights for the future Regional Workplans.

While DIASPARA primarily targets eel and salmon, many of the outcomes of the project (databases, impact of dams and weirs, methodological developments) will also contribute to the advice and management of other species, including other diadromous species.

DCF-Data collection for Diadromous Species (Eel, Salmon, Sea Trout)

Salmon (WGNAS)

WGNAS are already working at a regional scale, hence forming RWP's for further improvements in harmonization and regionalization is recommended and needs to be agreed on.

Eel (WGEEL)

Currently the international assessment by WGEEL is based on recruitment data, collected across the entire distribution area. The DIASPARA Project aims at a more holistic advice by explicitly accounting for the complex spatial structure of the species. As a result, DIASPARA has the ambition of improving the regionalised management and as such, to contribute to the future Regional Workplans in near future. According to the WKFEA roadmap, the aim is to have a first benchmark in 2027.

In the meantime, data on recruitment series collected for the international assessment should take into account following guidelines:

- Recruitment series should, whenever possible, continue existing series.
- The series should have the longest record possible, data from the 1960-1980 period will be of great value.

If data collection is started at a new recruitment site, these guidelines should be followed:

- The site location should be as close to the sea as possible
- The series should not be biased by local factors (gate operation, glass eel fishery, etc).
- The series should not be biased by glass eel translocation (restocking).
- The whole recruitment season should be sampled.
- The series should be representative of annual recruitment variation at the site.

- The series can be a trap, partial or total sampling, a scientific monitoring, a fishery-based index.

Each series should describe:

- The name of site, the unit (number or kg), the life stage (either glass eel, or a mixture of glass and yellow eel corresponding to glass eel having recruited the same year, or yellow eel in areas where glass eel recruits are not available), the code of the Eel Management Unit and the ICES subdivision (FAO code of sea region at the division level) of the river or sampling location, the longitude and latitude (in format EPSG:4326), the distance to the sea from the sampling site (the river path), the method of sampling.
- In addition, when possible, the series description should also include the effort in terms of number of fishing trips/day, a precise description of the method used and possible biases, a precise description of the site, including the sea where the river is flowing to, possible comments on the change in data collection (upgrade of the fishway, change in methods, change in local conditions, etc).
- Annual data should be provided, along with year, effort, comments on the annual data, comments on the quality of the series.
- Ideally, series should be accompanied with a set of biological descriptors relative to the annual sampling including, for sites comprising glass eel, the average length of glass eel with at least one sampling per month during the whole migration season (at least 4 to 5 months), based on individual samples of 50 glass eel (no preservation with formalin) measured to the nearest mm, weighted (after removing excess water) to the nearest 0.1 g, the pigmentation stage of the glass eel (to check for stages having resumed their growth).
- Whenever possible, the samples of glass eel should be collected in the estuary downstream from the trap (since there is a delay before the ascent of glass eel trap). For sites comprising a mixture of glass eel and yellow eels, in addition to the described individual sampling, group metrics should indicate the proportion of glass eel in the mixture (reported as weight, if the series is weight based, and as numbers if the series is made of counts).
- For sites comprising yellow eels, group metrics of the average size and weight (and if possible, age) of ascending yellow eels, as well as individual samples of yellow eel size and weights.

Agreements and commitments on the coordination of diadromous species data collection

MS involved: ALL

MS agreed that the following activities should be evaluated and developed further to be part of the RWP:

- Ensure comparable methods between regions (e.g., in sampling methodologies such as recruitment data series, electrofishing protocols or comparability of effort data).
- Enable usage of Regional Data Base and Estimation System (RDBES) for partial data storage (landings).
- Meetings and/or email exchanges between ISSG Diadromous fish species and Assessment Working Groups will be maintained to ensure alignment between data collection and data use.

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Name of the study: 5 North Sea bass (*Dicentrarchus labrax*) stock marine recreational fisheries sampling

1. Aim of the test study

The North Sea seabass stocks were identified by the ISSG Marine Recreational Fisheries as a candidate for a regional sampling plan, because it is a stock that involves several Member States (MS) including a non-EU MS (UK).

2. Duration of the test study

2025-2027.

3. Methodology and expected outcomes of the test study

As a first approximation, the importance in terms of catches of this stock by MS has been reviewed. In addition, a first review of the available data (historical data series, etc.), methodologies used for data collection, etc. has also been carried out. With this information, the possible coordination of sampling by MS is being discussed, with the aim of being able to incorporate this information into the assessment groups.

Agreement and commitment on the development of North Sea bass marine recreational fisheries sampling

MS involved: ALL

MS agreed to continue the work to provide assessment working groups with recreational catches of North Sea bass using the agreed methodology.

Text Box 1b: Other data collection activities

General comment: Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection.

This textbox is aimed at describing fundamental tools and services developed for a better functioning of the RCGs. Each sub-section of RWP textbox 1B needs to be referred to in all involved MS NWP 2025-27 in order to confirm the listed agreements and commitments.

1 - RCGs Secretariat

1. Aim of the activity

Support the operation and functioning of the RCGs Secretariat underpinning fluent regional coordination of data collection activities as stipulated by Article 9 of the DCF Regulation (EU) 2017/1004.

2. Duration of the activity

2025-2027

3. Methodology and expected outcomes of the activity

The Secretariat's organizational structure has been set up and pilot tested throughout the SecWeb project

(MARE/2020/08 grant). The key functions of the RCG's Secretariat have been determined in close collaboration with all RCGs, in particular with RCG and Intersessional Subgroups (ISSGs) chairs. A business model has been developed. In addition, good practices in communication within and among the RCGs have been promoted and installed. The overall capacity to reach out to a wider public and increase the visibility of the work and output of the RCGs has been boosted with the development of a dedicated website and the consolidation of a visual identity.

RCG chairs and the RCG's network (including participants and stakeholders) have readily acknowledged the added value of having an RCG's Secretariat to support and improve data collection coordination activities.

Based on the SecWeb project outputs, the proposed data collection related activity will connect the whole RCG network and stakeholders to work together on common goals. The Secretariat provides fluent administrative and coordination support for more efficient regional coordination liberating national experts involved in regionally coordinated data collection activities from heavy burden administrative tasks.

Overall expected outcomes:

1. A full-time dedicated Secretariat support service for the RCGs enables a consistent approach to administer RCG activities, facilitating communication, and enhancing the intersessional work, and also supporting the work of RCG sub-groups.
2. A dynamic and permanently updated website (<https://www.fisheries-rcg.eu/>) will be kept available including as features:
 - Repository – one-stop location and reference location for reports, various agreements covering regional coordination, RCG protocols and working procedures
 - Integration – allowing seamless synchronization with third-party information needs and requests;
 - Responsive display – to serve content across multiple devices, screens, and browsers;
 - User experience- maintaining a satisfactory user experience throughout the website sections;
 - Accessibility – To any interested visitor in a user-friendly way across the website sections;
 - Retention- keeping visitors coming back to the website;
 - Links to relevant restricted access sites and virtual environments.

The visibility and understanding of the work carried out by the RCGs is increasingly consolidated for everyone, from data collectors to stakeholders.

A regularly updated Stakeholders' database improves the communication function among the RCGs' experts and the stakeholders' community.

Internal communication protocols and help-desk make it easier for any new comer to efficiently join, adopt responsibilities, and contribute to the RCGs objectives and work commitments.

The public description of the secretariat functions, operational working protocols and commitments will build trust and enhance the whole network transparency and accountability.

Agreements and commitments are as follows:

Agreement and commitment on RCGs secretariat

MS involved: ALL

At the 2022 RCG Decision meeting, all MS agreed on the principle of the implementation of a long-term secretariat in support of the work of all RCGs. This agreement led to continued support beyond the deadline of the SecWeb project. Based on the experience gained, the extended support for regional coordination activities and the aim to secure a long-term, uninterrupted support, the agreement on the principle remains in place for 2025-2027.

General comment: Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection.

2 - Regional data base and estimation System (RDBES)

1. Aim of the data collection activity

To contribute to the development and operation of the Regional Database and Estimation System (RDBES)

2. Duration of the data collection activity

2025 – 2027

3. Methodology and expected outcomes of the data collection activity

The RDBES is a fundamental tool for regional coordination. The RDBES gathers in a single data base catch, effort and sampling data for biological variables and Protected, Endangered and Threatened Species (PETS) together with information on the sampling design. The RDBES is planned to replace both the existing ICES InterCatch and RDB database systems and has an important part to play in increasing transparency and improving the quality of stock assessment within ICES.

This transition to RDBES requires an important effort by countries:

- To adapt their internal processes to store and provide data in the RDBES data model;
- To calculate required estimates (discard weight, landed weight of species which are landed together, number at length, number at age) using the RDBES data model;
- To reproduce the data management which used to be done in InterCatch, using the estimates coming from the RDBES;
- To take advantage of the WK designed to give countries support in the transition
- To participate in the development of the RDBES through the core group and the different ICES WG and ISSGs giving feedback about different data types and end user needs (including catch and effort data, Small Scale Fisheries data, biological variables, Marine Recreational Fisheries (MRF), PETS, ...)

The RDBES developments planned for different data types, such as SSF, MRF and PETS are embedded in the respective textboxes.

Several ISSGs under the RCGs were established to use the data in the RDBES. These ISSG develop tools and (Shiny)apps to enhance the use of the RDBES by the RCGs. If ICES Assessment Working Groups, Workshops and other Working Groups want to use the developed tools & apps, ICES would need to take the responsibility to make them available, as well to support their use. This approach would be similar as it was the case with the RDBES & SmartDots.

Agreements reached at RCG 2023:

ICES to check data quality in relation to ICES work/stock assessment, also including non-EU countries

All MS ensure to be engaged in a workshop to set up the RDBES Data confidentiality and license. It is reminded that third countries need to be involved in this. Work planned to be finalized by the end of 2023.

Agreements and commitments on RDBES

MS involved: ALL

- RCGs to check data quality in relation to RCG work,
- All MS ensure to allocate experts to the relevant RDBES training sessions, workshops and working groups related to RCG work, in order to have the RDBES roadmap implemented.

General comment: Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection.

3 - Regional Coordination taking place in Inter Sessional SubGroups (ISSGs) and pan regional cooperation between RCGs

1. Aim of the data collection activity

To develop and propose coordinated actions in dedicated thematic areas during the Intersessional year for the RCG NANSEA

2. Duration of the data collection activity

2025 – 2027

3. Methodology and expected outcomes of the data collection activity

Regional cooperation is meant to improve the efficiency of data collection through sharing of expertise, data, best practices, knowledge and collaborative tasks. The RCGs bring together several Member States to coordinate planning and implementation of data collection. Their workplan across the year, from one round of the annual technical meetings to the next, is supported with the setup of the Intersessional Subgroups.

In these subgroups the experts concentrate on specific Thematic Focus Areas, and sometimes they are pan-regional. During the relevant RCG's technical meetings, the different ISSGs present progress and hurdles encountered across the period and propose the update of their Terms of Reference with the tasks and targets for the new intersessional period for approval. The work performed by ISSG is essential for RCG technical meeting preparation and meeting discussions and Member States are requested to name experts in the different ISSG relevant to them and these experts should allocate a significant amount of time (on average 40 hours per ISSG) for carrying the work during the intersessional year.

The ISSG may change over the years as task are completed and new needs are coming up. An updated list of the ISSG operating every year under the umbrella of the RCG NANSEA can be found here: <https://www.fisheries-rcg.eu/rcg-nansea/>

A non-exhaustive list of the ISSG is presented below:

- ✓ ISSG End-user and RCG interaction
- ✓ ISSG RDB catch, effort and sampling overviews
- ✓ ISSG Metier and transversal variable issues
- ✓ ISSG Data Quality
- ✓ ISSG Electronic Monitoring Technologies
- ✓ ISSG Diadromous Fishes
- ✓ ISSG Surveys

- ✓ ISSG Optimized and Operational Regional Sampling Plans
- ✓ ISSG Optimisation of PETS bycatch sampling
- ✓ ISSG Evaluation of the data collected for the Small-Scale Fisheries at EU level
- ✓ ISSG Regionally coordinated stomach sampling
- ✓ ISSG Recreational fishery
- ✓ ISSG Development of Draft Regional Work Plan
- ✓ ISSG National Correspondents

Agreements and commitments on ISSGs and pan regional coordination

MS involved: ALL

- Member States agreed to name experts in the different ISSG relevant to them.
- The only ISSG requiring the presence of all MS is the ISSG on National Correspondents.
- Experts participating in an ISSG should allocate a significant amount of time (on average 40 hours per ISSG) for carrying the work during the intersessional year.

General comment: Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection.

4- Smart Dots

1. Aim of the data collection activity

The SmartDots platform (<https://www.ices.dk/data/tools/Pages/smartdots.aspx>) facilitates exchanges, workshops and training events for calibration of age readings, maturity staging and ichthyoplankton analyses between labs based on images.

2. Duration of the data collection activity

2025 – 2027

3. Methodology and expected outcomes of the data collection activity

A set of software tools supports the user in managing all data of ICES workshops and exchanges on age reading, maturity staging and fish larvae identification. The workshop or exchange manager can manage the meta data related to workshops and exchanges, and the biological readers can carry out readings by annotating images provided by the workshop managers. All registered data are available in the connected reporting environment.

The SmartDots biological reading platform is an opensource solution originally developed by ILVO (Flanders Research Institute for Agriculture, Fisheries and Food). All source code is publicly accessible. The development of SmartDots within ICES is guided by the working group on SmartDots Governance (WGSMART).

Agreements and commitments on Smart Dots

MS involved: ALL

- All MS ensure to be engaged in exchanges and workshops using SmartDots for the different biological variables
- All MS ensure that national experts are trained to use SmartDots. Tutorials are available on <https://www.youtube.com/channel/UCa4bjXo-eBDfW0cm1oEIWeQ/playlists>

General comment: Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection.

5 - Catch, effort and sampling overviews for RCG Technical Meeting

1. Aim of the data collection activity

Using the RDBES to develop baseline tools to be used internal by RCGs and to further developed in a RCG. The overviews should give living support to specific issues that are raised and discussed within RCGs, and for which decisions need to be taken (e.g. ISSG PETS request on the sampled metiers). It will be important that the specific needs of the RCGs are presented to this ISSG in order to be able to produce the overviews accordingly.

In order to enhance the RWP work, aggregated graphs (static) should be developed, as for example total landings in a region (all countries together), or number of fishes sampled per length or number of species sampled. This can give input to look into the regional re-distribution (and agreements) for biological sampling.

2. Duration of the data collection activity

2025-2027

3. Methodology and expected outcomes of the data collection activity

- Production of baseline tools (R-scripts/shiny R) on an annual basis to support the RWP and RCG work. Using hereby the data from RDBES (awaiting the data confidentiality and license final outcome end of 2023)
- Production of graphs to establish regional sampling.

Agreements and commitments on Fisheries overviews

MS involved: ALL

- All MS ensure to upload the data in the RDBES to ensure that fisheries overviews for the relevant regions are as complete as possible.

SECTION 2: BIOLOGICAL DATA

Text Box 2.3: Diadromous species data collection in freshwater

General comment: This text box fulfils Article 5(2)(a), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 2.1(b) and point 2.3 of the EU MAP Delegated Decision annex. Use this text box to give an overview of the methodology used to collect data from freshwater and inland commercial and

recreational fisheries for salmon, sea trout and eel. Also include overview of data to be collected from research surveys on salmon, sea trout and eel in freshwater, and on eel in any relevant habitat including coastal waters.

The work of coordinating diadromous species data collection under DCF is ongoing and further information on plans and developments towards RWP are reflected in Text Box 1A.

There are currently no formal agreements or decisions for regional workplan for salmon, sea trout or eel in place.

Agreements and commitments on the coordination of diadromous data collection in freshwater

MS involved: ALL

- **No regional sampling is planned**

Text Box 2.4: Recreational Fisheries

Region: NANSEA

General comment: This text box fulfils Article 5(2)(a), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 2.2 of the EU MAP Delegated Decision annex. Use this text box to give an overview of the methodology used to collect data on marine and freshwater recreational catches. For freshwater diadromous species, use Table and Text Box 2.3.

The regional coordination of data collection of recreational fisheries is under development in the RCG ISSG Recreational Fishery (see also Textbox 1A, section E on sea Bass). The work relates to the selection of species for the NANSEA region in addition to the mandatory species and the integration of the RDBES.

DCF mandatory species for catch data collection is limited to few species. However, based on the routine surveys carried out and on the pilot studies developed by several Member States under the DCF, it was identified that some of the target species for recreational fisheries are not the ones identified as mandatory.

The ICES Working Group on Recreational Fisheries Surveys (WGRFS) has recommended to carry out multispecies surveys under the routine samplings surveys, considering that the increase on the workload and cost implications are low. Under this scenario, the RCG asked the WGRFS to provide a priority list of species by ecoregion, to be incorporated into the national surveys in addition to the mandatory species.

A preliminary list of species by ecoregion was defined by the WGRFS. This list was developed following an approach similar to a Productivity Susceptibility Analysis (PSA) (e.g. McCully Phillips et al., 2015). The criteria considered under this methodology were: catchability, biological importance in marine recreational fisheries, existing regulations, and socio-economic relevance.

The list and the methodology used were agreed by ICES WGRFS. The aim of this list is to recommend Member States the inclusion of these species in the ecoregions identified in addition to the mandatory species, under the routine surveys.

There is no agreement yet on species list to be included in national sampling plan on top of the species listed in the EU-MAP Regulation. Work ongoing.

Agreements and commitments on the integration of recreational fisheries data into the RDBES

MS involved: ALL

MS agreed that recreational fisheries data should be integrated into the RDBES. The developments needed for this were also prioritized by ICES WGRDBESGOV. In 2023, an official data call was launched by the WGRFS,

with the aim of realizing a first full test about the incorporation of this data following the templates developed with this objective.

Text Box 2.5: Sampling plan description for biological data

Region: NANSEA

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 2.1(a) of the EU MAP Delegated Decision annex. This text box complements Table 2.5.

Sampling plan: Biological data

The regional coordination of sampling plan for biological data is under development in the

- RCG ISSG on Pelagic Freezer Trawler in the North East Atlantic (see Text Box 1A)
- RCG ISSG on Trawlers in the Iberian Waters

The work relates to developing regional sampling plans.

For the handling of PETS data within the fisheries monitoring programmes, see Text Box 4.2

Agreement and commitment on regional sampling plan for biological data

MS involved: ALL

No regional sampling is planned

Text Box 2.6: Research surveys at sea

Research survey: North Sea and Eastern Arctic (ICES areas 1, 2, 3a, 4, 7d)

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

The regional coordination of surveys is under development in the RCG ISSG Surveys. The work relates to presenting all the internationally coordinated surveys in the North Sea and Eastern Arctic (ICES areas 1, 2, 3a, 4, 7d) with commonly agreed text and tables where planned days at sea are reflected. In this context, internationally coordinated surveys are those listed on the Commission Implementing Decision (EU) 2021/1168 of 27 April 2021 and conducted by more than one country.

2025 will be the first year when this RWP is implemented and MS refer to the internationally coordinated surveys in the RWP and add national specificities, if any, in their NWP 2025-2027.

Agreements and commitments on internationally coordinated research surveys at sea in the NS&EA

MS involved: listed in each of the surveys

- Only internationally coordinated surveys are included in the RWP
- Surveys listed below are the ones relevant for the region and are to be conducted by the MS listed as participants
- The allocated effort by MS are given in Table 2.6

International Ecosystem Survey in the Nordic Seas (ASH; ICES acronym: IESNS)

1. Objectives of the survey

The International Ecosystem Survey in the Nordic Seas (IESNS) is an acoustic/pelagic trawl survey carried out in order to investigate distribution and migrations of the Atlanto-Scandian herring (ASH), blue whiting and other pelagic fish and to produce a biomass index for herring and a recruitment index for blue whiting for the ICES Working Group on Widely Distributed stocks (ICES WGWIDE). The survey area spans from Barents Sea area to Northern and central Norwegian Sea and Southwestern Area.

Furthermore, hydrographic conditions and plankton abundance in the Norwegian Sea and adjacent waters are monitored in order to investigate distribution and migration of herring and other pelagic fishes are influenced by environmental conditions.

The survey is carried out in April/May.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Acoustic data are collected using a Simrad EK60 scientific echosounder, Biological sampling is carried out using a single vessel pelagic midwater trawl (country dependent) and Environment details (temperature and salinity) are taken from a CTD cast.

Details of the survey design and sampling protocol is described in the survey manual:

<https://doi.org/10.17895/ices.pub.7582>

3. Description of the participating Member States.

The participating EU Member States are Ireland, Germany, The Netherlands, Sweden and Denmark

The ASH survey is also carried out by four non-EU county (Faroe Islands, Iceland, Norway and Russia), each contributing with its own survey vessel.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by the WGIPS.

A cost sharing agreement is in place, to reimburse Denmark for the ship time at the relative share of each participating MS TAC. Germany, Ireland, the Netherlands and Sweden participate financially and with the provision of scientific staff (see Table 2.6 for details).

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

North Sea Beam Trawl Survey (BTS)

1. Objectives of the survey

Target species of this survey are Common dab (*Limanda limanda*), European plaice (*Pleuronectes platessa*), Thornback ray (*Raja clavata*), Small-eyed ray (*Raja microocelata*), Spotted ray (*Raja montagui*), Smooth hounds (*Mustelus spp.*), common sole (*Solea solea*) Small-spotted catshark (*Scyliorhinus canicula*), Nursehound (*Scyliorhinus stellaris*) and Turbot (*Psetta maxima*) in the North Sea and Eastern English Channel (ICES area 4 and 7d). The survey provides densities (abundance and biomass) indices for the target species as well as hydrographic data. The survey is conducted annually in August-September.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

All surveys coordinated by WGBEAM are carried out with a beam trawl. Depending on the local circumstances and the ship's capacity, the width and rigging of the beam trawls varies.

Details of the survey design and protocol are given in the Manual:

<https://doi.org/10.17895/ices.pub.21603336.v1><https://doi.org/10.17895/ices.pub.21603336.v1>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The Beam Trawl Survey in the North Sea and Eastern English Channel is carried out by Belgium, Germany and the Netherlands.

In total, the BTS is carried out by three EU MSs and one non-EU country (UK), each contributing with its own survey vessel.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by the WGBEAM.

Cost sharing: There is currently no cost sharing agreement in place for this survey. All MS involved contribute financially, technically and with personnel to the survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Kattegat Cod Survey (CODS_Q4)

1. Objectives of the survey

The survey is a combined Danish-Swedish fisherman-scientist survey. The goal of the Kattegat cod survey is to estimate the abundance, biomass and distribution of cod and to establish a fisheries independent time series of catch and effort series. Furthermore, a recruitment index is established. The results have for the first time been used in 2015, together with commercial catch and effort data, to strengthen the scientific advice on the cod stock in Kattegat. The survey is carried out in November/December

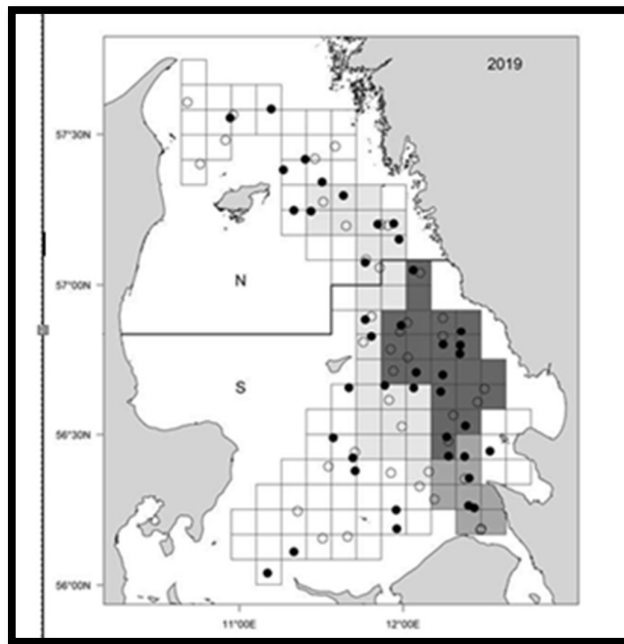
2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Initially, 4 commercial trawlers (2 Swedish and 2 Danish vessels) participated in the survey. In 2016, Sweden continued to use commercial vessel, whereas Denmark used the new research vessel RV Havfisken but with the same trawl as previously on the commercial vessels.

The survey is designed as a stratified random bottom trawl survey. The survey area is stratified in three strata based on information from commercial fishers on expected densities of cod: a stratum with expected high density of cod, a stratum with medium density and a stratum with low density. In 2010 and 2011, there was a minor re-stratification to adopt the areas to the catch information collected during the former years. In 2013, a fourth stratum was added to better assure data from the area closed for fisheries. Each stratum is further subdivided in 5*5 nm squares. The high density, medium density and closed area stratum has been allocated relatively more stations than the other strata.

Each vessel is assigned 20 or 40 stratified randomly selected survey squares, and all vessels are assigned the same proportion of hauls from each stratum.

Within each square, the skipper decides on the best way to fish at the location, e.g., set position and tow direction. The survey gear is a 112 feet commercial bottom trawl with 70 mm liner in the cod- end. Each haul is sorted, and all species are recorded, length measured and weighted. For target species biological parameters are collected on fish length, age, weight, sex and gonadal maturity. In case of large catches subsampling is performed.



Map showing the CODS Q4 survey area and stratification (in grayscale). N (north) and S (south) identify the two domains used for biological sampling. The Swedish (filled symbols) and Danish (open symbols) set positions in 2019 are shown to illustrate the spatial distribution of sampling stations.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

Survey planning and data analysis is conducted in close cooperation between Denmark and Sweden and the results are provided to ICES WGBIFS.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Cost sharing: There is currently no cost sharing agreement in place for this survey. All MS involved contribute financially, technically and with personnel to the survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Demersal Young Fish Survey (DYFS)

1. Objectives of the survey

The aim of the survey is to provide abundance indices for flatfish species (sole, plaice, dab, flounder, turbot and brill) and brown shrimp along the North Sea shore. The indices are part of a time series which started in the early 1970's.

The DYFS sampling area currently ranges from the coastal zone of Belgium, the Netherlands and Germany all the way to Esbjerg in Denmark. The surveys include the Dutch Scheldt basins (Eastern resp. Western Scheldt), and the Dutch and German Wadden Sea.

The collected data are submitted to ICES DATRAS.

DYFS takes place from August till the end of October.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

All DYFS surveys are carried out with a beam trawl. Depending on the local circumstances and the ship's capacity, the width and rigging of the beam trawls varies. However, Most countries have used the same gear for the full time period and did not change the geographical area over time. Operation of the gear might occur from the aft or from the side, depending on the ship's design.

All DYFS gears are rigged with bobbins, to rouse shrimp from the sediment into the net. Due to the target flatfish age groups as well as shrimp, mesh size for the DYFS in the cod-end is around 20 mm.

The survey manual is being developed as part of Inshore beam trawl survey manual.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The Beam Trawl inshore Survey in the North Sea is carried out by Belgium, Germany and the Netherlands.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by WGBEAM. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

International Bottom Trawl Survey (IBTS_Q1)

1. Objectives of the survey

- To determine the distribution and relative abundance of pre-recruits of the main commercial species with a view of deriving recruitment indices;
- To monitor changes in the stocks of commercial fish species independently of commercial fisheries data;
- To monitor data for the determination of biological parameters for selected species;
- To collect hydrographical and environmental information;
- To determine the abundance and distribution of late herring larvae in order to provide the ICES Herring Assessment Working Group (HAWG) with a recruitment index for the North Sea herring stock.

Major target species using bottom trawl (Grand Overture Vertical): herring, sprat, cod, haddock, whiting, saithe, Norway pout, plaice, turbot, gurnards, flounder and rays in the North Sea (ICES area 3a, 4).

Major target plankton species using Midwater Ring Net (MRN2): herring

In addition, the distribution and relative abundance of all fish species and selected invertebrates is recorded.

The survey is conducted annually in January-February.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

All IBTS surveys are conducted using Bottom trawling with a standard GOV trawl, vertical profiles (CTD) for physical oceanography data and MRN2 net haul for Plankton;

Details of survey design and methods can be found in the Survey manuals:

ICES. 2020. Manual for the North Sea International Bottom Trawl Surveys. Series of ICES Survey Protocols SISP 10-IBTS 10, Revision 11. 102 pp. <http://doi.org/10.17895/ices.pub.7562> and

ICES. 2017. Manual for the Midwater Ring Net sampling during IBTS Q1. Series of ICES Survey Protocols SISP 2. 25 pp. <http://doi.org/10.17895/ices.pub.3434>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is carried out by France, The Netherlands, Germany, Denmark, Sweden

In total, The IBTS is carried out by five EU MSs and three non-EU countries (UK-England, UK-Scotland and Norway), each contributing with its own survey vessel.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by the IBTSWG.

Coordinating bodies are the ICES International Bottom Trawl Survey Working Group (IBTSWG) for trawl samples and the ICES Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent seas (WGSINS) for plankton sampling. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

International Bottom Trawl Survey (IBTS_Q3)

1. Objectives of the survey

The main objective of the IBTS Q3 is to provide abundance indices of the target species haddock, cod, saithe, whiting, Norway pout, herring, sprat, turbot, pollock, flounders, rays and plaice in the North Sea and the Skagerrak (ICES area 3a, 4). Apart from abundance indices, information is collected on individual length, weight and age for the target species. Additional age data are obtained for selected fish species to be evaluated for future use in assessments. Furthermore, abundance, weight and length data are collected for all fish species caught. This serves the second objective to obtain information on changes in the abundance and distribution of fish species not commercially targeted, and in the composition of regional groundfish assemblages.

The survey is conducted annually in August.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Types of data collected include biological data for the groundfish community, as well as additional data on the bycatch of benthic invertebrates. Further accompanying data recorded include information on stations and gear performance, hydrographic data, observations of weather and sea state. The data are stored locally in databases in the national institutes and submitted to public international databases at ICES. - A detailed description of the survey methods can be found in the corresponding survey manual:

<https://doi.org/10.17895/ices.pub.7562>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is carried out by Germany, Denmark and Sweden

In total, The IBTS-Q3 is carried out by three EU MSs and three non-EU countries (UK-England, UK-Scotland and Norway), each contributing with its own survey vessel

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by the IBTSWG. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

International Herring Larvae Surveys (IHLS)

1. Objectives of the survey

The main objective of the survey is to help to assess the herring stocks in the North Sea. The results of the herring larvae surveys are used to calculate an overall biomass index of the SSB of North Sea autumn-spawning herring as well as the relative contribution of different stock components on the total herring reproduction. The surveys monitor the annual distribution and abundance of herring larvae at the main spawning locations, the length frequency of herring larvae, as well as ambient water temperature and salinity. All relevant herring larvae data are stored together with basic hydrographic information in the ICES eggs and larvae database. The surveys are conducted annually during autumn (September) and winter (January).

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Herring larval abundance is surveyed at the major herring spawning grounds in the North Sea, e.g. in the Orkney/Shetland area, the Buchan region, the Central North Sea and the Southern North Sea. Standard gears are high-speed GULF samplers, deployed in a double oblique manner to near the seabed and back to surface. Stations are located on a 10 by 10 nautical miles grid. This grid includes every square that is known to contain herring larvae less than 10 mm. Herring larvae are sorted from the samples and length-measured. The number of larvae per m² at each station is used to calculate mean numbers of larvae per m² for each ICES rectangle (consist of nine IHLS stations in total). These values are raised by the sea surface corresponding to the relevant rectangle and summed over the total area to obtain larvae abundance indices.

The manual of the IHLS is available as Annex 7 to the ICES WGIPS Report 2010.

<https://doi.org/10.17895/ices.pub.19657797.v1>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

Germany and the Netherlands participate in the IHLS sampling.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by WGSINS. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

North Sea Herring Acoustic Survey (NHAS)

1. Objectives of the survey

The survey aims to provide an annual estimate of the distribution, abundance and population structure to inform the assessment of the following herring and sprat stocks: Western Baltic spring-spawning herring (in ICES Divisions 4 and 3a), North Sea autumn-spawning herring (in 4, 3a and 7d), West of Scotland herring (in 6aN), Malin Shelf herring (west of Scotland/Ireland in 6aN-S and 7b,c), North Sea sprat (in 4) and sprat in 3a (Skagerrak/Kattegat). The derived estimates and age structure of herring and sprat are used as tuning indices in the respective assessments and are submitted annually to the ICES Herring Assessment Working Group (HAWG). The survey is conducted annually in June-July.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Data collected include 1nm NASCs for clupeid fishes (aggregated and disaggregated acoustic data), age and length distribution for all clupeids in the investigation area, maturity at age.

Survey manual: <https://doi.org/10.17895/ices.pub.7582>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is carried out by Ireland, Denmark, The Netherlands and Germany.

In total, The NHAS is carried out by four EU MSs and two non-EU countries (UK-Scotland and Norway), each contributing with its own survey vessel.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by WGIPS. Each participating country is responsible for the activities conducted on its national part of the international survey. A survey coordinator monitors and plans the national contributions.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Nephrops UWTV (UWTV3-4)

1. Objectives of the survey

The purpose of the survey is to estimate the abundance of Nephrops in the Skagerrak and the Kattegat (Functional units 3 and 4). The survey is carried out in March/April.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

The survey design and method are described in the survey manual: <https://doi.org/10.17895/ices.pub.8014>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is conducted by Denmark and Sweden.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants are coordinated by WGNEPS.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

Research survey: North East Atlantic (ICES areas 5-14 and NAFO areas)

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

The regional coordination of surveys is under development in the RCG ISSG Surveys. The work relates to presenting all the internationally coordinated surveys in the North Atlantic (ICES areas 5-14 and NAFO areas) with commonly agreed text and tables where planned days at sea are reflected.

2025 will be the start of the implementation of this work.

The MS involved are listed in each of the surveys below.

Agreements and commitments on internationally coordinated research surveys at sea in the North Atlantic

MS involved: listed in each of the surveys

- Only internationally coordinated surveys are included in the RWP
- Surveys listed below are the ones relevant for the region and are to be conducted by the MS listed as participants
- The allocated effort by MS are given in Table 2.6

International Blue Whiting Spawning Survey (IBWSS)

1. Objectives of the survey

- The primary aim of the International blue whiting spawning stock survey is to determine the age stratified abundance and distribution of blue whiting (*Micromesistius poutassou*) using acoustic survey techniques
- Collect hydrographic data by means of vertical CTD profiles
- Conduct directed trawl sampling using a pelagic trawl to determine the biological profile of target species
- Conduct directed trawl sampling using a pelagic trawl to determine the species composition of mesopelagic fish echo traces
- Conduct visual abundance surveys of marine mammals and seabirds

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

The Manual for International Pelagic Surveys (IPS) describes the methods used for survey design, analysis and reporting of survey data: <https://doi.org/10.17895/ices.pub.7582>

Details of the implementation are available in the latest IBWSS survey report ([WGIPS \(ices.dk\)](http://www.wgips.org))

3. For internationally coordinated surveys, describe the participating Member States/vessels.

This survey acoustically measures the size of the spawning stock of blue whiting (*Micromesistius poutassou*) in western waters and is conducted by vessels from Ireland, The Netherlands and Spain.

In total, the IBWSS survey is carried out by three EU MSs and two non-EU countries (the Faroe Islands and Norway).

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants are coordinated by WGIPS.

Cost sharing: A cost sharing agreement is in place, to reimburse Ireland and the Netherlands for their ship time at the relative share of their TAC. Participating Member States for the blue whiting survey are

Denmark, Germany, the Netherlands, Ireland, France and Sweden (based on the share of catches determined for 2023).

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Western IBTS 4th Quarter (IBTS_Q4) including porcupine survey

1. Objectives of the survey

The main objective of the IBTS_Q4 is to collect data on the distribution, relative abundance and biological parameters of commercial commercially exploited demersal species. The indices currently utilised by assessment WG's are for haddock, whiting, plaice, cod, hake and sole. Survey data is also provided for white & black anglerfish, megrim, pollack, ling, gurnards, blue whiting and a number of elasmobranchs and cephalopods as well as several pelagics (herring, horse mackerel and mackerel). Occurrence of vulnerable or sentinel invertebrate species such as corals, sea pen, fan mussel and ocean quahog is also noted. Marine litter is also sorted and recorded. Oceanographic data are collected from CTD instrument on trawl door and occasional surface to sea bed CTD transects. Sediment grabs are carried out opportunistically using a Day grab.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Stations for the **Irish** survey are randomly selected within a stratified survey area in 6a south, 7b & 7g-j north based on depth and historic analysis of survey catch distribution rates. Fishing is conducted using a GOV 36/47 trawl (20mm liner) with 5.3m² (1450 Kg) Morgere otter doors, 16" hoppers (D-gear) in area 6a and 8" disks (A- gear) areas 7b, g and j. The gear is trawled at 4kn for 30min at each station. Sweeps are 55m up to 80m depth, extended to 110m in deeper water to minimise variable trawl geometry.

The **Portuguese** surveys cover 9a area in Portuguese waters. The surveyed area extends from latitude 41°20' N to 36°30' N, and from 20 to 500 m depth. The surveys were carried out with the R/V "Mário Ruivo", a multipurpose oceanographic vessel, with 76 m. The used fishing gear is a bottom trawl (type Norwegian Campell Trawl 1800/96 NCT) with a 20 mm codend mesh size. The mean vertical opening is 4.6 m and the mean horizontal opening between wings and doors is 15.1 m and 45.7 m, respectively. The polyvalent trawl doors are rectangular (954 mm x 535 mm) with an area of 1.75 m² and weighting 500 Kg.

The **French** survey samples ICES area 7d annually during 30 days in October following a fixed sampling design with about 88 trawling stations. The survey follows the standard protocol and uses the standard bottom trawl "gear A" (GOV 36/47) to conduct 30min tows during daylight.

The **Spanish** survey is carried out annually in three different surveyed areas following a stratified random sampling procedure with bottom trawl hauls: zones 8c and 9a north, 35 days in September-October with about 133 trawling stations; zone 9a south, 14 days in November with about 45 trawling stations; and zone 7ck: 31 days in October with about 80 trawling stations. IBTS SISP 15 manual: <https://doi.org/10.17895/ices.pub.3519>

3. Description of the participating Member States.

The survey is run by Spain, France, Ireland and Portugal.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are coordinated by the IBTSWG for trawl samples and the WGSINS for plankton sampling. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

International Mackerel and Horse Mackerel Egg Survey (MEGS)

1. Objectives of the survey

The main objective of the survey is to extract, identify and stage the development of mackerel and horse mackerel eggs collected from plankton samples. Samples are collected every ICES half statistical rectangle. A CTD is attached to the plankton sampler and information on temperature, salinity and sample depth is collected at each station. Gonad samples are also collected from female fish which are analysed for fecundity, batch fecundity, atresia and POF stage. These data are used to provide WGWISE, the assessment group for widely distributed pelagic fish, with a spawning stock biomass, SSB, estimate for mackerel, and an egg production estimate for horse mackerel.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

The survey protocols have been published by ICES and can be accessed at

<https://doi.org/10.17895/ices.pub.5139>

and

<https://doi.org/10.17895/ices.pub.5140>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The MEGS surveys are carried out by Ireland, Portugal, Spain, Germany and The Netherlands

In total, the MEGS is carried out by five EU MSs and four non-EU countries (UK-Scotland, the Faroe Islands, Norway and Iceland), each contributing with its own vessel.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

For Type of participation other than 'Financial' describe the type of participation, and/or the background of the type of participation in more detail.

The survey is coordinated by ICES WGMEGS. Task sharing applies. Fecundity and atresia samples are divided among the three analysing EU countries (Ireland, the Netherlands, Spain), and two non-EU countries UK-Scotland and Norway.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Sardine, Anchovy, Horse Mackerel Acoustic Survey (SAHMAS)

1. Objectives of the survey

The surveys have a different origin, but together provide information on abundance estimates of a suite of small pelagic species, primarily anchovy, pilchard, horse mackerel and boarfish in the NE Atlantic (ICES areas 6, 7, 8, 9). The surveys take place between mid-March and July.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Methods have been validated by WGACEGG and are described in details in the survey protocols manual: <https://doi.org/10.17895/ices.pub.7462>

Multibeam and multifrequency echosounders provide real time information on the spatial patterns and abundance of small pelagic fish. Simultaneously, a Continuous Fish Eggs Sampler (CUFES) provide complementary information on anchovy and sardine eggs. The presence and abundance of seabirds and marine mammals are also continuously recorded along transects during daytime. The species composition of fish school echoes are identified by midwater trawling, performed in an adaptative manner. CTD stations and zooplankton net casts are performed at night to characterize the small pelagic fish biotic and abiotic environment.

CUFES samples are processed onboard using the Zoocam egg and mesozooplankton scanner system, which allows for the semi-automatic identification and counting of anchovy and sardine eggs. Fish biological samples are recorded and analysed at sea, including anchovy and sardine age readings. Acoustic and fishing data are combined using the EchoR R package, to derive small pelagic fish biomass estimates and distribution maps.

Acoustic and fishing data, as well as biomass assessment results are stored in the EchoBase relational database. Acoustic and fishing data are shared within the ICES ACEGG working group. They are being stored in the ICES dedicated database: <https://www.ices.dk/data/data-portals/Pages/acoustic.aspx>.

Anchovy, sardine, mackerels, horse mackerels, blue whiting and boarfish biomass estimates derived from data collected during PELGAS are provided to ICES stock assessment groups (WGHANSA and WGWISE).

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The spring acoustic survey SAHMAS includes the PELAGO survey carried by Portugal, the PELACUS survey carried out by Spain and the PELGAS survey carried out by France.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

The survey is internationally coordinated within the ICES Working Group on Acoustic and Egg Surveys for Sardine and Anchovy in ICES Areas 7, 8 and 9 (WGACEGG). Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Sardine DEPM triennial (SDEPM)

1. Objectives of the survey

The objectives of the survey are to Estimate the spawning stock biomass (SSB) of the Atlanto-Iberian sardine stock (ICES 9a plus 8c- Spain), using the Daily Egg Production Method (DEPM).

The SDEPM survey involves vertical ichthyoplankton sampling on fixed stations with a CalVET net. Simultaneously, the auxiliary CUFES system operates underway (between the CalVET stations), collecting surface plankton samples (3m below surface approximately) every 3 nm. The deployment of both samplers follows a predefined grid of fixed transects perpendicular to the coast and spaced 8 nm, covering the platform at least until the 200 m isobath. Decisions on the offshore limit of surveying (delimitation of the spawning area) are made, adaptively, depending on the egg results provided by the samples obtained by the CUFES system. After hauling, ichthyoplankton samples are preserved and subsequently processed and analysed in laboratory. Concurrently to the plankton sampling with the CalVET and the CUFES, environmental data (temperature and salinity and fluorescence) are recorded. The ichthyoplankton samples are then used in view of:

- Quantifying and identifying per developmental stage sardine eggs observed over the whole surveyed area;
- Delimiting and estimating the spawning area of sardine;
- Estimating sardine daily egg production.

Simultaneously with the ichthyoplankton sampling, fishing hauls are conducted by pelagic or bottom trawling, opportunistically, following the information provided by the RV echo-sounder. Their number and spatial distribution aim at ensuring a good and homogeneous coverage of the survey area and an adequate representation of the population demography and distribution. Samples collected by the RV are often complemented with samples obtained from the commercial purse-seine fleet at the main landing harbours, during the period of the survey. Immediately after trawling, sardine fish samples are processed onboard the RV, individual biological information is recorded, and biological material is collected and preserved for subsequent histological processing in laboratory.

The data and material collected are used to estimate adult parameters (sex ratio, mean female weight, mean batch fecundity and spawning fraction) within the mature component of the population, and subsequently calculate sardine daily fecundity.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

ICES manual for DEPM survey (Series of ICES Survey Protocols) are being finalized by ICES WGACEGG.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The EU MSs participating to this survey are Spain and Portugal.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Sardine DEPM survey is coordinated internationally under the auspices of the ICES WGACEGG; Portuguese survey carried out jointly with the Spanish survey (from the Instituto Español de Oceanografía, IEO) in order to cover the Atlanto-Iberian sardine stock area (9a, 8c). Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Nephrops UWTV Surveys (UWTV 30)

1. Objectives of the survey

- To obtain estimates of Nephrops burrows densities in the Gulf of Cádiz from a randomized isometric grid of UWTV stations spacing 4 nautical miles using the underwater images.
- To define the Nephrops distribution in the Gulf of Cadiz
- To obtain density estimates of benthic-demersal macrofauna species and the occurrence of trawl marks on the sea bed
- To calibrate benthic-demersal macrofauna observed in the underwater videos and those obtained in the beam trawl.
- To measure oceanographic variables using a sledge mounted CTD

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Manual for Nephrops Underwater TV Surveys, coordinated under ICES Working Group on Nephrops Surveys (WGNPS) <https://doi.org/10.17895/ices.pub.4370>

The UWTV survey design follows a randomized isometric grid of stations at 4 nm spacing. The stations ranged from 130-650 m depth with an average depth around 410 m. Additionally, stations located on the shallower edge of the study area are considered in order to verify the boundary of the Nephrops distribution. The sledge, once stable on the seabed, is towed at between 0.6-0.7 knots in order to obtain the best possible conditions for counting burrows and 10 good minutes are recorded. This time corresponds to 200 m swept, approximately. HiPAP transponder on the sledge is used to obtain the sledge position. The distance over ground estimate (DOG) is calculated using the sledge position and the field of view of the video footage is 75 cm (FOV), which was confirmed using line lasers.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

Spain is the only participant to this survey (as in Table 2.6)

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants are allocated by the responsible ICES survey planning group. Each participating country is responsible for the activities conducted on its national part of the international survey. Cost sharing: There is currently no cost sharing agreement in place for this survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Nephrops UWTV Surveys (UWTV 16-17, UWTV 19, UWTV 20-22)

Three UWTV surveys in any one year but they are described here as one as the areas surveyed can interchange during the survey periods depending on weather conditions.

1. Objectives of the survey

- The main objective of the Irish *Nephrops* Underwater TV surveys is to obtain quality assured estimates of *Nephrops* burrow densities for the following Functional Units (FU): 16-17, 19, 20-22.
- Occurrence of vulnerable or sentinel invertebrate species such as soft corals, and sea pens is also noted. Litter is recorded.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Stations are randomly selected within a stratified survey area sufficient to cover adequately the known spatial and bathymetric distributions for each stock and ensure a CV of less than 20% for the total abundance estimate as recommended by SGNEPS. This data is submitted to [WGCSE](#) on an annual basis to contribute to stock assessment and management advice and also to WGNEPS annually, for survey coordination and quality control purposes.

At each station the UWTV sledge is deployed to capture time referenced high-definition image data with field of view or 'FOV' of 1.03 metre. Vessel position (DGPS), depth and position of sledge using a USBL transponder are recorded every 3 seconds. Occurrence of vulnerable or sentinel invertebrate species such as corals and seapen is also noted. Litter is recorded. Oceanographic data are collected from a sledge mounted CTD instrument. Sediment grabs are carried out opportunistically using Day grab.

When time allows beam trawling is carried out to opportunistically sample *Nephrops* and macro benthos, where the aim is to carry out approximately 7 beam trawls randomly on FU 17 and FU 22 only.

Sampling design description: Individual video transects are the Primary sample Unit (PSU), these are selected from random locations inside each stratum. Each transect is then processed according to the ICES Manual for *Nephrops* Underwater TV Surveys TIMES 65 manual <https://doi.org/10.17895/ices.pub.8014>.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

Ireland RV Tom Crean

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Relevant international planning group WGNEPS ICES Working Group on Nephrop Surveys.

Individual tasks to survey participants are allocated by responsible ICES Survey Planning Group. Each participating country is responsible for the activities conducted on its national part of the international survey.

Cost sharing: There is currently no cost sharing agreement in place for this survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Mackerel Egg Survey (triennial) (NSMEGS)

1. Objectives of the survey

The survey aims to estimate egg production and SSB for North Sea mackerel. The survey is conducted every third year, and the next survey is planned for 2022. Plankton sampling is performed to provide information on the distribution and abundance of mackerel eggs and some pelagic trawling is carried out for collecting adult female mackerel for fecundity estimates. The survey is carried out in May/June.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

The survey design and sampling procedures are described in:

[http://www.ices.dk/sites/pub/Publication%20Reports/ICES%20Survey%20Protocols%20\(SISP\)/SISP%206%20-%20MEGS%20V1.3.pdf](http://www.ices.dk/sites/pub/Publication%20Reports/ICES%20Survey%20Protocols%20(SISP)/SISP%206%20-%20MEGS%20V1.3.pdf)

and

[http://www.ices.dk/sites/pub/Publication%20Reports/ICES%20Survey%20Protocols%20\(SISP\)/SISP%205%20-%20WGMEGS%20V11%20Manual%20for%20AEPM%20and%20DEPM%20fecundity.pdf](http://www.ices.dk/sites/pub/Publication%20Reports/ICES%20Survey%20Protocols%20(SISP)/SISP%205%20-%20WGMEGS%20V11%20Manual%20for%20AEPM%20and%20DEPM%20fecundity.pdf).

3. For internationally coordinated surveys, describe the participating Member States/vessels.

DNK (RV "Dana")

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Not applicable - DNK only

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

International Redfish Trawl and Acoustic Survey (REDTAS)

1. Objectives of the survey

This survey is part of a coordinated effort of ICES to undertake an International Deep Pelagic Ecosystem Survey in the Irminger Sea and adjacent waters in June/July, estimating the abundance and biomass of the pelagic beaked redfish (*Sebastes mentella*) stocks and conducting additional observations relevant to integrated ecosystem assessment in the area. The survey is conducted triennially in June-July.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

The international trawl/acoustic survey on pelagic redfish in the Irminger Sea and adjacent waters in June/July is carried out by two vessels from Germany and Russia. In the depth zone that can be surveyed by hydroacoustic measurements, i.e. shallower than the deep-scattering layer (DSL; down to about 350 m), hydroacoustic measurements and identification trawls are carried out. Within and below the DSL (down to about 500 m), redfish abundance is estimated by trawls. At depths below 500 m, redfish abundance is estimated by trawls at three depths layers (headline: 550 m, 700 m and 850 m). Biological samples are collected from the redfish caught in the pelagic trawls and hydrographical measurements are taken on regular stations on the survey tracks. For details, see:

<http://www.ices.dk/community/groups/Pages/WGIDEEPS.aspx>

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey takes place every three years and is scheduled to be a joint survey by Germany with the FRV “Walther Herwig III”, Iceland and Russia.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

Individual tasks to the survey participants (e.g. coverage of certain areas in a certain time frame) are allocated by WGIDEEPS. Each participating country is responsible for the activities conducted on its national part of the international survey.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Greenland Groundfish Survey (GGS)

1. Objectives of the survey

The objective is to obtain data for the assessment of cod, demersal redfish and other demersal species off Greenland. The survey is conducted annually in October-November.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

Demersal trawling, plankton sampling and CTD casts for physical oceanographic measurements along standard transects are carried out. The survey started in 1982 and was primarily designed for the assessment of cod, but covers the entire groundfish fauna down to 400 m depth. It is carried out annually during the 4th quarter and provides the only fishery-independent information about the abundance & biomass of groundfish off Greenland (ICES Div. 14b and NAFO Div. 1B-1F). Designed as a stratified random survey, the hauls are allocated to 14 strata (7 geographic areas * 2 depth strata, 0-200m, 201-400m) off West and East Greenland. The fishing gear used is a standardised 140-foot bottom trawl. Biological data from the catches (length distributions for all species, individual weights, gonad and liver weights as well as sex and maturity for the commercial species) are collected, population data raised to the total surveyed area and submitted to the ICES North-Western Working Group (NWWG) and NAFO Scientific Council and used in the respective stock assessments. In addition, hydrographic (CTD) and weather data are collected. The survey is carried out every October/November on FRV “Walther Herwig III”.

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is regularly evaluated through ICES NWWG. DEU is the only EU Member State to undertake this survey. The current vessel used for the survey is FRV „Walther Herwig III“.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

No task sharing with other countries for the autumn survey. Greenland conducts a parallel spring survey with its own vessel. Data from the two seasons are combined in the assessment. No cost sharing applies.

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Sole Net Survey (SNS_NLD)

1. Objectives of the survey

The SNS is carried out annually in September. The Netherlands participates with RV Isis (10 days at sea) in the Dutch, German and Danish coastal zone. The SNS is a mandatory survey. The ICES Manual for the Inshore Beam Trawl Surveys (in prep., presumed finalisation Q2 2022) describes the current objectives:

- a. Create fisheries-independent abundance indices by age group (0 year olds, 1 year olds, and older) for a number of fish species (plaice, sole, dab, flounder, turbot, brill) for the sampled area
- b. Collection of biological data on all fish species including elasmobranch species for ecosystem analysis purposes, including length measurements
- c. Collection of data on (a selection of) epibenthos species for ecosystem analysis purposes.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Table 2.6 for this specific survey.

During daytime, 15 minute beam trawl hauls are conducted. Hydrographical data is collected with a datalog CTD attached to the net. The complete sampling procedure is defined in the ICES Manual for the Inshore Beam Trawl Surveys (in prep.), and is largely in line with the sampling procedures for the Beam Trawl Survey (see above).

3. For internationally coordinated surveys, describe the participating Member States/vessels.

The survey is internationally coordinated by the ICES Working Group on Beam Trawl Surveys ([WGBEAM](#)). The Netherlands is the only MS conducting this survey.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.

No task sharing applies (NLD only MS carrying out this survey). No cost sharing applies.

SECTION 3: FISHING ACTIVITY DATA

Text Box 3.1: Fishing activity variables data collection strategy

General comment: This text box fulfils Article 5 (2)(c), Article 6 (3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 3.1 of the EU MAP Delegated Decision annex. It is intended to describe the method used to derive estimates on representative samples where data are not to be recorded under the Control Regulation (EC) No 1224/2009 or where data collected under Regulation (EC) No 1224/2009 are not at the right aggregation level for the intended scientific use. Text Box 3.1 should be filled only in case complementary data collection is planned

The regional coordination on fisheries activities variables is under development in the RCG ISSG on Métier and transversal variables issues and RCG ISSG on Small Scale Fisheries. The work relates to agreeing on methods to process fisheries activities data that are collected through the control regulation and other national legislation.

Agreements and commitments on a common strategy for data collection on Fishing activity

MS involved: ALL

Transversal variables for all fisheries

- MS agreed to use the methods for assigning métier codes to transversal data: Common standardized/homogenized best practices, R script and reference tables used to assign métiers have been made available on the RCG GitHub <https://github.com/ices-eg/RCGs/tree/master/Metiers>.
- MS agreed to follow general principles for effort calculation for vessels carrying logbooks (more than 10 meters length vessels), as developed in the 2nd Workshop on Transversal Variables in 2016.

Small-Scale Fisheries (SSF) effort reporting

- When reporting SSF vessels (less than 10 meters length) fishing effort for data calls, the estimates should be calculated keeping in line as far as possible with the general principles elaborated in 2016. The commonly used assumption that SSF have generally a daily activity and that therefore the following assumption could be considered: 1 sales note = 1 fishing trip = 1 day at sea = 1 fishing day as far as no other information contradicts.

SECTION 4: IMPACT OF FISHERIES ON MARINE BIOLOGICAL RESOURCES

Text Box 4.2: Incidental catches of sensitive species

Region: NANSEA

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

The regional coordination on Incidental catches of sensitive species is under development in the RCG ISSG on PETS. The work relates to the development of a regional list of priority PET species, the incorporation of PETS data into the RDBES, the assessment of the relative risk of bycatch for the different gear types and/or métiers and agreeing on common methods for data collection.

The work is ongoing and will be developed further in 2023/2024.

Incidental catches of sensitive species - List of PET Species provided by ICES

List of PET Species has been developed by ICES on a region-wide level (https://ices-library.figshare.com/articles/report/ICES_Roadmap_for_bycatch_advice_on_protected_endangered_and_threatened_species/19657167).

A shorter list of species is specifically required in ICES datacall (https://ices-library.figshare.com/articles/report/WGBYC_Data_call_2022_Bycatch_of_protected_species_for_ICES_advisory_work/19745809/2?file=35156167)

These species lists will be used by the RCGs to prioritize future regional work plans regarding PETS sampling programmes. These species lists will be subjected to periodic review and update.

Agreement and commitment on a Regional list of priority PET species

MS involved: ALL

MS to ensure that the species listed in the documents referred above are recorded when encountered during the commercial sampling and given high priority in case concurrent sampling cannot be implemented.

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

RDBES incorporation of bycatch data

The regional coordination of data collection of PET species is under development in the RCG ISSG on PETS. The work relates to the incorporation of bycatch data into the RDBES.

WGBYC members have worked with the RDBES core group over the last years to make sure some formats were suitable for bycatch data (ICES WGBYC, 2023). The results of the tests carried out will allow to assess the incorporation of all PETS bycatch related data into the RDBES, essential for the regional coordination of potential regional sampling plans.

Agreements and commitments on incorporation of bycatch data into the RDBES

MS involved: ALL

- Data format has been agreed
- All MS to upload PETS bycatch related data into the RDBES, essential for the regional coordination of potential regional sampling plans.

It is to be noted that the second bullet point is conditional to data uploading tests which will be carried out together with ISSG PETS, WGBYC and RDBESGOV in 2023/2024.

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

Identification of high-risk fisheries

The work ongoing in ICES WGBYC and PETSAMP series of workshops makes it possible to identify the high-risk fisheries from PETS bycatch, including their effort. The methodology used and the available data also provides information on the spatial coverage of the fisheries, and the abundance and overlap of PET species in the ecoregion. The information obtained through this assessment needs to be processed further by ISSG on PETS to allow the RCGs to identify which are the main fisheries that should be sampled at regional level based on the needs of the main end-users.

Agreements and commitments on the Identification of high-risk fisheries

MS involved: ALL

- The methodology developed by WGBYC (2018) to identify high-risk fisheries, was agreed by the ISSG/PETS and RCG TM of NANSEA.
- MS agreed to give consideration to the identified high-risk fisheries when designing their sampling programme.

Text Box 4.3: Fisheries impact on marine habitats

General comment: This text box fulfils Article 5 paragraph 2(a) and 2(b), Article 6 paragraph 3(a), 3(b) and 3(c) of Regulation (EU) 2017/1004 and Chapter 2, section 4.2 of the EU MAP Delegated Decision annex. It contains information on additional studies on the fisheries impact on marine habitats.

The regional coordination on fisheries impact on marine habitats is under development in the RCG ISSG on stomach sampling. The work relates to the development of a regionally coordinated stomach sampling program.

Regionally coordinated stomach sampling program

1. Aim of the study

The main objective is to establish a regionally coordinated stomach sampling in European waters, starting with the North Sea, Skagerrak and Kattegat.

The regionally coordinated stomach sampling program has been elaborated, planned and coordinated by the RCG ISSG Regionally coordinated stomach sampling. The work relates to a full set up covering on-board sampling, stomach analyses in the laboratory, data storage and report, in European waters. A first coordinated stomach sampling program started in 2022 with North Sea, Skagerrak and Kattegat as a case study and using the International Bottom Trawl Survey (IBTS) Q1 and Q3.

2. Duration of the study

The RWP for 2025-2027 covers the years 4 to 6 of the five-year rolling scheme of the stomach sampling program. The sampling for the program started in 2022.

3. Methodology and expected outcomes of the study

The MS involved in this regionally coordinated program are: Germany, Denmark, France, The Netherlands and Sweden; along with UK-England, UK-Scotland and Norway through their participation in the IBTS. It is to be noted that the sampling allocation is differing from one year to the other and will be balanced out over the five-year period. With limited time and financial resources, it is preferable to concentrate the sampling effort for a particular predator to one year rather than having an insufficient sampling intensity each year. The frequency of stomach samples, however, should at least ensure that important changes in the food web would be detected every 2–5 years. A five-year rolling scheme sampling each year 2-3 key fish predators should be adequate to ensure a sufficient availability of time series data (e.g. meaning that predators “A” and “B” will be sampled in year 1 and 6 and 11 etc.). This will allow for process studies on the evolution of predator-prey interactions over time and a proper parameterisation of improved multi species assessment models and delivers valuable information for the characterisation and environmental status of the food web (additional information on background, sampling schemes and details are available in Annex I.1).

There was no agreement reached yet by MS on analysing the sampled stomachs in their own laboratories or on commissioning other MSs (bilateral agreements) for the period 2025-2027. Regarding the commissioning of stomach sampling, no formal agreement is needed between the country collecting the data

and the one doing the analysis. Data owner is the country that is collecting the stomachs and responsible for submitting the data.

Agreements reached at RCG 2023: MS agreed to start the analysis of the stomachs already sampled in 2022 and 2023 and also those stomachs to be sampled in 2023 and 2024.

Agreements and commitments on a Regionally coordinated stomach sampling program

MS involved: ALL

- MS agree to sample stomachs of defined species according to the rolling sampling scheme given in Annex 1.1
- MS agree to upload the stomach content data (and the associated data) to the <https://www.ices.dk/data/data-portals/Pages/Stomach-content.aspx>[ICES stomach content data base](#), accepting the [ICES data policy](#).

SECTION 5: ECONOMIC AND SOCIAL DATA IN FISHERIES

Text Box 5.2: Economic and social variables for fisheries data collection

General comment: This Text box fulfils Article 5(2)(d), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 5 of the EU MAP Delegated Decision annex. It is intended to specify data to be collected under Tables 7, 8 and 9 of the EU MAP Delegated Decision annex.

Information on regional agreements on economic and social variables for fisheries data collection are developed in the RWP on economic issues

SECTION 6: ECONOMIC AND SOCIAL DATA IN AQUACULTURE

Text Box 6.1: Economic and social variables for aquaculture data collection

General comment: This text box fulfils Article 5(2)(e), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 6 of the EU MAP Delegated Decision annex. It is intended to specify data to be collected under Tables 10 and 11 of the EU MAP Delegated Decision annex.

Information on regional agreements on economic and social variables for aquaculture data collection are developed in the RWP on economic issues

SECTION 7: ECONOMIC AND SOCIAL DATA IN FISH PROCESSING

Text Box 7.1: Economic and social variables for fish processing data collection

General comment: This text box fulfils Article 5(2)(f), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 7 of the EU MAP Delegated Decision annex.

Information on regional agreements on economic and social variables for fish processing data collection are developed in the RWP on economic issues

ANNEX 1.1 - QUALITY REPORT FOR BIOLOGICAL DATA SAMPLING SCHEME

The quality report fulfils Article 6(3)(d) of Regulation (EU) 2017/1004. This document is intended to specify data to be collected under Chapter II, point 2 of the EU MAP Delegated Decision annex: Biological data on exploited biological resources caught by Union commercial and recreational fisheries.

Use this document to state whether documentation in the data collection process (design, sampling implementation, data capture, data storage, sample storage and data processing) exists and identify where this documentation can be found. Provide short descriptions where indicated, even if the documentation can be found in English. Names of sampling schemes and strata shall be identical to those in Tables 2.2, 2.3, 2.4, 2.5, 2.6 and 4.1 of the WP/AR. For quality information on scientific surveys, use the survey acronym as a sampling scheme identifier. For mandatory surveys, refer to Table 1 of the EU MAP Implementing Decision annex, see also MasterCodeList 'Mandatory survey at sea'.

(Sampling scheme identifier: Regional stomach content sampling)

MS: DE, DK, FR, NL, SE; along with UK-ENG, UK-SCO and NOR through their participation to IBTS
Region: North-East Atlantic: North Sea, Skagerrak and Kattegat
Sampling scheme identifier: Regional stomach content sampling
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea (Scientific observer at sea on commercial or scientific vessels)
Time period of validity: 2022 to present
<p>Short description (max 100 words): Background</p> <p>Fundamental changes in the importance of natural versus fishing induced mortality have been observed in the North Atlantic while moving towards maximum sustainable yield (MSY) management targets. The reduction of fishing mortality in combination with successive recovery of fish stocks, especially of some larger predatory species, led to an increasing natural mortality as opposed to fishing mortality. Consequently, estimates of natural mortality have become more important for stock assessments and forecasts. In general, information on prey availability, competition and predation processes in fish stomachs are needed to support several policies (e.g., Common Fisheries Policy (CFP), EU Marine Strategy Framework Directive (MSFD)) that envisage an Ecosystem Approach to Fisheries (EAF) and an Ecosystem Based Fisheries Management (EBFM). Assessing trophic relations with detailed stomach contents analysis increases knowledge on suitable stock-recruit models (e.g., density dependent effects like cannibalism), assessment of fish species (e.g., estimates of Natural Mortality), reliable Biological Reference Points (BRP) considering species interactions, all aiming at providing a more appropriate framework for the implementation of multi-annual management plans. New data on predation is also important for providing both tactical and strategic advice for management of marine ecosystems (FAO 2008), since they positively contribute to the quality of the tools used to quantitatively assess their dynamics (i.e. multispecies assessment models, ecosystem models, etc.). A DG MARE tender (Contract No MARE/2012/02-SI2.632887) pilot study on stomach sampling in the North and Baltic Seas was able to demonstrate, in cooperation with the ICES Working Group on Multi Species Stock Assessment Methods (WGSAM), that cost-effective sampling of stomachs is possible during existing surveys. It was possible to analyse stomachs in a cost-effective manner with the help of national labs and/or external contractors. Results of the FishPi project (EU MARE/2014/19) conclude that opportunistic stomach sampling on existing DCF surveys is a promising way forward. However, missing regional coordination was identified a challenge. The lack of coordination leads to unbalanced sampling effort resulting in a lack of statistically sound sampling of</p>

all key species needed for food web characterisation and finally to a barrier for moving towards an Ecosystem Approach to Fisheries (EAF).

The main objective of the ISSG Regionally Coordinated Stomach Sampling is to establish a regionally coordinated stomach sampling program – potentially covering on-board sampling, stomachs analyses in laboratory, data storage and report – in European waters, starting with the North Sea, Skagerrak and Kattegat as a case study.

Description of the population

Population targeted: A large number of fish species (Whiting, Anglerfish, Megrin, Cod, Horse Mackerel, Hake, Plaice, Haddock, Mackerel, Saithe, Red gurnard, Grey gurnard, Turbot, Brill, Pollack, Tusk, Ling, Tub gurnard, Starry ray, Cuckoo ray, Thornback ray, Spotted ray, Common skate-complex, Spurdog, Tope, Halibut) are targeted, as the aim of this sampling is to provide more accurate estimations of natural mortality and trophic interactions in multispecies assessment models.

Population sampled: Populations of the species mentioned above occurring in the area covered by the IBTS survey in the North Sea, Skagerrak and Kattegat

Stratification: The geographical survey area defined in the IBTS survey manual.

Sampling design and protocols

Sampling design description:

Protocol for stomach sampling at sea during the IBTS Q1 and Q3:

Following the species rolling scheme (see table below), one/two species already sampled for biological parameters (according to the IBTS survey manual) and one/two additional species are to be collected each year, along with all individuals of species occurring in low numbers (“Minor” species in table below), and dead individuals of species of some concern (i.e. individuals of species usually released, mostly sharks and rays).

Year of DCF cycle	Quarter	Species	"Minor" species sampled each year	Species to be sampled opportunistically each year (dead specimens; live specimens are generally released)
1	1	Whiting	Turbot Brill Pollack Tusk Ling Tub gurnard	Starry ray Cuckoo ray Thornback ray Spotted ray Common skate-complex Spurdog Tope Halibut
	3			
	1	Anglerfish		
	3			
	1	Megrin		
	3			
2	1	Cod		
	3			
	1	Horse Mackerel		
	3			
3	1	Hake		

	3			
	1	Plaice		
	3			
4	1	Haddock		
	3			
	1	Mackerel		
	3			
5	1	Saithe		
	3			
	1	Red gurnard		
	3			
	1	Grey gurnard		
	3			

Two stomachs per 5 cm length group are sampled from each haul in every ICES rectangle in quarter 1 and 3 (sampling of stomachs starts from 15 cm total length (≥ 15 cm)). The at sea sampling has to be conducted according to the DCF RCG at sea sampling manual (annex 15.1 in 2023 RCG NANSEA report Part III).

Expected numbers of stomach samples by IBTS participating MS and non-EU countries

Nation	Year	Quarter	Main species	expected number of stomachs (Main)	Quarter	expected number of stomachs (Minor)	Sum of all stomachs per year and nation (Main + Minor)
Denmark	2025	1	Haddock	59	1	21	380
		3		64	3	72	
		3	Mackerel	165			
England	2025	3	Haddock	294	3	118	645
		3	Mackerel	233			
France	2025	1	Haddock	35	1	115	188
		1	Mackerel	39			
Germany	2025	1	Haddock	426	1	113	724
		3		26	3	59	

		3	Mackerel	100			
Netherlands	2025	1	Haddock	74	1	113	241
		1	Mackerel	54			
Norway	2025	1	Haddock	248	1	93	857
		3		250	3	122	
		3	Mackerel	144			
Scotland	2025	1	Haddock	347	1	98	1268
		3		443	3	111	
		3	Mackerel	270			
Sweden	2025	1	Haddock	123	1	194	593
		3		92	3	80	
		3	Mackerel	105			
Denmark	2026	1	Saithe	6	1	21	456
		3		22			
		1	Grey gurnard	150	3	72	
		3		183			
		1	Red gurnard	1			
		3		1			
England	2026	3	Saithe	183	3	118	573
		3	Grey gurnard	263			
		3	Red gurnard	9			
France	2026	1	Saithe	0	1	115	312
		1	Grey gurnard	186			
		1	Red gurnard	11			
Germany	2026	1	Saithe	180	1	113	854
		3		14			
		1	Grey gurnard	336	3	59	
		3		118			
		1	Red gurnard	34			
		3		0			
Netherlands	2026	1	Saithe	0	1	113	288
		1	Grey gurnard	161			
		1	Red gurnard	14			
Norway	2026	1	Saithe	169	1	93	1036
		3		292			
		1	Grey gurnard	186	3	122	
		3		169			
		1	Red gurnard	4			

		3		0			
Scotland	2026	1	Saithe	74	1	98	1128
		3		172			
		1	Grey gurnard	219	3	111	
		3		319			
		1	Red gurnard	87			
		3		48			
Sweden	2026	1	Saithe	62	1	194	604
		3		96			
		1	Grey gurnard	98	3	80	
		3		75			
		1	Red gurnard	0			
		3		0			
Denmark	2027	1	Whiting	158	1	21	427
		3		173			
		1	Anglerfish	1	3	72	
		3		1			
		1	Megrin	1			
		3		0			
England	2027	3	Whiting	317	3	118	504
		3	Anglerfish	20			
		3	Megrin	49			
France	2027	1	Whiting	258	1	115	373
		1	Anglerfish	0			
		1	Megrin	0			
Germany	2027	1	Whiting	387	1	113	723
		3		89			
		1	Anglerfish	29	3	59	
		3		1			
		1	Megrin	45			
		3		0			
Netherlands	2027	1	Whiting	227	1	113	341
		1	Anglerfish	1			
		1	Megrin	0			
Norway	2027	1	Whiting	218	1	93	792
		3		207			
		1	Anglerfish	23	3	122	
		3		22			

		1	Megrim	46				
		3		60				
Scotland	2027	1	Whiting	269	1	98	976	
		3		367				
		1	Anglerfish	16				
		3		22				3
		1	Megrim	36				
		3		57				
Sweden	2027	1	Whiting	181	1	194	586	
		3		128				
		1	Anglerfish	3				
		3		1				3
		1	Megrim	0				
		3		0				

Is the sampling design compliant with the 4S principle? NA

Regional coordination: Coordination of the at-sea sampling is currently performed by the RCG ISSG Stomach sampling, with frequent exchanges with IBTSWG. Evolution of this coordination is a crucial question that should be tackled soon.

Link to sampling design documentation:

(https://datacollection.jrc.ec.europa.eu/documents/10213/1407574/2021_RCG-NA-NSEA+and+RCG+Baltic_TM_partIII_ISSG.pdf/a48620eb-f12a-4e21-a90e-4d44851398de?version=1.4&download=true)

Compliance with international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: Preliminary numbers are recorded by the IBTS coordinators for the Q1 and the Q3 surveys. Final numbers on the sampling progress are reported in the IBTSWG report in the year following the sampling year.

Data capture

Means of data capture: Fishes are collected by bottom-trawling during IBTS, following IBTS protocol evaluated by the ICES IBTSWG. After fish/stomach collection, each sample will be recorded by an individual id.

Data capture documentation: The sampled stomachs are documented in the data storage system of the individual IBTS participating countries. Numbers of sampled stomachs are reported to the IBTS coordinators after the survey.

Quality checks documentation: NA

Data storage

National database: Depending on the choice made regarding the stomach analysis option ((1) each country analyses its own stomachs, (2) bilateral agreements, (3) centralization of stomachs in Stomachs Analyses Centres), countries should store the data in their own national databases.

International database: The goal is to upload all data to the ICES stomach content database, if the money requested to update and maintain the database is allocated.

<https://www.ices.dk/data/data-portals/Pages/Stomach-content.aspx>

Format description:

Quality checks and data validation documentation: consistency checks on vocabulary-related data entry, and cross-checks between related fields

Sample storage

Samples (whether dissected stomachs or entire fish) will be stored frozen onboard and in lab's freezers after landing. For the storage of stomach samples new needs of freezer space might arise for some MS and this needs to be handled and solved to secure the quality of the collected data.

If the stomachs are analysed in centralised labs, transportation of frozen material and associated costs should be considered. It is mandatory that stomachs remain frozen, or samples will be spoiled.

Data processing: not applicable yet. All aspects regarding data processing will be discussed along with end users after the analysis of the first collected data.