

Dutch Ministry of Agriculture, Nature and Food Quality, The Hague

Wageningen Marine Research, IJmuiden

Wageningen Economic Research, The Hague

**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

**The Netherlands Annual Report on data
collection in the fisheries and aquaculture
sectors**

2022

Version 3

[The Hague, June 21, 2023]

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SECTION 1: GENERAL INFORMATION

Data collection framework at national level

General comment: Use this text box to describe how data collection is organised in your Member State (institutions involved, contact information) and in which regional coordination groups (RCG) your Member State participates.

In the Netherlands, the data collection programme is conducted by Wageningen Marine Research (WMR, biological components) and Wageningen Economic Research (WEcR, social-economic components) under the statutory tasks of the Ministry of Agriculture, Nature and Food Quality (LNV). Both institutes provide an annual work plan to the Ministry for the statutory tasks of the next year in October. The national statutory tasks encompass more activities than for the EU data collection programme, e.g. data collection on fresh water fish and fisheries, shellfish and shellfish fisheries data collection.

The data collection methodologies are constant over time and no major changes in approach are foreseen compared to previous years.

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Text Box 1a: Test studies description

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

1. Aim of the test study: No test studies scheduled for the Netherlands.
2. Duration of the test study: NA
3. Methodology and expected outcomes of the test study: NA

No test studies were planned for 2022.

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.

I. Support for regional coordination

Future progress in continued support for regional coordination depends on the SECWEB (Mare 2020-08) project outcomes and the selected route to proceed and fund the required work. As regional coordination is the cornerstone of the collective approach to data collection, the continuation of the work may be embedded in a regional work plan in the future based on national input and support.

II. Support for Regional Databases

In support of regional coordination, Regional databases form the basis for quality controlled storage of data collected under the DCF. Future progress in support for regional databases depends on the selected route to proceed and fund the required development and maintenance of the systems. From a national perspective, the Netherlands is contributing to a variety of groups in support of development and governance of databases (both for surveys and commercial data). In the future the continuation of the work may be embedded in a regional work plan based on national input and support. This input may be through effort and/or financial support through a regional contribution.

I. Support for regional coordination

Brief description of the results (including deviations from the plan and justifications as to why if this was the case).

During 2022 the activities of the RCGs' Secretariat still developed in the context of the SecWeb Project, which was extended to last until the end of February 2023. The RCG experts and the Member States' NCs engaged in several discussions about the long-term stabilisation of the Secretariat services, given the value added by the project to the RCGs' networks, and agreed on a short-term solution for continuity in 2023 which was incorporated with a statement in "Text Box 1b: Other data collection activities" of the Work Plans of the Member States. No deviations arose for the Netherlands.

Achievement of the original expected outcomes of the study and justification if this was not the case.

The SecWeb project has finished. However, the project reports its outcomes in a dedicated report in line with grant obligations. The results themselves are not part of this AR. The longer-term (pan-regional) perspective will build upon the outcomes from SECWEB and be dealt with intersessionally by ISSG NCs in 2023 and beyond.

Incorporation of study results into regular sampling by the Member State.

The Netherlands considers the outcomes of SecWeb as highly valuable for the continued RCG support and aims to integrate the results in future WPs.

II. Support for Regional Databases

Brief description of the results (including deviations from the plan and justifications as to why if this was the case).

In 2022, NLD contributed to a number of ICES groups related to the development and governance of the Regional Database (RDB) and its successor Regional Database and Estimation System (RDBES) as hosted by ICES. NLD delivered various expertise to support advancing the RDB(ES) through these groups, including the so-called core group. No deviations arose for the Netherlands.

Achievement of the original expected outcomes of the study and justification if this was not the case.

The Netherlands continued to contribute to the various relevant RDB-groups and to the ToRs set for the various groups. Achievements are considered as the outcome of the group and not a national outcomes. Various reporting and feedback mechanisms are in place. The results of these groups are not part of the AR.

Incorporation of study results into regular sampling by the Member State.

The Netherlands considers the RDB(ES) as vital for future data collection coordination and dissemination of

data and aims to integrate its contributions to the development in future WPs.

SECTION 2: BIOLOGICAL DATA

Text Box 2.1: List of required species/stocks

Region: North Sea and Eastern Arctic

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(a) of the EU MAP Delegated Decision annex. This text box applies to the annual report and complements Table 2.1.

Deviations from the work plan

No deviations other than mentioned in Table 2.1

Actions to avoid deviations

Not applicable

Region: North-East Atlantic

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(a) of the EU MAP Delegated Decision annex. This text box applies to the annual report and complements Table 2.1.

Deviations from the work plan

No deviations other than mentioned in Table 2.1

Actions to avoid deviations

Not applicable

Region: Other regions

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(a) of the EU MAP Delegated Decision annex. This text box applies to the annual report and complements Table 2.1.

Deviations from the work plan

See AR Poland as sampling (and reporting) in other regions is covered under a multi-lateral agreement with Poland.

Actions to avoid deviations

Not applicable

Text Box 2.2: Planning of sampling for biological variables

Region: North Sea and Eastern Arctic

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(a) of the EU MAP Delegated Decision annex. This text box applies to

the annual report and complements Table 2.2.

Deviations from the work plan

No deviations other than mentioned in Table 2.2.

Specific deviations related to sampling plans are in Text box 2.5 (DEMACT1, DEMACT2, DEMPAS)

Actions to avoid deviations.

Not applicable

Region: North-East Atlantic

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(a) of the EU MAP Delegated Decision annex. This text box applies to the annual report and complements Table 2.2.

Deviations from the work plan

No deviations other than mentioned in Table 2.2.

Specific deviations related to sampling plans are in Text box 2.5

Actions to avoid deviations.

Not applicable

Region: Other regions

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(a) of the EU MAP Delegated Decision annex. This text box applies to the annual report and complements Table 2.2.

Deviations from the work plan

No deviations other than mentioned in Table 2.2.

Actions to avoid deviations.

Not applicable

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.

In the Netherlands, eel (*Anguilla anguilla*) is the only diadromous fish species that is fished commercially in freshwater. In 2010 the Ministry of Economic Affairs introduced an obligatory online catch registration for all freshwater waterbodies. In 2012 effort data (type and number of fishing gears) was added to the registration system. In the catch & effort registration system, yellow eel and silver eel catches are not separated. The existing market sampling programme consists of 36 samples (= fishing trip) collected between May and August, and in the province of Friesland also in autumn. In each sample length measurements of approximate 150 (max. 200) eels are taken from the unsorted catches. Maturity (Silver eel/yellow eel) is registered separately. In addition to collecting length data, eels are collected for biological sampling (life stage, length, weight, sex, age). Annually several hundred eels are dissected for biological samples (4 eels per 10cm class until 50 cm and 2 eels per 10 cm class for eel >50cm). From these eel, a subset of 50 otoliths are selected for ageing and the otoliths are sent to SLU (Swedish university of agricultural sciences). See also Annex 1.1 sampling scheme ELE-FRS-MIS-commercial.

In addition to the fisheries data, fisheries independent surveys take place:

1. Glass eel survey: Yearly survey with 9 glass eel detectors (elvi's). The glass eel monitoring with detectors started in 2019 and is continuous during the glass eel season. See also Annex 1.1 sampling scheme ELE-FRS-MPM.
2. Glass eel survey with a liftnet (1*1m) at Den Oever and at IJmuiden during March/May. The survey started in 1938 and is an important series in the ICES assessment for a European glass eel index. See also Annex 1.1 sampling scheme ELE-FRS-LNP.
3. Lake IJsselmeer and Markermeer are sampled yearly with electric gear (beam trawl in the open water, dipping net in the shore). See also Text box 2.6 (FYMA) and Annex 1.1 Type of sampling activity: trawl hauls.

For *Salmo salar* and *Salmo trutta* commercial fishery is banned, so no data from commercial catches are collected. One fisheries-independent survey takes place: sampling with a traditional salmon fyke on three locations in the Rhine & Meuse catchment area. In total, three locations are sampled in May-July and October-November. One location (river Waal) is sampled annually, the other two (river Maas, river IJssel) biennially. See Annex 1.1 sampling scheme SAL-FGRZ. This survey is funded by the Ministry of Infrastructure and Environment as part of the Water Framework Directive.

Were the planned numbers achieved? Yes

Glass eel: yes

Eel: yes

Salmo salar: yes

Text Box 2.4: Recreational Fisheries

Region: North Sea and Eastern Arctic

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 target population are the resident recreational fishers in The Netherlands. Recreational fishers are >95% anglers.

The Netherlands carries out a biennial sampling programme covering all recreational fisheries in fresh and marine waters. The catches of all species are recorded. As there is no licence system in the Netherlands for marine fishing, the programme consists of a biennial screening survey covering about 25,000 – 60,000 households. These households are questioned on their participation in recreational fishery. Based on the results of this screening survey about 2500 recreational fishermen are selected to provide information on their recreational catches in a biennial logbook survey for one year (see also [van der Hammen et al 2019](#)).

Deviations from the work plan

- *The number of recreational fishermen starting the logbook survey was 2129 instead of 2500. The recruiting of enough fishermen is executed by a commercial company (Kantar) and they were not able to recruit 2500 fishers.*
- *Additional information on 'the catches of all species area recorded': The retained and returned catches of all species are recorded.*
- *Additional information on licences: There is no licence system in the Netherlands covering all fresh water fishing activities and no licence system exists for marine fishing activities.*

Action to avoid deviations

Limited options are available to avoid the deviation as the subcontractor's effort is maximised, yet the willingness to contribute to the data collection seems to decrease.

Text Box 2.5: Sampling plan description for biological data

Region: North Sea and Eastern Arctic

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.

The on-board sampling plan for commercial fisheries in the North Sea and Eastern Arctic areas consists of sampling schemes from, in principle, three predefined sampling populations: passive demersal gears (DEMPAS), active demersal gears (DEMACT1, DEMACT2) and pelagic gears (PEL1, see section 2.5 All regions). The on-shore sampling schemes AUCTION_DEM and AUCTION_SHRIMP, cover respectively demersal landings and brown shrimp (*Crangon crangon*) landing in the main Dutch auctions. Market samples from pelagic trawlers active in the North Sea are covered under All regions (see section 2.5 all regions).

Additional information on sampling schemes

The sampling of passive demersal gears (DEMPAS) concerns a non-probabilistic vessel*trip sampling scheme, with a sampling intensity of 10 trips per year. In practice, probabilistic selection is hampered due to the highly variability of fishing activity throughout the year and the seasonal and weather dependent character of the fisheries. The sampling of active demersal gears (DEMACT1, DEMACT2) is based on a reference fleet. The sampling scheme is a probabilistic vessel*week scheme, with a sampling intensity of 10 observer trips (DEMACT1) and 160 self-sampling trips (DEMACT2) per year. Auction sampling (AUCTION_DEM and AUCTION_SHRIMP) is carried out in the main auctions in the Netherlands, accounting for over 80% of the demersal and shrimp landings. The sampling scheme is based on auction*days stratified by quarter and samples are further stratified by size categories where relevant. Further details on the sampling schemes are provided in Annex 1.1.

Additional description on sampling frames

The sampling frame descriptions as indicated in Table 2.5 includes information by sampling scheme on the fisheries and area.

Deviations from the work plan

DEMACT1

Two out of ten planned trips could not be executed. One was caused by the vessel availability, as in 2022 numerous vessels participating in the reference fleet discontinued fishing during longer periods of the year due to high fuel prices and bad weather. The last observer trip of 2022 could not take place due to the illness of a planned observer.

DEMACT2

As indicated for DEMACT1, in 2022 numerous vessels participating in the reference fleet discontinued fishing for longer periods of the year. Consequently, the “planned number of PSUs” of 160 trips could not be reached in 2022.

DEMPAS

The unpredictability of the Dutch passive fleet, i.e. on the short term it is never certain if/when a vessel will depart, in combination with capacity problems resulted in not reaching the “planned number of PSUs” of 10 observer trips in 2022.

Actions to avoid deviations

For DEMACT1 and DEMACT2 attempts have been made at the end of 2022 and the beginning of 2023 to expand the reference fleet in order to avoid the stated deviations in future. However, as the Dutch North Sea demersal fisheries is currently in a decommissioning scheme which is causing a significant reduction in the fleet, it has shown to be difficult to recruit new vessels for the reference fleet. Eventually, the decommissioning scheme could result in resetting the NLD “planned number of PSUs” for DEMACT1 and/or DEMACT2.

Capacity problems are dealt with on an institute level. In addition an employee recruited in 2022 with an extremely good network in the DEMPAS fleet, has been assigned the task to organise and execute the observer trips for DEMPAS.

Region: All regions

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.

Additional information on sampling schemes

The on-board sampling plan for pelagic trawlers (PEL1) concerns a probabilistic vessel*time sampling scheme, with a sampling intensity of one trip per month. Sampling is carried out by observers. The PEL2 sampling plan is based on self-sampling by instructed fishermen of a reference fleet and concerns a week*ICES division scheme for a predefined list of species. Both sampling scheme cover the pelagic freezer trawler fleet operating in EU waters. Details on the sampling schemes are provided in Annex 1.1. The RCG InterSessional SubGroup “Case study on freezer trawler fleet exploiting pelagic fisheries in the NEA” of which NLD is participant is working towards a regional sampling plan for this fleet.

Deviations from the work plan

Not applicable

Actions to avoid deviations

Not applicable

Text Box 2.6: Research surveys at sea

Region: North Sea and Eastern Arctic

International Bottom Trawl Survey (IBTS_Q1)

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

The IBTS is carried out twice a year, one survey is conducted in the first quarter and a second survey in the third quarter. The Netherlands participates only in the first quarter (Q1) survey with RV Tridens (25 days at sea). The IBTS is a mandatory survey. The [ICES SISP Manual for the International Bottom Trawl Surveys](#) (revision IX) describes the current objectives:

- a. To determine the distribution and relative abundance of pre-recruits of the main commercial species with a view of deriving recruitment indices;
- b. To monitor changes in the stocks of commercial fish species independently of commercial fisheries data;
- c. To monitor the distribution and relative abundance of all fish species and selected invertebrates;
- d. To collect data for the determination of biological parameters for selected species;

- e. To collect hydrographical and environmental information;
- f. To determine the abundance and distribution of late herring larvae (February North Sea survey).

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, GOV trawl hauls are conducted. At night time, a Method Isaac Kidd (MIK) plankton trawl is deployed. Hydrographical data is collected with a CTD (downcast) at every trawl station. Since 2011, litter from the trawl catch is being sorted and registered. The complete sampling procedure and the level of precision are defined in the [ICES SISP Manual for the International Bottom Trawl Surveys](#) (revision IX) and the [Manual for the Midwater Ring Net sampling during IBTS Q1](#).

The ICES IBTS Working Group ([IBTSWG](#)) decides annually on the sampling areas for the contributing MSs.

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

The survey is internationally coordinated by the ICES IBTS Working Group ([IBTSWG](#)) and performed in collaboration with research vessels from France, Germany, Denmark, Sweden. Non-EU countries also participate: UK and Norway.

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

Task sharing applies. The IBTS Q1 survey is carried out by a number of EU MSs and non-EU countries, each contributing with its own vessel. No cost sharing applies.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. International Bottom Trawl Survey Working Group (IBTSWG). ICES Scientific Reports. 04:65. 183pp. <http://doi.org/10.17895/ices.pub.20502828>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).

The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea herring, sprat, Norway pout, haddock, whiting, cod, mackerel, and plaice (age-based indices), and for stock assessments of rays and skates (length and catch information). The survey results are also used by OSPAR for the evaluation of the marine strategy framework directive (every six years). As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.

7. Extended comments

No extended comments.

North Sea Beam Trawl Survey (BTS)

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

The BTS is carried out annually in August/September. The Netherlands participates with RV Tridens (35 days at sea), covering a large part of the North Sea. The BTS is a mandatory survey. The [ICES Manual for the Offshore Beam Trawl Surveys](#) (SISP14, April 2019) describes the current objectives:

- a. Create fisheries-independent abundance indices by age group (1 year olds and older) for a number of fish species (i.a. plaice, sole, dab, lemon sole, flounder, turbot, brill, monk fish) 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 at least a selection of epibenthos species for ecosystem analysis purposes

d. Collection of marine litter data

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, 30 minute beam trawl hauls are conducted. Hydrographical data is collected with a CTD (downcast) at every trawl station. Since 2011, litter from the trawl catch is sorted and registered on board Tridens. The complete sampling procedure is defined in the [ICES Manual for the Offshore Beam Trawl Surveys](#) (SISP14, April 2019).

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](#)). Other MSs carrying out beam trawl surveys in the region are Belgium and Germany. Non-EU participation also occurs in the North Sea, by UK.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied. Task sharing applies. The survey is carried out by four EU MSs, each contributing with its own vessel. No cost sharing applies.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on Beam Trawl Surveys (WGBEAM). ICES Scientific Reports. 4:59. 113 pp. <http://doi.org/10.17895/ices.pub.20376717>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea plaice, sole, dab, flounder, lemon sole, turbot, brill (age-based indices), and for stock assessments of rays and skates (length and catch information). The survey results are also used by OSPAR for the evaluation of the marine strategy framework directive (every six years). As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.

7. Extended comments

The survey manual has been updated during 2022 and was published in January 2023:

de Boois, I.J., Burt, G., Lecomte, J.-B., Masnadi, F., Panten, K., Raat, H., Sigurdsson, G.M., Thorlacius, M. 2023. ICES Survey Protocols – Offshore beam trawl surveys, coordinated by Working group on Beam Trawl Surveys (WGBEAM). ICES Techniques in Marine Environmental Sciences Vol. 69. 70 pp. <https://doi.org/10.17895/ices.pub.21603336>

Demersal Young Fish Survey (DYFS)

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 DYFS is carried out annually from end of August-early November. The Netherlands participates with RV Isis (25 days at sea), RV Luctor (15 days at sea), RV Stern (25 days at sea) covering different near shore areas and estuaries. The DYFS 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

<p>purposes, including length measurements</p> <p>c. Collection of data on (a selection of) epibenthos species for ecosystem analysis purposes</p> <p>d. Collection of abundance and length-frequency data of brown shrimp (<i>Crangon crangon</i>)</p> <p>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.</p> <p>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).</p> <p>3. For internationally coordinated surveys, describe the participating Member States/vessels.</p> <p>The survey is internationally coordinated by the ICES Working Group on Beam Trawl Surveys (WGBEAM). Other MSs carrying out DYFS are Belgium and Germany.</p> <p>4. Where applicable, provide more details on the type of participation and/or threshold agreement applied.</p> <p>Task sharing applies. The DYFS is carried out by three EU MSs, each contributing with its own vessel. No cost sharing applies.</p>
<p>5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.</p> <p>ICES. 2022. Working Group on Beam Trawl Surveys (WGBEAM). ICES Scientific Reports. 4:59. 113 pp. http://doi.org/10.17895/ices.pub.20376717</p> <p>6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).</p> <p>The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea plaice, sole (age-based indices), and brown shrimp (length and catch information). As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.</p> <p>7. Extended comments</p> <p>No extended comments.</p>

Sole Net Survey (SNS_NLD)

<p><i>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.</i></p>
<p>Sole Net Survey (SNS_NLD)</p> <p>1. Objectives of the survey</p> <p>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:</p> <p>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</p> <p>b. Collection of biological data on all fish species including elasmobranch species for ecosystem analysis purposes, including length measurements</p> <p>c. Collection of data on (a selection of) epibenthos species for ecosystem analysis purposes</p> <p>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.</p> <p>During daytime, 15 minute beam trawl hauls are conducted. Hydrographical data is collected with a datalog</p>

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.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.
ICES. 2022. Working Group on Beam Trawl Surveys (WGBEAM). ICES Scientific Reports. 4:59. 113 pp. <http://doi.org/10.17895/ices.pub.20376717>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea plaice, sole (age-based indices). As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.

7. Extended comments
No extended comments.

Herring Larvae Survey (IHLS)

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.

Herring Larvae Survey (IHLS)

1. Objectives of the survey

The herring larvae survey in the North Sea is annually carried out in September (two weeks) and December (one week). The Netherlands participates with RV Tridens (total 15 days), covering the North Sea. The IHLS is a mandatory survey.

The aim of the survey is to estimate the adult population of autumn spawning herring based on the abundance of newly hatched herring larvae as this is a reliable index for spawning stock abundance. In particular, the survey gives information on the abundance of different spawning components. The Netherlands covers Buchan, central North Sea, southern North Sea and English Channel.

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 main sampling type are plankton hauls using a Gulf VII plankton sampler, following a fixed station design. In addition to the plankton hauls, fish hauls (with a pelagic trawl) may be carried out for the collection of adult biological parameters. Hydrographical data are collected with a Seabird CTD attached to the plankton sampler. During the herring larvae surveys a standard grid is sampled. In each ICES rectangle 9 stations are sampled (0°30 N x 1°E/W; ca. 30 x 30 NM). The complete sampling procedure is defined in the [ICES Manual for the International herring larvae surveys south of 62° North](#) (Annex 7, January 2010).

3. For internationally coordinated surveys, describe the participating Member States/vessels. The survey is internationally coordinated by the ICES Working Group on Surveys on Ichthyoplankton in the

North Sea and adjacent Seas ([WGSINS](#)). Other MS carrying out IHLS is Germany.

4. Where applicable, provide more details on the type of participation and/or threshold agreement applied. Task sharing applies. The IHLS is carried out by two EU MSs, each contributing with its own vessel. No cost sharing applies.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent Seas (WGSINS; outputs from 2021 meeting). ICES Scientific Reports. 4:27. 47pp. <http://doi.org/10.17895/ices.pub.19420232>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea herring, sprat (larvae index). As data is submitted to a public data portal, other use cannot be monitored but may take place.

7. Extended comments

No extended comments.

Downs recruitment survey (IHLS-DRS; Additional 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.

Downs recruitment survey (IHLS-DRS; Additional survey)

1. Objectives of the survey

The Downs recruitment survey in the North Sea is since 2018 annually carried out in April (one week). The Netherlands participates with RV Tridens (total 5 days), covering the relevant area in the North Sea (sampling area based on larval drift modelling). The survey is not mandatory under the DCF. The survey is part of the Dutch statutory task programme for fisheries.

The aim of the DRS is to provide a recruitment index for the winter spawning herring population in the Southern North Sea and English Channel. This index is intended to be added to the existing IBTS-MIK index for tuning of the North Sea herring assessment.

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.

In order for the 'Downs' recruitment index to be similar to the already existing MIK-index, the survey is carried out as similar as possible as the IBTS-MIK. The major difference being that the IBTS-MIK is carried out at night, whereas the DRS is performed both day and night. Both IBTS-MIK and DRS target larger herring larvae. These larvae are able to swim and could avoid the MIK-net. Therefore, for the night sampling during the IBTS-MIK a black net is used. A black net will however be easily visible for herring larvae during daytime and invoke avoidance. For the DRS survey it was decided to use a blue MIK-net. A blue net will be less visible for the herring larvae both during day and night. Survey protocols of the IBTS-MIK are followed ([Manual for the Midwater Ring Net sampling during IBTS Q1](#)).

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

The survey is internationally coordinated by the ICES Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent Seas ([WGSINS](#)). The Netherlands is the only MS conducting the 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.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on Surveys on Ichthyoplankton in the North Sea and adjacent Seas (WGSINS; outputs from 2021 meeting). ICES Scientific Reports. 4:27. 47pp. <http://doi.org/10.17895/ices.pub.19420232>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). The survey results are used in the not yet used due to the limited length of the time series. It is planned to use information from this survey in the (international and routinely conducted) ICES stock assessments for North Sea herring, sprat (larvae index).

7. Extended comments

No extended comments.

NS Herring Acoustic Survey (NHAS)

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.

NS Herring Acoustic Survey (NHAS)

1. Objectives of the survey

The NHAS is carried out annually in June/July in the North Sea. The Netherlands participates with RV Tridens (total 20 days). The NHAS is a mandatory 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 IV and IIIa), North Sea Autumn Spawning herring (in IV and IIIa), West of Scotland herring (in VIaN), Malin Shelf herring (west of Scotland/Ireland in VIaN-S and VIIb,c), North Sea sprat (in IV) and Sprat in IIIa (western Baltic).

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 the survey acoustic echosounder measurements are done, preferably in transects perpendicular to the coast. In addition, trawl hauls are made to identify the species composition of the acoustic recordings.

Hydrographical data are collected on regular intervals. The complete sampling procedure is defined in the [ICES Manual for International Pelagic Surveys \(IPS\)](#) chapter 2.1.5.

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

The survey is internationally coordinated by the ICES Working Group on International Pelagic Surveys ([WGIPS](#)) and performed in collaboration with research vessels from Denmark, Germany, Ireland. Non-EU countries also participate: UK and Norway.

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

Task sharing applies. The NHAS is carried out by four EU MSs and two non-EU countries, each contributing with its own vessel. No cost sharing applies.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on International Pelagic Surveys (WGIPS). ICES Scientific Reports. 4:82. 622 pp. <http://doi.org/10.17895/ices.pub.20502822>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). The survey results are used in the (international and routinely conducted) ICES stock assessments for North Sea herring, sprat (age-based index). As data is submitted to a public data portal, other use cannot be monitored but may take place.

7. Extended comments
No extended comments.

International Ecosystem Survey in the Nordic Seas (ASH)

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 Ecosystem Survey in the Nordic Seas (ASH) –see for full description Workplan Denmark

1. Objectives of the survey

The ASH is carried out annually in the May/June and is carried out by RV Dana (Denmark). The ASH is a mandatory survey. The [ICES Manual for International Pelagic Surveys \(IPS\)](#) (version 1.00) describes the current objectives:

- a. Carry out a predetermined survey cruise track
- b. Determine an age stratified estimate of relative abundance of herring within the survey area
- c. Determine an age stratified estimate of relative abundance of blue whiting within the survey area
- d. Collect biological samples from directed trawling on insonified fish echotraces to determine age structure and maturity state of the herring stock
- e. Collect physical oceanography data from vertical profiles (CTD)
- f. Plankton sampling (WP2 and Dyedi)

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 the survey acoustic echosounder measurements are done. In addition, trawl hauls are made to identify the species composition of the acoustic recordings. Also hydrographical and plankton data are collected. The complete sampling procedure is defined in the [ICES Manual for International Pelagic Surveys \(IPS\)](#) chapter 2.1.2.

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

The survey is internationally coordinated by the ICES Working Group on International Pelagic Surveys ([WGIPS](#)). The Netherlands participates in the ASH as part of a consortium of EU MSs and let two scientists join the survey on-board RV Dana.

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

Task sharing (personnel) applies: the survey is carried out by RV Dana and the Netherlands let two scientists join the survey.

Cost sharing applies: the operational costs of the vessels are shared by EU MSs applying an allocation key proportional to national share of the EU TAC.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on International Pelagic Surveys (WGIPS). ICES Scientific Reports. 4:82. 622 pp. <http://doi.org/10.17895/ices.pub.20502822>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). See Annual report Denmark.

7. Extended comments
See Annual report Denmark.

Dutch shellfish surveys (Additional surveys MOSKOK, ENSIS)

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.

Dutch shellfish surveys (Additional surveys MOSKOK, ENSIS)

1. Objectives of the surveys

The Dutch shellfish surveys are carried out annually between February and October covering the Dutch coast and estuaries (Wadden Sea, Oosterschelde, Westerschelde, and since 2017 Veerse Meer and Grevelingen). The surveys together form the basis for the national shellfish advice. The sampling design has been evaluated in 2015 and is a continuation of the previous design. The survey is not mandatory under the DCF. The survey is part of the Dutch statutory task programme for fisheries.

The survey aims to provide an annual estimate of:

- a. the abundance of *Ensis* sp., *Spisula subtruncata*, *Mytilus edulis*, *Cerastoderma edule* and *Lutraria lutraria* in the Dutch coastal zone
- b. the abundance of *Cerastoderma edule*, *Mytilus edulis* and *Crassostrea gigas* in the Wadden Sea and Oosterschelde and Westerschelde estuary
- c. the abundance of non-commercial shellfish and infauna species in the Dutch coastal zone, Wadden Sea and Ooster- and Westerschelde estuary

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 samples a number of commercial shellfish species in the littoral and sublittoral areas in the Dutch coastal zone and estuaries. All sub-surveys are stratified. The sampling device (box-corer, Van Veen grab, towed and suction dredges) depends on the sampling location and target species. The complete sampling procedure is defined in the Dutch manual 'Handboek schelpdierbestandsopnames' (available on request). Information in Dutch on the (results of) the surveys is available at <http://www.wur.nl/schelpdiermonitor>

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

The survey is not internationally coordinated.

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

Not applicable.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

National survey, no international coordination. Cruise reports available upon request. Annual report (data 2021): <https://www.wur.nl/nl/publicatie-details.htm?publicationId=publication-way-353937313536>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).

The survey results are used in the (national and routinely conducted) shellfish stock assessments for the main commercial shellfish species, to provide fisheries advice to the national Ministry of Agriculture, Nature and Food quality.

7. Extended comments

No extended comments.

Lakes IJsselmeer and Markermeer (FYOE)

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.

Lakes IJsselmeer and Markermeer (FYOE)

1. Objectives of the survey

The Dutch shore survey on the lakes IJsselmeer and Markermeer is carried out annually in August/September, covering both lakes. The survey delivers data to the international advice on eel as well as to national advice on smelt, bream, roach, perch, pikeperch. The survey is not mandatory under the DCF. The survey is part of the Dutch statutory task programme for fisheries.

The survey aims to provide an annual estimate of:

- a. the abundance of eel, smelt, bream, roach, perch and pikeperch in lakes IJsselmeer and Markermeer
- b. the abundance of non-commercial fish species in both lakes
- c. provide information to the national evaluation of the Water Framework Directive

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 shore monitoring (approx. 100 stations) is conducted from a small boat with an electric fishing net. The survey has a fixed location design, selected to cover all habitat types and to represent the complete lakes.

The complete sampling procedure for both surveys is defined in the Dutch manual <https://doi.org/10.18174/522029> (shore monitoring chapter 4.2)

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

The survey is not internationally coordinated.

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

Not applicable.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

National survey, no international coordination. Methods used:

<https://research.wur.nl/en/publications/vismonitoring-rijkswateren-tm-2021-deel-ii-toegepaste-methoden>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).

The survey results are used in the (national and routinely conducted) fresh water fish stock assessments for the main commercial shellfish species, to provide fisheries advice to the national Ministry of Agriculture, Nature and Food quality. The eel information is taken into account in the (international and routinely conducted) eel evaluation. The survey information is also used for the (national and routinely conducted) evaluation of the Water framework directive. As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.

7. Extended comments

No extended comments.

Lakes IJsselmeer and Markermeer (FYMA)

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.

Lakes IJsselmeer and Markermeer (FYMA)

1. Objectives of the survey

The Dutch open water survey on the lakes IJsselmeer and Markermeer is carried out annually in October/November (open water monitoring, FYMA), covering both lakes. The survey delivers data to the international advice on eel as well as to national advice on smelt, bream, roach, perch, pikeperch. The survey is not mandatory under the DCF. The survey is part of the Dutch statutory task programme for fisheries.

The survey aims to provide an annual estimate of:

- a. the abundance of eel, smelt, bream, roach, perch and pikeperch in lakes IJsselmeer and Markermeer
- b. age composition of eel, bream, roach, perch and pikeperch in both lakes
- c. the abundance of non-commercial fish species in both lakes
- d. provide information to the national evaluation of the Water Framework Directive

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 open water survey is carried out in October/November with an electric beam trawl (approx. 40 hauls) for eel sampling and with a 4 meter beam trawl (approx. 40 hauls) for the other species, and standardised since 1989. The survey has a fixed sampling design.

The complete sampling procedure for both surveys is defined in the Dutch manual

<https://doi.org/10.18174/522029> (open water monitoring chapter 4.1)

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

The survey is not internationally coordinated.

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

Not applicable.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

National survey, no international coordination. Methods used:

<https://research.wur.nl/en/publications/vismonitoring-rijkswateren-tm-2021-deel-ii-toegepaste-methoden>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).

The survey results are used in the (national and routinely conducted) fresh water fish stock assessments for the main commercial shellfish species, to provide fisheries advice to the national Ministry of Agriculture, Nature and Food quality. The eel information is taken into account in the (international and routinely conducted) eel evaluation. The survey information is also used for the (national and routinely conducted) evaluation of the Water framework directive. As data is submitted to a public data portal, other use cannot be monitored but definitely takes place.

7. Extended comments

No extended comments.

Region: North-East Atlantic

Blue whiting survey (IBWSS)

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.

Blue whiting survey (IBWSS)

1. Objectives of the survey

The IBWSS is carried out annually in March/April in the Atlantic (west of Ireland). The Netherlands participates with RV Tridens (approx. 18 days). The IBWSS is a mandatory survey.

The survey aims to determine the distribution and abundance at age and length of the Northeast Atlantic blue whiting stock during the spawning season to the west of Britain and Ireland.

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 the survey transect-wise acoustic echosounder measurements are done. In addition, trawl hauls are made to identify the species composition of the acoustic recordings. Hydrographical data are collected on regular intervals. The complete sampling procedure is defined in the [ICES Manual for International Pelagic Surveys \(IPS\)](#) chapter 2.1.1.

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

The survey is internationally coordinated by the ICES Working Group on International Pelagic Surveys ([WGIPS](#)) and performed in collaboration with research vessels from Ireland and non-EU countries Faroe Islands, Russia, and Norway. UK is planning to also contribute with a research vessel, but there is no final decision taken at the time the NWP is written.

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

Task sharing applies. The IBWSS is carried out by two EU MSs, and three non-EU MSs, each contributing with its own vessel. Furthermore, scientists from Denmark and Germany participate in the survey on board of the Dutch vessel.

Cost sharing applies: the operational costs of the vessels are shared by EU MSs applying an allocation key proportional to national share of the EU TAC.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2022. Working Group on International Pelagic Surveys (WGIPS). ICES Scientific Reports. 4:82. 622 pp. <http://doi.org/10.17895/ices.pub.20502822>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators).

The survey results are used in the (international and routinely conducted) ICES stock assessments for blue whiting (age-based index). As data is submitted to a public data portal, other use cannot be monitored but may take place.

7. Extended comments

No extended comments

International Mackerel and Horse Mackerel Egg Survey (MEGS; Triennial)

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; Triennial)

1. Objectives of the survey

The international MEGS is carried out triennially from January until July (first survey in this WP period scheduled in 2022). The Netherlands participates with RV Tridens (approx. 30 days), mostly in May-June. The MEGS is a mandatory survey.

The aim of the survey is to provide abundance estimates of the western and southern component of Atlantic mackerel and horse mackerel by measuring the egg abundance. In combination with measurements of fecundity and atresia, which will be collected in the same year, the egg abundance can be converted into estimates of the spawning stock.

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 main sampling type are plankton hauls using a Gulf VII plankton sampler, following a fixed station design. The survey is split up into 6 or 7 periods, and in each period the spawning area is fully covered. In addition to the plankton hauls, fish hauls (with a pelagic trawl) are carried out for the collection of adult mackerel and horse mackerel biological parameters. Also hydrographical data are collected with a Seabird CTD attached to the plankton sampler. The complete sampling procedure is defined in the [SISP Manual for the mackerel and horse mackerel egg surveys \(MEGS\): sampling at sea](#) (version 2.2 2019). The methodology for atresia and fecundity estimates is defined in the SISP Manual for the mackerel and horse mackerel egg surveys (MEGS): [SISP 5 - WGMEGS V12 Manual for AEPM and DEPM fecundity](#).

ICES Working Group on Mackerel and Horse Mackerel Egg Surveys ([WGMEGS](#)) decides on the sampling areas for the contributing MSs.

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

The survey is coordinated by ICES WGMEGS ([WGMEGS](#)). Germany, Ireland, Netherlands, Portugal, Spain, and non-EU countries UK, Iceland, the Faroe Islands participate in the survey.

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

Task sharing applies. The MEGS is carried out by five EU MSs and three non-EU countries, each contributing with its own vessel. Fecundity and atresia samples are divided among the three analysing EU countries (Ireland, Netherlands, Spain), UK and Norway. No cost sharing applies.

5. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

ICES. 2023. Working Group on Mackerel and Horse Mackerel Egg Surveys (WGMEGS; outputs from 2022 meeting). ICES Scientific Reports. 5:20. 67 pp. <https://doi.org/10.17895/ices.pub.22128536>

6. List the main use of the results of the survey (e.g. indices, abundance estimates, environmental indicators). Specify in which context the results are used (on a routine basis), both in international and national context.

The survey results are used in the (international and routinely conducted) ICES stock assessments for mackerel and horse mackerel (SSB estimate based on annual resp. daily egg production method). As data is submitted to a public data portal, other use cannot be monitored but may take place.

7. Extended comments

No extended comments.

SECTION 3: FISHING ACTIVITY DATA

Text Box 3.1: Fishing activity variables data collection strategy

<p><i>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</i></p>
<p>Data on capacity, effort, landings and prices is generally available data collected under Regulation (EC) No 1224/2009. For large pelagic trawlers and for dredgers price information is not available from sales notes. This is due to the fact that many of these vessels are part of integrated companies or sell their catches directly to processing companies. To overcome this problem price information from the large pelagic trawlers is obtained from the accounts of the companies (see also Annex 1.2). These prices are internal prices used to calculate crew wage. For the dredgers, price information is gathered by means of questionnaires in the survey on the economic information from small coastal fisheries (see also Annex 1.2).</p>
<p>Deviations from the work plan <i>No deviations. Data on prices and value of landings from the pelagic trawlers and dredgers were obtained from the accounts and the questionnaires respectively. Although the response rates for the dredgers were low, the prices are representative of this small sector.</i></p>
<p>Actions to avoid deviations <i>Not applicable</i></p>

Text Box 3.2: Fishing activity variables data collection strategy (for inland eel commercial fisheries)

<p><i>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 3.2 of the EU MAP Delegated Decision annex. It is intended to describe the methods and data sources used to estimate fishing capacity, effort and landings data.</i></p>
<p>Mandatory registration (census) and reporting by fishermen. Since 2010, all fresh water fishermen with a licence to land eel, monitor their catches and supply them online to the Ministry on a weekly basis by gear type. Since 2012, the effort is also monitored through this system. This catch and effort monitoring system is obliged by the eel regulation (EC 1100/2007). Data is stored by the Ministry and provided to the research institute on a regular basis. No additional data collection is required as all variables are sufficiently covered.</p>
<p>Deviations from the work plan <i>No deviations</i></p>

SECTION 4: IMPACT OF FISHERIES ON MARINE BIOLOGICAL RESOURCES

Text Box 4.2: Incidental catches of sensitive species

Region: North Sea and Eastern Arctic

<p><i>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.</i></p>
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During the observer trips (DEMACT1, DEMPAS) the scientific observers record incidental bycatches of sensitive species and corresponding observation effort. Further details on the sampling schemes are provided in Annex 1.1. Sampling scheme PEL1 covers the North Sea area as well, but given the wider geographical scope, PEL1 is covered under ‘All regions’.

Additional information on planning the observation of incidental catches of sensitive species:

- Has an assessment of the relative risk of bycatch for the different gear types/metiers taken place and been taken into account for the sampling design?
The [FishPi](#) project (page 375, EU MARE/2014/19) ‘analysed risk from various gears to seabirds and marine mammals and determined that observations were most needed in fisheries using set gillnets, trammelnets, drift nets, and bottom trawls’. DEMACT1 covers the bottom trawlers, DEMPAS covers the gillnet fisheries (trammel nets and drift nets are not relevant for NLD)
- What are the gear types/metiers that present the highest risk of bycatch per species/taxa of PETS in a given region?
See above on assessment.
- What are the methods to calculate the observation effort?
For the active fisheries (DEMACT1) the observation effort is determined by the scientific observer through expressing the time observed of catch processing at the conveyer belt.
For the passive fisheries (DEMPAS) the observation effort is expressed by the scientific observer, depending on the type of fisheries, through the observed metres nets (gillnet fisheries), number of fykes (fyke fisheries), number of fishing (handline fisheries).
- Does the sampling design and protocol follow the recommendations from relevant expert groups? Provide appropriate references. If there are no relevant expert groups, the design and protocol have to be explained in the text.
The sampling protocol follows recommendations from [ICES Working Group on Bycatch of Protected Species \(WGBYC\)](#).

Additional information on observer protocols (if already filled in in Annex 1.1, indicate where it can be found):

- Does the on-board observer protocol contain a check for rare specimens in the catch at opening of the cod-end?
The scientific observer registers whether the cod-end was checked in a haul for rare, incidental bycatches and the observer is instructed to indicate when the cod-end was not checked in a haul.
- In gill nets and hook-and-line fisheries: does the on-board observer protocol instruct the observer to indicate how much of the hauling process has been observed for (large) incidental bycatches that slip out of the net?
In gillnet and hook-and-line fisheries the scientific observer registers how much of the hauling process has been observed for incidental bycatches which never came on board.
- In large catches: does the protocol instruct to check for rare specimens during sorting of the catch (i.e. at conveyor belt)? Is the observer instructed to indicate what percentage of the sorting or hauling process has been checked at “haul level”?

In active fisheries the scientific observer indicates what percentage of the sorting or hauling process has been checked at haul level for rare, incidental bycatches.

Results

During all observer trips on board commercial vessels (i.e. Sampling schemes DEMACT1 and DEMPAS) the scientific observers recorded incidental bycatches (this also includes zero bycatch) and corresponding observation effort on haul level. In total 185 hauls were observed in 2022. Preliminary data show that a total of 7 incidental bycatch species from the list in Annex 01 of ICES WGBYC datacall were recorded. This includes 5 bony fish species (tub gurnard, European conger, seahorse, john dory, eelpout), 1 mammal species (grey seal) and 1 bird species (Northern Gannet). The observed incidentally by-caught species were generally released dead. Data will be submitted to ICES WGBYC.

Deviations from the work plan

*As noted in Textbox 2.5 the “planned number of PSUs” of 10 observer trips for both DEMACTI and DEMPAS was not reached. As a results, the scientific observer recorded incidental bycatches/PETS and corresponding observation effort on haul level for 14 trips (i.e 8 DEMACTI trips and 6 DEMPAS trips) instead of the planned 20 trips. Actions to avoid deviations
See Textbox 2.5.*

Region: All regions

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.

During the observer trips (PEL1) the scientific observers record incidental bycatches of sensitive species and corresponding observation effort. Note that scheme PEL1 also encompasses North Sea and Eastern Arctic. Further details on the sampling schemes are provided in Annex 1.1.

Additional information on planning the observation of incidental catches of sensitive species:

- Has an assessment of the relative risk of bycatch for the different gear types/metiers taken place and been taken into account for the sampling design?
The [FishPi](#) project (page 375, EU MARE/2014/19) ‘analysed risk from various gears to seabirds and marine mammals and determined that observations were most needed in fisheries using set gillnets, trammelnets, drift nets, and bottom trawls’. The demersal gears are included under region ‘North Sea and Eastern Arctic’ while trammel nets and drift nets are not relevant for NLD. Sampling scheme PEL1 covers the pelagic trawlers in addition for EU waters under ‘All regions’.
- What are the gear types/metiers that present the highest risk of bycatch per species/taxa of PETS in a given region?
See above on assessment.
- What are the methods to calculate the observation effort?
For the active fisheries under sampling scheme PEL1, the observation effort is determined by the scientific observer through expressing the time observed of catch processing at the conveyer belt.
- Does the sampling design and protocol follow the recommendations from relevant expert groups? Provide appropriate references. If there are no relevant expert groups, the design and protocol have to be explained in the text.
The sampling protocol follows recommendations from [ICES Working Group on Bycatch of Protected Species \(WGBYC\)](#).

Additional information on observer protocols (if already filled in in Annex 1.1, indicate where it can be found):

- Does the on-board observer protocol contain a check for rare specimens in the catch at opening of the cod-end?
The scientific observer registers whether the cod-end was checked in a haul for rare, incidental bycatches and the observer is instructed to indicate when the cod-end was not checked in a haul.
- In gill nets and hook-and-line fisheries: does the on-board observer protocol instruct the observer to indicate how much of the hauling process has been observed for (large) incidental bycatches that slip out of the net?
Not applicable to the Netherlands for this region.
- In large catches: does the protocol instruct to check for rare specimens during sorting of the catch (i.e. at conveyor belt)? Is the observer instructed to indicate what percentage of the sorting or hauling process has been checked at “haul level”?

In active fisheries the scientific observer indicates what percentage of the sorting or hauling process has been checked at haul level for rare, incidental bycatches.

Results

During all observer trips on board commercial vessels (i.e. Sampling scheme PEL1) the scientific observers

recorded incidental bycatches (this also includes zero bycatch) and corresponding observation effort on haul level (in total 410 hauls were observed). Preliminary data show that a total of 15 incidental bycatch species from the list in Annex 01 of WGBYC data call were recorded; including 9 bony fish species (Atlantic pomfret, tub gurnard, rabbitfish, European conger, lumpfish, blackbelly rosefish, Atlantic halibut, sunfish, john dory) and 6 elasmobranchii species (black dogfish, frilled shark, birdbeak dogfish, great lanternshark, velvet belly lanternshark, Greenland shark). The observed incidentally by-caught species were generally released dead. Data will be submitted to ICES WGBYC.

Deviations from the work plan

No deviations

Actions to avoid deviations

Not applicable

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.

1. Aim of the study: No additional studies are planned at the moment.

2. Duration of the study: Not applicable

3. Methodology and expected outcomes of the study: Not applicable

Brief description of the results (including deviations from the plan and justifications as to why if this was the case).

Not applicable: no study

Achievement of the original expected outcomes and justification if this was not the case.

Not applicable: no study

Follow-up to the activities (what are the next steps, how the results will be used).

Not applicable: no study

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.

1. Description of clustering

The Dutch fishing fleet consists of a large variety of vessel types, ranging from large pelagic trawlers to small scale vessels using handlines. As a result, the 2020 national fleet consisted of 34 segments of which only 7 included more than 10 active vessels (total 481 vessels). Besides, 21 segments included less than 10 vessels (total 65 vessels) and 6 segments included inactive vessels (total 189 vessels). The small segments provide an issue both from privacy and from sampling purposes. Almost all of the smaller segments included <5 vessels and contributed <3% to the total landings and revenues. Only the segment of the large pelagic trawlers contributed considerably to the total landings and value: 75% of total landings and 30% of landings value. Because of this, the segment of large pelagic trawlers is considered a separate segment. The other segments were considered as non-important segments and were clustered, taking into account the distinction in fishing patterns. Clusters of less important segments were constructed, based on the difference in cost structure of vessels with passive gears and active gears and based on length of the vessels and consistency of the clustering with previous data collection programmes. The resulting clustering is given in the table below.

segment	activity level	cluster	Number	% landings	% value	% sea catch
Demersal trawlers and/or demersal seiners 0 < 10 m	NA	Beam trawlers 0 < 10 m	8	0.0%	0.0%	0.0%
Demersal trawlers and/or demersal seiners 10 < 12 m	NA	Beam trawlers 0 < 10 m	1	0.0%	0.0%	0.0%
Beam trawlers 0 < 10 m	NA	Beam trawlers 0 < 10 m	6	0.0%	0.0%	0.2%
Vessels using active and passive gears 0 < 10 m	NA	Beam trawlers 0 < 10 m	2	0.0%	0.0%	0.0%
Demersal trawlers and/or demersal seiners 24 < 40 m	NA	Demersal trawlers and/or demersal seiners 24 < 40 m	34	3.9%	10.3%	12.5%
Demersal trawlers and/or demersal seiners 40 m or larger	NA	Demersal trawlers and/or demersal seiners 24 < 40 m	1	0.1%	0.4%	0.4%
Drift and/or fixed netters 12 < 18 m	NA	Drift and/or fixed netters 18 < 24 m	1	0.0%	0.0%	0.0%
Drift and/or fixed netters 18 < 24 m	NA	Drift and/or fixed netters 18 < 24 m	1	0.0%	0.0%	0.1%
Vessels using Pots and/or traps 12 < 18 m	NA	Drift and/or fixed netters 18 < 24 m	3	0.0%	0.0%	0.1%
Vessels using Pots and/or traps 18 < 24 m	NA	Drift and/or fixed netters 18 < 24 m	3	0.0%	0.0%	0.1%
Vessels using Pots and/or traps 24 < 40 m	NA	Drift and/or fixed netters 18 < 24 m	1	0.2%	0.3%	0.6%
Vessels using hooks 12 < 18 m	NA	Drift and/or fixed netters 18 < 24 m	1	0.0%	0.0%	0.0%
Vessels using polyvalent passive gears only 12 < 18 m	NA	Drift and/or fixed netters 18 < 24 m	1	0.0%	0.0%	0.0%
Dredgers 24 < 40 m	NA	Vessel using other active gears 18 < 24 m	3	0.7%	0.8%	0.5%
Dredgers 40 m or larger	NA	Vessel using other active gears 18 < 24 m	4	3.0%	3.5%	0.6%
Demersal trawlers and/or demersal seiners 12 < 18 m	L	Vessel using other active gears 18 < 24 m	1	0.0%	0.0%	0.0%
Beam trawlers 12 < 18 m	L	Vessel using other active gears 18 < 24 m	2	0.0%	0.0%	0.0%
Beam trawlers 18 < 24 m	L	Vessel using other active gears 18 < 24 m	5	0.0%	0.0%	0.2%
Pelagic trawlers 12 < 18 m	NA	Vessel using other active gears 18 < 24 m	1	0.0%	0.0%	0.0%

Vessels with active gears of less than 12 meter were clustered in the one segment. Because of consistency with previous data collection program the cluster was named Beam trawlers 0<10 m.

One large demersal trawler >40 m was merged with the segment of demersal trawlers and seiners 24-<40 m. This vessel has a length of just over 40 m and has a similar fishing pattern and cost structure as many of the vessels in the other segment which are just under 40 m.

Vessels deploying passive gears larger than 12 m were clustered in the segment Drift and/or fixed netters 18-<24 m. Although most of the vessels in this segment mainly use pots, the naming was used for consistency reasons as this name was also used in previous programmes. All vessels using active gears from small segments were clustered in the segment Vessel using other active gears 18-<24 m.

Demersal trawlers and beam trawlers larger than 12 meters with a total revenue less than 50,000 euro were also included in this segment. These are vessels that have very little effort and are not regarded as normally active fishing enterprises. In order to prevent bias of the data for the active fleet segments, these vessels have been clustered with other small segments.

Pelagic trawlers larger than 40 meters operate both in EU en non EU waters. As this is a small group of vessels with similar cost structures, these vessels are clustered in one segment.

2. Description of activity indicator

In the segments of beam trawlers and demersal trawlers and seiners larger than 12 meters distinction is made between low and normally active vessels. Vessels using these gears with an overall estimated landings value of 50,000 euro are regarded as low active. This landings value translates into an income level comparable with the minimal wage, for the Netherlands (19,620 euro), the threshold for low active vessels according to the RCG Econ guidelines (PGEcon 2018). The value of landings is estimated based on the logbook and sales notes information. The low active vessels (8 in total) are clustered with other small segments with vessels using other active gears in the cluster “Vessel using other active gears 18-<24 m” in order to prevent bias in the fleet segments of active vessels. For all other segments no such distinction is made.

3. Deviation from the RCG ECON (ex. PGECON) definitions

For the large pelagic trawlers >40 m no information on financial data can be gathered. This information is regarded as privacy sensitive information and is not available.

For the other small coastal fisheries, the value of the physical capital was based on the insurance value (see Annex 1.2).

Deviations from the work plan

For the cutter fisheries (segments Beam trawlers and Demersal trawlers 18-24 m, 24-40m and 40 m or larger) the data on Gross debt and Total value of assets were gathered from the financial statements as planned in the National plan. Because of this procedure the data refers to 2020 instead of 2021.

As for the small coastal fisheries and inactive vessels, 100% of the vessel owners were included in the sampling scheme as specified in the National programme. In the small coastal fisheries, the response rate was still relatively low (20%). This response rate is still low, but increases by 35% from last year. The response rate for inactive vessels has been quite good, because of the telephone questionnaires (37% in 2022). In some smaller strata the low response rate still caused problems, because too little information was available for certain clusters.

Financial data (total assets and long/short debt) were not collected for the segment of large trawlers due to privacy reasons. As these companies are part of larger (international) companies, these parameters are more a result of the strategic choices of these companies than indications of their financial well-being.

Actions to avoid deviations

To overcome the problem of low response in the small segments of the small coastal fisheries in the data estimation procedure, the following clusters have been combined in order to estimate the economic variables (income, expenditures, employment and capital):

- *Demersal trawlers and/or demersal seiners 0-< 10 m, cluster Beam trawlers 0-< 10 m and cluster Beam trawlers 12-< 18 m*
- *Cluster Dredgers 24-< 40 m and cluster Drift and/or fixed netters 12-< 18 m*

The economic importance of these segments is of minor importance for the Dutch fleet. In the past year, increased cooperation has been sought with fishermen’s organisations and in the coming years this cooperation will be extended in an increased effort to enlarge the response rate for the small coastal fisheries.

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.

1. Description of the threshold application

The total Dutch aquaculture production in 2019 was 45,750 tonnes with a total value of 78 million euro (eurostat data). As a result, the 5% threshold is 2,288 tonnes and 3.9 million euro.

	Volume (tonnes)	value (euro)
Total	45,750	78,412,143
Threshold	2,288	3,920,607
Mussels	38,094	45,597,920
Oysters	2,545	6,744,197
Eel	2,200	18,700,000
African catfish	2,700	4,860,000
Other marine species	212	2,510,026
Other freshwater species	0	0

Production of mussels, oysters (combined flat and cupped oyster production) and eel are well above the threshold and are included in the data collection scheme. Production of African catfish consists of two different fish types (Clarias and so called Claresse) that are cultured by different companies (respectively four and one company). Because the production of both Claresse and Clarias is below the threshold and the number of companies involved is so small no data will be collected for this species. This species is reported in the table as other freshwater species. Other marine species are well below the threshold.

2. Deviation from the RCG ECON (ex. PGECON) definitions
No deviations from the definitions.

Deviations from the work plan

Data coverage from the mussel sector was lower than expected as one company in the panel stopped their activities in 2020.

In 2022 economic data from the oyster sector was collected by questionnaire for the first time. This resulted in 4 responses (out of 11 companies) which is more than previously, but still too low for an appropriate estimation of the economic results in this small segment.

For the eel culture the response rate in the first year of the data collection was very low (10%) despite strong cooperation with the sector organisation and various reminders. Therefore, no economic data from this sector can be presented based on this years' data collected.

Actions to avoid deviations

In 2023 a new panel member for the mussel sector will be sought.

In 2023 the cooperation with sector organisation in both the oyster and the eel sector will be maintained and extended where possible in order to convince entrepreneurs to share their data. During RCGEcon a session will be organised to exchange best practices on this field.

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.

No data will be collected on the fish processing sector.

Deviations from the work plan

No data collection

Actions to avoid deviations

Not applicable

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. 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. In case of 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'.

RELATED TO TEXT BOX 2.3 AND TABLE 2.3 (DIADROMOUS SPECIES DATA COLLECTION)

Sampling scheme identifier: ELE-FRS-MPM: no changes

Sampling scheme identifier: ELE-FRS-LNP: no changes

Sampling scheme identifier: ELE-FRS-MIS-commercial fishing: no changes

Sampling scheme identifier: SAL-FGRZ: information incorrect

MS : NLD
Region: All regions
Sampling scheme identifier: Sal-FGRZ
Sampling scheme type: Diadromous (scientific)
Observation type: SciObs water body
Time period of validity: 2022-2027
Short description (max 100 words): Every year at two locations in the Rhine & Meuse catchment area, migrating salmonids are sampled using traditional salmon fykes. Apart from <i>Salmo salar</i> and <i>Salmo trutta</i> also all other species in the catch are measured. Annual sampling takes place at sampling location Waal, alternating biennial sampling is conducted at locations Maas (even years) and IJssel (odd years).
AR comment: no changes
Description of the population
Population targeted: migrating salmonids in the Rhine and Meuse catchment area.
Population sampled: migrating salmonids in the Rhine and Meuse catchment area.
Stratification: samples are taken at the location with the longest glass eel monitoring (Den Oever, since 1938), and IJmuiden (since 1973). On both locations also glass eel detectors are placed (see Sampling scheme identifier ELE-FRS-MPM).
AR comment: Stratification description is incorrect. Correct description of stratification: The monitoring takes place annually in spring (6 weeks) and in autumn (6 weeks). In the even years, sampling takes place in rivers Maas and Waal, in the odd years in rivers IJssel and Waal. Traditional salmon fykes are placed in shallow water with the opening towards the flow direction. Commercial fishers are hired to empty the fykes daily (Maas) or 2-3 times a week (IJssel, Waal).
Sampling design and protocols
Sampling design description: From March till May glass eel abundance at the main entrance points for fresh water is determined by means of lift net catches. Sampling takes place at night time.

<p>Is the sampling design compliant with the 4S principle?: NA</p> <p>Regional coordination: N</p> <p>Link to sampling protocol documentation: Sampling protocols are available in Dutch. A general description is available in https://doi.org/10.18174/522029, chapter 6.1.3. During night time (Den Oever: daily 22.00-05.00; IJmuiden approx. 2 times a week, 22.00-01.00), every hour a lift net is lowered to the bottom, and hauled after five minutes. The glass eel in the net is counted and released back into the environment. Hauls are replicated twice (three subsequent hauls).</p> <p>Compliance with international recommendations: Y</p>
<p>AR comment:</p> <ol style="list-style-type: none"> 1. Sampling design description is incorrect. Correct description of sampling design: The monitoring takes place annually in spring (6 weeks) and in autumn (6 weeks). Traditional salmon fykes are placed in shallow water with the opening towards the flow direction. Commercial fishers are hired to empty the fykes daily (Maas) or 2-3 times a week (IJssel, Waal). 2. Link to sampling protocol documentation is incorrect. Correct link to sampling protocol documentation: Sampling protocols are available in Dutch. A general description is available in https://doi.org/10.18174/522029, chapter 5.3.
<p>Sampling implementation</p>
<p>Recording of refusal rate: NA</p>
<p>Monitoring of sampling progress within the sampling year: NA</p>
<p>AR comment: no changes</p>
<p>Data capture</p>
<p>Means of data capture: After hauling the net, the total glass eel is sorted from the other catch. Number of glass eel in the catch is counted. Counts and haul information are written down on specific measurement lists, and data is entered as soon as possible. Software used for data entry is in-house developed: Billie Turf. Data are stored as plain text files at a centralised location for which a daily back-up routine is put in place.</p> <p>Data capture documentation: Y, in Dutch (available upon request). Annex 43 in Keeken, O.A. van, K. Kwakman-Schilder, P. de Bruijn, J. de Leeuw, T. Leijzer, B. Griffioen, M. van Hoppe, E. van Os-Koomen, J.A.M. Wiegerinck. 2021. Handboek zoetwater vismonitoringen versie 2021 (CVO_h_008). Internal CVO report 21.005</p> <p>Quality checks documentation: Quality checks are conducted upon processing at the institute, and before entry into the national database FRISBE. Standardised SAS scripts are used for the data quality checks (available upon request). Essentially, the trawl haul data are checked for outliers on numerical values (either by plotting or by providing minimum, mean, and maximum values), consistency in text variables (e.g. station coding, crew members). References used follow from the Data capture documentation.</p>
<p>AR comment: Data capture documentation incorrect. Correct Data capture documentation: Y, in Dutch (available upon request). Annex 33 in Keeken, O.A. van, K. Kwakman-Schilder, P. de Bruijn, J. de Leeuw, T. Leijzer, B. Griffioen, M. van Hoppe, E. van Os-Koomen, J.A.M. Wiegerinck. 2021. Handboek zoetwater vismonitoringen versie 2021 (CVO_h_008). Internal CVO report 21.005</p>
<p>Data storage</p>
<p>National database: after processing, and a standardised quality check on outliers, the information for is stored in the WMR database FRISBE (Oracle relational database). WMR personnel have permanent access after signing a form with general instructions. Access to databases with DCF related data is described in the 'Protocol databases WMR' (in Dutch, available upon request). Different user access rights and restrictions apply for the databases. All databases below are</p>

relational Oracle databases. For data managers and database managers other access permissions apply, also described in the protocol. Database description is internally available for personnel at vinvis.wurnet.nl.
International database: NA
Quality checks and data validation documentation: During import into the database FRISBE, data validation checks are conducted. Documentation of those checks is available upon request.
AR comment: no changes
Sample storage
Storage description: NA. The catch released in the water after processing. In some years marking of glass eel takes place (mark recapture experiment). In that case, a subsample of glass eel are stored in water trays in the lab alive until release in the same water body.
Sample analysis: NA
AR comment: Storage description is incorrect. Correct Storage description: NA. The catch released in the water after processing.
Data processing
Evaluation of data accuracy (bias and precision): N, but glass eel index used by WGEEL for a long time. Den Oever index is used for the EU eel evaluation (obligatory by the eel regulation).
Editing and imputation methods: Editing only takes place when odd values are encountered. Corrections then are done in the institute's database
Quality document associated to a dataset: N.
Validation of the final dataset: N, although before submitting the data to the end-user the data has been reviewed to prevent erroneous incorrect information due to data entry mistakes.
AR comment: Evaluation of data accuracy information incorrect. Correct information on Evaluation of data accuracy: N

RELATED TO TEXT BOX 2.4 AND TABLE 2.4 (RECREATIONAL FISHERIES)

Sampling scheme identifier: REC_Self: no changes

RELATED TO TEXT BOX 2.5 AND TABLE 2.5 (SAMPLING BIOLOGICAL DATA)

Sampling scheme identifier: PEL1: no changes

Sampling scheme identifier: PEL2: no changes

Sampling scheme identifier: DEMACT1: no changes

Sampling scheme identifier: DEMACT2: no changes

Sampling scheme identifier: DEMPAS: no changes

Sampling scheme identifier: AUCTION_DEM: no changes

Sampling scheme identifier: AUCTION_SHRIMP: no changes

RELATED TO TEXT BOX 2.6 AND TABLE 2.6 (RESEARCH SURVEYS AT SEA)

Type of sampling activity: Acoustic profiles: no changes

Type of sampling activity: Hydrography: no changes

Type of sampling activity: Trawl hauls: no changes

Type of sampling activity: Plankton hauls: no changes

Type of sampling activity: Litter hauls: no changes

Type of sampling activity: Grabs, towed dredge and suction dredge: no changes

RELATED TO TABLE 4.1 (STOMACH)

Sampling scheme identifier: IBTS_Q1: no changes

ANNEX 1.2 - QUALITY REPORT FOR SOCIOECONOMIC DATA SAMPLING SCHEME

The quality report fulfils Article 6 (3) (d) of the Regulation (EU) 2017/1004. This document is intended to specify data to be collected under chapter II, points 3, 5, 6, and 7 of the Delegated Decision annex: Socioeconomic data on fisheries, aquaculture and any complementary data collection of fishing activity and fish processing. Use this document to describe quality aspects of the data collection process (design, sampling implementation, data capture, data storage and data processing etc.). The annex should be filled for each sampling scheme. Where applicable, use the handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study), available on the DCF website.

Sector name(s): Cutter sector

Survey Specifications
<i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design. Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i>
Sector name(s): Cutter sector
Sampling scheme: stratified random sampling
Variables: All economic variables
Supra region(s): All Supra regions
Survey planning
The population for this sampling scheme consists of vessels using active gears (beam trawls and other trawls and seines) with a length of 12 meter or more, which are included in the following segments/clusters: <ul style="list-style-type: none">• Beam trawlers 12-< 18 m• Beam trawlers 18-< 24 m• Beam trawlers 24-< 40 m• Beam trawlers 40 m or larger• Demersal trawlers and/or demersal seiners 18-< 24 m• Demersal trawlers and/or demersal seiners 24-< 40* In addition to this only vessels with an overall estimated landings value of 50,000 euro are included

in the population. This landings value translates in an income which is comparable with the minimal wage, for the Netherlands (19,620 euro), the threshold for low active vessels according to the RCG Econ guidelines (PGEcon 2018). The value of landings is estimated based on the logbook and sales notes information. The low active vessels (8 in total) are clustered with other small segments with vessels using other active gears in the cluster Vessel using other active gears 18-< 24 m in order to prevent bias in the fleet segments of active vessels.

Survey design and strategy

Data are retrieved directly from the ledger and fiscal annual reports of a panel of 90 vessels. The data collection takes place either on site (accountants office of fishermen's home) or at the office. Auxiliary information on technical characteristics of the fleet and logbook data is available via access to the official data bases.

In order to prevent long-term bias in the panel around 5%-10% of the panel members are renewed annually.

Detailed data on costs and earnings is obtained from the company accounts at the lowest level of detail. For cost items such as crew costs or fuel costs the level of data collection is the fishing trip. In combination with the independent data from logbooks on fishing activities of all vessels, this enables the estimation of the cost structure for each of the main fishing techniques in this part of the fleet (see also estimation design). In order to do so, sampling rates for each of the fishing techniques should be sufficiently high.

Sample size was determined based on an overall sampling proportion of 30% of the population in order to allow for high quality estimates of the economic performance of the sector and all subsectors and fishing methods. In addition to the EU stratification, the cutters in the Dutch national program are also stratified according to the engine power classes. For these vessels using active gears, this stratification is more meaningful as the fishing opportunities (e.g., possibility to fish in the 12-mile zone) is managed according to engine power. Within the fleet 5 engine power classes are distinguished:

- 0-260 hp (small shrimp vessels): sampling rate 20%
- 261-300 hp (euro cutters using various fishing techniques): sampling rate 25%
- 301-800 hp (cutters with intermediate engine powers using various fishing techniques): sampling rate 50%
- 801-1500 hp (cutters with intermediate engine powers using various fishing techniques): sampling rate 58%
- 1500-2000 hp (cutters with large engine power using predominantly various beam trawls): sampling rate 40%

Especially in case of vessel of 24= \leq 40 m, this stratification results in much more homogeneous strata than the EU stratification in which vessels of 24 m, having and engine power of 300 hp are combined with engines of 40 m and an engine power of almost 2000 hp.

The sampling proportion for each of the segments is adjusted based on the characteristics of the fleet segment using the following rules of thumb:

- Contribution to the total fleet economics (based on landings value). Fleet segments with vessels that contribute more to total landings value are sampled more intensely (Sampling with probability proportional to size).
- Diversity of the fishing activities (based on logbook information), to ensure sufficient coverage of all fishing techniques
- Size of the fleet segment (minimum number of vessels in order to prevent the risk of too low sampling rate in case one of the panel members drops out).

This allocation of sampling units resembles multivariate allocation.

Based on the overlap of the hp-classes with the EU segments the resulting sampling rates of the fleet segments are:

- Beam trawlers 12-< 18 m: 40%
- Beam trawlers 18-< 24 m: 25%
- Beam trawlers 24-< 40 m: 25%
- Beam trawlers 40 m-<: 45%
- Demersal trawlers and/or demersal seiners 18-< 24 m: 25%
- Demersal trawlers and/or demersal seiners 24-< 40 m: 50%.

As the total costs are estimated using various methods among which regression analyses (see section on estimation design), for each of the segments sampling units cover the range of independent variables (e.g., effort) is within each of the segments

Logbook data and data from annual tax accounts are used to cross reference the accounts data.

Estimation design

Based on the detail of the data collection and the availability of auxiliary information from all population units in the cutter sector (data on fishing activities, landing value and volume and technical characteristics of the vessels) the population estimates are calculated using different methods. The national stratification is used as the basis for the estimation procedure as the segmentation in Hp- classes results in more homogeneous groups than the segmentation in length classes (see above). Based on the estimation procedure the costs and earnings are estimated for each vessel in the population, after which the totals can be added up for each of the EU strata.

The table below gives an overview of the cost items underlying the EU costs and the applied methodology for estimation of the values for each of the vessels in the stratum.

EU cost item	Basic variable	Method/independ	Aggregation Level
Consumption of fixed capital	DepreciationHullCost	PIM method	Vessel
Consumption of fixed capital	DepreciationEngineCost	PIM method	Vessel
Days at sea	DaysAtSea	calculation	Fishing method
Energy consumption	GasoilAmount	Hpday	Fishing method
Energy consumption	GasoilAmountBoilingShrimp	landings volume	Fishing method
Energy costs	GasoilCost	Hpday	Fishing method
Energy costs	GasoilCostBoilingShrimp	landings volume	Fishing method
Full-time Equivalent (FTE), unpaid labour, paid labour	CrewDaysSea	calculation	Fishing method
Full-time Equivalent (FTE), unpaid labour, paid labour	CrewDaysAshore	GrTday	Vessel
Gross debt	Gross debt	average	Vessel
Income from leasing out quota or other fishing rights	LeaseQuotumRevenue	average	Vessel
Investments in tangible assets (net purchase of assets)	Investments in tangible assets (ne	average	Vessel
Lease/rental payments for quota or other fishing rights	LeaseQuotumCost	average	Vessel
Other income	OtherRevenue	average	Vessel
Other non-variable costs	GeneralCost	average	Vessel
Other non-variable costs	InsuranceCost	average	Vessel
Other non-variable costs	NavigationCost	average	Vessel
Other variable costs	TravelExpenseCost	average	Vessel
Other variable costs	FactorCost	GrT	Vessel
Other variable costs	FreightCost	GrT	Vessel
Other variable costs	DeckNeedsCost	GrTday	Vessel
Other variable costs	FishingGearCost	GrTday	Fishing method
Other variable costs	ProcessingShrimpCost	GrTday	Fishing method
Other variable costs	ArrangementWithdrawCost	landings volume	Vessel
Other variable costs	SaltPackageCost	landings volume	Fishing method
Other variable costs	ProvisionCost	man days	Vessel
Other variable costs	AuctionClaimsCost	landings value	Fishing type
Other variable costs	CommodityBoardCost	landings value	Vessel
Other variable costs	SortLandingCost	landings volume	Vessel
Personnel costs	WagesCrewExtraWorkCost	average	Vessel
Personnel costs	SocialSecurityCost	crew	Vessel
Personnel costs	WagesCrewCost	landings value	Vessel
Repair and maintenance costs	MaintenanceEngineCost	GrT	Vessel
Repair and maintenance costs	MaintenanceHullCost	GrT	Vessel
Repair and maintenance costs	IceCoolingCost	GrTday	Vessel
Repair and maintenance costs	LubricatingOilCost	Hpday	Vessel
Total value of assets	Total value of assets	average	Vessel
Value of physical capital	ReplacementValueHullEngine	age	Vessel
Value of unpaid labour	WagesSailedOwnerExtraWorkCos	average	Vessel
Value of unpaid labour	WagesSailedOwnerCost	landings value	Vessel

Some items such as days at sea can be calculated based on logbook information. Other items which are not related to auxiliary information, (e.g.) other income, general costs of travel expenses) are based on Horvitz-Thompson (HT) estimations. For items that are related to auxiliary information (e.g. the effort expressed as GrTdays), linear fixed-effects regression models are used for the estimation. The choice of the auxiliary variable that is used is based on expert knowledge and regression analyses. For some variables costs items, the costs may vary by fishing technique (e.g. energy costs, fishing gear costs). For these cost items the regression estimation procedure is based on the effort in the specific fishing technique. Value of unpaid labour is imputed on a trip basis based on information whether the owner(s) have joined the vessel and the highest wage paid for that trip.

The value of quota and other fishing rights is based on market information on prices of fishing rights and information on the amount of quota per species obtained from the authorities. In case of transactions of ITQ's are observed in the accounts both the amount and the total value of the ITQs

<p>are registered. Average price estimates of the value/kg are estimated based for all species based on weighted averages of all known transactions. Only transferable rights are taken into account in the data collection.</p> <p>Consumption of fixed capital is based on the PIM method implemented both for the hull (including main equipment) and the engine of the vessel.</p> <p>Because of the fact that the data are derived directly from the accounts there are no issues with nonresponse.</p>
<p>Error checks</p> <p>During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors.</p> <p>The economic data is stored in an object-oriented database which includes a large number of internal consistency checks for the data of each vessel and cross-checks with auxiliary information (e.g. logbooks). The resulting costs data for each vessel are checked internally with data from comparable other vessels (benchmark) and historical data and all panel members get a participant report, which serves also as an extra check on the data. Moreover, outliers of individual cost items per vessel are identified in the estimation process by comparison with other vessels and these values are checked with the basic data. During the data processing and estimation phase, outcomes of estimates are tested for internal consistency and consistency with auxiliary information, Many of these checks have been automated and incorporated in the standard process.</p>
<p>Data storage and documentation</p> <p>Data is stored in an object-oriented database system at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS.</p> <p>Additional information on the sampling method will become available in 2021 in a Wageningen Economic Research publication.</p>
<p>Revision</p> <p>The Dutch cutter survey is evaluated annually, and the panel is adjusted to changes in the population. The aggregation procedures have been evaluated in 2021.</p>
<p>Confidentiality</p> <p>Are procedures for confidential data handling in place and documented? Yes. Data are stored in secure databases (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.</p> <p>Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information</p> <p>Are protocols to enforce confidentiality with external users in place and documented? Privacy sensitive data is not exchanged with external users. All panel members have signed an authorization to use their data.</p> <p>Are there any issues with publication of data due to confidentiality reasons? No.</p>
<p>AR comment: No deviations</p>

Sector name(s): Large pelagic trawlers

<p>Survey Specifications</p> <p><i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data</i></p>
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<p><i>collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design. Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i></p>
<p>Sector name(s): Large pelagic trawlers</p>
<p>Sampling scheme: census</p>
<p>Variables: All economic variables</p>
<p>Supra region(s): All supra regions</p>
<p>Survey planning</p>
<p>The population for this sampling scheme consists of 6 vessels of the segment Pelagic trawlers 40 m or larger These large vessels are owned by four internationally operating companies.</p>
<p>Survey design and strategy</p>
<p>Data are retrieved from the accounts of all vessels in the segment. For some companies the data collector has direct on-site access to the ledger, for other companies the accountant fills in the predefined excel format that is send by e-mail. Because of the small number of vessels and companies, all vessels are included in the survey (census). Logbook data and data are used to cross reference the accounts data.</p>
<p>Estimation design</p>
<p>Most of the cost items from the economic data collection are taken directly from the accounts. This information also includes the prices of the fish for each of the species. And the gross value of landings (table 3.1) Consumption of fixed capital is based the accounts value as it is impossible to gain insight in the value of these large fishing vessels. The value of quota and other fishing rights is based on market information on prices of fishing rights and information on the amount of quota per species obtained from the authorities. (see also description of the cutter survey) Only for demersal species ITQs have been traded in recent years. Segment totals are calculated from the total values for all vessels. Because the data are derived directly from the accounts there are no issues with nonresponse. In case one of the companies fails to deliver economic data on time the costs structure of the vessels concerned will be estimated based on the costs structure of the previous year and the changes in fishing activities obtained from auxiliary information (logbooks). Financial information (Gross debt, Investments in tangible assets (net purchase of assets) and Total value of assets) are not available because of privacy reasons.</p>
<p>Error checks</p>
<p>During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors. The economic data is stored in a series of excel datasheets which includes several internal consistency checks for the data of each vessel and cross-checks with auxiliary information (e.g., logbooks). The resulting costs data for each vessel are checked internally. Moreover, outliers of individual cost items per vessel are identified in the aggregation process by comparison with other vessels and historical values and these values are checked with the basic data. During the data processing and estimation phase, outcomes of estimates are tested for internal consistency and consistency with auxiliary information,</p>

Data storage and documentation
Data is stored in an series of excel datasheets at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.
Additional information on the sampling method will become available in 2021 in a Wageningen Economic Research publication.
Revision
The data processing procedures have been evaluated in 2021.
Confidentiality
Are procedures for confidential data handling in place and documented? Yes. Data are stored in secure databases (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.
Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information
Are protocols to enforce confidentiality with external users in place and documented? Privacy sensitive data is not exchanged with external users. All panel members have signed an authorization to use their data.
Are there any issues with publication of data due to confidentiality reasons? Yes, as stated above the group of vessels and companies is very small (4 companies) and financial information is not provided for privacy reasons.
AR comment: No deviations

Sector name(s): Other coastal fisheries

Survey Specifications
<i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design. Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i>
Sector name(s): Other coastal fisheries
Sampling scheme: census
Variables: All economic and social variables
Supra region(s): All Supra regions
Survey planning
The population for this sampling scheme consists of all vessels that are not taken into account in the other surveys (cutter and trawler economics). As a result, the population for this survey consists of the following segments/clusters: <ul style="list-style-type: none"> • Beam trawlers 0-< 10 m* • Drift and/or fixed netters 18-< 24 m*

- Inactive vessels 0-< 10 m
- Inactive vessels 10-< 12 m
- Inactive vessels 12-< 18 m
- Inactive vessels 18-< 24 m
- Inactive vessels 24-< 40 m
- Inactive vessels 40 m or larger
- Vessel using other active gears 18-< 24 m*
- Vessel using other active gears 18-< 24 m*
- Vessels using other Passive gears 0-< 10 m*
- Vessels using other Passive gears 10-< 12 m*

Survey design and strategy

Data is collected by two surveys:

- Telephone interviews on
- Questionnaire (by both mail and e-mail) on the other economic variables

As it is known that the overall response rates to questionnaires is low (<30%), all vessel owners are contacted to provide data on their fishing activities and economic performance. Based on an extensive internet search telephone numbers of most owners are obtained. All owners are called (maximum three times) to ask for the level of activity and main fishing method, and in case of inactive vessels, the capital value and costs. Besides the respondents are asked whether they would like to receive a paper questionnaire or an email with the questionnaire. After this telephone survey a paper/email questionnaire is send out to all fishermen that:

- Could not be reached during the telephone survey.
- Have stated that they would like to receive the survey on economics (either by mail/e-mail)

Besides returning the mail or paper survey the survey can also be filled in by the fishermen themselves through an internet survey. All three surveys ask for all economic variables in the EU map and additional information on fishing gear, fishing activities and landings. After some weeks a reminder of the questionnaire is send to those owners which have not responded yet.

Logbook are used to cross reference the questionnaire data.

Estimation design

Most of the costs items from the economic data collection are taken directly from the questionnaires and estimation to totals per cluster are based on Horvitz-Thompson (HT) estimations. For some specific costs items the numbers are inferred from other information from the questionnaire:

- Value of unpaid labour: In small fishing operations the value of unpaid labour is often unknown. In the questionnaire information is obtained on the labour that the owner does, the number of crew members and their wages. In case the owner joins fishing operations and one or more crewmembers are paid, the value of unpaid labour is estimated from the total wages divided by the number of crew. In case no crew members are joining fishing operations the value of unpaid labour is estimated based on the average proportion of the wage of the crew over the total revenue in the cluster and the revenue of the vessel concerned.
- Due to the large variety of the vessels and their values, an assessment of the average value per ton would result in highly uncertain values which may not be applicable to a large proportion of these small fisheries. Therefor the value of the vessel (value of physical capital) is taken from on the insurance value, requested from the questionnaires.

- The number of FTE, paid labour and unpaid labour is derived from information about the fishing time (number of trips and trip time), the number of fishers on board the vessel and whether the owner joins fishing operations or not.
- Gross debt is calculated from the proportion of own capital, and the value of the vessel as requested in the questionnaire.
- The value of quota and other fishing rights is based on market information on prices of fishing rights and information on the amount of quota per species obtained from the authorities. (see also description of the cutter survey)

In the years in which social variables are collected, the questions about the social variables are also included in the questionnaire. This information is used to estimate the proportion of fishers with various characteristics and together with the information about total labour and FTE, this forms the basis for the social indicators.

The survey also provides information on the average price per species and the totale value per species for dredgers for the activity data (table 3.1)

In case of missing/unclear information the respondent is contacted by telephone to discuss the provided information. In case this is not feasible, the questionnaire is ignored in the estimation process.

Error checks

During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors.

The economic data is stored in an access database which includes several internal consistency checks to prevent inconsistent data entry (e.g. negative values for costs and income, value of landings per species and totals). During data processing extra inconsistency checks (both internally, and with auxiliary logbook information) are carried out and improbable data are flagged. Moreover, outliers of individual cost items per vessel are identified in the aggregation process by comparison with other vessels. These values are checked with the basic data (questionnaires) and with the respondent in case basic data seem to be incorrect. The outcomes of estimation process are tested for internal consistency, historic consistency and consistency with auxiliary information,

Data storage and documentation

Data is stored in access databases and SPSS datasets at Wageningen Economic Research. Data processing and estimation is done using standardised SPSS scripts and procedures. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.

Additional information on the sampling method and quality assessment of the procedures of the will become available in 2021 in a Wageningen Economic Research publication.

Revision

The data processing procedures have been evaluated in 2021.

Confidentiality

Are procedures for confidential data handling in place and documented? Yes. Data are stored on a secure data server (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.

Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information.

Are protocols to enforce confidentiality with external users in place and documented? Yes, privacy

sensitive data is not exchanged with external users. In the accompanying letter of the questionnaire, the confidentiality policy is explained.

Are there any issues with publication of data due to confidentiality reasons? No, because of the clustering of segments with less than 10 vessels, none of the resulting estimates have issues with confidentiality..

AR comment: No deviations

Sector name(s): Mussel sector economics

Survey Specifications
<p><i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex.</i></p> <p><i>Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design.</i></p> <p><i>Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i></p>
Sector name(s): Mussel sector
Sampling scheme: stratified random sampling
Variables: All economic variables
Supra region(s): All Supra regions
Survey planning
<p>The population for this sampling scheme consists of all companies that are active in mussel cultivation. Most of these companies are only involved in mussel culture, but an increasing part of the population combines mussel culture and processing.</p>
Survey design and strategy
<p>Economic are retrieved directly from the fiscal annual reports of a rotating panel of companies. Auxiliary information on technical characteristics of the fleet and production data is available through access to the official fleet vessels register and sales data of the mussel auction in Yerseke.</p> <p>Sample size was determined based on an overall sampling proportion of 25% of the population (number of companies) in order to allow for high quality estimates of the economic performance of the sector. Because of the difference in company size, the sampling units are based on PSS (methodology handbook section 3.5).</p> <p>Production data from the mussel auction is used to cross reference the collected data.</p>
Estimation design
<p>Most of the cost items from the economic data collection are taken directly from the fiscal annual reports. For some specific costs items the numbers are inferred from additional information:</p> <ul style="list-style-type: none"> • Livestock used: inferred from livestock costs and average price of seed mussels. • Fish feed used and Raw material: feed costs: As feed is not used in mussel farming this information is not collected • Operational subsidies and subsidies on investments: subsidies are taken from national official databases on subsidies.

<ul style="list-style-type: none"> • Weight of sales: taken from national statistical office (based on auction statistics). <p>Totals of most variables are based on Horvitz-Thompson (HT) estimations. In case variables are clearly related to production capacity, regression estimation will be used in order to further enhance the quality of estimations.</p> <p>In case of missing/unclear information the respondent is contacted by telephone to discuss the provided information.</p> <p>As fiscal annual reports only become available one year after the closed book year, the collection of economic data from the mussel sector lags one year behind the normal data collection and economic data are collected from year $N - 2$. Provisional estimates of the costs of the year $N - 1$ are estimated based on the developments in production, mussel price, number of vessels and oil price.</p>
<p>Error checks</p> <p>During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors.</p> <p>The economic data is stored in an object-oriented database which includes a large number of internal consistency checks for the data of each company and cross-checks with auxiliary information on production. The resulting costs data are checked internally with data from comparable other vessels (benchmark) and historical data and all panel members get a participant report, which serves also as an extra check on the data. Moreover, outliers of individual cost items per vessel are identified in the estimation process by comparison with other vessels and these values are checked with the basic data. During the data processing and estimation phase, outcomes of estimates are tested for internal consistency and consistency with auxiliary information, Many of these checks have been automated and incorporated in the standard process,</p>
<p>Data storage and documentation</p> <p>Data is stored in an object-oriented database system at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.</p> <p>Additional information on the sampling method will become available in 2021 in a Wageningen Economic Research publication.</p>
<p>Revision</p> <p>The sampling design and data processing procedures have been evaluated in 2020. The sampling plan will be evaluated annually</p>
<p>Confidentiality</p> <p>Are procedures for confidential data handling in place and documented? Yes. Data are stored on a secure data server (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.</p> <p>Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information.</p> <p>Are protocols to enforce confidentiality with external users in place and documented? Yes, privacy sensitive data is not exchanged with external users other than the owners of the data. All panel members have signed an authorization to use their data.</p> <p>Are there any issues with publication of data due to confidentiality reasons? No.</p>
<p>AR comment: No deviations</p>

Sector name(s): Oyster and Eel sector economics

Survey Specifications
<p><i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex.</i></p> <p><i>Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design.</i></p> <p><i>Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i></p>
Sector name(s): Oyster and Eel sector
Sampling scheme: census
Variables: All economic variables
Supra region(s): All Supra regions
Survey planning
The population for this sampling scheme consists of all companies that have oyster culture and eel culture as their main activity (resp. 11 and 10 companies).
Survey design and strategy
<p>Economic are retrieved by means of a questionnaire that is send to all company owners and follow up of non-response will be done by telephone calls. Auxiliary information on production is available through access to the official production statistics by the Dutch statistical office.</p> <p>Because of the small group sized in both sectors and the assumed low response rates, the questionnaire will be send out to all companies.</p>
Estimation design
<p>The questionnaire will include all variables requested in the EU-map.</p> <p>Totals of most variables are based on Horvitz-Thompson (HT) estimations. In case variables are clearly related to production capacity, regression estimation will be used in order to further enhance the quality of estimations.</p> <p>In case of missing/unclear information the respondent is contacted by telephone to discuss the provided information.</p>
Error checks
<p>During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors.</p> <p>The economic data is stored in an access database which includes internal consistency checks for the data of each company. The resulting data are checked internally with data from comparable other companies (benchmark) and historical data. During the data processing and estimation phase, outcomes of estimates are tested for internal consistency and consistency with auxiliary information. Many of these checks are automated and incorporated in the standard process,</p>
Data storage and documentation
Data is stored in an object-oriented database system at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.
Revision
The sampling plan will be evaluated annually
Confidentiality

Are procedures for confidential data handling in place and documented? Yes. Data are stored on a secure data server (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.

Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information.

Are protocols to enforce confidentiality with external users in place and documented? Yes, privacy sensitive data is not exchanged with external users other than the owners of the data. All panel members have signed an authorization to use their data.

Are there any issues with publication of data due to confidentiality reasons? No.

AR comment: No deviations

Sector name(s): Social data fisheries sector

Survey Specifications

Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex.

Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design.

Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.

Sector name(s): Cutter sector and large pelagic sector.

Sampling scheme: census

Variables: All social variables

Supra region(s): All Supra regions

Survey planning

The population for this sampling scheme consists of all fisheries companies of the following segments/clusters:

- Beam trawlers 12-< 18 m
- Beam trawlers 18-< 24 m
- Beam trawlers 24-< 40 m
- Beam trawlers 40 m or larger
- Demersal trawlers and/or demersal seiners 18-< 24 m
- Demersal trawlers and/or demersal seiners 24-< 40*
- Pelagic trawlers 40 m or larger*

Survey design and strategy

Social data are collected by means of a questionnaire (paper or by e-mail) that are sent to all companies. Follow up reminder will be by mail/e-mail. Auxiliary information on total employment is available through the economic sampling programs in each of the sectors.

For the small coastal fisheries, the social data will be collected in combination with the economic data.

Estimation design

The questionnaire will include all variables requested in the EU-map.

<p>Totals of variables per sector (small scale fisheries, large scale fisheries, trawlers) are based on Horvitz-Thompson (HT) estimations. In combination with total employment in each of these sectors (from the economic surveys), the employment per category (e.g., age, sex) is estimated. In case of missing/unclear information the respondent is contacted to discuss the provided information. In case this is not possible results will be ignored in the aggregation procedure.</p>
<p>Error checks</p>
<p>During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors. The social data is stored in an access database which includes internal consistency checks. The resulting data are checked internally with economic data from the companies and historical data. During the data processing and estimation phase data will be cross checked with trends in number of companies/vessels. Many of these checks are automated and incorporated in the standard process,</p>
<p>Data storage and documentation</p>
<p>Data is stored in an access database at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.</p>
<p>Revision</p>
<p>The sampling plan will be evaluated every three years</p>
<p>Confidentiality</p>
<p>Are procedures for confidential data handling in place and documented? Yes. Data are stored on a secure data server (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement.</p> <p>Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information.</p> <p>Are protocols to enforce confidentiality with external users in place and documented? Yes, privacy sensitive data is not exchanged with external users. In the accompanying letter of the questionnaire, the confidentiality policy is explained.</p> <p>Are there any issues with publication of data due to confidentiality reasons? No.</p>
<p>AR comment: No deviations</p>

Sector name(s): Social data aquaculture sector

<p>Survey Specifications</p> <p><i>Sector name refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. Sampling scheme refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling then outline sampling design. Variables refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex. Supra region refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All Supra regions'.</i></p>
<p>Sector name(s): Aquaculture sector.</p>
<p>Sampling scheme: census</p>

Variables: All social variables
Supra region(s): All Supra regions
Survey planning
The population for this sampling scheme consists of all aquaculture companies.
Survey design and strategy
Social data are collected by means of a questionnaire (paper or by e-mail) that are send to all companies. Follow up reminder will be by mail/e-mail. Auxiliary information on total employment is available through the economic sampling programs in each of the sectors.
Estimation design
The questionnaire will include all variables requested in the EU-map. Totals of variables per sector (mussel, oyster and eel sector) are based on Horvitz-Thompson (HT) estimations. In combination with total employment in each of these sectors (from the economic surveys), the employment per category (e.g., age, sex) is estimated. In case of missing/unclear information the respondent is contacted to discuss the provided information. In case this is not possible results will be ignored in the aggregation procedure.
Error checks
During the process of data collection and data processing various errors might be introduced. The most important errors for this survey are data entry errors and data processing errors. The social data is stored in an access database which includes internal consistency checks. The resulting data are checked internally with economic data from the companies and historical data. During the data processing and estimation phase data will be cross checked with trends in number of companies/vessels. Many of these checks are automated and incorporated in the standard process,
Data storage and documentation
Data is stored in an access database at Wageningen Economic Research. Data processing and estimation is done using standardised scripts in SPSS. For each of the procedures (data entry, data checking and data estimation) internal protocols are available.
Revision
The sampling plan will be evaluated every three years
Confidentiality
Are procedures for confidential data handling in place and documented? Yes. Data are stored on a secure data server (two factor authentication) which are only accessible by the persons who work with the data and have signed a nondisclosure agreement. Are protocols to enforce confidentiality between DCF partners in place and documented? Yes, a processing agreement has been signed for the use of auxiliary information. Are protocols to enforce confidentiality with external users in place and documented? Yes, privacy sensitive data is not exchanged with external users. In the accompanying letter of the questionnaire, the confidentiality policy is explained. Are there any issues with publication of data due to confidentiality reasons? No.
AR comment: No deviations

