National Marine Fisheries Research Institute, Gdynia, Poland

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

Poland Work Plan for data collection in the fisheries and aquaculture sectors

2025-2027

Version 3

Warsaw, Poland - 31 October 2024

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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.

Based on the DCF Regulation, the Polish Fisheries Act includes a statutory delegation for the minister in charge of fisheries to designate the institution responsible for implementation of the EU multi-annual program for fisheries data collection. In the regulation issued on the basis of this statutory delegation, the minister responsible for fisheries appointed the National Marine Fisheries Research Institute (NMFRI) to implement the DCF program.

1. The Fishery Department of the Ministry of Agriculture and Rural Development (MRiRW).
Address
Wspólna 30
00-930 Warszawa, Poland

Contact
Secretariat: tel. +48 22 583 89 00; fax: +48 22 583 89 01; e-mail: sekretariat.dr@minrol.gov.pl

Role
Comprehensive supervision of the implementation of the fisheries policy with regard to marine and freshwater fisheries and aquaculture.

2. National Marine Fisheries Research Institute (NMFRI)
Address
Kołłataja 1
81-332 Gdynia, Poland

Contact
Secretariat: tel. +48 58 73 56 232; fax: +48 58 73 56 110; e-mail: sekretariat@mir.gdynia.pl

Role
Implementation of the EU multi-annual program for fisheries data collection since 2005.

National Correspondent:
Ireneusz Wójcik (NMFRI); tel. +48 58 73 56 232; e-mail: iwojcik@mir.gdynia.pl

National data collection website: https://dcf.mir.gdynia.pl/

(max. 1000 words)

Text Box 1a: Test studies description

Region: Baltic Sea

Test study: 1 Regionally coordinated stomach sampling program

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

Name of the regional test study: 1 Regionally coordinated stomach sampling program
RWP BALTIC 2025-2027

(max 250 words per study)

Text Box 1b: Other data collection activities

Region: Baltic Sea, North-East Atlantic, North Sea and Eastern Arctic, Other region – SPRFMO, CECAF, NPFC

Activity: 1 - RCGs Secretariat

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.
Name of the regional activity: 1 - RCGs Secretariat RWP BALTIC 2025-2027, RWP NANSEA 2025-2027, RWP LDF 2025-2027, RWP ECON 2025-2027 *(max 250 words per study)*

Activity: 2 - Regional data base and estimation System (RDBES)

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.
Name of the regional activity: 2 - Regional data base and estimation System (RDBES) RWP BALTIC 2025-2027, RWP NANSEA 2025-2027, RWP LDF 2025-2027 *(max 250 words per study)*

Activity: 3 - Regional Coordination taking place in ISSGs and pan regional cooperation between RCGs

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.
Name of the regional activity: 3 - Regional Coordination taking place in ISSGs and pan regional cooperation between RCGs RWP BALTIC 2025-2027, RWP NANSEA 2025-2027, RWP LDF 2025-2027, RWP ECON 2025-2027 *(max 250 words per study)*

Activity: 4 - Smart Dots

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the regional activity: 4 - Smart Dots
RWP BALTIC 2025-2027, RWP NANSEA 2025-2027, RWP LDF 2025-2027 *(max 250 words per study)*

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

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.
Name of the regional activity: 5 - Catch, effort and sampling overviews for RCG Technical Meeting RWP BALTIC 2025-2027, RWP NANSEA 2025-2027, RWP LDF 2025-2027 *(max 250 words per study)*

SECTION 2: BIOLOGICAL DATA

Text Box 2.3: Diadromous species data collection in freshwater

Region: Baltic Sea

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.
Method selected for collecting data. **European eel** Already since 2010 WGEEL has been indicating the need of an assessment of biomass and mortality indicators in management as well as scientific reference points to ultimately result in a scientific advice framework that works in line with the ICES precautionary approach. The sampling design will provide relevant data for biomass assessment to WGEEL to perform the approach for international stock assessment. As required by DECISION (EU) 2021/1167, the data collection for two Polish EMU's (Oder and Vistula) will consist of: • catch quantities derived from inland commercial and recreational fisheries; Fishery statistics in public inland waters are collected as part of the Public Statistics Research Programme. Data collection from fishery operators is carried out using the questionnaire RRW-23 'Statement on fisheries management conducted in public inland surface running waters' and includes among others:

- Information on catches of fish and crayfish with fishing gear and equipment in fishing districts, amount of stocking material introduced into the waters of fishing districts;
- Employment;
- Angling catches of fish in total in all fishing districts operated by the authorized persons and the method of determining them.

In addition, statistics on angling catches in districts leased by a Polish angling association will be collected based on records compulsorily filled in by anglers (***rec_diad***).
Catch estimates are provided each year following the data call of ICES Working Group on Eels (WGEEL). Quality of the data provided are discussed and verified during the group meetings.

- biological variables (***commercial_diad, trap_eel***)

Samples will come from commercial fishery in lakes and rivers in northern Poland. It is planned to collect a total of 300 eel individuals and determine variables such as age, length, weight, sex and life stage. Additionally, in both EMUs, biological data will be collected from eels caught in research traps. Annually, an additional of approx. 500 eels will be analysed in this way.

- the abundance of recruits – catch data obtained from eel ladder in Słupia and Łupawa river (***trap_eelrecruits***)

Natural recruitment plays a minor role in population formation. Monitoring of eel occurrence being currently performed on rivers flowing directly into the Baltic Sea has confirmed small numbers of ascending eel fry. In 2012-2023, monitoring points on the Słupia and Łupawa rivers found eels with lengths ranging from 8 to 40 cm, with an average length of 14 cm. The number of fry ranged from a few to about 1,600 per year, with by far the majority caught in a trap located on the Słupia River. Monitoring will be continued.

- the abundance of the standing stock – calculated by mathematical modelling, supplemented by data from scientific non-selective fyke nets set in lagoons and lakes (***trap_eel***)
- the number of emigrating silver eels will be calculated by mathematical modelling

The stock dynamics of eel for both EMU's is estimated using a version of CAGEAN model (Deriso et al., 1985), described in the Polish Eel Management Plan. Data will be delivered to WGEEL annually.

Salmon and sea trout

- catch quantities and biological variables derived from inland commercial and recreational fisheries (***commercial_diad_trout, rec_diad***)

Currently, there is no targeted commercial fishing for sea trout and salmon in Poland. However, it is planned to collect data from 100 individuals caught for the purpose of obtaining gonads for artificial reproduction. The majority of the fish are released into the water. Data will include length, weight, age, sex.
For angling, catch rates will be determined based on compulsory registers filled in by anglers on the rivers Drwęca, Reda, Łeba, Słupia, Parsęta, Łupawa, Rega, Ina.

- Parr density (***electro_diad***)

Fishing for sea trout and salmon parr will be carried out using the electrofishing method. On their basis, the density of salmon and sea trout fry in individual age classes will be estimated. The research fishery will be carried out in 17 rivers and its tributaries, in at least 54 positions located in the areas of the spawning grounds of sea trout and salmon. The result of the work should be a set of data required by the WGBAST working group.

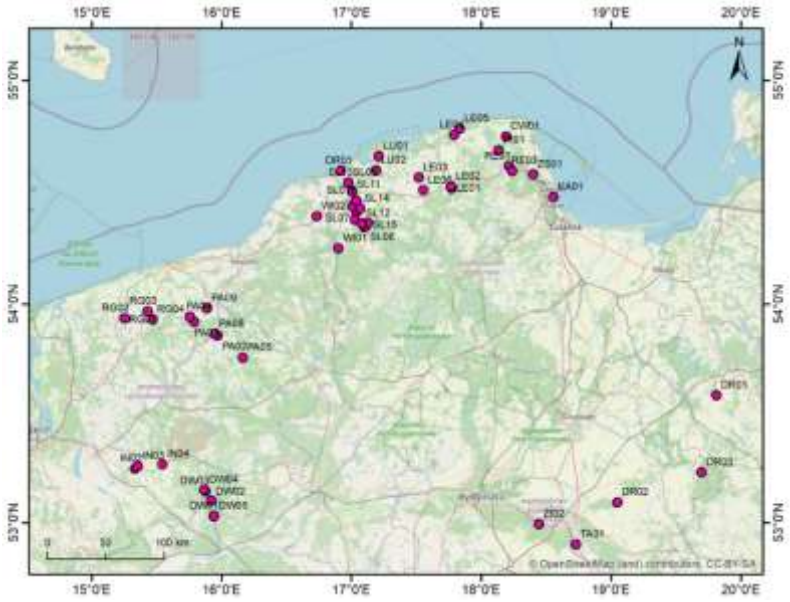


Fig.1 Electrofishing sites planned for parr monitoring

- Smolt abundance (***smolt_trap***)

Description of data collection – rotational trap on the Słupia River
Species, number, length and age of smolts caught and estimated total number of run-off smolts will be determined.

- Ascending individuals (***counter_diad***)

Data will be collected from records of 7 automatic fish counters located at fish ladders on the Vistula, Słupia, Parsęta, Drawa, Łupawa and Wieprza rivers. It will include species, number, estimated length and estimated age of fish migrating through the fish ladders.

Recreational catches of salmon and sea trout inland waters

Sea trout is an important angling goal in the coastal rivers. The majority of rivers of this area are located within the Polish Angling Assosiation (PAA) usage range. Currently, the only source of information on the level of angling catches is catch registers maintained by individual PAA districts. However, the data obtained from the records are incomplete. This is due to the different level of recovered records in individual districts, the lack of information on catches of visiting anglers and the problem of reliability of data entered into registers. The aim of the monitoring is to implement a set of actions enabling gathering and development of reliable data on angling catches of sea trout and salmon in the selected rivers of the northern Poland.

The survey covers all year except closed season (October-December).

Seven rivers of different size have been selected for a monitoring, i.e. Słupia, Rega, Łeba, Parsęta, Reda and Drwęca (Vistula R. basin) which are the Pomeranian rivers (SD 25, 26),

and the Ina river that belongs to the Oder catchment area (SD 24). They are all mixed sea trout rivers, where sea trout is also the main object of angling activity. The protection period for sea trout lasts from 1 October to 31 December. The sea trout angling in Poland is focused mainly on catching kelts (January–March). Apart from this period, the months of increased pressure are September and the turn of June and July **(*rec_diad)***.

The methodology of estimating the angling catches will be based on the following elements:

- Analysis of catch records from the PAA districts of the analyzed rivers. Since the access to data is shifted in time, the time of processing results falls for the next year. The analysis of the registers must provide such information as: number of registers issued, number of registers returned, share of full and partial licenses, reported number of sea trout and salmon.
- Confrontation of angling data with information obtained from automated meters (Słupia and Parsęta - Riverwatcher) and data from the catch points (Rega and Słupia).

Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

(max 250 words per species and area)

Text Box 2.4: Recreational Fisheries

Region: Baltic Sea

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.

Recreational fisheries for diadromous species

The aim of the monitoring is a development of a current map of the Polish Exclusive Economic Zone with spatial and temporal distribution of salmon and seatrout recreational fisheries by species and fishing techniques. Depending on the target species and fishing techniques used, the monitoring should cover time period from late autumn to late spring in order to determine areas and time with highest recreational fisheries activities and to provide a reliable monitoring data for estimates of fishing effort as well as catch volume and composition for recreational fisheries for salmon and seatrout.

One module is dedicated to monitoring of recreational fisheries of salmon and seatrout conducted at sea with the use of trolling technique (trolling boats – salmon and sea trout).

There are two basic categories of trolling boats active in this fisheries:
Commercial boats, for which the recreational fishery is an official commercial activity. Such boats take on board up to 4-6 recreational fishermen who are fishing under holding individual fishing permits.

Second category consist of private fishing boats, not offering commercial fishing trips.

Four main methods will be applied to monitor the composition of the fleet engaged in the recreational fishery and fishing effort:

- remote CCTV cameras installed in ports identified as the most important for salmon and seatrout recreational fishery (Hel, Gdańsk - Górki Zachodnie). The cameras record boat movements between 04:00 and 18:00 each day. A high image frame rate; Full HD format (25 images per second) is set to ensure full coverage of the activity at each monitored marina and correct identification of trolling boats. Taking into account the capacity of cameras hard drives, data from them should be downloaded to the NMFRI server at three-month intervals;
- monthly on-site questionnaire interviews. Trolling boats are randomly sampled from both groups; commercial recreational boats and private fishing boats. The number of interviewed boats is selected randomly. The App dedicated to the survey is used by the observers. The refusal rate is recorded. The number of anglers on boat and fishing rods are recorded in the protocol. In addition, sociological data are collected ***(diad_troll_harb)***;
- annual off-site questionnaire interviews. An annual off-site survey is targeting in general sea recreational fishing in Polish Maritime Waters with a particular emphasis of diadromous fish species ***(diad_web)***;
- onboard observations – observers' participation in trolling cruises (one trip per month). The biological samples (length, weight, sex, age, maturity stage) and catch composition are collected. Scales samples are collected from each fish and stored in the paper envelopes. The GPS position is recorded three times during the trip (start, middle and end of fishing). In addition, number of anglers on boat and fishing rods are recorded in the protocol. Directly, after each trip, collected data are digitized in the excle file. In addtion, paper protocols are stored ***(diad_troll_offshore)***;

The use of remote CCTV cameras for monitoring of recreational salmon trolling fishery effort revealed that remote cameras proved to be a cost-efficient method providing accurate fishing effort estimates helping to reduce bias in recreational catch estimates. On-site as well as off-site questionnaire interviews appear to be method delivering data of high quality. Onboard observations at sea, on-site interviews and data collected through the CCTV cameras will serve to verify the reliability/accuracy of the catch volumes estimates based on the off-site questionnaire interviews.

Other module - the monitoring of coastal recreational fisheries of seatrout from the shore with the use of fishing rods will be conducted with the use of method listed below. The duration time cover the period from late autumn to late spring (sea trout).

- Sea trout – off-site questionnaire interviews. An annual off-site survey is targeting in general sea recreational fishing in Polish Maritime Waters with a particular emphasis of diadromous fish species ***(diad_web)***;
- Sea trout – on-site questionnaire interviews covering the period from late autumn to late spring ***(diad_coastal)***.

Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST) for salmon and sea trout. Quality of the data provided are discussed and verified during the group meetings.

(max 900 words per region)

Text Box 2.5: Sampling plan description for biological data

Region: Baltic Sea

Sampling scheme name: Small Pelagics in the Baltic

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

Sampling scheme name (or identifier): Small Pelagics in the Baltic

RWP BALTIC 2025-2027

(max 250 words per sampling scheme)

Sampling scheme name: Baltic at sea

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

Sampling scheme name (or identifier): Baltic at sea

In the Polish data collection programme in the Baltic Sea, both at-sea and on-shore sampling schemes are implemented based on the same rules. Therefore, the same text applies to both sections, for ‘Baltic at sea’ and ‘Baltic on shore’ sampling schemes in text box 2.5.

Additional information on sampling schemes

At sea sampling is considered to be the most reliable data source on all catch fractions including landings, discards and BMS, as well as bycatch of PETS. In the period covered by the previous work plan (2022-2024), following the recommendations from STECF EWG 21-09, separate sampling schemes for at sea and on shore sampling were defined. However, given the national specificities, sampling in both schemes was carried out in a combined way. Sampling at sea is assumed to have a higher priority over sampling on shore, which is only conducted when there is no possibility to have a scientific observer on board. Similar approach will be applied in 2025-2027. The analysis of the number of trips per observation type from the last few year was performed in order to determine the planned number of trips for both sampling schemes. Figure 1 shows the percentage shares of the number of sampled trips by vessel length categories and observation types from the period 2021-2023.

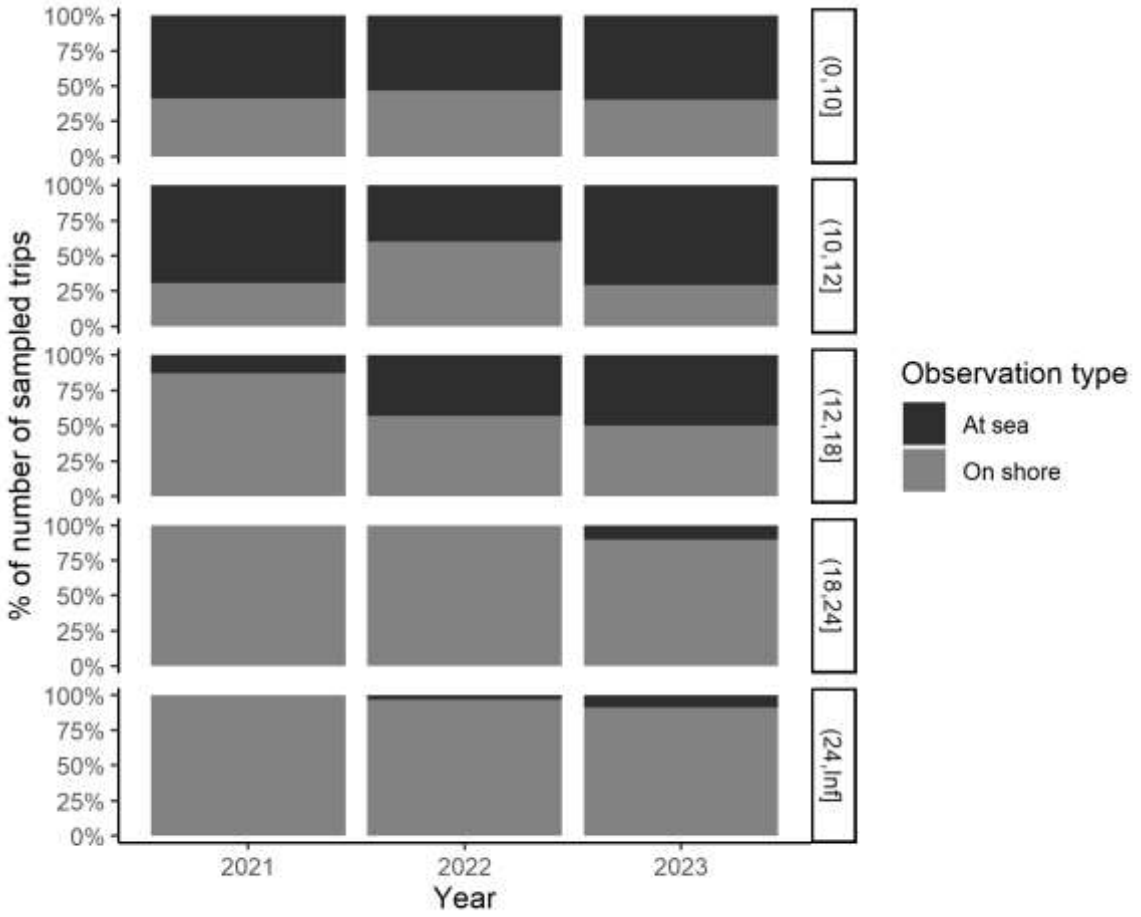


Figure 1. Sampled trips by vessel length categories.

The number of sampled trips per observation type varies by vessel length categories. For vessels under 18m in length, the proportion of observation types appears to be at the expected level. It is planned to further monitor the execution of sampling plan, especially for larger vessels (over 18m in length). An important element of this analysis will be related to refusal rates and reasons for refusals to take observers on board.
As the sampling in both observation types is executed in a combined way, it was decided to divide the total number of planned sampled trips equally between the at-sea and on shore schemes.

Additional description of sampling frames

The primary sampling unit applied in the sampling program is **vessel*trip**. The list of vessels is used as a proxy to select a trip, because the list of trips is not known in advance. When planning stratification, it is important to ensure that each primary sampling unit is assigned to only one group. Therefore, in the Polish sampling scheme, the stratification of PSUs is based on vessel length categories. Such approach was found to be very flexible in case of sudden changes in the fisheries caused by e.g. change in a legislation, natural causes, etc. Figure 2 shows the number of vessels by vessel length categories.

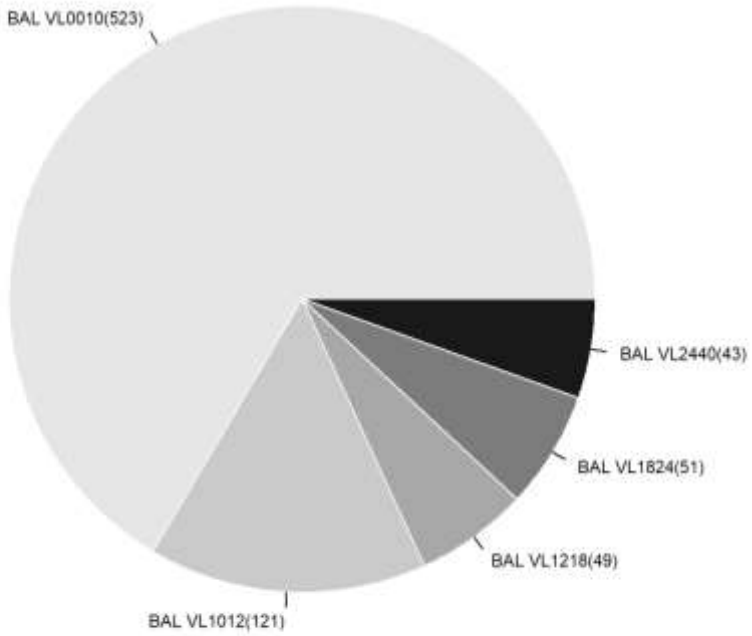


Figure 2. Number of vessels by length groups

In order plan the sampling of commercial fisheries, official catch statistics from 2021-2023 were summarized. Major types of fisheries were identified and analysed by groups of PSUs. The figures 3 and 4 show catches and numbers of trips by major types of fisheries and groups of PSUs in the reference years. The smallest vessels, under 10m in length (BAL VL0010), use only passive gears, mainly in the Vistula and Szczecin Lagoons and also to a slightly lesser extent in the coastal waters of the open sea. The activity of vessels from 10m to 12m in length (BAL VL1012) is primarily based on using passive gears in the coastal waters of the open sea. Vessels with length from 12m to 18m in length (BAL VL1218) represent the most diverse group of PSUs. This part of the fleet target mainly pelagic and demersal species and use both active and passive gears. The two last groups represent the biggest vessels, from 18m to 24m (BAL VL1824) and from 24m to 40m (BAL VL2440). These vessels use mainly pelagic trawls and target sprat and herring. It was decided to split them into two separate groups because of their characteristics. The largest vessels have slightly different catch composition. Their catches are often destined for industrial purposes.

These vessels usually have longer trips and land abroad more often than 18-24m vessels.

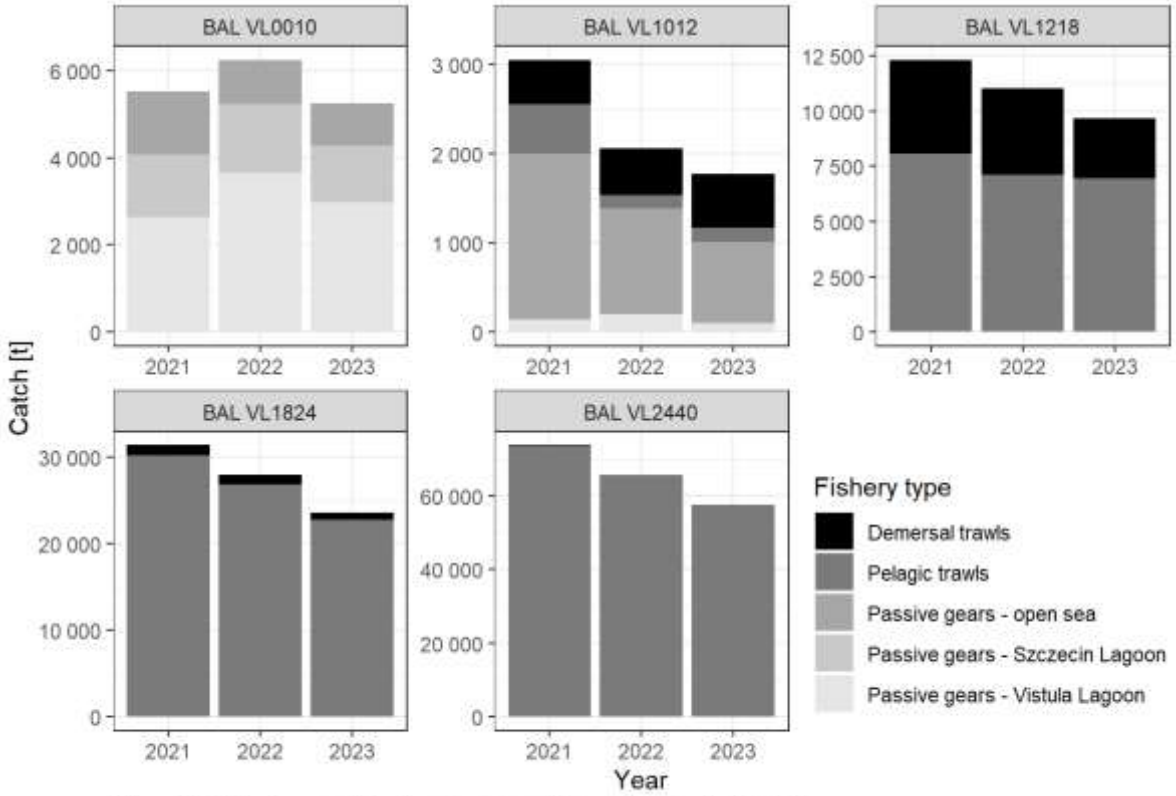


Figure 3. Catches by vessel length categories and fishery types in the Baltic Sea

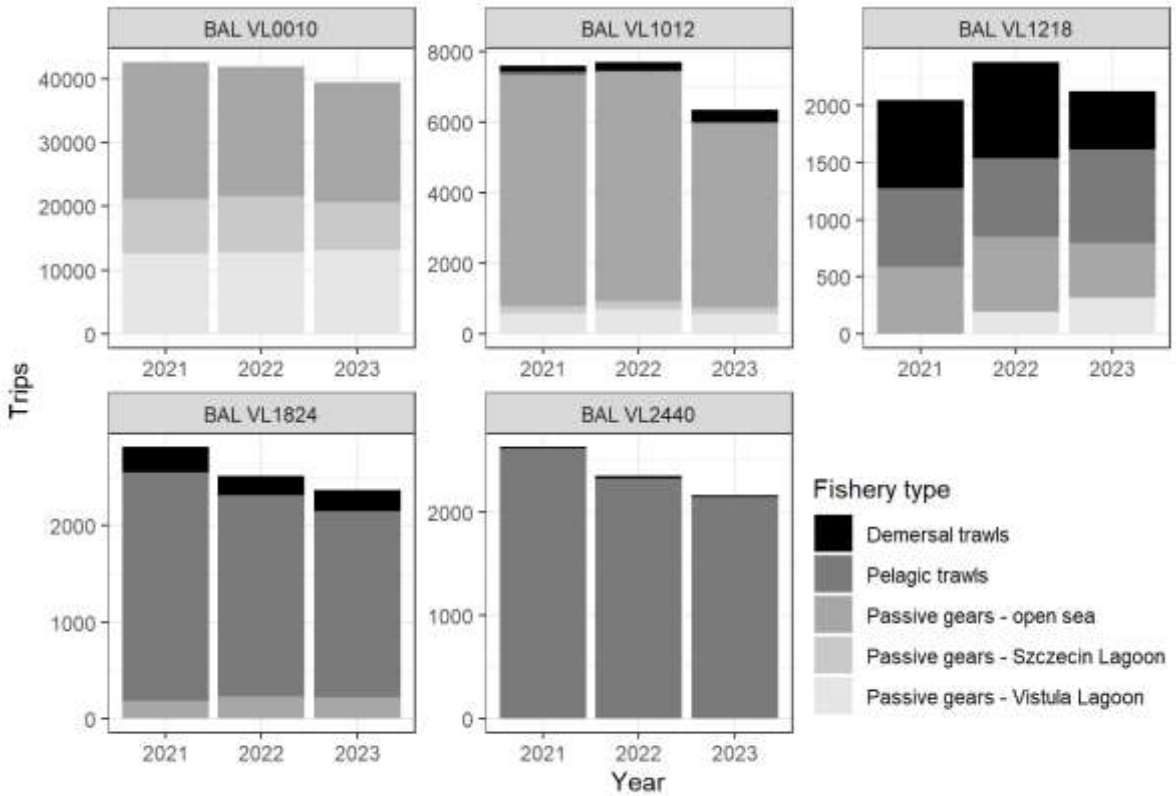


Figure 4. Number of trips by vessel length categories and fishery types in the Baltic Sea

For each group of PSUs, an average annual catch in kg and an average annual number of trips were calculated using official catch statistics from the period 2021-2023. These values will be used to proportionally allocate the planned number of sampled trips between groups of PSUs and quarters. Groups related to small scale fisheries have relatively high number of trips and low catch weight, unlike larger vessels. Therefore, both effort and catches were used to cover all PSU groups with a sufficient number of planned sampled trips. In the recent period 66 vessels were withdrawn and more vessels are expected to be withdrawn in the coming years. It was decided to remove the data of withdrawn vessels from the summaries of catches and trips.

The total number of 200 planned sampled trips will be split across all groups and quarters. 60% of the total number of planned sampled trips will be allocated to groups and quarters proportionally to the average annual number of fishing trips from the period 2021-2023. The remaining 40% of the total number of planned sampled trips will be allocated to groups and quarters proportionally the average annual catches from the period 2021-2023. A factor based 60% on the number of fleet trips proved to be the most optimal. In this scenario, sufficient monitoring of the activity of small scale fleet is ensured. Planned number of sampling trips of large scale fleet is on a relatively high level. This is expected to mitigate the issue of refusal to take observers, which was observed in previous years. The numbers of planned sampled trips per groups of vessels and quarters is presented in the figure 5.

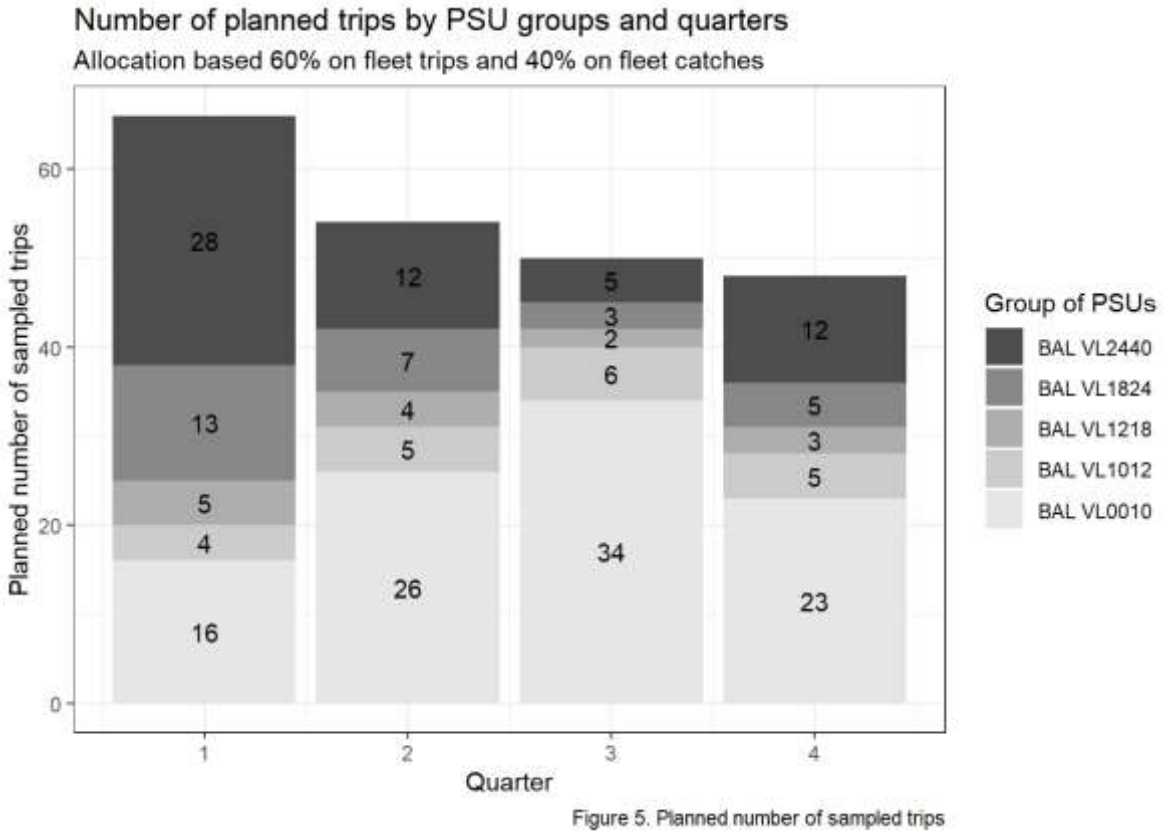


Figure 5. Planned number of sampled trips

Based on the sampling plan created in the previous steps, a simulation of random selection of vessels and trips was conducted using the data from 2023. The list of PSUs consists of all vessels active in 2023, excluding vessels which have been withdrawn since 2023. Unequal probability sampling with replacement was applied to draw vessels from the list. The probability of a vessel being selected is determined by an average annual catches from the period 2021-2023. In the second step, trips were selected using simple random sampling

without replacement. Major fishery types were identified. The results of the simulated selection of PSUs are shown in the figure 6.

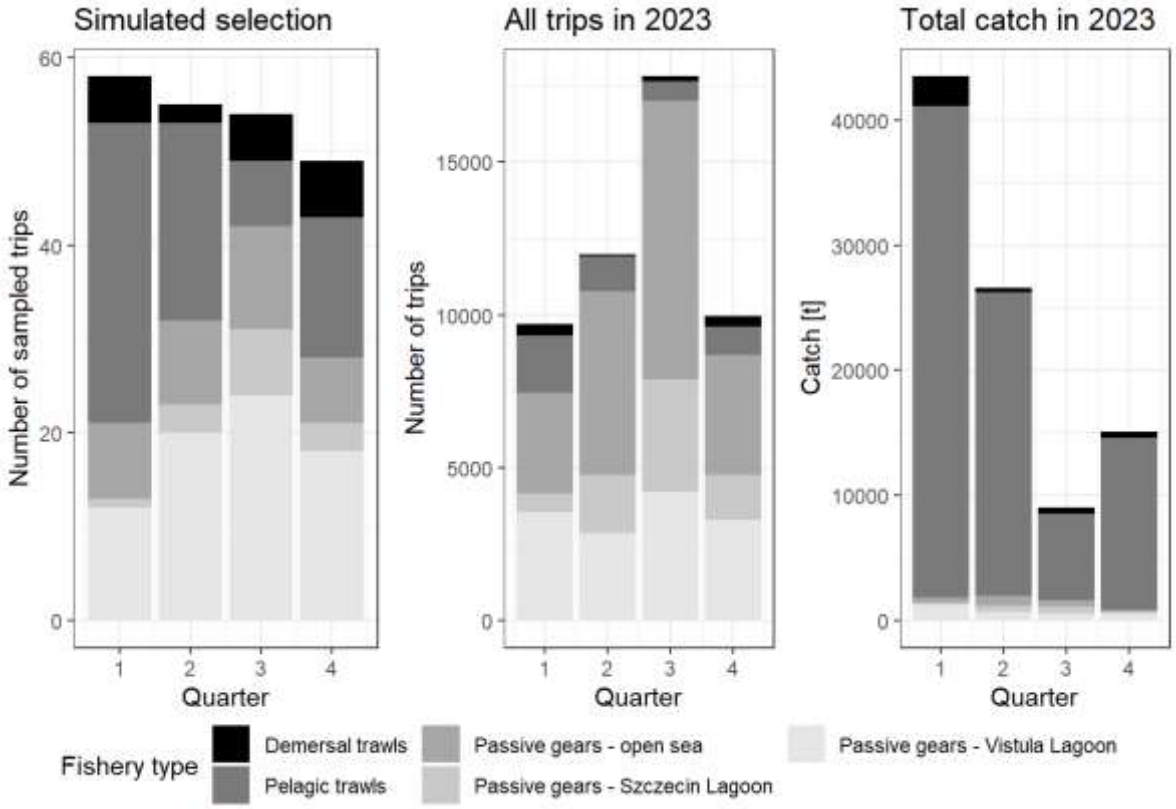


Figure 6.Results of the simulated selection of trips by the types of fisheries

The results of the simulation allow to assume that the selection of PSU based on the designed sampling plan will sufficiently cover major types of fisheries.

(One text box (max. 1 000 words) per region/RFMO/RFO/IO)

Sampling scheme name: Baltic on shore

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

Sampling scheme name (or identifier): Baltic on shore

In the Polish data collection programme in the Baltic Sea, both at-sea and on-shore sampling schemes are implemented based on the same rules. Therefore, the text from the 'Baltic at sea' sampling scheme applies also to the 'Baltic on shore' sampling scheme.

(One text box (max. 1 000 words) per region/RFMO/RFO/IO)

Region: Other regions (Eastern Central Atlantic (FAO area 34)) – CECAF

Sampling scheme name: Regional coordination for sampling small pelagics fisheries in CECAF waters

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

Sampling scheme name (or identifier): Regional coordination for sampling small pelagics fisheries in CECAF waters (CECAF at sea sampling)

RWP LDF 2025-2027

Details can be found in the NWP NLD 2025-2027.

(max 250 words per sampling scheme)

Region: Other regions (South-Pacific (FAO area 81 and 87)) – SPRFMO

Sampling scheme name: Regional coordination for sampling small pelagics fisheries in SPRFMO waters

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

Sampling scheme name (or identifier): Regional coordination for sampling small pelagics fisheries in SPRFMO waters (SPRFMO at sea sampling)

RWP LDF 2025-2027

Details can be found in the NWP NLD 2025-2027.

(max 250 words per sampling scheme)

Region: Other regions (North-Pacific (FAO area 61 and 67)) - NPFC

Sampling scheme name: Regional coordination for sampling small pelagics fisheries in NPFC waters

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

Sampling scheme name (or identifier): Regional coordination for sampling small pelagics fisheries in NPFC waters (NPFC at sea sampling)

RWP LDF 2025-2027

Details can be found in the NWP NLD 2025-2027.

(max 250 words per sampling scheme)

Text Box 2.6: Research surveys at sea

Region: Baltic Sea

Research survey: Baltic International Trawl Surveys – BITS_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.
Research survey: Baltic International Trawl Surveys – BITS_Q1 RWP BALTIC 2025-2027 *(max 450 words per survey)*

Research survey: Baltic International Trawl Surveys – BITS_Q4

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.
Research survey: Baltic International Trawl Surveys – BITS_Q4 RWP BALTIC 2025-2027 *(max 450 words per survey)*

Research survey: Baltic International Acoustic Surveys – BIAS

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.
Research survey: Baltic International Acoustic Surveys – BIAS RWP BALTIC 2025-2027 *(max 450 words per survey)*

Research survey: Sprat Acoustic Surveys – SPRAS

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.
Research survey: Sprat Acoustic Surveys – SPRAS RWP BALTIC 2025-2027 *(max 450 words per survey)*

Research survey: Baltic Ichthyoplankton Survey - BIS

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.

Research survey: Baltic Ichthyoplankton Survey - BIS

1. Objectives of the survey

The main aim of the Baltic Ichthyoplankton Surveys is monitoring of the spatial distribution and abundance of fish eggs and larvae. Several individual survey cruises are conducted each year in close collaboration between several institutes around the Baltic Sea. The surveys are conducted between March and November, aiming to cover the entire spawning season of the target species, Baltic cod.
However, depending on the time of sampling, eggs and larvae of other species are caught as well, such as e.g. sprat, herring and flounder as well as several non-commercial species. As spawning of Baltic cod is presently mainly restricted to the Bornholm Basin due to the ambient hydrographic conditions, the main survey area is located in ICES SD 25, but some cruises also cover adjacent areas to account for potential spatial extension of spawning activity. In addition to the ichthyoplankton sampling, a number of trawl hauls are conducted to obtain information on the adult cod, in particular on their fecundity and sex ratios. Furthermore, hydrological parameters are recorded throughout the survey area via CTD casts, and their vertical and horizontal variations are taken into account during analysis and interpretation of survey results. The data resulting from these surveys are utilized to produce a fishery independent SSB estimate as well as a larval index, which are used in the stock assessment of Baltic cod.

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

Ichthyoplankton is sampled on a regularly spaced station grid consisting of 60 stations in the main Basin. The sampling gear is a Bongo net with an opening diameter of 60 cm and nets of 320 cm length, one net with 500 micrometr and one net with 335 micrometr mesh size. The gear is deployed at 3 knots ship speed in a double-oblique haul from the surface to 5 m above the sea floor. In addition, on each sampling station profiles of the ambient hydrographic conditions are obtained by CTD casts. Adult fish are sampled by different types of otter trawls, depending on the institute conducting the individual surveys.

As mentioned, several institutes are contributing to these surveys to cover the spawning season of Baltic cod from March to November. National Marine Fisheries Research Institute is conducting a survey in June onboard on polish RV Baltica, which is a joint survey with the DTU Aqua, Denmark. In addition, one survey is conducted in August only by NMFRI, also on RV Baltica.

- DTU Aqua – National Institute of Aquatic Resources, Denmark, RV DANA & RV BALTICA(charter)
- NMFRI – National Marine Fisheries Research Institute, Poland, RV BALTICA
- GEOMAR – Helmholtz Centre for Ocean Research Kiel, Germany, RV ALKOR
- IMF – Institute of Marine Ecosystem and Fishery Science, Hamburg University, Germany, RV ALKOR
- TI-OSF – Thünen Institute of Baltic Sea Fisheries, Germany, RV CLUPEA

(max 450 words per survey)

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

Region: Baltic Sea

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.

National strategies.

In Poland, all inland flowing waters are designated as fishing areas known as fishing districts. To obtain authorization for fishing activities in a district, one must win a competition for its use. The director of the Regional Water Management Board signs a multi-year agreement with the winner of the competition.
Fishermen authorized to fish in the district who manage fisheries properly have the right to enter into another agreement (priority right to conclude an agreement for a further period). Fisheries management in the district is based on a fishing plan, which provides a detailed description of planned fishing activities along with specifications for stocking. The fishing plan requires a positive opinion from an authorized body, currently the National Inland Fisheries Institute.

As of 2023, there are 2,215 fishing districts established in Poland, of which about 1,800 are currently used by around 450 entities (both legal and natural). These entities are required to complete statistical questionnaires under the Public Statistics Survey Program (PSSPS), conducted in cooperation with scientific institutions for the Central Statistical Office. In recent years, this program has collected fishing data from 380-390 entities utilizing 370-390 thousand hectares of fishing district waters. The collected data cover at least 95% of actual eel catches and eel stocking in inland waters and are included in the plan.

According to inland fisheries regulations, there is no requirement to record fishing days or other indicators of fishing effort. From 2025 to 2027, the program for collecting data on fishing effort will be expanded to include the 10 largest entities that catch more than 1 ton of eel per year. By the end of the programming period, all fishing operators will be surveyed. The intention is to record each fishing operation, including: type of gear, day of deployment, day of retrieval, size of catch, and location of catch. Special forms will be developed and introduced for the main eel fishing users in the following years.

In the next three years, it is also planned to introduce electronic data reporting on eel catches in inland waters, especially in lakes, by expanding the ERS system with new inland fishing modules or developing a new system. A computer and/or mobile application will be created in which authorized fishermen will report their catches at the appropriate frequency.

(max. 900 words)

Text Box 4.2: Incidental catches of sensitive species

Region: Baltic Sea, North-East Atlantic, 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 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

Incidental catches of sensitive species - List of PET Species provided by ICES
RWP BALTIC 2025-2027, RWP NANSEA 2025-2027

(max 250 words per activity)

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

RDBES incorporation of bycatch data
RWP BALTIC 2025-2027, RWP NANSEA 2025-2027

(max 250 words per activity)

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

Identification of high-risk fisheries
RWP BALTIC 2025-2027, RWP NANSEA 2025-2027

(max 250 words per activity)

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.

Additional information on planning the observation of incidental catches of sensitive species (if already filled in in Annex 1.1, please indicate where it can be found):

— 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?

No (not yet).
However, as part of activities currently outside the DCF, in cooperation between the Department of Fisheries, NMFRI and fishermen organizations, it is planned to launch a project on monitoring coastal/small-scale fisheries in order to protect biodiversity with particular emphasis on bycatch of protected organisms. Based on the collected data, NMFRI will propose recommendations regarding the intensity of monitoring fishing operations conducted with the use of various categories of fishing gear and will determine the regions and types of fishing gear, taking into account seasonal changes, characterized by a high risk of bycatch of protected species.

— What are the gear types/metiers that present the highest risk of bycatch per species/taxa of PETS in a given region?

It is assumed that the risk of bycatch of PETS is relatively high for small scale fleets using passive gears and operating in coastal areas with depth less than 20-30m.

— What methods are used to calculate the observation effort?

Data on bycatch including incidental catches of sensitive species are collected by observers as a standard procedure. Fishing operations subject to at sea sampling of commercial catches are checked for the occurrences of PETS. All parts of observed fishing operations are covered. Information on fishing operations which were not sampled is also registered.

— 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.

Sampling protocol follows the recommendations from FishPi2, WGBYC and WGCATCH.

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? If YES, is the observer instructed to indicate if the cod-end was NOT checked in a haul?

Yes

— 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?

Yes

— In large catches: does the protocol instruct the observer to check for rare specimens during sorting of the catch (i.e. at the conveyor belt)? Is the observer instructed to indicate what percentage of the sorting or hauling process has been checked at 'haul level'?

Yes

Additional information on sampling schemes:

.

From legal perspective, it is compulsory for fishermen to report all bycatch, including bycatch of protected species, in the logbook.

Under the DCF the absence or presence of incidental bycatches, including all protected species (including fish, birds, mammals), are routinely recorded on each at-sea-observer trip. Observers are specifically instructed and requested to:

● Check each observed catch for the presence of protected species, irrespective of the fishing gear used;

● Observe hauling process during observed fishing operations;

● Record details of the bycatch of protected species, with length and weight measurements where possible (including photo documentation);

● Record parameters of the fishing gear (such as the number of units, their heights and lengths and the amount of the observed hauling process in case of passive gears;

Particular attention for presence of protected species is paid during observations of fishing trips with the use of passive gears and in case of coastal or small scale fisheries as those gears and fleet segments are regarded as presenting higher risk of bycatch of protected species.

Data on bycatch are annually submitted within the ICES WGBYC data call and will be included in the future submission of RDBES data when respective tables and parameters are in place.

In 2019 a free mobile application (for smartphones, tablets) was developed at the National Marine Fisheries Institute (NMFRI), dedicated to monitor, record and document the bycatch of protected species. The application

is named “MIR przyłowy” (in direct translation: “NMFRI bycatch”) and from 2019 until now is tested and further developed in cooperation with fisherman and fisheries organisation along the whole Polish coast in the Baltic. This application i.a. automatically records the time and position of the vessel with graphical presentation on the map and has functionalities activated by fisherman (or person using it) enabling recording the details of the fishing operations: fishing vessel official number, name of ports for fishing trip start and end, fishing gear used and its main parameters (length, height, mesh size number of hooks etc.), sea and weather condition, start of shooting or hauling in the fishing gear, depth, target and bycatch species data (weight or number), taking photos on the spot of the bycaught protected species (for later species identification). All data recorded by application during the fishing operations are stored in the device memory and, once within the range of mobile network, can be sent directly to the server in NMFRI. Software developed on the server side enables generating the trip reports with all details of the fishing trip and catch. The application tests to-date have shown that it is a very practical and effective tool for monitoring the catch, bycatch and fishing effort.

The implementation of this application on a large scale requires cooperation and general acceptance of the fishing community and at the present stage it is very difficult to apply. Currently, the app is tested on a voluntary basis. However, this app has great potential as an effective tool for monitoring the by-catch of protected species.

Additional description on sampling frames

None

(One text box (max. 1 000 words) per region/RFMO/RFO/IO)

Region: Other regions – SPRFMO, CECAF, NPFC

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.

RWP LDF 2025-2027

(max 250 words per activity)

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.

RWP ECON 2025-2027

1. Description of clustering

Due to low number of vessels belonging to several segments two clusters gathering 3 and 4 segments is necessary to create.

The first cluster **(A) Drift and/or fixed netters 12-< 24 m*** consists of Drift and/or fixed netters 12-< 18 m (17 vessels), Drift and/or fixed netters 18-< 24 m (5 vessels), and Vessels using hooks 12-< 18 m (4 vessels).

The second cluster **(B) Demersal trawlers and/or demersal seiners 12-< 18 m*** consists of four segments of vessels using demersal trawls mainly: Demersal trawlers and/or demersal seiners 08-<12 m (7 vessels), Demersal trawlers and/or demersal seiners 12-<18 m (14 vessels), Demersal trawlers and/or demersal seiners 18-<24 m (5 vessels), and Demersal trawlers and/or demersal seiners 24-<40 m (1 vessel).

In the case of cluster A, technical parameters (length and engine power), as well as species composition of catches and type of gears used, were taken into account when clustering. Segments belonging to each cluster are considered similar to other segments with no distinct characteristic or importance.

Demersal trawlers and/or demersal seiners 12-<18 m dominate in cluster B. The average length of the two other neighbouring segments is close to the lower (12 m) and upper (18 m) ranges of the mentioned dominant segment length class. All these segments use the same gear type and have similar species composition pattern. The 100% use of demersal trawl and similar species composition justified including the single vessel Demersal trawlers and/or demersal seiners 24-<40 m segment in the cluster regardless of its distinct technical characteristics. The vessel's contribution to the cluster's total effort and catches is very low (1%).

Table 5.2.1 Clusters/segments - basic technical parameters (based on 2023).

Cluster name	Segment	vessels	mean GT	mean kW	mean length
Drift and/or fixed netters 12-< 18 m*	Drift and/or fixed netters 12-< 18 m	17	25.8	107.1	14.7
	Drift and/or fixed netters 18-< 24 m	5	40.4	165.4	19.0
	Vessels using hooks 12-< 18 m	4	5.7	52.3	12.0
Total Cluster A		**26**	**25.5**	**109.9**	**15.1**
Demersal trawlers and/or demersal seiners 12-< 18 m*	Demersal trawlers and/or demersal seiners 8-12 m	7	16.0	89.1	11.8
	Demersal trawlers and/or demersal seiners 12-< 18 m	14	34.1	145.9	15.5
	Demersal trawlers and/or demersal seiners 18-< 24 m	5	62.6	228.6	19.4
	Demersal trawlers and/or demersal seiners 24-< 40 m	1	100.0	258.0	25.6
Total Cluster B		**27**	**37.1**	**150.7**	**15.6**

A) Cluster **Drift and/or fixed netters 12-< 18 m***

The cluster consist of 26 vessels with dominant contribution of Drift and/or fixed netters 12-< 18 m (17 vessels), the second minor group (5 units) are Drift and fixed netters and the third Vessels using hooks (4 vessels). Figures showing comparison of number of days, volume and value of catches and species composition of catches for segments belonging to the cluster are presented below.

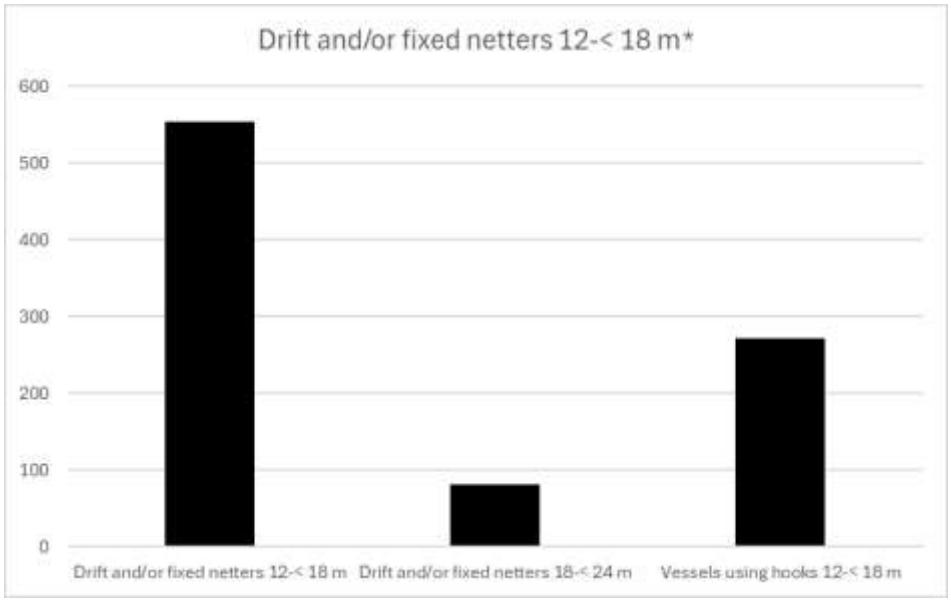


Fig. 5.2.1 Comparison of number of days at sea for segments belonging to cluster Drift and/or fixed netters 12-< 18 m* (2023).

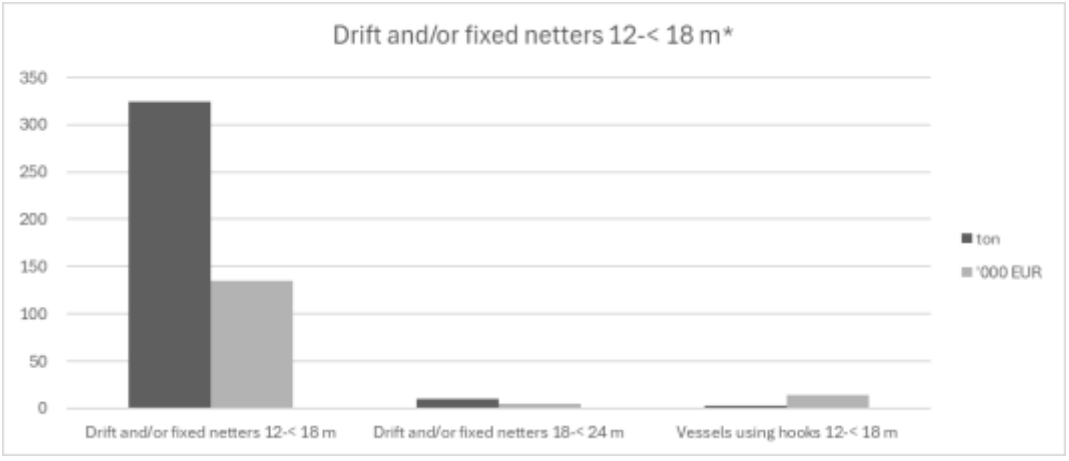


Fig. 5.2.2 Comparison of value and volume of catches for segments belonging to cluster Drift and/or fixed netters 12-< 18 m* (2023).

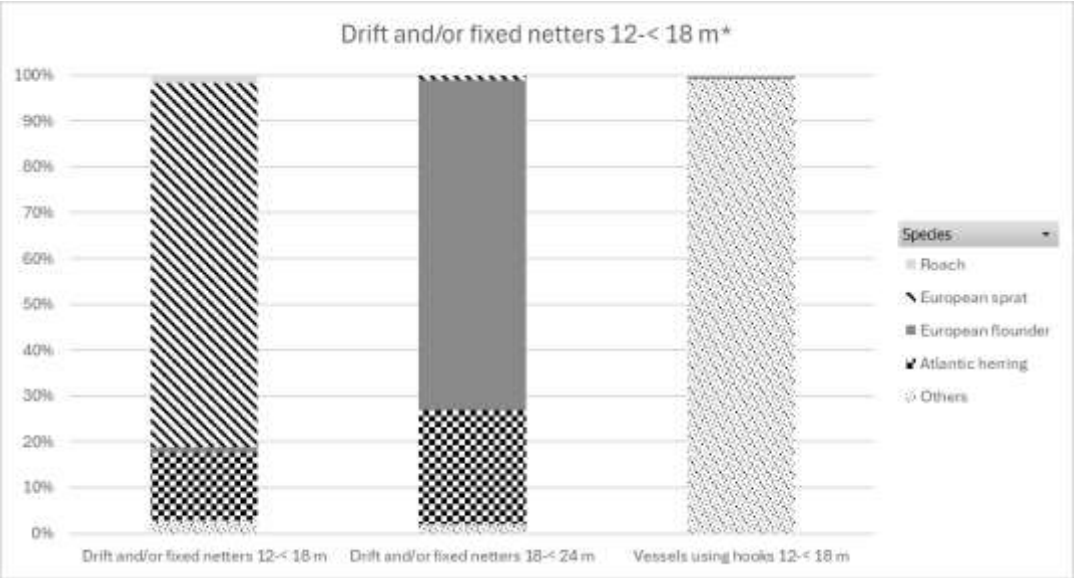


Fig. 5.2.3 Species composition of catches for segments belonging to cluster Drift and/or fixed netters 12-< 18 m* (2023).

B) Cluster **Demersal trawlers and/or demersal seiners 12-< 18 m***

The cluster consist of 27 vessels with dominant contribution of Demersal trawlers and/or demersal seiners 12-< 18 m (14 vessels), the second much smaller group (7 units) are vessels using demersal trawl of 8-< 12 meters length (11.8 m average). There are also 5 Demersal trawlers and/or demersal seiners of 18-<24 meters and single demersal trawling vessel over 24 meters. Figures showing comparison of number of days, volume and value of catches and species composition of catches for segments belonging to the cluster are presented below.

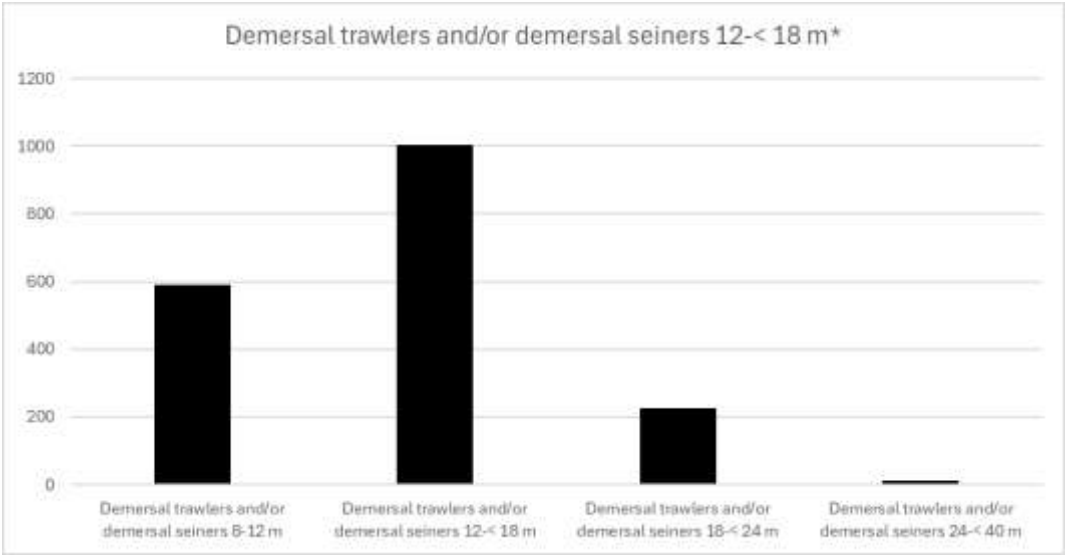


Fig. 5.2.4 Comparison of number of days at sea for segments belonging to cluster Demersal trawlers and/or demersal seiners 12-< 18 m* (2023).

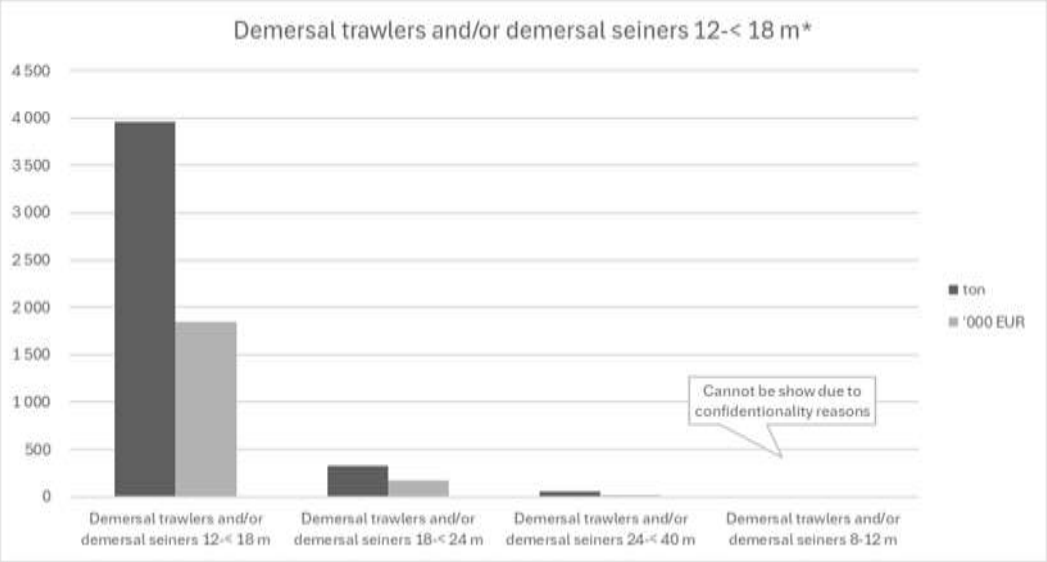


Fig. 5.2.5 Comparison of value and volume of catches for segments belonging to cluster Demersal trawlers and/or demersal seiners 12-< 18 m* (2023).

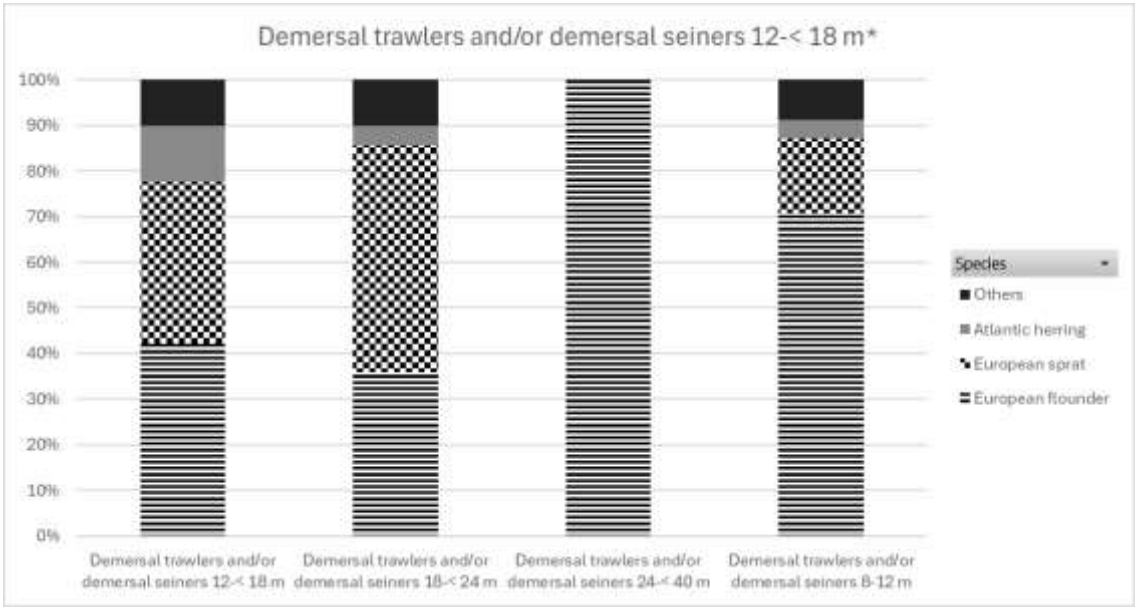


Fig. 5.2.6 Species composition of catches for segments belonging to cluster Demersal trawlers and/or demersal seiners 12-< 18 m* (2023).

2. Description of activity indicator

Activity indicator is not used.

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

Using of PIM method in calculation of invested capital is conditioned by availability of the input data (prices of new constructed vessels mainly). In case of data shortage the scraping premium values

(which influence a real second hand market value) will be used as a subsidiary method. No other deviation is foreseen.

(max. 900 words)

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.

RWP ECON 2025-2027

1. Description of the threshold application

Polish aquaculture sold production amounted to 3.9% in terms of volume and 3.8% in terms of value (source: Eurostat - Production from aquaculture excluding hatcheries and nurseries), therefore economic and social data collection in aquaculture is obligatory.

According to Chapter II point 7 of the EU MAP Implementing Decision annex it is not mandatory for Member States to collect such data for species accounting for less than 5% of the Member State's aquaculture production by both weight and value. Carp production amounted to 40% in terms of quantity and 41% in terms of value. Trout production amounted to 49% in terms of quantity and 47% in terms of value. Sturgeon production (including eggs for human consumption) amounted to 2% in terms of quantity and 5.3% in terms of value. Production of other species is accounting for less than 5% of the Member State's aquaculture production by both weight and value. Therefore economic and social data will be collected for: carp, trout and sturgeon (including eggs for human consumption) in the period of 2025-2027.
In case of aquaculture technique "*Enclosures and pens*" for Sturgeon (eggs for human consumption) planned sample rate indicated in Table 6.1 is 100%. The situation of 100% sampling is specific due to the very small target population (sturgeon in a specific production segment), and to avoid a statistically high error, the sampling must be conducted at this level. We aim to avoid changing the description from PSS to census, as the PSS method has been uniformly selected for the entire aquaculture study (covering various production segments).

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

No deviations from variable definitions as listed in 'EU MAP Guidance Document' in the DCF website, is planned.

(max. 900 words)

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.

RWP ECON 2025-2027

1. The Member State should provide justification for complementary data collection for fish processing in addition to Eurostat data.

Data collection for fish processing is necessary for further analysis of the industry in economic and financial terms. Poland is a one of the largest participants in fish processing industry, especially salmon, and is an important link in the supply chain and distribution channel of fish in Europe.
The collected data make it possible to know the flows referred to above and are crucial to make key economic decisions concerning management and development of the fish processing industry, project planning and public debate including stakeholder participation in policy development. The collected data are necessary for scientific research and publications. Research outcomes contribute to sustainable industry development, process and product innovations. This might be shared with companies and their management, who can take key economic decisions on its basis concerning future development.
Analysis of the fish processing industry is also linked to state policy on modern technologies and environmental protection (e.g. waste management), education and employment in the fish processing industry. The collected data provides the necessary knowledge on the destination of domestic aquaculture products and the directions of fish imports and exports, including species caught in the Polish economic zone on the Baltic Sea not available from other sources. Fish processing industry is labour intensive, energy consuming and harmful to the environment therefore needs to be kept under constant review, as made possible by the knowledge gained from data collection.

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

(max. 900 words)

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

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: Baltic SPF regional

MS : POL
Region: Baltic Sea
Sampling scheme identifier: Baltic SPF regional
Sampling scheme type: Commercial fishing trip
Observation type: SelfAtSea
Time period of validity: 2025 fully implemented
Short description (max 100 words): This is a regional sampling program to collect length and age samples from the mixed sprat and herring fishery conducted by commercial trawlers operating in the Baltic Sea (ICES subdivisions 27.3.d.22 to 27.3.d.29 and 27.3.d.32) using self-sampling, or sampling on shore. The aim is to estimate length-and age composition of catches and mean weight of fish by length and age, caught by commercial trawlers by quarter and subdivision. The sampling program was introduced as a trial in 2022 to test what and how much it is possible to standardize regional sampling. In 2025 the sampling will be fully implemented as a RWP. In most countries the program has been conducted in parallel to national sampling programs covering other parts of the stocks (ex. Gillnets). The program is still under development and at the moment some aspects of the sampling (e.g., observation type, sample selection method, sampling frequency) vary between countries, mainly due to practicalities; but the countries have agreed on standardized protocols for the sub-sampling of biological parameters and a substantial number of other aspects (e.g., coordinated estimation, upload to RDBES, etc). RWP BALTIC 2025-2027
Description of the population
Population targeted: **Population sampled:** **Stratification:**
Sampling design and protocols
Sampling design description **Is the sampling design compliant with the 4S principle?:** **Regional coordination:** **Link to sampling design documentation:** **Design follows international recommendations:** **Link to sampling protocol documentation:** **Protocol follows international recommendations:**
Sampling implementation
Recording of refusal rate:

Monitoring of sampling progress within the sampling year:
National specifics:
There is a set of tools created to monitor the sampling progress:
MIRlottery is the system which stores the information about vessels drawn and their status (e.g. done, refused, cancelled). The tool contains module with contact details to vessels owners which is regularly updated with the most recent data. It is possible to display some basic statistics there with the summary of the implementation rate per stratum per quarter.

The other tool is the '*Lottery Mail Confirmation'*. This application was created in 2023, as a manager tool with the purpose of supplying an easy way to avoid errors and improve the execution of the sampling plan. In the middle and two weeks before the end of each quarter, tool automatically sends email notifications to the PSU Group Coordinators and to person in charge of DCF execution in Poland with information about actual status of sampling execution. After reviewing the information, coordinators are expected to click on a confirmation link to confirm that they have read the report. The confirmation of reading the report will be saved in the database. For the double control purpose, tool automatically sends mail also to Species Coordinators with the attachment containing information about actual number of biological samples for each species/stock per ICES SD and per quarter.

The third tool is the '*Sampling plan achievement monitoring application'*. This application was created in 2020 as a manager tool with the purpose of supplying an easy way to monitor the achievement of the sampling plan. What is already developed is the set of analysis displaying number of trips, samples, specimens measured for age and length for a species and year selected by a user.
Additionally, a set of R scripts was also created, which summarizes the progress made.

All the tools above, are used on a daily basis but especially during the quarterly team meetings, where the sampling plan fulfilment is analysed. Basing on the tools, the managers are making decisions whether there should be some extra sampling carried out – not probabilistic, basing on the expert knowledge, to supply the sufficient number of samples. There is also analysis of refusals carried out, and a trial made to lower the refusal rate. This whole effort is being made to make sure that the best quality of sampling is carried out.

Data capture

Means of data capture:

Data capture documentation:

Quality checks documentation:
National specifics:
Web page with sampling documentation: https://dcf.mir.gdynia.pl/sampling/
Document: https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DataQualityCheck_Description_ver-2024.pdf

Data storage

National database:

International database:

Quality checks and data validation documentation:
National specifics:
https://dcf.mir.gdynia.pl/sampling/

Sample storage

Storage description: National specifics: Otoliths and scales from both surveys and commercial sampling are stored in the archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand). **Sample analysis:**
Data processing
Evaluation of data accuracy (bias and precision): https://dcf.mir.gdynia.pl/sampling/ **Editing and imputation methods:** **Quality document associated to a dataset:** **Validation of the final dataset:** https://dcf.mir.gdynia.pl/sampling/

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: CECAF at sea sampling

MS : POL
Region: CECAF
Sampling scheme identifier: CECAF at sea sampling
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words): Under the EU Data Collection Framework, based on the activity of the commercial fishing vessels, the EU long distance fishery targeting small pelagic species in the CECAF waters was selected for biological sampling. Biological data collection from the EU fisheries for small pelagics by freezer trawlers as well as data validation, processing and delivery to the relevant end-users is coordinated and executed following the Multi-lateral agreement between Germany, Latvia, Lithuania, The Netherlands and Poland for biological data collection of small pelagics fisheries in CECAF waters. The observation of the presence of PETS is included in the sampling scheme and is a part of the routine data collection on board. The current agreement is valid until the end of 2027 with an option for further extension. Details can be found in the NWP NLD 2025-2027. RWP LDF 2025-2027
Description of the population
Population targeted: **Population sampled:** **Stratification:**
Sampling design and protocols
Sampling design description:

Is the sampling design compliant with the 4S principle?: **Regional coordination:** **Link to sampling design documentation:** **Design follows international recommendations:** **Link to sampling protocol documentation:** **Protocol follows international recommendations:**
Sampling implementation
Recording of refusal rate: **Monitoring of sampling progress within the sampling year:**
Data capture
Means of data capture: **Data capture documentation:** **Quality checks documentation:**
Data storage
National database: **International database:** **Quality checks and data validation documentation:**
Sample storage
Storage description: **Sample analysis:**
Data processing
Evaluation of data accuracy (bias and precision): **Editing and imputation methods:** **Quality document associated to a dataset:** **Validation of the final dataset:**

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: NPFC at sea sampling

MS : POL
Region: NPFC
Sampling scheme identifier: NPFC at sea sampling
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: 2025-2027

Short description (max 100 words):

On the basis of a multilateral agreement between Germany, Lithuania, Netherlands and Poland, a joint sampling programme for the collection of biological data from pelagic fisheries in NPFC waters was set. Sampling is carried out on EU vessels active in pelagic fisheries in the North Pacific. Scientific observers from the EU Member States involved collect data from catch sampling, length distribution and biological parameters of fish in accordance with the requirements of the NPFC. The observation of presence of PETS is included in the sampling scheme. The current multi-lateral agreement is valid until the end of 2027 with an option for further extension.

Details can be found in the NWP NLD 2025-2027.

RWP LDF 2025-2027

Description of the population

Population targeted:

Population sampled:

Stratification:

Sampling design and protocols

Sampling design description:

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

Regional coordination:

Link to sampling design documentation:

Design follows international recommendations:

Link to sampling protocol documentation:

Protocol follows international recommendations:

Sampling implementation

Recording of refusal rate:

Monitoring of sampling progress within the sampling year:

Data capture

Means of data capture:

Data capture documentation:

Quality checks documentation:

Data storage

National database:

International database:

Quality checks and data validation documentation:

Sample storage

Storage description: **Sample analysis:**
Data processing
Evaluation of data accuracy (bias and precision): **Editing and imputation methods:** **Quality document associated to a dataset:** **Validation of the final dataset:**

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: SPRFMO at sea sampling

MS : POL
Region: SPRFMO
Sampling scheme identifier: SPRFMO at sea sampling
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words): On the basis of a multilateral agreement between Germany, Lithuania, Netherlands and Poland, a joint sampling programme for the collection of biological data from pelagic fisheries in SPRFMO waters was set. Sampling is carried out on EU vessels active in pelagic fisheries in the South Pacific. Scientific observers from the EU Member States involved collect data from catch sampling, length distribution and biological parameters of fish in accordance with the requirements of the SPRFMO. The observation of presence of PETS is included in the sampling scheme. The current multi-lateral agreement is valid until the end of 2027 with an option for further extension. Details can be found in the NWP NLD 2025-2027. RWP LDF 2025-2027
Description of the population
Population targeted: **Population sampled:** **Stratification:**
Sampling design and protocols
Sampling design description: **Is the sampling design compliant with the 4S principle?:** **Regional coordination:** **Link to sampling design documentation:** **Design follows international recommendations:** **Link to sampling protocol documentation:** **Protocol follows international recommendations:**
Sampling implementation

Recording of refusal rate: **Monitoring of sampling progress within the sampling year:**
Data capture
Means of data capture: **Data capture documentation:** **Quality checks documentation:**
Data storage
National database: **International database:** **Quality checks and data validation documentation:**
Sample storage
Storage description: **Sample analysis:**
Data processing
Evaluation of data accuracy (bias and precision): **Editing and imputation methods:** **Quality document associated to a dataset:** **Validation of the final dataset:**

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)

Sampling scheme identifier: diad_troll_offshore

MS : POL
Region: Baltic Sea
Sampling scheme identifier: diad_troll_offshore
Sampling scheme type: recreational (on site surveys)
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words): Sampling scheme aiming at collecting biological samples (length, weight, sex, age, maturity stage), numbers and catch composition from recreational trolling off-shore catches conducted in Polish Marine Areas. The sampling scheme concerns direct on-board observations.
Description of the population
Population targeted: The target species are Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* in ICES SD 24-26. **Population sampled:** Baltic Salmon and sea trout **Stratification:** Polish trolling fisheries operates in the Main Basin of the Baltic Sea (Polish Marine Areas SD 24-26) where the mixed-stock fisheries of salmon occur (ICES SD 22-31). The temporal stratification covers 1st , 2nd and 4th quarter of the year (covering whole fishing season). The applied unit is a fishing boat-day/trip.
Sampling design and protocols
Sampling design description:

The sampling design takes into account one trip per month. The number of planned on-board observations is 7 per year. Because of the formal procedures the trolling boats are randomly sampled only from the group of commercial recreational boats (taking on board up to 4-6 recreational fishermen who are fishing under the interim or full-year permit/license purchased by the boats' owners). The GPS position is recorded three times during the trip (start, middle and end of fishing). In addition, number of anglers on boat and fishing rods are recorded in the protocol.
As a standard procedure, if bycatch occurs during at sea sampling data on bycatch is collected.

https://dcf.mir.gdynia.pl/sampling/

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

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/Sampling-Plan-Marine-recreational-fisheries-for-Diadromous-species_rev1.pdf
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf

Design follows international recommendations: Y

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/Sampling-Plan-Marine-recreational-fisheries-for-Diadromous-species_rev1.pdf
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf

Protocol follows international recommendations: N

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
Measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols, GPS. Biological data (length, weight, sex, maturity etc.) are recorded at sea and stored in the excel file.

Data capture documentation: N

Quality checks documentation: N
Details are provided in this textbox.

Data storage

National database:
Data stored in Excel base.
International database: NA

Quality checks and data validation documentation: N
Details are provided in this textbox.

Sample storage

Storage description: Scales from sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. Scale samples are dried and stored in the paper envelopes with a biological information about each specimen. **Sample analysis:** Biological analysis follows the guidelines established by ICES WKADS and associated workshops: https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2011/WKADS/WKADS%202011.pdf
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no a document summarising the estimation process followed. **Validation of the final dataset:** Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)

Sampling scheme identifier: diad_troll_harb

MS : POL
Region: Baltic Sea
Sampling scheme identifier: diad_troll_harb
Sampling scheme type: recreational (on site surveys)
Observation type: SciObsOnShore
Time period of validity: 2025-2027
Short description (max 100 words): Sampling scheme aiming at collecting biological samples (length, weight), numbers and catch composition from recreational trolling on-shore catches conducted in Polish Marine Areas. The sampling scheme concerns direct on-site observations in the harbors.
Description of the population
Population targeted: The target species are Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* in ICES SD 24-26. **Population sampled:** Baltic Salmon and sea trout **Stratification:** Polish trolling fisheries operates in the Main Basin of the Baltic Sea (Polish Marine Areas SD 24-26) where the mixed-stock fisheries of salmon occur (ICES SD 22-31). The temporal stratification covers 1st , 2nd and 4th quarter of the year (covering whole fishing season). The applied unit is a fishing boat-day/trip.
Sampling design and protocols
Sampling design description:

The sampling design takes into account monthly on-site creel survey questionnaire interviews in harbors having high importance for salmon trolling fishing. Trolling boats are randomly sampled from both groups; commercial recreational boats and private fishing boats. The number of interviewed boats is selected randomly. The App dedicated to the survey is used by the observers. The refusal rate is recorded. The number of anglers on boat and fishing rods are recorded in the protocol. In addition, sociological data are collected. As a standard procedure, data on bycatch is collected, whenever recorded or reported.

The use of remote CCTV cameras for monitoring of recreational salmon trolling fishery effort proved to be a cost-efficient method providing accurate fishing effort estimates helping to reduce bias in recreational catch estimates. Remote CCTV cameras have been installed in two harbors i.e., Hel and Gdańsk Górki Zachodnie which were defined during the Pilot Studies as the most important for salmon and sea trout recreational fishery and were also chosen because of availability of technical infrastructure. The cameras record boat movements between 04:00 and 18:00 each day. A high image frame rate; Full HD format (25 images per second) is set to ensure full coverage of the activity at each monitored marina and correct identification of trolling boats. Taking into account the capacity of cameras hard drives, data from them should be downloaded to the NMFRI server at three-month intervals.

To monitor trolling cruises frequency, catch per unit effort as well as catch species composition a self-sampling method of trolling catches has been applied. A fishing loogbooks, containing cruise data as well as biological data of fish caught are distributed among the trolling boats' skippers/owners to fill-in on a voluntary basis.

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

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/Sampling-Plan-Marine-recreational-fisheries-for-Diadromous-species_rev1.pdf
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf

Design follows international recommendations:
Y
Hartill B.W., Taylor S.M., Keller K., Weltersbach M.S. (2020). Digital camera monitoring of recreational fishing effort: Applications and challenges. Fish and Fisheries, 21: 204–215.
ICES (2018). Report of the Working Group on Recreational Fisheries Surveys (WGRFS), 11–15 June 2015, Faro, Portugal. ICES CM 2018/EOSG:19. 111 pp.
McCormick J.L., Meyer K.A. 2017. Sample Size Estimation for On-Site Creel Surveys. North American Journal of Fisheries Management 37:970–980.
Weltersbach M.S. 2013. Recreational fishery on salmon and sea trout. Planned research activities in Germany. WGBAST. Tallinn, 06.04.2013.
Weltersbach M.S., Kaiser F., Strehlow H.V. 2016. Surveying 2.0 - Using remote cameras to monitor a highly specialized recreational fishery in the Baltic Sea. Oral presentation. ICES Annual Science Conference, organized in Riga (Latvia), 19-23 September 2016.

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture
Means of data capture: Measuring boards, scales, different sampling protocols, tablets. Biological data (length, weight) and catch composition are recorded and stored in the excel file. CCTV cameras are permanently installed in the harbors throughout the year. **Data capture documentation:** N Details are provided in this textbox. **Quality checks documentation:** N Details are provided in this textbox.
Data storage
National database: Data stored in Excel base. **International database:** NA **Quality checks and data validation documentation:** N Details are provided in this textbox.
Sample storage
Storage description: Digitized questionnaires from sampling are stored in the archive of the National Marine Fisheries Research Institute in Gdynia. Video records from cameras are stored on hard drives. **Sample analysis:** ICES (2018). Report of the Working Group on Recreational Fisheries Surveys (WGRFS), 11–15 June 2015, Faro, Portugal. ICES CM 2018/EOSG:19. 111 pp. Weltersbach M.S., Kaiser F., Strehlow H.V. 2016. Surveying 2.0 - Using remote cameras to monitor a highly specialized recreational fishery in the Baltic Sea. Oral presentation. ICES Annual Science Conference, organized in Riga (Latvia), 19-23 September 2016.
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no document summarising the estimation process followed. **Validation of the final dataset:** Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)

Sampling scheme identifier: diad_coastal

MS : POL
Region: Baltic Sea
Sampling scheme identifier: diad_coastal

Sampling scheme type: recreational (on site surveys)

Observation type: SciObsOnShore

Time period of validity: 2025-2027

Short description (max 100 words):

Sampling scheme aiming at collecting biological samples (length, weight), numbers and catch composition from recreational on-shore catches conducted in Polish Marine Areas. The sampling scheme concerns direct on-site observations from the shore.

Description of the population

Population targeted:

The target species are sea trout *Salmo trutta* in ICES SD 24-26.

Population sampled:

Baltic sea trout

Stratification:

Polish anglers fish in the Main Basin of the Baltic Sea (Polish Marine Areas SD 24-26). The temporal stratification covers 1st , 2nd and 4th quarter of the year (covering the whole fishing season). The applied unit is a fishing day.

Sampling design and protocols

Sampling design description:

The sampling design takes into account monthly on-site creel survey questionnaire interviews. This method is based on a digital questionnaire installed on tablets enabling a direct interviews among anglers fishing from the shore for sea trout. The refusal rate is recorded. In addition, sociological data are collected if available. As a standard procedure, data on bycatch is collected, whenever recorded or reported.

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

Regional coordination: NA

Link to sampling design documentation:

https://dcf.mir.gdynia.pl/sampling/

https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/Sampling-Plan-Marine-recreational-fisheries-for-Diadromous-species_rev1.pdf

https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf

Design follows international recommendations: Y

McCormick J.L., Meyer K.A. 2017. Sample Size Estimation for On-Site Creel Surveys. North American Journal of Fisheries Management 37:970–980.

Weltersbach M.S. 2013. Recreational fishery on salmon and sea trout. Planned research activities in Germany. WGBAST. Tallinn, 06.04.2013.

Link to sampling protocol documentation:

https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year:

The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:

Measuring boards, scales, different sampling protocols, tablets. Biological data (length, weight) and catch composition are recorded and stored in the excel file.

Data capture documentation: N Details are provided in this textbox. **Quality checks documentation:** N Details are provided in this textbox.
Data storage
National database: Data stored in Excel base. **International database:** NA **Quality checks and data validation documentation:** N Details are provided in this textbox.
Sample storage
Storage description: Digitized questionnaires from sampling are stored in the archive of the National Marine Fisheries Research Institute in Gdynia. **Sample analysis:** ICES (2018). Report of the Working Group on Recreational Fisheries Surveys (WGRFS), 11–15 June 2015, Faro, Portugal. ICES CM 2018/EOSG:19. 111 pp.
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no document summarising the estimation process followed. **Validation of the final dataset:** Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the group meetings.

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)**Sampling scheme identifier: diad_web**

MS : POL
Region: Baltic Sea
Sampling scheme identifier: diad_web
Sampling scheme type: recreational (off site surveys)
Observation type: SciObsOnShore
Time period of validity: 2025-2027
Short description (max 100 words): Sampling scheme aiming at collecting numbers and catch composition from recreational trolling and on-shore catches conducted in Polish Marine Areas. The sampling scheme concerns direct off-site survey.
Description of the population
Population targeted:

The target species are Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* in ICES SD 24-26.

Population sampled:
Baltic Salmon and sea trout

Stratification:
Polish trolling fisheries operate in the Main Basin of the Baltic Sea (Polish Marine Areas SD 24-26) where the mixed-stock fisheries of salmon occur (ICES SD 22-31). The temporal stratification covers 1st , 2nd and 4th quarter of the year (covering the whole fishing season). The applied unit is a fishing boat-day/trip.

Sampling design and protocols

Sampling design description:
An annual off-site survey is targeting in general sea recreational fishing in Polish Maritime Waters with a particular emphasis on diadromous fish species. This survey is based on a web-site questionnaire including information about the survey and describing the aim of this work with an instruction on how to fill a web-based questionnaire.

Information about the survey is distributed and made available on the Internet platforms, social media and NMFRI web-site:
http://ankiety2.mir.gdynia.pl/sample-apps/Ankieta-wedkarska/
https://dcf.mir.gdynia.pl/sampling/

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

Regional coordination: NA

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/Sampling-Plan-Marine-recreational-fisheries-for-Diadromous-species_rev1.pdf
https://dcf.mir.gdynia.pl/wp-content/uploads/2021/05/PS1-PL-2021_Report.pdf

Design follows international recommendations: N

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: N

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
The on-line questionnaire is available throughout each year (opened 1st of January and blocked 31st of December).

Data capture documentation: N
Details are provided in this textbox.

Quality checks documentation: N
Details are provided in this textbox.

Data storage

National database:

Collected data are stored on the servers of the National Marine Fisheries Research Institute in Gdynia. **International database:** NA **Quality checks and data validation documentation:** N Details are provided in this textbox.
Sample storage
Storage description: NA **Sample analysis:** Data are analysed with the use of R script and visualized using the Shiny R package.
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no document summarising the estimation process followed. **Validation of the final dataset:** Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: Baltic at sea

MS : POL
Region: Baltic Sea
Sampling scheme identifier: Baltic at sea
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words): The aim of the sampling scheme is to collect length and biological samples from commercial catches at sea for all species listed in Table 1 of the EU MAP Delegated Decision annex. Additionally, observation of presence of PETS is conducted. The scheme covers the Baltic Sea.
Description of the population
Population targeted: The target population consists of all vessels that were active in the latest available data of three years. The primary sampling unit applied in the sampling program is vessel*trip. The list of vessels is used as a proxy to select a trip, because the list of trips is not known in advance. **Population sampled:** The coverage of target population equals 100%.

Stratification:
Population is stratified based on the vessel's length category. The following strata were defined:
- BAL VL0010 – Baltic vessels under 10 meters in length (list of 523 vessels)
- BAL VL1012 – Baltic vessels between 10 and 12 meters in length (list of 121 vessels)
- BAL VL1218 – Baltic vessels between 12 and 18 meters in length (list of 49 vessels)
- BAL VL1824 – Baltic vessels between 18 and 24 meters in length (list of 51 vessels)
- BAL VL2440 – Baltic vessels between 24 and 40 meters in length (list of 43 vessels)

The main advantage of stratifying the population by vessel length categories is that every vessel belongs to exactly one group. Additionally, such approach was found to be very flexible in case of sudden changes in the fisheries caused by e.g. change in a legislation, natural causes. Moreover, the sampling scheme is also stratified by quarters, with various sampling intensities assigned to each quarter calculated based on the historical data. The list of primary sampling units is drawn separately for each quarter.

Sampling design and protocols

Sampling design description:

All vessels that were active (at least one fishing trip) in 2021-2023 make a list that is proxy for selecting the PSUs. This methodology is in line with the WKPICS 2013.
In order to maintain the continuity of the sampling intensity compared to the previous years, the annual number of samples to be collected during 2025-2027 period is at similar level as during the previous multiannual programs (2014-2024). Sampling is based on a quarterly basis. For each group of PSUs and quarters, an average annual catch in kg and an average annual number of trips were calculated using official catch statistics from the period 2021-2023. To define the sampling intensity per each stratum per quarter, the 40% of the total annual number of samples was distributed proportionally to the quarterly distribution of landings and the 60% of the total number of samples was distributed proportionally to the total number of trips. It was decided to include both parameters in order to distribute the sampling effort reflecting the different segments of the fishing fleet. So to take into consideration vessels that have the bigger share in total catches (i.e. larger vessels) as well as vessels that have much more fishing trips but small catches (i.e. smaller vessels, active mainly in a coastal fishery).
Regarding the sample selection, for each quarter and for each stratum a list of vessels will be randomly selected with replacement with unequal probability from a sampling frame. The list of PSUs will consists of all vessels active in previous year, excluding vessels which have been withdrawn since previous year. The number of vessels selected will be overrated, to take into account potential refusals and to avoid additional draws. In case, the selected number of vessels will not be enough (more refusals than expected, e.g. lack of contact with the vessel, refusal to take observer on board or provide landed fish for sampling on shore), the non-probabilistic (based on expert knowledge) vessel selection will be carried out to maintain the desired number of vessels trips to sample. The complementary trip will be chosen depending on the observer availability. In the next step the concurrent hauls and species sampling will be carried out on board. Catch fraction which is used is 'Catch'. List of vessels selected for sampling will be recorded in a register. This register will contain information on date of selection, date the vessel was contacted to arrange sampling, information if contact with the vessel was successful or not, vessel's owner acceptance or refusal to be sampled, as well as reasons in case of refusal.

Is the sampling design compliant with the 4S principle?: Y

Regional coordination: N

Link to sampling design documentation: https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DCF_Sampling_Design-2025-2027.pdf

Design follows international recommendations: Y

Link to sampling protocol documentation:

No standalone sampling protocol was created so far for Baltic at sea. When conducting the sampling, we are following the ICES BITS and BIAS manual.

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year:
There is a set of tools created to monitor the sampling progress:
MIRlottery is the system which stores the information about vessels drawn and their status (e.g. done, refused, cancelled). The tool contains module with contact details to vessels owners which is regularly updated with the most recent data. It is possible to display some basic statistics there with the summary of the implementation rate per stratum per quarter.

The other tool is the *'Lottery Mail Confirmation'*. This application was created in 2023, as a manager tool with the purpose of supplying an easy way to avoid errors and improve the execution of the sampling plan. In the middle and two weeks before the end of each quarter, tool automatically sends email notifications to the PSU Group Coordinators and to person in charge of DCF execution in Poland with information about actual status of sampling execution. After reviewing the information, coordinators are expected to click on a confirmation link to confirm that they have read the report. The confirmation of reading the report will be saved in the database. For the double control purpose, tool automatically sends mail also to Species Coordinators with the attachment containing information about actual number of biological samples for each species/stock per ICES SD and per quarter.

The third tool is the '*Sampling plan achievement monitoring application'*. This application was created in 2020 as a manager tool with the purpose of supplying an easy way to monitor the achievement of the sampling plan. What is already developed is the set of analysis displaying number of trips, samples, specimens measured for age and length for a species and year selected by a user.
Additionally, a set of R scripts was also created, which summarizes the progress made.

All the tools above, are used on a daily basis but especially during the quarterly team meetings, where the sampling plan fulfilment is analysed. Basing on the tools, the managers are making decisions whether there should be some extra sampling carried out – not probabilistic, basing on the expert knowledge, to supply the sufficient number of samples. There is also analysis of refusals carried out, and a trial made to lower the refusal rate. This whole effort is being made to make sure that the best quality of sampling is carried out

Data capture

Means of data capture:
Measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols.

Data capture documentation:
No standalone sampling protocol was created so far for Baltic at sea. When conducting the sampling, we are following the ICES BITS and BIAS manual.
Data is captured on paper and transcribed to a centralised database system through a dedicated web application as soon as possible. Data is entered to the database in a two-stage process. Newly entered data are attributed with a status indicating that they are waiting for approval. Then, another person verifies the data and approves it.
Quality checks documentation: Y,
https://dcf.mir.gdynia.pl/sampling/

Data storage

National database:
NPZDRpl, database is only accessible from the intranet.

International database:
RDBES (ICES) - https://sboxrdbes.ices.dk/
Intercatch(ICES)- https://intercatch.ices.dk/,
STECF Fisheries Dependent Information Database (JRC) -https://datacollection.jrc.ec.europa.eu/dc/fdi

Quality checks and data validation documentation:
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DataQualityCheck_Description_ver-2024.pdf

Sample storage

Storage description:

Otoliths and scales from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand).

Sample analysis:

Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/sites/pub/Publication%20Reports/Forms/DispForm.aspx?ID=37133

Data processing

Evaluation of data accuracy (bias and precision):
https://dcf.mir.gdynia.pl/sampling/

Editing and imputation methods: N,
In case of any gaps in the sampling strata, imputation is not performed at national level but at Stock Data Coordination level. Data are provided to end user "as-is" (as collected, validated and recorded in national database). In case of gaps in ALK or WLK, average values are used if available

Quality document associated to a dataset: N

Validation of the final dataset:
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DataQualityCheck_Description_ver-2024.pdf

Related to Table 2.5 [and Text Box 2.5 (commercial fisheries data collection)

Sampling scheme identifier: Baltic on shore

MS : POL

Region: Baltic Sea

Sampling scheme identifier: Baltic on shore

Sampling scheme type: Commercial fishing trip

Observation type: SciObsOnShore

Time period of validity: 2025-2027

Short description (max 100 words):

The aim of the sampling scheme is to collect length and biological samples from commercial catches on shore for all species listed in Table 1 of the EU MAP Delegated Decision annex.
The scheme covers the Baltic Sea.

Description of the population

Population targeted:
The target population consists of all vessels that were active in the latest available data of three years. The primary sampling unit applied in the sampling program is vessel*trip. The list of vessels is used as a proxy to select a trip, because the list of trips is not known in advance.

Population sampled:
The coverage of target population equals 100%.

Stratification:
Population is stratified based on the vessel's length category. The following strata were defined:
- BAL VL0010 – Baltic vessels under 10 meters in length (list of 523 vessels)
- BAL VL1012 – Baltic vessels between 10 and 12 meters in length (list of 121 vessels)
- BAL VL1218 – Baltic vessels between 12 and 18 meters in length (list of 49 vessels)
- BAL VL1824 – Baltic vessels between 18 and 24 meters in length (list of 51 vessels)
- BAL VL2440 – Baltic vessels between 24 and 40 meters in length (list of 43 vessels)

The main advantage of stratifying the population by vessel length categories is that every vessel belongs to exactly one group. Additionally, such approach was found to be very flexible in case of sudden changes in the fisheries caused by e.g. change in a legislation, natural causes. Moreover, the sampling scheme is also stratified by quarters, with various sampling intensities assigned to each quarter calculated based on the historical data. The list of primary sampling units is drawn separately for each quarter.

Sampling design and protocols

Sampling design description:

All vessels that were active (at least one fishing trip) in 2021-2023 make a list that is proxy for selecting the PSUs. This methodology is in line with the WKPICS 2013.
In order to maintain the continuity of the sampling intensity compared to the previous years, the annual number of samples to be collected during 2025-2027 period is at similar level as during the previous multiannual programs (2014-2024). Sampling is based on a quarterly basis. For each group of PSUs and quarters, an average annual catch in kg and an average annual number of trips were calculated using official catch statistics from the period 2021-2023. To define the sampling intensity per each stratum per quarter, the 40% of the total annual number of samples was distributed proportionally to the quarterly distribution of landings and the 60% of the total number of samples was distributed proportionally to the total number of trips. It was decided to include both parameters in order to distribute the sampling effort reflecting the different segments of the fishing fleet. So to take into consideration vessels that have the bigger share in total catches (i.e. larger vessels) as well as vessels that have much more fishing trips but small catches (i.e. smaller vessels, active mainly in a coastal fishery).
Regarding the sample selection, for each quarter and for each stratum a list of vessels will be randomly selected with replacement with unequal probability from a sampling frame. The list of PSUs will consists of all vessels active in previous year, excluding vessels which have been withdrawn since previous year. The number of vessels selected will be overrated, to take into account potential refusals and to avoid additional draws. In case, the selected number of vessels will not be enough (more refusals than expected, e.g. lack of contact with the vessel, refusal to take observer on board or provide landed fish for sampling on shore), the non-probabilistic (based on expert knowledge) vessel selection will be carried out to maintain the desired number of vessels trips to sample. The complementary trip will be chosen depending on the observer availability. In the next step the concurrent hauls and species sampling will be carried out on board. Catch fraction which is used is 'Catch'. List of vessels selected for sampling will be recorded in a register. This register will contain information on date of selection, date the vessel was contacted to arrange sampling, information if contact with the vessel was successful or not, vessel's owner acceptance or refusal to be sampled, as well as reasons in case of refusal.

Is the sampling design compliant with the 4S principle?: Y

Regional coordination: N

Link to sampling design documentation: https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DCF_Sampling_Design-2025-2027.pdf

Design follows international recommendations: Y

Link to sampling protocol documentation:
No standalone sampling protocol was created so far for Baltic on shore. When conducting the sampling, we are following the ICES BITS and BIAS manual.

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year:
There is a set of tools created to monitor the sampling progress:
MIRlottery is the system which stores the information about vessels drawn and their status (e.g. done, refused, cancelled). The tool contains module with contact details to vessels owners which is regularly updated with the most recent data. It is possible to display some basic statistics there with the summary of the implementation rate per stratum per quarter.

The other tool is the 'Lottery Mail Confirmation'. This application was created in 2023, as a manager tool with the purpose of supplying an easy way to avoid errors and improve the execution of the sampling plan. In the middle and two weeks before the end of each quarter, tool automatically sends email notifications to the PSU Group Coordinators and to person in charge of DCF execution in Poland with information about actual status of sampling execution. After reviewing the information, coordinators are expected to click on a confirmation link to confirm that they have read the report. The confirmation of reading the report will be saved in the database. For the double control purpose, tool automatically sends mail also to Species Coordinators with the attachment containing information about actual number of biological samples for each species/stock per ICES SD and per quarter.

The third tool is the 'Sampling plan achievement monitoring application'. This application was created in 2020 as a manager tool with the purpose of supplying an easy way to monitor the achievement of the sampling plan. What is already developed is the set of analysis displaying number of trips, samples, specimens measured for age and length for a species and year selected by a user.
Additionally, a set of R scripts was also created, which summarizes the progress made.

All the tools above, are used on a daily basis but especially during the quarterly team meetings, where the sampling plan fulfilment is analysed. Basing on the tools, the managers are making decisions whether there should be some extra sampling carried out – not probabilistic, basing on the expert knowledge, to supply the sufficient number of samples. There is also analysis of refusals carried out, and a trial made to lower the refusal rate. This whole effort is being made to make sure that the best quality of sampling is carried out

Data capture

Means of data capture:
Measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols.

Data capture documentation:
No standalone sampling protocol was created so far for Baltic on shore. When conducting the sampling, we are following the ICES BITS and BIAS manual.
Data is captured on paper and transcribed to a centralised database system through a dedicated web application as soon as possible. Data is entered to the database in a two-stage process. Newly entered data are attributed with a status indicating that they are waiting for approval. Then, another person

verifies the data and approves it.

Quality checks documentation: Y,
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DataQualityCheck_Description_ver-2024.pdf

Data storage

National database:
NPZDRpl, database is only accessible from the intranet.

International database:
RDBES (ICES) - https://sboxrdbes.ices.dk/
Intercatch(ICES)- https://intercatch.ices.dk/,
STECF Fisheries Dependent Information Database (JRC) -https://datacollection.jrc.ec.europa.eu/dc/fdi

Quality checks and data validation documentation:
https://dcf.mir.gdynia.pl/sampling/

Sample storage

Storage description:

Otoliths and scales from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand).

Sample analysis:

Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/sites/pub/Publication%20Reports/Forms/DispForm.aspx?ID=37133

Data processing

Evaluation of data accuracy (bias and precision):
https://dcf.mir.gdynia.pl/sampling/

Editing and imputation methods: N,
In case of any gaps in the sampling strata, imputation is not performed at national level but at Stock Data Coordination level. Data are provided to end user "as-is" (as collected, validated and recorded in national database). In case of gaps in ALK or WLK, average values are used if available

Quality document associated to a dataset: N

Validation of the final dataset:
https://dcf.mir.gdynia.pl/sampling/
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/DataQualityCheck_Description_ver-2024.pdf

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection)

Sampling scheme identifier: BIAS

MS : POL
Region: Baltic Sea
Sampling scheme identifier: BIAS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea

Time period of validity: 2025-2027

Short description (max 100 words):

The aim of the BIAS surveys is an estimation of Clupea harengus, Sprattus sprattus and, to some extent, Gadus morhua stocks resources (biomass and abundance) and analysis of their spatial distribution in the pelagic zone of the southern Baltic during autumn season, with the use of standardized survey design, acoustic measurements, fishing method and data analysis for stock assessment purposes. Hydrographical parameters like seawater temperature, salinity and oxygen content are sampled to analyse the relation between fish temporal distribution and density and current hydrological conditions.
Additionally, observation of presence of PETS is also conducted.
BIAS surveys are conducted in September/October. BIAS is internationally co-ordinated by the WGBIFS where timing, surveyed area and the methods of investigation are agreed.

RWP BALTIC 2025-2027

Description of the population

Population targeted:
Target species is herring *(Clupea harengus)* and sprat *(Sprattus sprattus)* in the Baltic in ICES Subdivisions 25-26.

Population sampled:
Pelagic fish species.

Stratification:
The acoustic and ichthyological sampling stratification is based on ICES statistical rectangles (0.5 degree in latitude and 1 degree in longitude)

Sampling design and protocols

Sampling design description:
The objective is to survey distance of about 60 nautical miles per area of 1000 nm2 in statistical rectangle. In general, each ICES-rectangle is covered with parallel transects spaced by a maximum of 15nm whenever possible. Fishing is conducted with a pelagic trawl according to hydroacoustic indications indications (with intention of minimum two hauls per the ICES statistical rectangle) and subsequent biological measurement of catches (species, length composition, sex, maturity and age) are taken. Hydrographic measurements are recorded with a CTD probe before or after each catch-station, and recorded at least in 1-m intervals.

Link to surveys manual: http://doi.org/10.17895/ices.pub.3368

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

Regional coordination:
BIAS is internationally co-ordinated by the ICES Baltic International Fish Survey Working Group (WGBIFS) with the participation of Estonia, Finland, Germany, Lithuania, Latvia, Poland, Sweden.

Link to sampling design documentation:
http://doi.org/10.17895/ices.pub.3368

Design follows international recommendations: Y

Link to sampling protocol documentation:
http://doi.org/10.17895/ices.pub.3368

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate:
NA

Monitoring of sampling progress within the sampling year:
NA

Data capture

Means of data capture:
Hydroacoustic measurements with an echosounder Simrad EK60 at frequency 38kHz, measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols, CTD probe with data processing software. Biological data (length, weight, sex, maturity etc.) are recorded at sea in the dedicated desktop application called MorskaAkustyka.

Data capture documentation:
See survey manual: http://doi.org/10.17895/ices.pub.3368

Quality checks documentation: Y
https://dcf.mir.gdynia.pl/sampling/

Data storage

National database:
NPZDRpl, database is only accessible from the intranet.

International database:
ICES Acoustic Trawl Survey DB.
https://www.ices.dk/data/data-portals/Pages/acoustic.aspx

Quality checks and data validation documentation:
https://www.ices.dk/data/tools/Pages/data-validation.aspx
https://acoustic.ices.dk/validationrules

Sample storage

Storage description:

Otoliths from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand).

Sample analysis:

Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/community/groups/Pages/WGBIFS.aspx

Data processing

Evaluation of data accuracy (bias and precision):
Y - for acoustic measurements through calibration, see survey manual: http://doi.org/10.17895/ices.pub.3368

Editing and imputation methods:
N – not performed at national level but at end-user level (ICES).
ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction.
https://www.ices.dk/data/tools/Pages/data-validation.aspx

Quality document associated to a dataset:
Data quality control checks are performed by ICES data officers before data are uploaded to the thematic portals are documented in the Quality Control Database (QC DB).

https://www.ices.dk/data/tools/Pages/data-validation.aspx
https://acoustic.ices.dk/validationrules

Validation of the final dataset:
Quality check by scientist before upload and validated by ICES during and after uploading to database

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection /stomach sampling)

Sampling scheme identifier: BITS_Q1

MS : POL

Region: Baltic Sea

Sampling scheme identifier: BITS_Q1

Sampling scheme type: Research survey at sea

Observation type: SciObsAtSea

Time period of validity: 2025-2027

Short description (max 100 words):

The main aim of the Baltic International Trawl Surveys (BITS) is to determine the year-class strength of the commercially important demersal fish species in the Baltic Sea. The target data are abundances, weight and length distributions of all fishes and length-weight-age-sex-maturity data of target species as well as hydrographic data (temperature, salinity and oxygen). In addition, marine litter and various biological samples (e.g. stomachs from target species) are sampled for national and international studies. Observation of presence of PETS is also conducted.

The survey is conducted in February /March.

RWP BALTIC 2025-2027

Description of the population

Population targeted:

The target species are mainly Baltic cod (Gadus morhua), flounder (Platichthys flesus), plaice (Pleuronectes platessa) and to some extent sprat (Sprattus sprattus) and herring (Clupea harengus) and other the flatfish species in ICES SD 25-26 and 28.

Population sampled:
Demersal fish species.

Stratification:
The international trawl surveys are carried out in form of a stratified random survey. The ICES subdivisions and depth layers within eight ICES subdivisions (SD21-SD28) are used as strata. Six layers between 10 to 120 m (10 – 39 m, 20 – 39 m, 40 – 59 m, 60 – 79 m, 80 – 99 m and 100 – 120 m) depending on ICES subdivision are covered by the surveys in aggregated areas in nm^2 by 10-m depth layers and ICES rectangles. The temporal stratification covers 1st quarter of the year

Sampling design and protocols

Sampling design description:
The numbers of planned stations of all participating countries are summarized for the western Baltic area (ICES Subdivisions 22–24) and for the eastern Baltic area (ICES Subdivisions 25–28). Then the total number of planned trawl stations is allocated to subdivisions according to the area and the 5 years running mean of the cpue derived from the BITS surveys for each region. The number of planned stations of each the ICES Subdivision is then

allocated to the depth layers. Hydrographic measurements are recorded with a CTD probe on predetermined stations and after each catch-station, and recorded at least in 1-m intervals.
Link to surveys manual: http://doi.org/10.17895/ices.pub.2883

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

Regional coordination: The BITS Survey sampling design is a regional agreement developed by the ICES Working Group on Baltic International Fish Survey (WGBIFS) with the participation of Germany, Denmark, Lithuania. Latvia, Poland and Sweden.

Link to sampling design documentation:
http://doi.org/10.17895/ices.pub.2883
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/BITS_2017_manual.pdf

Design follows international recommendations: Y

Link to sampling protocol documentation:
http://doi.org/10.17895/ices.pub.2883
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/BITS_2017_manual.pdf

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: NA

Data capture

Means of data capture: Measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols, CTD probe with data processing software. Biological data (length, weight, sex, maturity etc.) are recorded at sea in the dedicated desktop application called MorskiDATRAS.

Data capture documentation: http://doi.org/10.17895/ices.pub.2883
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/BITS_2017_manual.pdf

Quality checks documentation: Y
https://dcf.mir.gdynia.pl/sampling/

Data storage

National database:
NPZDRpl, database is only accessible from the intranet.

International database:
ICES trawl surveys database DATRAS.
https://www.ices.dk/data/data-portals/Pages/DATRAS.aspx

Quality checks and data validation documentation:
Quality checks for data validation run when the data is uploaded from the national server to ICES-DATRAS.
https://www.ices.dk/data/data-portals/Pages/DATRAS.aspx

Sample storage

Storage description:

Otoliths from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand).

Sample analysis: Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/community/groups/Pages/WGBIFS.aspx

Data processing

Evaluation of data accuracy (bias and precision): Y

Editing and imputation methods: N – not performed at national level but at end-user level (ICES).
ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction.
https://www.ices.dk/data/tools/Pages/data-validation.aspx

Quality document associated to a dataset:
Data quality control checks are performed by ICES data officers before data are uploaded to the thematic portals and are documented in the Quality Control Database (QC DB).

Validation of the final dataset:
Final data set is screened automatically by DATRAS when submitted to this ICES database. Survey indices are produced by ICES Data Centre.
https://www.ices.dk/data/Documents/DATRAS/Indices_Calculation_Steps_BITS.pdf

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection /stomach sampling)

Sampling scheme identifier: BITS_Q4

MS : POL

Region: Baltic Sea

Sampling scheme identifier: BITS_Q4

Sampling scheme type: Research survey at sea

Observation type: SciObsAtSea

Time period of validity: 2025-2027

Short description (max 100 words):

The main aim of the Baltic International Trawl Surveys (BITS) is to determine the year-class strength of the commercially important demersal fish species in the Baltic Sea. The target data are abundances, weight and length distributions of all fishes and length-weight-age-sex-maturity data of target species as well as hydrographic data (temperature, salinity and oxygen). In addition, marine litter and various biological samples (e.g. stomachs from target species) are sampled for national and international studies. Observation of presence of PETS is also conducted.

The survey is conducted in October /November or December depending on area.

RWP BALTIC 2025-2027

Description of the population

Population targeted:

The target species are mainly Baltic cod (Gadus morhua), flounder (Platichthys flesus), plaice (Pleuronectes platessa) and to some extent sprat (Sprattus sprattus) and herring (Clupea harengus) and other the flatfish species in ICES SD 25-26 and 28.

Population sampled:
Demersal fish species.

Stratification:
The international trawl surveys are carried out in form of a stratified random survey. The ICES subdivisions and depth layers within eight ICES subdivisions (SD21-SD28) are used as strata. Six layers between 10 to 120 m (10 – 39 m, 20 – 39 m, 40 – 59 m, 60 – 79 m, 80 – 99 m and 100 – 120 m) depending on ICES subdivision are covered by the surveys in aggregated areas in nm² by 10-m depth layers and ICES rectangles. The temporal stratification covers 4th quarter of the year

Sampling design and protocols

Sampling design description:
The numbers of planned stations of all participating countries are summarized for the western Baltic area (ICES Subdivisions 22–24) and for the eastern Baltic area (ICES Subdivisions 25–28). Then the total number of planned trawl stations is allocated to subdivisions according to the area and the 5 years running mean of the cpue derived from the BITS surveys for each region. The number of planned stations of each the ICES Subdivision is then allocated to the depth layers. Hydrographic measurements are recorded with a CTD probe on predetermined stations and after each catch-station, and recorded at least in 1-m intervals. Link to surveys manual:
http://doi.org/10.17895/ices.pub.2883

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

Regional coordination: The BITS Survey sampling design is a regional agreement developed by the ICES Working Group on Baltic International Fish Survey (WGBIFS) with the participation of Germany, Denmark, Lithuania. Latvia, Poland and Sweden.

Link to sampling design documentation:
http://doi.org/10.17895/ices.pub.2883

Design follows international recommendations: Y

Link to sampling protocol documentation:
http://doi.org/10.17895/ices.pub.2883
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/BITS_2017_manual.pdf

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: NA

Data capture

Means of data capture: Measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols, CTD probe with data processing software. Biological data (length, weight, sex, maturity etc.) are recorded at sea in the dedicated desktop application called MorskiDATRAS.

Data capture documentation: http://doi.org/10.17895/ices.pub.2883
https://dcf.mir.gdynia.pl/wp-content/uploads/2024/10/BITS_2017_manual.pdf

Quality checks documentation: Y https://dcf.mir.gdynia.pl/sampling/
Data storage
National database: NPZDRpl, database is only accessible from the intranet. **International database:** ICES trawl surveys database DATRAS. https://www.ices.dk/data/data-portals/Pages/DATRAS.aspx **Quality checks and data validation documentation:** Quality checks for data validation run when the data is uploaded from the national server to ICES-DATRAS. https://www.ices.dk/data/data-portals/Pages/DATRAS.aspx
Sample storage
Storage description: Otoliths from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand). **Sample analysis:** Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/community/groups/Pages/WGBIFS.aspx
Data processing
Evaluation of data accuracy (bias and precision): Y **Editing and imputation methods:** N – not performed at national level but at end-user level (ICES). ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction. https://www.ices.dk/data/tools/Pages/data-validation.aspx **Quality document associated to a dataset:** Data quality control checks are performed by ICES data officers before data are uploaded to the thematic portals and are documented in the Quality Control Database (QC DB). **Validation of the final dataset:** Final data set is screened automatically by DATRAS when submitted to this ICES database. Survey indices are produced by ICES Data Centre. https://www.ices.dk/data/Documents/DATRAS/Indices_Calculation_Steps_BITS.pdf

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection)

Sampling scheme identifier: SPRAS

MS : POL
Region: Baltic Sea
Sampling scheme identifier: SPRAS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words):

The main aim of the SPRAS surveys is an estimation of the abundance indices of Sprattus sprattus in May, with the use of standardized survey design, acoustic measurements, fishing method and data analysis for stock assessment purposes. Hydrographical parameters like seawater temperature, salinity and oxygen content are sampled to analyse the relation between fish temporal distribution and density and current hydrological conditions. Additionally, observation of presence of PETS is conducted.
SPRAS is internationally co-ordinated by the ICES Baltic International Fish Survey Working Group (WGBIFS) where timing, surveyed area and the methods of investigation are agreed.

RWP BALTIC 2025-2027

Description of the population

Population targeted:
Target species is sprat (Sprattus sprattus) in the Baltic in ICES Subdivisions 25-26.

Population sampled:
Pelagic fish species.

Stratification:
The acoustic and ichthyological sampling stratification is based on ICES statistical rectangles (0.5 degree in latitude and 1 degree in longitude).

Sampling design and protocols

Sampling design description:
The objective is to survey distance of about 60 nautical miles per area of 1000 nm2 in statistical rectangle. In general, each ICES-rectangle is covered with parallel transects spaced by a maximum of 15 nm whenever possible. Fishing is conducted with a pelagic trawl according to hydroacoustic indications (with intention of minimum two hauls per the ICES statistical rectangle) and subsequent biological measurement of catches (species, length composition, sex, maturity and age) are taken. Hydrographic measurements are recorded with a CTD probe before or after each catch-station, and recorded at least in 1-m intervals.

Link to surveys manual:
http://doi.org/10.17895/ices.pub.3368

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

Regional coordination:
SPRAS is internationally co-ordinated by the ICES Baltic International Fish Survey Working Group (WGBIFS) with the participation of Estonia, Germany, Latvia, Lithuania, Poland and Sweden.

Link to sampling design documentation:
http://doi.org/10.17895/ices.pub.3368

Design follows international recommendations: Y

Link to sampling protocol documentation: http://doi.org/10.17895/ices.pub.3368

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: NA

Data capture

Means of data capture:

Hydroacoustic measurements with an echosounder Simrad EK60 at frequency 38kHz, measuring boards, scales, dissection equipment, tubs & buckets, different sampling protocols, CTD probe with
data processing software. Biological data (length, weight, sex, maturity etc.) are recorded at sea in the dedicated desktop application called MorskaAkustyka.

Data capture documentation:

See survey manual: http://doi.org/10.17895/ices.pub.3368

Quality checks documentation:

Y

https://dcf.mir.gdynia.pl/sampling/

Data storage

National database:

NPZDRpl, database is only accessible from the intranet.

International database:

ICES Acoustic Trawl Survey DB.
https://www.ices.dk/data/data-portals/Pages/acoustic.aspx

Quality checks and data validation documentation:

https://www.ices.dk/data/tools/Pages/data-validation.aspx
https://acoustic.ices.dk/validationrules

Sample storage

Storage description:

Otoliths from both surveys and commercial sampling are stored in archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand).

Sample analysis:

Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops*: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx* and
ICES WGBIFS https://www.ices.dk/community/groups/Pages/WGBIFS.aspx

Data processing

Evaluation of data accuracy (bias and precision):

Y, for acoustic measurements through calibration, see survey manual:
http://doi.org/10.17895/ices.pub.3368

Editing and imputation methods:

N – not performed at national level but at end-user level (ICES).
ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction.
https://www.ices.dk/data/tools/Pages/data-validation.aspx

Quality document associated to a dataset:

Data quality control checks are performed by ICES data officers before data are uploaded to the thematic portals are documented in the Quality Control Database (QC DB).
https://www.ices.dk/data/tools/Pages/data-validation.aspx
https://acoustic.ices.dk/validationrules

Validation of the final dataset:

Quality check by scientist before upload and validated by ICES during and after uploading to database.

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection)

Sampling scheme identifier: BIS

MS : POL
Region: Baltic Sea
Sampling scheme identifier: BIS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea
Time period of validity: 2025-2027
Short description (max 100 words): The main aim of the Baltic Ichthyoplankton Surveys is monitoring of the spatial distribution and abundance of fish eggs and larvae, with Baltic cod as the main target species. In addition to the ichthyoplankton sampling, a number of trawl hauls are conducted to obtain information on the adult cod, in particular on their fecundity and sex ratios. Furthermore, hydrological parameters are recorded throughout the survey area via CTD casts. The data resulting from these surveys are utilized to produce a fishery independent SSB estimate as well as a larval index, which are used in the stock assessment of Baltic cod.
Description of the population
Population targeted: The main target species is Baltic cod (Gadus morhua). However, depending on the time of sampling, eggs and larvae of other species are caught as well, such as e.g. sprat (Sprattus sprattus), herring (Clupea harengus) and flounder (Platichthys flesus) as well as several non-commercial species. **Population sampled:** Same as described above under “Population targeted”. **Stratification:** The surveys are carried out on a regularly spaced station grid in the main spawning areas of Baltic cod.
Sampling design and protocols
Sampling design description: Several individual survey cruises are conducted each year in close collaboration between several institutes around the Baltic Sea. The surveys are conducted between March and November, aiming to cover the entire spawning season of the target species, Baltic cod. As spawning of Baltic cod is presently mainly restricted to the Bornholm Basin in ICES SD 25 due to the ambient hydrographic conditions, this area is also the main survey area which is covered by a standard station grid consisting of 45 stations. In addition, some cruises also cover adjacent areas (15 stations) to account for potential spatial extension of spawning activity. **Is the sampling design compliant with the 4S principle?:** NA A fixed station allocation is used in the design **Regional coordination:** The Baltic Ichthyoplankton Surveys consist of several individual survey cruises, which are conducted each year in close collaboration between several institutes around the Baltic Sea. Participating nations are Denmark, Germany and Poland. Bilateral agreement DNK-POL (table 1.3) **Link to sampling design documentation:** The Baltic Ichthyoplankton Surveys and the applied sampling design and sampling procedures as well

as sample and data analyses have been reviewed and evaluated by ICES WGALES (Working Group on Atlantic Fish Larvae and Eggs Surveys):

ICES. 2018. Report of the Working Group on Atlantic Fish Larvae and Eggs Surveys (WGALES). 22-26 October. Lyngby, Denmark. ICES CM 2018/EOSG:04. 56 pp.
https://ices-library.figshare.com/articles/report/Report_of_the_Working_Group_on_Atlantic_Fish_Larvae_and_Eggs_Surveys_WGALES_/18616808?file=33394601

Design follows international recommendations: Y

Link to sampling protocol documentation: NA

Protocol follows international recommendations: NA

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: NA

Data capture

Means of data capture:
Sorting equipment, stereo microscopes, different sampling protocols, CTD probe with data processing software.

Data capture documentation:
NA

Quality checks documentation:
NA

Data storage

National database:
Temporary database in Excel.

International database:
NA so far, but potential future implementation into ICES egg and larvae database

Quality checks and data validation documentation:
NA

Sample storage

Storage description:

By bilateral agreement for conducting a combined scientific ichthyoplankton survey in the Baltic Sea samples collected are send to the DTU Aqua. Only eggs, parasites and larves other than cod (Gadus morhua) are stored in archive of the National Marine Fisheries Research Institute in Gdynia.

All samples collect during August survey are stored in archive of the National Marine Fisheries Research Institute in Gdynia.

Sample analysis:
https://www.ices.dk/community/groups/Pages/WGSINS.aspx
https://www.ices.dk/data/data-portals/Pages/Eggs-and-larvae.aspx

Data processing

Evaluation of data accuracy (bias and precision):
NA

Editing and imputation methods:
NA

Quality document associated to a dataset:
NA

Validation of the final dataset:
NA

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: electro_diad

MS : POL

Region: Baltic Sea

Sampling scheme identifier: electro_diad

Sampling scheme type: Diadromous (scientific)

Observation type: SciObs water body

Time period of validity: 2025-2027

Short description (max 100 words):
Sampling scheme aiming fishing for sea trout and salmon parr will be carried out using the electrofishing method. On their basis, the density of salmon and sea trout fry in individual age classes will be estimated. The research fishery will be carried out in 11 rivers of northern Poland, in at least

Description of the population

Population targeted:
The target species are Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* in ICES SD 24-26.

Population sampled:
Baltic Salmon and sea trout

Stratification:
The temporal stratification covers 3rd quarter of the year. The applied fishing unit is a triple run of 50m long site. The parr density is expressed as a number of fish per 100m ^{2}.

Sampling design and protocols

Sampling design description:
: Currently, approximately 50 juvenile monitoring sites are surveyed annually in Poland. The monitoring area primarily encompasses rivers along the coast between the Oder and Vistula rivers, as well as several streams in the lower Oder (catchment of the Ina and Drawa rivers) and lower Vistula (catchment of the Drwęca, Zielona Struga, Mień, Tążyna rivers). Both larger rivers in their lower reaches (e.g., Słupia, Łupawa) and small streams that are their tributaries or flow directly into the Baltic (e.g., Czarna Wda, Orzechówka) are studied. The temporal stratification covers 3rd quarter of the year.
In Poland, each sampled section of the stream is 50 m long. Fish are sampled in the upstream direction using backpack electrofishing gear. The applied fishing unit is triple run of 50m long site. All specimens are measured and archived on the fishing protocols. Raw data are stored in the excel file.
The number of young salmon and trout is estimated for each site separately, using the Carle and Strub (1978) Maximum Weighted Likelihood method for three consecutive catches. The parr density is expressed as a number of fish per 100m2.
Is the sampling design compliant with the 4S principle?: NA

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/

Design follows international recommendations:
ICES 2023. Baltic Salmon and Trout Assessment Working Group (WGBAST). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22800983.v1

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y
ICES 2023. Baltic Salmon and Trout Assessment Working Group (WGBAST). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22800983.v1

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
Measuring boards, generator, tubs & buckets, different sampling protocols, GPS. Biological data (e.g. length) are recorded in the field and stored in the excel file.

Data capture documentation:
Details are provided in this textbox.

Quality checks documentation:
Details are provided in this textbox.

Data storage

National database:

Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia.

International database:
ICES WGBAST database

Quality checks and data validation documentation: details in the text box

Sample storage

Storage description:

No biological samples collected. Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia.

Sample analysis:

Data is analysed with the use of statistical tools.

Data processing

Evaluation of data accuracy (bias and precision): NA

Editing and imputation methods: N

Quality document associated to a dataset:
There is no document summarising the estimation process followed.

Validation of the final dataset:
Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: counter_diad

MS : POL
Region: Baltic Sea
Sampling scheme identifier: counter_diad
Sampling scheme type: Diadromous (scientific)
Observation type: EMA water body
Time period of validity: 2025-2027
Short description (max 100 words): Number of ascending individuals of sea trout and salmon will be recorded by automatic counters. Currently, it is planned to collect data from counters located on 6 main salmonid rivers – Słupia, Drawa, Parsęta, Vistula, Łupawa and Wieprza.
Description of the population
Population targeted: The target species are Atlantic salmon *Salmo salar* and sea trout *Salmo trutta* in ICES SD 24-26. **Population sampled:** Baltic Salmon and sea trout **Stratification:** The temporal stratification covers the whole year.
Sampling design and protocols
Sampling design description: Number of ascending individuals of sea trout and salmon are recorded by automatic VAKI Riverwatcher fish counters installed in the fish ladders. This type of counter are used on many rivers around the Baltic Sea (ICES 2023). Currently, it is planned to collect data from counters located on 6 main salmonid rivers – Słupia, Drawa, Parsęta, Vistula, Łupawa and Wieprza. The device is recording among others time data, water temperature, fish direction, fish length and short video sequence of particular fish. Data is recorded in the field and stored in the dedicated software. Data is analysed with the use of statistical tools. **Is the sampling design compliant with the 4S principle?:** NA **Regional coordination:** N **Link to sampling design documentation:** https://dcf.mir.gdynia.pl/sampling/ **Design follows international recommendations:** Y **Link to sampling protocol documentation:** https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
Automatic fish counter with supporting devices. Data is recorded in the field and stored in the dedicated software.

Data capture documentation: N
Details are provided in this textbox.

Quality checks documentation: Details are provided in this textbox.

Data storage

National database:
Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia

International database: N

Quality checks and data validation documentation: Details are provided in this textbox.

Sample storage

Storage description:

No biological samples collected. Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia

Sample analysis:

Data are analysed with the use of statistical tools.

Data processing

Evaluation of data accuracy (bias and precision): N
Details are provided in this textbox

Editing and imputation methods: N
Details are provided in this textbox

Quality document associated to a dataset:
There is no a document summarising the estimation process followed.

Validation of the final dataset:
Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: commercial_diad_trout

MS : POL

Region: Baltic Sea

Sampling scheme identifier: commercial_diad_trout

Sampling scheme type: Diadromous (commercial)

Observation type: Self water body

Time period of validity: 2025-2027

Short description (max 100 words):
Sampling scheme aiming at collecting biological data (length, weight, sex ratio, age) from commercial catches and landings. Sampled specimens of sea trout are captured during their spawning migration and subjected to a typical controlled spawning operation.

Description of the population

Population targeted:
The target species is sea trout *Salmo trutta* in ICES SD 24-26

Population sampled:
Baltic sea trout

Stratification:
The survey covers the spawning season (October-December) of sea trout.

Sampling design and protocols

Sampling design description:
Stock related variables will be collected during monitoring of commercial catches for broodstock. It is planned to collect 100 samples of sea trout from three rivers in northern Poland (Parsęta, Słupia, Rega). Salmon catches are incidental and there is no fishery targeting this species.

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

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/

Design follows international recommendations: Y
ICES 2023. Baltic Salmon and Trout Assessment Working Group (WGBAST). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22800983.v1

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y
ICES 2023. Baltic Salmon and Trout Assessment Working Group (WGBAST). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22800983.v1

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:

Measuring boards, scales, dissection equipment, different sampling protocols. Biological data are recorded in the field and stored in the excel file. **Data capture documentation:** N Details are provided in this textbox. **Quality checks documentation:** N Details are provided in this textbox.
Data storage
National database: Biological samples are stored in in the archive at the National Marine Fisheries Research Institute in Gdynia. Collected data are stored in an electronic form on the servers of the NMFRI. **International database:** WGBAST database **Quality checks and data validation documentation:** N Details are provided in this textbox.
Sample storage
Storage description: Biological samples are stored in in the archive at the National Marine Fisheries Research Institute in Gdynia. Scale samples are dried and stored in the paper envelopes with biological information about each specimen. **Sample analysis:** Data is analysed with the use of statistical tools.
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no document summarising the estimation process followed. **Validation of the final dataset:** Data are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the group meeting.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: smolt_trap

MS : POL
Region: Baltic Sea
Sampling scheme identifier: smolt_trap
Sampling scheme type: Diadromous (scientific)
Observation type: SciObs water body
Time period of validity: 2025-2027
Short description (max 100 words):

Currently, there are several screw traps operating in rivers of the Baltic Sea catchment area, primarily in Sweden and Finland, but also in Estonia and Denmark. Rotary screw traps are now the primary tool for monitoring the life cycle of salmonids and allow for the assessment of the timing of smolt migration and their abundance.
A rotary screw trap consists of a large conical structure with a propeller, suspended between two floating pontoons The flow of the river turns the propeller and directs some migrating fish into an underwater reservoir at the back of the trap. Staff operating the trap during the migration season (in Poland from March to May) count, measure, and tag the captured fish daily. Since the traps only sample a portion of the migrating smolts (from part of the river), it is necessary to regularly measure the trap's effectiveness to determine its catchability. For this purpose, captured smolts are tagged and released upstream of the trap to obtain a measure of catchability (Carlson et al. 1998). This experiment is repeated multiple times (Roper and Scarnecchia 2000).

Description of the population

Population targeted:
The target species are Atlantic salmon Salmo salar and sea trout Salmo trutta in ICES SD 24-26.

Population sampled: Baltic salmon and sea trout.

Stratification: During smolt migration season (from March to May).

Sampling design and protocols

Sampling design description: Staff operating the trap during the migration season (in Poland from March to May) count, measure, and tag the captured fish daily

Is the sampling design compliant with the 4S principle?: N

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/
Carlson, S.R., Coggins, L.G., Swanton, C. 1998. A Simple Stratified Design for Mark-Recapture Estimation of Salmon Smolt Abundance. Alaska Fisheries Research Bulletin, 5, 88–102.

Design follows international recommendations: Y

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y
ICES 2023. Baltic Salmon and Trout Assessment Working Group (WGBAST). ICES Scientific Reports. Report. https://doi.org/10.17895/ices.pub.22800983.v1
Carlson, S.R., Coggins, L.G., Swanton, C. 1998. A Simple Stratified Design for Mark-Recapture Estimation of Salmon Smolt Abundance. Alaska Fisheries Research Bulletin, 5, 88–102.

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
A rotary screw trap. Data is recorded in the field and stored in the excel file.

Data capture documentation: Not yet developed (start in march 2025)

Quality checks documentation: Not yet developed (start in march 2025)
Data storage
National database: Not yet developed (start in march 2025) **International database:** Y, ICES WGBAST database **Quality checks and data validation documentation:** Not yet developed (start in march 2025)
Sample storage
Storage description: Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia **Sample analysis:** Data are analysed with the use of statistical tools.
Data processing
Evaluation of data accuracy (bias and precision): N Details are provided in this textbox **Editing and imputation methods:** N Details are provided in this textbox **Quality document associated to a dataset:** There is no a document summarising the estimation process followed. **Validation of the final dataset:** Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST). Quality of the data provided are discussed and verified during the WGBAST meeting.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: trap_eelrecruits

MS : POL
Region: Baltic Sea
Sampling scheme identifier: trap_eelrecruits
Sampling scheme type: Diadromous (scientific)
Observation type: Self water body
Time period of validity: 2025-2027
Short description (max 100 words): The main goal of the survey is to obtain indicators of natural recruitment
Description of the population
Population targeted: The target species is European eel (Anguilla anguilla) in Vistula and Oder EMU. **Population sampled:** Yellow eel. **Stratification:** Sampling takes place from April to August at fixed locations on Slupia and Lupawa rivers
Sampling design and protocols
Sampling design description: The so-called trough traps are used to catch the young yellow eels. The construction scheme of this gear is based on traps used in Germany (own information), and is consistent with

traps used in other countries (e.g. Legault, 1992; Solomon and Beach, 2004; Anon., 2011). It consists of an angled trough that fish climb up and a trap section that collects them. The bottom of the trough is lined with artificial substrate in the form of rows of plastic brushes. A few traps, however, of those used in the past in Smołdzino and Rejowice, were lined with plant material (branches and grass). The trap part of a trough trap is usually a barrel, which apart from the inlet opening, through which eels enter with the water, has numerous small openings allowing the constantly flowing water to flow out. The eels are lured to enter the trap area by water. This is supplied by gravity, or by a pump, through hoses to the beginning of the trough. Some of it flows down the trough where the fish climb. The rest of the water is directed to the trap section, where it enters through a funnel with a hose along with the flushed fish. Traps are set at presumed locations of aggregation or migration of eels below the dams, usually at the side of turbine outflows or at weir overflows. All fish caught are measured and weighed.

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

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/

Design follows international recommendations: Y

Link to sampling protocol documentation: All catch is emptied from research gear for 2-3 days and then stored at low temperature. It is successively measured and weighed in the laboratory.

https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year: NA

Data capture

Means of data capture:
Eel traps. Measuring boards, tubs & buckets, different sampling protocols, processing software.

Data capture documentation:
https://dcf.mir.gdynia.pl/sampling/

Quality checks documentation: N (2025)

Data storage

National database:
Data is stored in the internal database.

International database: ICES WGEEL database

Quality checks and data validation documentation: N

Sample storage

Storage description: No biological samples collected. Collected data are stored in an electronic form on the servers of the National Marine Fisheries Research Institute in Gdynia. **Sample analysis:** Data is analysed with the use of statistical tools.
Data processing
Evaluation of data accuracy (bias and precision): N (2025) **Editing and imputation methods:** N – not performed at national level but at end-user level (ICES). ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction. Quality is also assessed by WGEEL **Quality document associated to a dataset:** N **Validation of the final dataset:** The data does not need to be specifically checked for quality as it only relates to the numbers of fish caught in the research catches. The biological data passed to the end user are processed in accordance with the datacall, The data is checked and validated during the WGEEL integration procedure.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: commercial_diad_eel

MS : POL
Region: Baltic Sea
Sampling scheme identifier: commercial_diad_eel
Sampling scheme type: Diadromous (commercial)
Observation type: Self water body
Time period of validity: 2025-2027
Short description (max 100 words): Sampling scheme aiming at collecting eel biological data (length, weight, sex ratio, age) from commercial catches and landings.
Description of the population
Population targeted: The target species European eel Anguilla Anguilla in Vistula and Oder Emu **Population sampled:** European eel **Stratification:** from April to November
Sampling design and protocols
Sampling design description: Stock related variables will be collected during monitoring of commercial catches and landings. It is planned to collect 300 samples of eels from random fisheries in Oder and Vistula EMU **Is the sampling design compliant with the 4S principle?:** NA **Regional coordination:** N **Link to sampling design documentation:** https://dcf.mir.gdynia.pl/sampling/ **Design follows international recommendations:** Y

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y,
ICES WGEEL datacall

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture: Measuring boards, scales, different sampling protocols, tablets. Biological data (length, weight) and catch composition are recorded and stored in the excel file.

Data capture documentation: N
Details are provided in this textbox.

Quality checks documentation: N
Details are provided in this textbox.

Data storage

National database: Data is stored in the internal database.

International database: WGEEL database

Quality checks and data validation documentation: N
Details are provided in this textbox.

Sample storage

Storage description:
Otoliths are stored in the archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s

Sample analysis:
Biological analysis follows the guidelines established by WGEEL and several workshops.

Data processing

Evaluation of data accuracy (bias and precision): N
Details are provided in this textbox

Editing and imputation methods: N
Details are provided in this textbox

Quality document associated to a dataset: Quality is assessed by WGEEL

Validation of the final dataset: Data is provided to WGEEL and validated during the datacall evaluation.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: trap_eel

MS : POL

Region: Baltic Sea

Sampling scheme identifier: trap_eel

Sampling scheme type: Diadromous (scientific)

Observation type: Self water body

Time period of validity: 2025-2027

Short description (max 100 words): The main goal of the survey is to obtain indicators of yellow eel density.

Description of the population

Population targeted: The target species is European eel (Anguilla anguilla) in Vistula and Oder EMU.

Population sampled: Yellow eel.

Stratification: April to November

Sampling design and protocols

Sampling design description: Survey fyke nets without a selection sieve were used to catch yellow eels, allowing the entire length spectrum to be captured. The location of the fyke nets has been fixed since 2016, making it possible to analyse the eel abundance trend in the Szczecin Lagoon and the Vistula Lagoon.

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

Regional coordination: N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/

Design follows international recommendations: NA

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/
Protocol follows international recommendations: Y

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture: Measuring boards, dissection equipment, tubs & buckets, different sampling protocols, processing software. Biological data (length, weight, sex,.) are recorded in the internal database, and transferred annually during WGEEL datacall.

Data capture documentation:
https://dcf.mir.gdynia.pl/sampling/

Quality checks documentation: Y
Data is assessed by WGEEL annually

Data storage

National database: Data is stored in the internal database

International database: WGEEL database

Quality checks and data validation documentation:
https://dcf.mir.gdynia.pl/sampling/

Sample storage
Storage description: Otoliths from surveys and commercial sampling are stored in the archive of the National Marine Fisheries Research Institute in Gdynia. The collection includes otoliths and scales collected from the 1960s (their exact number is unknown - depending on the species it ranges from several dozen thousand to over 150 thousand). **Sample analysis:** Biological analysis of the different stocks follows the guidelines established by ICES WGBIOP and associated workshops: https://www.ices.dk/community/Pages/PGCCDBS-doc-repository.aspx and ICES WGBIFS https://www.ices.dk/sites/pub/Publication%20Reports/Forms/DispForm.aspx?ID=37133
Data processing
Evaluation of data accuracy (bias and precision): N **Editing and imputation methods:** N – not performed at national level but at end-user level (ICES). ICES Data validation is performed upon data submissions and produces data quality reports with quality flagged data for the submitter to verify if the data need any correction. Quality is also assessed by WGEEL **Quality document associated to a dataset:** N **Validation of the final dataset:** The data does not need to be specifically checked for quality as it only relates to the numbers of fish caught in the research catches. The biological data passed to the end user are processed in accordance with the datacall, The data is checked and validated during the WGEEL integration procedure.

Related to Table 2.3 [and Text Box 2.3] (diadromous data collection)

Sampling scheme identifier: rec_diad

MS : POL
Region: Baltic Sea
Sampling scheme identifier: rec_diad
Sampling scheme type: Diadromous (recreational)
Observation type: Self water body
Time period of validity: 2025-2027
Short description (max 100 words): The analysis of catch reports maintained by individual Polish Angling Association districts.
Description of the population
Population targeted: The target species are Atlantic salmon *Salmo salar*, sea trout *Salmo trutta* and eel *Anguilla anguilla* in ICES SD 24-26. **Population sampled:** Baltic salmon, sea trout and eel. **Stratification:** The survey cover all year.
Sampling design and protocols
Sampling design description: Analysis of catch records from the Polish Angling Association districts of the analyzed rivers. Since the access to data is shifted in time, the time of processing results falls for the next year. The analysis of the registers must provide such information as: number of registers issued, number of registers returned, share of full and partial licenses, reported number of sea trout and salmon in Pomeranian rivers and eel in Oder and Vistula River basins. **Is the sampling design compliant with the 4S principle?:** NA **Regional coordination:** N

Link to sampling design documentation:
https://dcf.mir.gdynia.pl/sampling/

Design follows international recommendations: Y

Link to sampling protocol documentation:
https://dcf.mir.gdynia.pl/sampling/

Protocol follows international recommendations: Y
WGBAST, WGEEL

Sampling implementation

Recording of refusal rate: NA

Monitoring of sampling progress within the sampling year:
The sample stratification and digitization process is monitored on an on-going basis.

Data capture

Means of data capture:
Polish Angling Association catch records.

Data capture documentation: N
Details are provided in this textbox.

Quality checks documentation: N
Details are provided in this textbox.

Data storage

National database: Collected data are stored on the servers of the National Marine Fisheries Research Institute in Gdynia.

International database:
WGBAST and WGEEL databases

Quality checks and data validation documentation: N
Details are provided in this textbox.

Sample storage

Storage description:

No biological samples collected..

Sample analysis:
Data are analysed with the use of statistical tools.

Data processing

Evaluation of data accuracy (bias and precision): N
Details are provided in this textbox

Editing and imputation methods: N
Details are provided in this textbox

Quality document associated to a dataset:
There is no document summarising the estimation process followed.

Validation of the final dataset:
Catch estimates are provided each year following the data call of ICES Baltic Salmon and Trout Assessment Working Group (WGBAST) and ICES Working Group on Eels (WGEEL) for salmon, sea trout and eel respectively. Quality of the data provided are discussed and verified during the group meetings.

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.

Provide information under each point in all sections.

Please indicate sampling scheme identifier (e.g combination of 'sector' and 'sampling scheme' or 'variables' from the annex table). Each identifier is unique and can be used only once; records with identical scheme identifiers are overwritten in the platform. Do not add any tables others than from the template.

Create a first survey specification record as a reference to the regional WP, add 'RWP ECON' in the 'sector name' field and leave the other fields empty.

Sampling scheme identifier: RWP ECON

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): RWP ECON 2025-2027
Sampling scheme:
Variables:
Supra region(s):
Survey planning
Survey design and strategy

1. Data sources *2.* Sample sizes: 3. Survey methods: 4. Additional information used in the survey strategy:
Estimation design
1. Calculation method for population estimate: *2.* Calculation method for derived data: 3. Nonresponse handling:
Error checks
Data storage and documentation
1. Data storage: 2. Documentation:
Revision
Confidentiality
1. Are procedures for confidential data handling in place and documented? 2. Are protocols to enforce confidentiality between DCF partners in place and documented? 3. Are protocols to enforce confidentiality with external users in place and documented? 4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation.

Sampling scheme identifier: Fishing fleet - Census

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): Fishing fleet

Sampling scheme: Census

Variables: All fleet economic and social variables from Tables 7 and 9 of EU MAP Delegated Decision 2021/1167

Supra region(s): All supra regions

Survey planning

Census, all registered fishing vessels, all active vessels

Survey design and strategy

1. Data sources

Fishing vessel register, log books, monthly catch reports (coastal log books), sales notes, questionnaires (financial accounts and social data);

2. Sample sizes:

Census, survey addressed to all registered vessels and all active vessels

3. Survey methods:

Requests and forms (questionnaires) on economic and social variables are sent to all active vessels owners. Replies are accepted by post, designated website or e-mail. Landings, effort, fleet capacity data derived from administrative datasets (permanent online access).

4. Additional information used in the survey strategy:

No supportive, auxiliary information needed.

Estimation design

1. Calculation method for population estimate:

The collected data is intended to be comprehensive, as it will include information from the entire population (census approach)

2. Calculation method for derived data:

Value of physical capital will be calculated using PIM method or using scrapping premiums, depending on availability of the data.

3. Nonresponse handling:

In the case of non-responses in the census, estimates will be made based on averages from vessels that provided data and information available for the entire population, such

as catch volume, fishing days, and the number of vessels within a given segment. If complete population data (100%) is unavailable, estimates will be based on average values from the sample, considering factors like the number of fishing vessels, fishing days, crew size, or catch size (variables known for the entire population).

Reminder letters, phone calls or physical visits to ports (to increase number of responses) are planned to address non response problem.

Error checks

A two-stage data (obtained from questionnaires) registration procedure supported by a number of completeness, data type, and range checks in the database application. In the first step a user enters the data into the application forms and saves the data in temporary tables for further verification. In the second step a privileged user can

review, update and check the data (using built-in, predefined in the database scripts). A further check is performed after exporting the data to MS Access by a final user (outliers identification, inconsistency between verified data in comparison to preceding year(s), inconsistency between similar variables eg. fuel costs vs. fuel consumption, inconsistent relative changes between number of fishing days and costs or between crew costs and fishing incomes are checked).

Data storage and documentation

1. Data storage:

   Economic raw data collected under the DCF are entered (and stored) into the database using a dedicated web application accessible only in the institute's network. Once the data for the specific year are completed, they are transferred (exported) for further processing and validation using MS Access and MS Excel.
2. Documentation:

Revision

No revision envisaged at national level unless common methodology remain unchanged.

Confidentiality

1. Are procedures for confidential data handling in place and documented?

   Y. Handling of confidential data is the subject to strict internal regulations.

2. Are protocols to enforce confidentiality between DCF partners in place and documented?

   No other partners involved in the economic data collection.

3. Are protocols to enforce confidentiality with external users in place and documented?

   As above.

4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation.

   The questionnaires with economic data are gathered as a part of Polish national statistical survey so the general statistical confidentiality regulations apply. This means that data on economic results of national economy entities cannot be made available if a given aggregation consists of less than 3 entities or the share of one entity in a given statement is less than 3/4 of the total.

Sampling scheme identifier: Aquaculture - PSS

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): Aquaculture
Sampling scheme: PSS
Variables: All variables listed in Table 6.1 Aquaculture SocEcon
Supra region(s): NA
Survey planning
According to the analysis of the following sources: Chief Veterinary Officer, Inland Fisheries Institute, and the ranking lists of the Agency for Restructuring and Modernization of Agriculture in the scope of support for aquaculture operations, the following number of active commercial entities exist in Poland's aquaculture sector: Carp (ponds) - 912; Trout (tanks and raceways) - 125; Trout (recirculation systems) -

12; Sturgeon (for meat or eggs for human consumption) (enclosures and pens) - 2; Sturgeon (for meat or eggs for human consumption) (tanks and raceways) - 12.

Survey design and strategy

1. Data sources: *The data source is questionnaire filled in by sampled respondents. Additionally in-depth interviews (IDI) are planned.*

2. Sample sizes: *Object: aquaculture enterprise. The sample is determined by two factors: sampling method and rate of nonresponse. Because of the first sampling time of socioeconomic data under the DCF in Poland the following assumptions were made: random sampling, confidence interval of 90% and a maximum error of 10%. Using nonresponse average rate from 2023 (10%) on DCF in Poland the total number of sampled farms is planed of 100.*

3. Survey methods: *Questionnaires send by post or email or/and interviews (phone, online and directly).*

4. Additional information used in the survey strategy: *Data validation through cross-checking different items in the questionnaire (followed by clarification with the respondent in case of discrepancies or correction in the event of obvious errors – e.g., order of magnitude errors (thousands)). Further data validation is done using publicly available data and interview data (average fish feed costs, unit costs of fry, average and minimum wage levels, minimum labour input for a given type of facility). Backup data sources include, among others, ranking lists and reports from the Agency for Restructuring and Modernization of Agriculture (ARiMR) regarding public support (investment and non-investment grants in the sector).*

Estimation design

1. Calculation method for population estimate: *Describe Small population. HT estimation based on stratified population of farms (Geographical and enterprise size stratification).*

2. Calculation method for derived data: *Where necessary, for the missing data, the following methods of imputation will be used: mean substitution or regression.*

3. Nonresponse handling: *Based on the experience of data collection for the years 2020-2022, a significant improvement was achieved, and with the current data collection system, nonresponse should not exceed 5-10%. The reduction in nonresponse is*

facilitated by providing support to respondents (assistance in completing the questionnaire – in the field, online, or by phone).
Error checks
To reduce the risk of errors, standard activities will be carried out, such as: questionnaire tests; training; double-check work. *The sample is not numerous because of focus on data quality issues. Expert validation of collection processing and distribution. Data sets collected under the project H2020 SUCCESS -typical farms approach will be used as a reference and verification point (recommended by PGEcon in 2019).*
Data storage and documentation
1. Data storage: *The data will be stored as database on server and paper forms collection.* 2. Documentation: *NA*
Revision
The methodology will be revised twice during collection period. First revision will take in 2025 and second in 2026.
Confidentiality
1. Are procedures for confidential data handling in place and documented? Y 2. Are protocols to enforce confidentiality between DCF partners in place and documented? Y 3. Are protocols to enforce confidentiality with external users in place and documented? Y 4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation. *Yes if the population in layer is less than 3 or when the turnover of the one farm is more than 75%. It could be case for sturgeon.*

Sampling scheme identifier: Fish processing - Census

Survey Specifications s
'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): Fish processing

Sampling scheme: Census

Variables: All variables listed in Table 7.1 Processing SocEcon

Supra region(s):NA

Survey planning

The data are census. The population refer to enterprises whose main activity is defined according to the EUROSTAT definition under NACE 15:20: 'Processing and preserving of fish and fish products' and those which have fish processing as non-main activity

Survey design and strategy

1. Data sources: Questionnaires. Enterprises are listed in General Veterinary Inspectorate register.

2. Sample sizes: NA

3. Survey methods: The data are census. Questionnaire forms are sent by post, e-mails or are available to download on website. Replies are accepted by post, e-mail or electronically using dedicated web platform.

4. Additional information used in the survey strategy: The financial data delivered on questionnaires can be verified by comparing it with the annual financial statements published in the Register of Business Enterprises (National Court Register).

Estimation design

1. Calculation method for population estimate: All enterprises are expected to return the completed questionnaire forms (legal obligation).

2. Calculation method for derived data: NA

3. Nonresponse handling: In case of nonresponse reminders will be sent by e-mail or post. In case of missing data a calculation based on averages will be made using data from the questionnaire forms received. Some financial data (if missing) can be gained from National Court Registry (if published).

Error checks

Each completed questionnaire form is checked for completeness and correctness. In the event of doubt or discrepancy, the data shall be corrected after prior clarification with the person responsible for completing the form via e-mail or phone. Afterwards the data are entered into the database. The next step of validation is cross-checking them with the previous year's data.

In case data are delivered using the web platform, they are verified and validated in the system. If necessary clarification is made by e-mail or phone and correction is made in the system.

Data storage and documentation

1. Data storage: All data are entered and stored in the database accessible only for registered institute users. Once the data input is completed it is exported to MS Excel for further processing and validation.
2. Documentation: https://dcf.mir.gdynia.pl/

Revision

No revision envisaged at national level unless common methodology remain unchanged

Confidentiality

1. Are procedures for confidential data handling in place and documented?
   Handling of confidential data is the subject to strict internal regulations.
2. Are protocols to enforce confidentiality between DCF partners in place and documented?
   No other partners are involved.
3. Are protocols to enforce confidentiality with external users in place and documented?
   NA
4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation.
   NA