REPUBLIC OF CYPRUS

**MINISTRY OF AGRICULTURE
NATURAL RESOURCES
AND ENVIRONMENT**

**DEPARTMENT OF FISHERIES
AND MARINE RESEARCH
1416 NICOSIA**

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

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

2026-2027

Version 4

Nicosia, Cyprus - 05 November 2025

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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.

General framework

The current document presents the National Work Plan (NWP) for data collection in the fisheries and aquaculture sectors that Cyprus proposes to undertake during the period 2025-2027.

The proposed activities are based on the requirements set by the Data Collection Framework (DCF) and identified end-user needs, considering thresholds applied. It includes regional activities listed in the relevant RWPs, i.e. RCG Med&BS RWP 2025-2027, RCG LP RWP 2025-2027 and RCG ECON RWP 2025-2027. The NWP will cover the areas under the effective control of the Government of the Republic of Cyprus.

Cyprus plans to meet the DCF obligations by the collection, management and use of fisheries data as follows:

a) Data collected under Control Regulation
b) Sampling schemes (on board and at landing sites)
c) Research Surveys at sea
d) Interviews
e) New IT systems (database)

Improved data collection planning and efforts, relevant to the Marine Action Plan, concern the on-board observer scheme for collecting information on catches from passive gears targeting demersal species in GSA25, including PETS (Section 4), as well as a test study on the evaluation of post-release survival of sea turtles incidentally caught in Drifting Longline Large Pelagic Fisheries (Section 1).

National correspondent

The Cyprus National correspondent has been appointed to supervise the data collection programme. There will be sub-coordinators, for separate aspects such as the collection of biological, research survey and economic data required by DCF.

The Cyprus National Correspondent for the National Data Collection Programme is:

Myrto Ioannou
Department of Fisheries & Marine Research (DFMR)
Ministry of Agriculture, Natural Resources & Environment
1416 Nicosia, Cyprus
Phone: +357 22 807822
Fax: +357 22 775955
E-mail: mioannou@dfmr.moa.gov.cy

Participating Institutes

The National Programme will be carried out by the Department of Fisheries and Marine Research (DFMR) of the Ministry of Agriculture, Natural Resources & Environment of Cyprus, which has the following contact details:

Department of Fisheries and Marine Research (DFMR)
Address: 101 Vithleem Street, 2033 Nicosia
Mailing Address: DFMR, P.O. Box 28548, 2080 Strovolos or DFMR, 1416 Nicosia
Phone: +357 22 807 807
Fax: +35722 775 955
E- mail: director@dfmr.moa.gov.cy

Some of the proposed activities will be assigned to other scientific bodies (e.g. the Medits survey and the study on the Distribution and biomass estimation of aggregated fish populations using Acoustic Research Survey). A list of the participating institutes cannot be provided at present, as the assignment procedures have not been completed yet.

Data collection website
A link to the national data collection website is provided below:
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/B7B01EAEC00C673F4225812A002F0525?OpenDocument

Regional coordination groups (RCGs)
Cyprus participates in the following RCGs: the RCG for the Mediterranean & Black Sea, the RCG for the Large Pelagic Fisheries and the RCG on Economic Issues. As already mentioned, the NWP includes the regional activities listed in the relevant RWPs. Information on planned regional and international coordination related with data collection is provided in Table 1.2.

(max. 1000 words)

Text Box 1a: Test studies description

Region: **Mediterranean Sea**

Test study: Distribution and biomass estimation of aggregated fish populations using Acoustic Research Survey

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

Name of the national test study: Distribution and biomass estimation of aggregated fish populations using Acoustic Research Survey

1. Aim of the test study
The acquisition of representative and fisheries independent estimations of fish populations size is of paramount importance for assessing the impacts of fishing on biological resources, and for regulating fishing activities at sustainable levels of exploitation. The research survey carried out in the NWP in accordance with Table 2 of EU MAP Implementing Decision, lacks the potential of assessing the relative abundance of a number of important species exploited by the Cypriot fishing fleets, including the demersal, semi-pelagic species *Spicara smaris* and *Boops boops*.
Spicara smaris is the most important species for trawlers in Cyprus, while Boops boops is the most important species in tonnage and value for the Cypriot artisanal fisheries. The fisheries data produced under the data collection programme and used for assessing the status of the above species cannot be tuned using an independent abundance index, and CPUE (with the many problems it carries) is the nominal code of practice for the delivered assessments which need to be improved. Acoustics seem to open a window of opportunity to get an almost absolute estimate of Spawning Stock Biomass of these species which aggregate during spawning season.
The aim of this study is to gain knowledge of the biomass levels and the spatial distribution of the species *Spicara smaris* and *Boops boops*, and it is based on national and end-users needs.

2. Duration of the test study
The duration is one year, in 2026 or 2027. The study is planned to be carried out the 1st and 2nd quarter of 2026 (or 2027), during the spawning season of the target species.

3. Methodology and expected outcomes of the test study
Acoustic survey will be conducted using modern multibeam/broadband/wideband sonar technology that gives the ability to transect various frequency's simultaneously and post process the echograms to facilitate various scopes of analysis. The survey will be cover all area under the effective control of the government of the Republic of Cyprus in depths bellow 50m were the spawning event occurs for the semi demersal (and /or semi pelagic) species, Spicara smaris (most important species for trawlers in Cyprus) and Boops boops (most important species in tonnage and value for Cypriot artisanal fisheries) and when fish aggregate in relatively

big schools. Other species will also be studied wherever possible. Bathymetric data from LIDAR mapping survey will be considered for proper beam dead zone calculations coupled with calibration on survey areas and species target strength tests on the field.
Fish sampling will take place using both pelagic and bottom trawls, in order to "translate" the echo inputs into species biomass.
Sampling strategy will be based on systematic pre-planned design which provides the most precise estimate of the abundance in a fixed domain and delivers the best distribution maps. An autocorrelation model will be used to estimate the survey precision. The selected depth allocation reduces the sampled water volume considerably and this allows for a very representative coverage of the study area.
Expected outcomes will be the estimation of the spawning stock abundance of the two target species, a distribution map of aggregation patterns and hot-spot spawning areas that might need special management considerations. Auxiliary information on species that will happen to be sampled during the cruise will be collected and evaluated. Estimation of plankton abundance will also be delivered as part of the post processing process which will add to the existing knowledge of the ecosystem functions and productivity. Multibeam technology will also give an opportunity to study internal school structures and behaviour which play an important role in the way the fish aggregate and has a great influence on the catch.
Derived survey SSB quantities will be compared with the estimates calculated in single species stock assessments and not only will advise the assessments but will also provide insights of the predicted and the real populations.
Based on the outcomes of the pilot study, Cyprus will evaluate the usefulness of including this acoustic survey in future work plans and/or may propose a continuation of the pilot study for optimising the survey design. In case the survey is decided to be performed systematically under the national work plan, it is expected to be coordinated under the MEDIAS (MEDiteranean International Acoustic Survey) Steering Committee.
(max 900 words per study)

Text Box 1b: Other data collection activities

Region: Mediterranean and Black Sea

Activity: RCG's 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: RCG's Secretariat
RWP Med&BS 2025-2027, RWP ECON 2025-2027, RWP LP 2025-2027

There are no national specifics, apart from the regional activity.

(max 250 words per study)

Activity: Med&BS Regional data base (RDBFIS)

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: Med&BS Regional data base (RDBFIS)
RWP Med&BS 2025-2027

There are no national specifics, apart from the regional activity.

(max 250 words per study)

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

RWP Med&BS 2025-2027, RWP LP 2025-2027, RWP ECON 2025-2027

There are no national specifics, apart from the regional activities.
(max 250 words per study)

Activity: Regional data base development

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: Regional data base development

RWP LP 2025-2027

There are no national specifics, apart from the regional activity.

Activity: Deep Water Red Shrimps Bottom Trawl survey in Cyprus waters

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 national activity: Deep Water Red Shrimps Bottom Trawl survey in Cyprus waters

1. Aim of the data collection activity

An emerging need, recommended from various scientific groups (e.g. SAC SRC-EM) and the GFCMdeep water red shrimp management plan in the East Mediterranean (GSAs 24-27) , is the increase of knowledge on the relevant species (*Aristaeomorpha foliacea* and *Aristeus antennatus*), through research surveys and targeted data collection programs. In fact, scientific knowledge of the particular species in the area is scarce. Gaining in-depth fishery independent knowledge on the abundance, distribution, population structure and growth of the red shrimp stocks in the East Mediterranean will support the effective assessment of the stock status of the species and contribute to the formulation of sound management measures for their exploitation.
Aside from scientific information on deep water red shrimps, a deep-water trawl survey may provide valuable knowledge on the associated species composition and the possible presence of vulnerable marine ecosystems (VMEs), which can be used for the formulation of management measures regulating deep water shrimp fisheries. Furthermore, as some fishing grounds can be found around coral habitats or on the edge of underwater canyons, except of the direct effects of towed gear over these ecosystems, another significant problem which can be attempted to be studied is the sediment resuspension from trawling.

Considering the above, a deep water red shrimps bottom trawl survey in Cyprus waters (GSA25) is proposed, aiming the following:

- Collection of data on the abundance, distribution, population structure and growth of the red shrimp stocks (*Aristaeomorpha foliacea*, *Aristeus antennatus*)
- Collection of data on the associated species
- Possible identification of vulnerable marine ecosystems (VMEs)

2. Duration of the data collection activity

The survey is proposed to be carried out during the second quarter of the years 2025-2027, during the fishing season of the deepwater red shrimps fishery.

3. Methodology and expected outcomes of the data collection activity

In order to be able to compare results in a standardized manner across regions, and subsequently be compatible with the available Cypriot MEDITS data series, the proposed methodology is the one used in the MEDITS survey. MEDITS protocol can be found in the following link: (

The differences with the Cyprus MEDITS survey will be: a) the spatial coverage will be greater than the one of the Cyprus MEDITS deep water hauls b) a finer station selection will be made, based on habitat suitability with depth ranging from 200-800 m, considering also the identified commercial fishing grounds of the fishing fleets operating in GSA25.

At the end of the study, it will be possible to evaluate the usefulness of the survey in terms of the delivered outputs, the methodology used and the progression in future.

Main expected outcomes will be:

- analytical data acquisition for setting the founding to move from data limited to data rich approaches in stock assessment of deep-water shrimps in the East Mediterranean
- information on associated species
- possible discovery and mapping of fragile environments and/or VMEs
- possible discovery and mapping of nursery and/or spawning aggregations

All information collected will be useful for formulating advice on the management of deep water fisheries resources in the area and on minimizing negative impacts of fishing activities on the marine ecosystem.

(max 900 words per activity)

SECTION 2: BIOLOGICAL DATA

Text Box 2.4: Recreational Fisheries

Region: Mediterranean and Black 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.

RWP Med&BS 2025-2027

National specifics

Concerning the triennial estimation of the population of recreational fishers by segment (fishing gear-technique; e.g., shore, boat, spear fishing, etc.), it is noted that in Cyprus an annual fishing licence is currently issued for boat fishing and spearfishing, therefore no estimation of the population is needed for these segments. The estimation of the population is planned only for fishermen from shore, for whom currently no license system exists. This information is provided also in Table 2.4.

The collection of data on large pelagic species managed by ICCAT will be covered by the same planned annual off-site survey for all species managed by GFCM (telephone and logbook through mobile application).

It is further noted that recreational fishermen in Cyprus are prohibited to fish *Thunnus thynnus*, *Xiphias gladius* and all elasmobranch species. It is expected that the planned off-site survey for collecting data and species will allow the estimation of incidental catches of prohibited species that are released.

The mobile application that will be used is Cy-FIS, a free mobile application for Android and iOS devices that

offers the ability to the DFMR to electronically record fishing and other related activities, collect fisheries, biological, ecological and other relevant data, monitor compliance with regulations and communicate with users. It is also able to record vessels' positions and inform users about fishing restrictions that may apply in certain areas, using interactive maps. The development of Cy-FIS was co-financed by the European Maritime and Fisheries Fund (EMFF) 2014-2020 - Action 3.1.7 of Article 76.2, of Measure 3.1 - Control and Enforcement of the Operational Program (OP) "Thalassa 2014-2020".

(max 250 words per sampling scheme)

Text Box 2.5: Sampling plan description for biological data

Region: Mediterranean and Black Sea

Sampling scheme name: Commercial fishing trip

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): Commercial fishing trip

RWP Med&BS 2025-2027.

There are no national specifics.

Sampling scheme name: SciObsAtSea*Commercial fishing trip*all species caught with OTB_DEF

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): SciObsAtSea*Commercial fishing trip*all species caught with OTB_DEF

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

This sampling scheme concerns the Trawl fishery targeting demersal species in GSA25, with only 2 vessels. There is a closed period from 1 June – 7 November. The Primary Sampling Unit (PSU) is the vessel, selected with Systematic Sampling Without replacement.

Additional description of sampling frames

No additional information.

Sampling scheme name: SciObsOnShore*Commercial fishing trip*list of commercial species caught with OTB_DEF

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): SciObsOnShore*Commercial fishing trip*list of commercial species caught with OTB_DEF

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

This sampling scheme concerns the Trawl fishery targeting demersal species in GSA25, with only 2 vessels. There is a closed period from 1 June – 7 November. The Primary Sampling Unit (PSU) is the vessel, selected with Systematic Sampling Without replacement.

Additional description of sampling frames

No additional information.

Sampling scheme name: SciObsOnShore*Commercial fishing trip*all species caught with PG_DEF

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): SciObsOnShore*Commercial fishing trip*all species caught with PG_DEF

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

This sampling scheme concerns the Passive gear demersal fishery in GSA25. The fishery concerns around 330 vessels, most of which are <12m long (~95%). The PSU is the landing site selected with Simple Random Sampling With Replacement (SRSWR).

Additional description of sampling frames

No additional information.

Sampling scheme name: SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF

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): SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

This sampling scheme concerns the Passive gear demersal fishery in GSA25. The fishery concerns around 330 vessels, most of which are <12m long (~95%). The PSU is the vessel selected with SRSWR.

Additional description of sampling frames

It is noted that for safety reasons, vessels <6m (~30 vessels) are excluded from the sampling frame.

Sampling scheme name: SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

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): SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

The Drifting longline fishery targeting swordfish concerns around 12 vessels with length >=12m. There is a closed period from 1 January – 31 March, and during summer months the activity is limited, since the vessels are engaged in the albacore fishery. The PSU is the vessel, selected with SRSWR.

Additional description of sampling frames

No additional information.

Sampling scheme name: SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

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): SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

The Drifting longline fishery targeting swordfish concerns around 12 vessels with length >=12m. There is a closed period from 1 January – 31 March, and during summer months the activity is limited, since the vessels are engaged in the albacore fishery. The PSU is the vessel, selected with SRSWR.

Additional description of sampling frames

For safety reasons, vessels <15m (2 vessels) are excluded from the sampling frame.

Sampling scheme name: SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_ALB

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): SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_ALB

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

The Drifting longline fishery targeting albacore concerns around 35 vessels with length >=12m. It is a seasonal fishery, with a period from June to August. The PSU is the vessel, selected with SRSWR.

Additional description of sampling frames

No additional information.

Sampling scheme name: SciObsAtSea*Commercial fishing trip*All species caught with LLD_ALB

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): SciObsAtSea*Commercial fishing trip*All species caught with LLD_ALB

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

The Drifting longline fishery targeting albacore concerns around 35 vessels with length >=12m. It is a seasonal fishery, with a period from June to August. The PSU is the vessel, selected with SRSWR.

Additional description of sampling frames

For sampling at sea, vessels <15m (~ 20 vessels) are excluded from the sampling frame, for safety reasons.

Sampling scheme name: Commercial fishing trip

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): Commercial fishing trip

National schemes from region Mediterranean and Black Sea

Additional information on sampling schemes

This sampling scheme concerns the fishing trips of one trawler from Cyprus operating in GSA15, that is covered by a bilateral agreement between Cyprus and Malta. Based on this bilateral agreement, “the Cyprus trawlers involved in a shared métier with Malta and landing their catch in Maltese ports will be included in the sampling scheme organized by Malta for the collection of biological data”.

Additional description of sampling frames

As mentioned, there is only one trawler from Cyprus operating in GSA15. It is noted that this vessel did not have any fishing activities during 2023 and 2024.

Text Box 2.6: Research surveys at sea

Region: Mediterranean and Black Sea

Research survey: International bottom trawl survey in the Mediterranean (MEDITS)

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: International bottom trawl survey in the Mediterranean (MEDITS) RWP Med&BS 2025-2027. There are no national specifics. *(max 450 words per survey)*

SECTION 3: FISHING ACTIVITY DATA

Text Box 3.1: Fishing activity variables data collection strategy

Region: Mediterranean and Black 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 3.1 of the EU MAP Delegated Decision annex. It is intended to describe the method used to derive estimates on representative samples where data are not to be recorded under the Control Regulation (EC) No 1224/2009 or where data collected under Regulation (EC) No 1224/2009 are not at the right aggregation level for the intended scientific use. Text Box 3.1 should be filled only in case complementary data collection is planned

National strategies

Based on Chapter II point 3.1 of the EU MAP Delegated Decision annex, data on fishing activity shall cover variables indicated in Table 6 at the lowest relevant geographic level by fleet segment and metier level 6.

Complementary data collection is required for vessels with length 0-6m and 6-12m for the following reasons:

- The use of logbooks, which provide information on effort variables, is not required for fishing vessels less than 10 metres length.
- For fishing vessels <10m, sales notes and sales receipts are considered as a proxy for fishing days, days-at-sea, fishing trips and fishing operations; however, these effort variables cannot be assigned to metiers. Furthermore, sales notes and sales receipts cannot be related with certain effort variables (e.g. length of nets, number of hooks, soaking time).
- Although all fishing vessels in Cyprus are required to record their landings irrespectively of quantities caught (through logbooks, sales notes and sales receipts), in the absence of logbooks the landings of vessels<10m cannot be assigned to metiers.

Information on the sampling schemes is available in the quality document (Annex 1.2).

It is clarified that the fishing activity variables not included in Table 3.1 will derive from data collected under the Control Regulation.

(max. 900 words)

Text Box 4.2: Incidental catches of sensitive species

Region: Mediterranean and Black 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 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

RWP Med&BS 2025-2027

No national specifics are applied.

(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.

National activities

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?

Yes, we have considered the following:

- Papageorgiou, M., Papadopoulou, A., Hadjioannou, L.. 2020. Cyprus Bycatch Project "Understanding multi-taxa 'bycatch' of vulnerable species and testing mitigation a collaborative approach in Cyprus". Technical Report: Results of Phase 1 (2018-20019) of the bycatch monitoring programme in Cyprus. BirdLife Cyprus and Enalia Physis Environmental Research Centre. Nicosia. Pp32. Link: https://enaliaphysis.org.cy/wp-content/uploads/2021/01/TECHNICAL-REPORT-CYPRUS-WEB-ONE-PAGE.pdf

- Carpentieri, P., Nastasi, A., Sessa, M. & Srour, A., eds. 2021. Incidental catch of vulnerable species in Mediterranean and Black Sea fisheries – A review. Studies and Reviews No. 101 (General Fisheries Commission for the Mediterranean). Rome, FAO. Link: https://doi.org/10.4060/cb5405en

- Pilot study report on the assessment of incidental catches of vulnerable species from bottom trawl fishery in Cyprus waters (GSA25), as part of the 2019 Cyprus Work Plan on Data Collection. Submitted to DGMARE in 2021 (https://datacollection.jrc.ec.europa.eu/pilots-study-reports-2017-2019- .

- Data on incidental catches in GSA25, collected under regular biological sampling and through interviews.

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

Based on a combination of the available information on incidental catches mentioned above, the gear types that present the highest risk of bycatch of elasmobranchs in GSA25 are the nets, followed by longlines. The gear types that present the highest risk of bycatch of sea turtles are the nets and the surface longlines. For the rest of PETS it is not considered that there is a high risk of bycatch.

— What methods are used to calculate the observation effort?

Observation effort concerning nets will be calculated in terms of fishing trips, days at sea, and length of nets* soaking time (km*hour). Therefore, observation effort will be calculated for the relevant year as:

- total number of observed trips using nets/ total number of trips using nets
- total number of observed days at sea using nets/ total number of days at sea using nets
- total observed length of nets* soaking time (km*hour)/total length of nets* soaking time (km*hour).

Observation effort concerning longlines will be calculated in terms of number of hooks, and number of hooks*soaking time. Observation effort will be calculated for the relevant years as:

- total number of observed hooks/ total number of hooks used
- total number of observed hooks*soaking time/total number of hooks*soaking time

Observation effort concerning bottom trawl will be calculated in terms of number of hauls, and number of hauls*towing time. Observation effort will be calculated at annual level as:

- total number of observed hauls / total number of hauls
- total observed number of hauls*towing time / total number of hauls* towing time

Observers-at-sea will be required to record in the relevant sampling form for each haul whether they have checked for PETS, in order to distinguish real zero by-catch from not sampled. Visual checks and records will cover separately slipping (for nets and longlines), hauling and sorting.

— Does the sampling design and protocol follow the recommendations from relevant expert groups? Provide appropriate references. If there are no relevant expert groups, the design and protocol have to be explained in the text.

The sampling design and protocol follows the relevant 2019 GFCM manual (Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: Methodology for data collection. 2019 FAO Fisheries and Aquaculture Technical Paper No. 640. Rome, FAO. This is in agreement with the RCG MED & BS 2021 Recommendation 8.

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, the on-board observer protocol of bottom trawlers contains a check for rare specimens in the catch at opening of the codend. The observer is instructed to indicate in the relevant sampling form whether the codend was checked in a haul.

— In gill nets and hook-and-line fisheries: does the on-board observer protocol instruct the observer to indicate how much of the hauling process has been observed for (large) incidental bycatches that slip out of the net?

Yes, the on-board observer protocol for recording bycatch from gill nets and hook-and-line fisheries instruct the observer to indicate how much of the hauling process has been observed for incidental bycatches that slip out of the net.

— 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'?

There are no conveyor belts in Cyprus fishing vessels; observers are instructed to be present during the whole sorting process of the catch. Observers are instructed to indicate what percentage of the sorting or hauling process has been checked at "haul level".

Additional information on sampling schemes: No additions. Additional description on sampling frames No additions. *(One text box (max. 1 000 words) per region/RFMO/RFO/IO)*

Text Box 4.3: Fisheries impact on marine habitats

Region: Mediterranean and Black Sea

Study: Regional coordination on fish stomach contents collection and analysis in the Med&BS

General comment: This text box fulfils Article 5 paragraph 2(a) and 2(b), Article 6 paragraph 3(a), 3(b) and 3(c) of Regulation (EU) 2017/1004 and Chapter 2, section 4.2 of the EU MAP Delegated Decision annex. It contains information on additional studies on the fisheries impact on marine habitats.
Name of the study: Regional coordination on fish stomach contents collection and analysis in the Med&BS RWP Med&BS 2025-2027 No national specifics. *(max 250 words per study)*

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 implementation years 2025-2027

National specific aspects

1. Description of clustering

According to Data Collection Framework (DCF), the vessel length (in meters) in the Mediterranean Sea is categorized into the following groups: 0-6m, 6-12m, 12-18m, 18-24m, 24-40m and above 40m. Four main fishing technique categories are used in Cyprus, which are: vessels using passive gears only for vessels <12m (PG), vessels using polyvalent passive gears only (PGP), demersal trawlers (DTS) and a licence category that was introduced by law in 2009, which represents the segments Polyvalent "passive gears only" (category C licences) (PGO). Based on the Cyprus law the fishing activity is performed on a periodic basis. This new category cannot be integrated with the existing segments of Vessels using Polyvalent passive gears only' below 12m since the data of previous years would not be comparative and we would face problems of bias.

Polyvalent "passive gears only" (category C licenses) (PGO) has a total population of 415 vessels. In 0-<6m length group (PGO0006) there are 346 vessels, and 6-<12m length group (PGO0612) includes 69 vessels. For this fleet segmentation clustering is not necessary.

Similarly, for vessels using passive gears only <12m there is no need for clustering, since they are divided into two subcategories as follows: vessels using passive gears only 0-<6m (PG0006) which includes 25 vessels and vessels using passive gears only 6-<12m (PG0612) with 302 vessels.

Furthermore, our fleet includes 33 polyvalent vessels using passive gears over 12 m (PGP) in 12-<18m length class, 3 vessels in 18-<24m length class and 2 vessels in 24-<40m length class. Because of the small population of the two length groups and for sampling purposes and confidentiality reasons, all polyvalent vessels using passive gears over 12 m (PGP) are included in a single category, 12-<18m. Length groups 12-<18m, 18-<24m and 24-<40m are involved in inshore fishery activities and they also perform longer trips since they target swordfish, albacore and Bluefin tuna. Therefore 18-<24m and 24-<40m polyvalent vessels are similar to 12<-18m vessels. The cost structure of the clustered segments does not change much and the clustering will not create any problems of bias.

Due to the very small number of demersal trawlers (DTS) below 24m (2 vessels) they could be regrouped in the 24-<40m length group (3 vessels), since they are similar and to ensure the consistency of data from previous years. Both groups are engaged in the same metier and they target the same group of species with the same gear despite their vessels' length. Although, all lengths of demersal trawlers have been grouped, their total population (=6) has a low number. However, further clustering will not take place due to the fact that demersal trawlers can give different economic data from other fleets.

2. Description of activity indicator

No activity indicator is used. It is noted though that the fishing activity of vessels using polyvalent passive gears only (category C licences) is performed on a periodic basis since they are allowed to fish only a total of approximately 100 days each year, under a new national legislation. According to this law, they are allowed to fish only on Saturdays and Sundays during the months of February, March, April, September, October, November and December. While in the months of June, July and August they can fish on Saturdays, Sundays and Wednesdays. Also, most of the fish produced by this segment is kept for self-consumption. Consequently, their income from fisheries activities is too low. However, no activity indicator is used. Instead, This new category is not included in the normal economic activity fleet segments but it constructs different fleet segments: the segments Polyvalent "passive gears only" 0-<6m (category C licences) and Polyvalent "passive gears only" 6-<12m (category C licences).

The economic activity of the other segments is normal, since there are no restrictions on their fishing effort.

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

No deviations

(max. 900 words)

SECTION 6: ECONOMIC AND SOCIAL DATA IN AQUACULTURE

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

General comment: This text box fulfils Article 5(2)(e), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 6 of the EU MAP Delegated Decision annex. It is intended to specify data to be collected under Tables 10 and 11 of the EU MAP Delegated Decision annex.
1. Description of the threshold application Threshold is applied. No data collection. Based on the latest (2022) EU aquaculture production reported to the EUROSTAT, the Cyprus production is 0.7% of the total EU aquaculture production. 2. Deviation from the RCG ECON (ex. PGECON) definitions Not applicable *(max. 900 words)*

SECTION 7: ECONOMIC AND SOCIAL DATA IN FISH PROCESSING

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: SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: 2026
Short description (max 100 words): This sampling scheme aims the following: - Collection of data on PETS occurrences in catches from passive gears targeting demersal species in GSA25 - Collection of length samples and discards from catches at-sea for all species listed in Table 1 of the EU MAP Delegated Decision annex, caught with passive gears targeting demersal species in GSA25. - Record fishing activity of vessels (effort variables not collected under Control Regulation due to absence of logbook) and assignment of catches to the gear caught (when more than 1 gear is used at the same fishing trip) - Collection of samples for ageing, weight, sex and maturity for selected stocks (when allowed by fishermen)
Description of the population
Population targeted: All catches made by the Cyprus licensed fishing vessels operating with passive gears targeting demersal species in GSA25. The primary sampling unit (PSU) is vessel. **Population sampled:** The part of the target population that will be sampled concerns catches made by fishing vessels of at least 6m overall length. Vessels with length less than 6m are excluded; due to their limited space there will be difficulties for fishermen and observers to perform their work, and there will be safety risks during the fishing trip. Specifically, 296 vessels involved in this fishery will be included, while 28 vessels smaller than 6m and are excluded. **Stratification:** An area stratification is proposed, covering the 4 coastal districts of the island; Famagusta District on the eastern side, Larnaka District on the south-eastern, Limassol District south side and Paphos District on the western and north-western side. Sampling will be equally distributed to quarters. This stratification was applied also during 2023-2024 as a first step for evaluating the bycatch of the different categories of PETS in the different Districts during each quarter. Since the results from 2023-2024 are not available yet, the same stratification is proposed. Based on the results, modifications may be proposed in 2025 for 2026 (e.g. dedicated sampling effort in specific Districts and/or specific quarters for the different PETS categories).
Sampling design and protocols
Sampling design description: The target is to sample 144 trips during the year, which account for 36 trips per quarter. Considering the area stratification, 9 trips per quarter are planned for each of the 4 coastal districts. A list of vessels registered and/or being active in each of the four districts will be made at monthly level, for considering possible movements of vessels between districts. From each list, 3 vessels will be randomly

selected. A date for each vessel within the month will be also randomly selected; the trip closest to the selected date will be sampled.

During sampling, catches from all fishing operations will be observed and sampled, considering that it is a common practice to use more than one gear during the same trip. All individuals of all species will be sampled, except in the case of large quantities (e.g. of bogue and picarel), for which individuals may be sampled randomly. If agreed by the owner, individual fish of specific species will be collected for biological variables (age, weight, sex and maturity), through length-stratified sub-sampling whenever possible.

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

Regional coordination: The sampling design and protocol is not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Design follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Protocol follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
Records on random selection at district and monthly level will be kept. In case the selected vessels are not available for sampling, they can be replaced by the following vessel in the ranking. All modifications will be electronically recorded and traced.

Data capture

Means of data capture: The means used for collecting the data include a scale, a flexible measuring tape, a calliper and a measuring board. Observers will be instructed to take photos whenever considered useful, especially in the case of PETS occurrence. Data will be recorded in the relevant templates that will be prepared for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument and http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/5C667104B416A5A0C22586C500320E18?OpenDocument

Quality checks documentation: Y. Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: Regional Database for Med&BS – RDBFIS (https://medbsrdb.eu/). A permanent solution for the hosting of RDBFIS is pending. Relevant data are transmitted to GFCM - DCRF online platform ( ), to DGMARE/JRC and also to ICES (WGBYC) concerning PETS.

Quality checks and data validation documentation: Several quality check tools have been developed (RoME for MEDITS survey and the RDBQC R package for commercial data). The packages have also been integrated in RDBFIS.

Sample storage
Storage description: Otoliths extracted from samples collected for biological variables are stored as whole in Eppendorf tubes, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. All otoliths collected are kept stored. Each year around 300 otoliths by relevant species of GSA25 are collected from commercial fisheries. **Sample analysis:** For age reading the following manual is consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf . The relevant manual includes all demersal species for which otoliths are collected from GSA25 (*Boops boops*, *Mullus barbatus*, *M. surmuletus*, *Pagellus erythrinus* and *Spicara smaris*). For the two *Mullus* species, the report from ICES Workshop on Ageing Validation methodology (ICES.2017) is also considered. Reference: ICES.2017. Workshop on Ageing Validation methodology of *Mullus* species (WKVALMU), 15-19 May 2017, Conversano, Italy. ICES CM 2017/ SSGIEOM:31. 74pp.
Data processing
Evaluation of data accuracy (bias and precision): Y. Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU . Evaluation of precision of length and other biological variables is based on methods described under STREAM MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies". ( ) . **Editing and imputation methods: N** A manual has not been prepared yet. The estimation of the length composition of the catches is made using the analytical methods described in the ICES Workshop on Sampling and Calculation Methodology for Fisheries Data – WKSCMFD. Age distribution is calculated using the estimated length frequency distribution of landings and the age-length keys (ALKs), based on analytical methods. **Quality document associated to a dataset:** Y. Quality documents are produced when data quality check tools (RDBQC R package) are used. **Validation of the final dataset:** Based on Recommendations issued by RCG Med&BS, the available quality check tools (RoME for MEDITS survey and the RDBQC R package for commercial landings) should be used before the submission of data.

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*all species caught with OTB_DEF

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*all species caught with OTB_DEF
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Short description (max 100 words): This sampling scheme aims at collecting length samples and discards from catches at-sea for all species listed in Table 1 of the EU MAP Delegated Decision annex and also PETS species, that are caught with bottom trawler targeting demersal species in GSA25. This sampling scheme aims also at collecting samples for biological variables (age, weight, sex, maturity) for 5 demersal species, whenever possible.

It is noted that the fishery is open for around 7 months, since there is an annual closed period from 1 June until 7 November. Only 2 vessels are engaged in this fishery.

Description of the population

Population targeted: All catches made by the Cyprus licensed vessels operating with bottom trawl targeting demersal species in GSA25. The primary sampling unit (PSU) is vessel.

Population sampled: All part of the target population will be sampled.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description:

The target is to sample 7 trips, allocating 1 sampled trip to each month of fishing activity. The sampling allocation is defined as follows:

Considering that there are only two licensed vessels involved in this fishery, systematic sampling will be followed for selecting the vessel. Having in mind that fishing trips have an average duration of 2 fishing days and usually fishing trips are continuous, within each month a week will be randomly chosen for selecting the first convenient (based on vessel availability) trip to be sampled.

During the sampled trip all hauls having an odd number (1,3,5…) will be sampled; this fixed selection has been decided for avoiding convenience decisions from observers. For each sampled haul, simple random sampling will be performed for the selection of i. Boxes to be sampled by species and by commercial category, in the case there are more than one box, ii. Individual fish to be length-sampled by box and iv. Individual fish to be collected for biological variables (age, weight, sex and maturity), through length-stratified sub-sampling (if allowed by the captain).

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Design follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Protocol follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year: Considering that only two fishing vessels are involved in this fishery, it is easy to monitor sampling progress; however, in the case a vessel is not available for sampling, there is only one vessel left that is available.

In the case vessel owners will refuse to receive observers on-board, efforts will be made by DFMR for resolving such problem. A mitigation measure to be considered is the collection of discard samples by the crew, accompanied with photos, to be delivered to observers on-shore.

Data capture

Means of data capture: The means used for collecting the data include a scale, a flexible measuring tape, a calliper and a measuring board. Observers are also instructed to take photos, especially in the case of PETS occurrence. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument and http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/5C667104B416A5A0C22586C500320E18?OpenDocument

Quality checks documentation: Y.
Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: Regional Database for Med&BS – RDBFIS (https://medbsrdb.eu/). A permanent solution for the hosting of RDBFIS is pending. Relevant data are transmitted to GFCM - DCRF online platform (https://www.fao.org/gfcm/data/dcrf/platform), to DGMARE/JRC and also to ICES (WGBYC) concerning PETS.

Quality checks and data validation documentation: Several quality check tools have been developed (RoME for MEDITS survey and the RDBQC R package for commercial data). The packages have also been integrated in RDBFIS.

Sample storage

Storage description: Otoliths extracted from samples collected for biological variables are stored as whole in Eppendorf tubes, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. All otoliths collected are kept stored. Each year around 300 otoliths by relevant species of GSA25 are planned to be collected from commercial fisheries.
Sample analysis: For age reading the following manual is consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf . The relevant manual includes all demersal species for which otoliths are collected from GSA25 (*Boops boops*, *Mullus barbatus*, *M. surmuletus*, *Pagellus erythrinus* and *Spicara smaris*). For the two *Mullus* species, the report from ICES Workshop on Ageing Validation methodology (ICES.2017) is also considered.

Reference:
ICES.2017. Workshop on Ageing Validation methodology of Mullus species (WKVALMU), 15-19 May 2017, Conversano, Italy. ICES CM 2017/ SSGIEOM:31. 74pp.

Data processing

Evaluation of data accuracy (bias and precision): Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU.
http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf.

Evaluation of precision of length and other biological variables is based on methods described under STREAM MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies".
(https://dcf.ec.europa.eu/regional-coordination/regional-grants_en)**.**

Editing and imputation methods: A manual has not been prepared yet.
The estimation of the length composition of the catches is made using the analytical methods described in the ICES Workshop on Sampling and Calculation Methodology for Fisheries Data – WKSCMFD. Age distribution is calculated using the estimated length frequency distribution of landings and the age-length keys (ALKs), based on analytical methods.

Quality document associated to a dataset: Quality documents are produced when data quality check tools (RDBQC R package) are used.

Validation of the final dataset: Based on Recommendations issued by RCG Med&BS, the available quality

check tools (RoME for MEDITS survey and the RDBQC R package for commercial landings) should be used before the submission of data.

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with OTB_DEF

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with OTB_DEF

Sampling scheme type: Commercial fishing trip

Observation type: SciObsOnShore

Time period of validity: from 2025 until 2027

Short description (max 100 words):
This sampling scheme aims at collecting length samples from landings for all commercial species listed in Table 1 of the EU MAP Delegated Decision annex, that are caught with bottom trawler targeting demersal species in GSA25.
This sampling scheme aims also at collecting samples for biological variables (age, weight, sex, maturity) for 5 demersal species, whenever possible.

It is noted that the fishery is open for around 7 months, since there is an annual closed period from 1 June until 7 November. Only 2 vessels are engaged in this fishery.

Description of the population

Population targeted: All catches made by the Cyprus licensed vessels operating with bottom trawl targeting demersal species in GSA25. The primary sampling unit (PSU) is vessel.

Population sampled: All part of the target population will be sampled.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description:

The target is to sample 7 trips, allocating 1 sampled trip to each month of fishing activity. The sampling allocation is defined as follows:
Considering that there are only two licensed vessels involved in this fishery and that systematic sampling will be applied for on-board sampling, vessels will be sampled on-shore systematically. The first vessel to be sampled on-shore will be the vessel that has not been selected first for onboard sampling.
Within each month a week will be randomly chosen for selecting the first convenient (based on vessel availability) trip to be sampled.

During the sampled trip simple random sampling will be performed for the selection of i. Boxes to be sampled (by species by commercial category), ii. Individual fish to be length-sampled by box and iv. Individual fish to be collected for biological variables (age, weight, sex and maturity), through length-stratified sub-sampling (if allowed by the owner).

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Design follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Protocol follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
Considering that only two fishing vessels are involved in this fishery, it is easy to monitor sampling progress. Since both vessels perform continuous fishing trips with average duration 2 days, no problems are expected to perform the planned sampling scheme.

Data capture

Means of data capture:
The means used for collecting the data include a scale, a flexible measuring tape, a calliper and a measuring board. Observers are also instructed to take photos, whenever considered useful. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument
and
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/5C667104B416A5A0C22586C500320E18?OpenDocument

Quality checks documentation: Y
Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: Regional Database for Med&BS – RDBFIS (https://medbsrdb.eu/). A permanent solution for the hosting of RDBFIS is pending. Relevant data are transmitted to GFCM - DCRF online platform (https://www.fao.org/gfcm/data/dcrf/platform), to DGMARE/JRC and also to ICES (WGBYC) concerning PETS.

Quality checks and data validation documentation: Several quality check tools have been developed (RoME for MEDITS survey and the RDBQC R package for commercial data). The packages have also been integrated in RDBFIS.

Sample storage

Storage description: Otoliths extracted from samples collected for biological variables are stored as whole in Eppendorf tubes, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. All otoliths collected are kept stored. Each year around 300 otoliths by relevant species of GSA25 are planned to be collected from commercial fisheries.
Sample analysis:
For age reading the following manual is consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf . The relevant manual includes all demersal species for which otoliths are collected from GSA25 (*Boops boops*, *Mullus barbatus*, *M. surmuletus*, *Pagellus erythrinus* and *Spicara smaris*). For the two *Mullus* species, the report from ICES Workshop on Ageing Validation methodology (ICES.2017) is also considered.

Reference:
ICES.2017. Workshop on Ageing Validation methodology of *Mullus* species (WKVALMU), 15-19 May 2017, Conversano, Italy. ICES CM 2017/ SSGIEOM:31. 74pp.

Data processing
Evaluation of data accuracy (bias and precision): Y Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf. Evaluation of precision of length and other biological variables is based on methods described under STREAM MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies". (https://dcf.ec.europa.eu/regional-coordination/regional-grants_en) . **Editing and imputation methods: N** A manual has not been prepared yet. The estimation of the length composition of the catches is made using the analytical methods described in the ICES Workshop on Sampling and Calculation Methodology for Fisheries Data – WKSCMFD. Age distribution is calculated using the estimated length frequency distribution of landings and the age-length keys (ALKs), based on analytical methods. Cyprus awaits for the development of estimation routines for the RDBES on stock variables, which will be followed. **Quality document associated to a dataset:** .Quality documents are produced when data quality check tools (RDBQC R package) are used. **Validation of the final dataset:** Based on Recommendations issued by RCG Med&BS, the available quality check tools (RoME for MEDITS survey and the RDBQC R package for commercial landings) should be used before the submission of data.

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*all species caught with PG_DEF

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*all species caught with PG_DEF
Sampling scheme type: Commercial fishing trip
Observation type: SciObsOnShore
Time period of validity: from 2025 until 2027
Short description (max 100 words): This sampling scheme aims the following: - Collection of length samples from landings for all commercial species listed in Table 1 of the EU MAP Delegated Decision annex, caught with passive gears targeting demersal species in GSA25. - Estimation of discards and PETS occurrence based on questionnaires - Record fishing activity of vessels (effort variables not collected under Control Regulation due to absence of logbook) and assignment of landings to each gear - Collection of samples for ageing, weight, sex and maturity for stocks selected (when allowed by fishermen / fishmongers)
Description of the population
Population targeted: All catches made by the Cyprus licensed vessels operating with passive gears targeting demersal species in GSA25. The primary sampling unit (PSU) is landing site. **Population sampled:** The part of the target population that will be sampled concerns 15 landing sites. Sampling will be performed during weekdays and during the day (early morning until midday). Possibility of performing sampling also during weekends and night is being evaluated. All landing sites are included in the sampling, except 1-2 sites that are used seasonally by 2-3 fishermen. **Stratification:** No stratification is planned.

Sampling design and protocols

Sampling design description: The target is to sample landing sites a minimum of 180 times during the whole year, which is an average of 4 landing sites (PSUs) per week (considering a minimum of 45 weeks per year). The sampling allocation is defined as follows:
All sampling sites are listed and are randomly ranked every two weeks. The list contains 12 landing sites, with combination of sites of very close proximity that may be sampled during the same day. The first 4 ranked landing sites are assigned to the first week, and the following 4 are assigned to the second week. A possible alternative landing site for each week is also selected based on the following 2 sites in the ranking, in the case it is not possible to perform the selected PSUs.

Following the selection of landings sites, a random sampling of the week days for each week is performed; at the moment the 5 week days are included in the random sampling; the first 4 ranked days are paired with the first 4 ranked landing sites, and the last day is paired with the alternative landing site.

During sampling, the aim is to sample all vessels encountered; in the case this is not possible due to simultaneous landing, a selection is made based on GFCM DCRF species priority list and species sample coverage; records of fishing activity are made on all vessels encountered, with indication whether length sampling was carried out, and for which species. During each sampled trip, individual fish per relevant species are randomly selected to be measured; in many cases due to low quantities all individuals are measured. If agreed by the owner / related fishmonger, individual fish of specific species are collected for biological variables (age, weight, sex and maturity), through length-stratified sub-sampling whenever possible.

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Design follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf)

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument

Protocol follows international recommendations: Y (https://www.fao.org/gfcm/data/dcrf).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year: For each PSU, records are made for all vessels encountered, as well as on all information collected by each vessel. In general, due to very good communication with fishermen, observers have access to the landings of all vessels encountered during sampling. PSUs with no fishing activity are also recorded.

The selection of a possible alternative PSU allows the replacement of a selected PSU if needed (e.g. due to bad weather or technical problem). All modifications are electronically recorded and can be traced.

Data capture

Means of data capture:
The means used for collecting the data include a scale, a flexible measuring tape, a calliper and a measuring board. Observers are also instructed to take photos, whenever considered useful. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument
and
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/5C667104B416A5A0C22586C500320E18?OpenDocument

Quality checks documentation: Y
Quality checks on data capture are made based on potential sources of bias, which have been identified by

consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: Regional Database for Med&BS – RDBFIS (https://medbsrdb.eu/). A permanent solution for the hosting of RDBFIS is pending. Relevant data are transmitted to GFCM - DCRF online platform (https://www.fao.org/gfcm/data/dcrf/platform), to DGMARE/JRC and also to ICES (WGBYC) concerning PETS.

Quality checks and data validation documentation: Several quality check tools have been developed (RoME for MEDITS survey and the RDBQC R package for commercial data). The packages have also been integrated in RDBFIS.

Sample storage

Storage description: Otoliths extracted from samples collected for biological variables are stored as whole in Eppendorf tubes, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. All otoliths collected are kept stored. Each year around 300 otoliths by relevant species of GSA25 are planned to be collected from commercial fisheries.
Sample analysis:
For age reading the following manual is consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf . The relevant manual includes all demersal species for which otoliths are collected from GSA25 (*Boops boops*, *Mullus barbatus*, *M. surmuletus*, *Pagellus erythrinus* and *Spicara smaris*). For the two *Mullus* species, the report from ICES Workshop on Ageing Validation methodology (ICES.2017) is also considered.

Reference:
ICES.2017. Workshop on Ageing Validation methodology of *Mullus* species (WKVALMU), 15-19 May 2017, Conversano, Italy. ICES CM 2017/ SSGIEOM:31. 74pp.

Data processing

Evaluation of data accuracy (bias and precision): Y
Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU .

Evaluation of precision of length and other biological variables is based on methods described under STREAM MARE/2016/22 STREAM project Deliverable 3.3 “Upgrade the methodological framework and tools for sampling optimization, implement and report case studies”.
( ) .

Editing and imputation methods: N

A manual has not been prepared yet.
The estimation of the length composition of the catches is made using the analytical methods described in the ICES Workshop on Sampling and Calculation Methodology for Fisheries Data – WKSCMFD. Age distribution is calculated using the estimated length frequency distribution of landings and the age-length keys (ALKs), based on analytical methods.
Cyprus awaits for the development of estimation routines for the RDBES on stock variables, which will be followed.

Quality document associated to a dataset: . Quality documents are produced when data quality check tools (RDBQC R package) are used.

Validation of the final dataset: Based on Recommendations issued by RCG Med&BS, the available quality check tools (RoME for MEDITS survey and the RDBQC R package for commercial landings) should be used before the submission of data.

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*all species caught with PG_DEF

Sampling scheme type: Commercial fishing trip

Observation type: SciObsAtSea

Time period of validity: 2027

Short description (max 100 words):

This sampling scheme aims the following:

- Collection of data on PETS occurrences in catches from passive gears targeting demersal species in GSA25
- Collection of length samples and discards from catches at-sea for all species listed in Table 1 of the EU MAP Delegated Decision annex, caught with passive gears targeting demersal species in GSA25.
- Record fishing activity of vessels (effort variables not collected under Control Regulation due to absence of logbook) and assignment of catches to the gear caught (when more than 1 gear is used at the same fishing trip)
- Collection of samples for ageing, weight, sex and maturity for selected stocks (when allowed by fishermen)

Description of the population

Population targeted: All catches made by the Cyprus licensed fishing vessels operating with passive gears targeting demersal species in GSA25. The primary sampling unit (PSU) is vessel.

Population sampled: The part of the target population that will be sampled concerns catches made by fishing vessels of at least 6m overall length. Vessels with length less than 6m are excluded; due to their limited space there will be difficulties for fishermen and observers to perform their work, and there will be safety risks during the fishing trip. Specifically, 296 vessels involved in this fishery will be included, while 28 vessels smaller than 6m and are excluded.

Stratification: An area stratification is proposed, covering the 4 coastal districts of the island; Famagusta District on the eastern side, Larnaka District on the south-eastern, Limassol District south side and Paphos District on the western and north-western side. Sampling will be equally distributed to quarters. This stratification was applied also during 2023-2024 as a first step for evaluating the bycatch of the different categories of PETS in the different Districts during each quarter. Since the results from 2023-2024 are not available yet, the same stratification is proposed. Based on the results, modifications may be proposed in 2025 for 2026 (e.g. dedicated sampling effort in specific Districts and/or specific quarters for the different PETS categories).

Sampling design and protocols

Sampling design description: The target is to sample 144 trips during the year, which account for 36 trips per quarter. Considering the area stratification, 9 trips per quarter are planned for each of the 4 coastal districts.

A list of vessels registered and/or being active in each of the four districts will be made at monthly level, for considering possible movements of vessels between districts. From each list, 3 vessels will be randomly selected. A date for each vessel within the month will be also randomly selected; the trip closest to the selected date will be sampled.

During sampling, catches from all fishing operations will be observed and sampled, considering that it is a common practice to use more than one gear during the same trip. All individuals of all species will be sampled, except in the case of large quantities (e.g. of bogue and picarel), for which individuals may be sampled randomly. If agreed by the owner, individual fish of specific species will be collected for biological variables

(age, weight, sex and maturity), through length-stratified sub-sampling whenever possible.

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

Regional coordination: The sampling design and protocol is not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at

Design follows international recommendations: Y ( )

Link to sampling protocol documentation: The documentation is available at

Protocol follows international recommendations: Y ( ).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
Records on random selection at district and monthly level will be kept. In case the selected vessels are not available for sampling, they can be replaced by the following vessel in the ranking. All modifications will be electronically recorded and traced.

Data capture

Means of data capture: The means used for collecting the data include a scale, a flexible measuring tape, a calliper and a measuring board. Observers will be instructed to take photos whenever considered useful, especially in the case of PETS occurrence. Data will be recorded in the relevant templates that will be prepared for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link:
and

Quality checks documentation: Y. Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accuracy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: Regional Database for Med&BS – RDBFIS (https://medbsrdb.eu/). A permanent solution for the hosting of RDBFIS is pending. Relevant data are transmitted to GFCM - DCRF online platform (https://www.fao.org/gfcm/data/dcrf/platform), to DGMARE/JRC and also to ICES (WGBYC) concerning PETS.

Quality checks and data validation documentation: Several quality check tools have been developed (RoME for MEDITS survey and the RDBQC R package for commercial data). The packages have also been integrated in RDBFIS.

Sample storage

Storage description: Otoliths extracted from samples collected for biological variables are stored as whole in Eppendorf tubes, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. All otoliths collected are kept stored. Each year around 300 otoliths by relevant species of GSA25 are collected from commercial fisheries.

Sample analysis: For age reading the following manual is consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf . The relevant manual includes all demersal species for which otoliths are collected from GSA25 (*Boops boops*, *Mullus barbatus*, *M. surmuletus*, *Pagellus erythrinus* and *Spicara smaris*). For the two *Mullus* species, the report from ICES Workshop on Ageing Validation methodology (ICES.2017) is also considered.

Reference:
ICES.2017. Workshop on Ageing Validation methodology of *Mullus* species (WKVALMU), 15-19 May 2017, Conversano, Italy. ICES CM 2017/ SSGIEOM:31. 74pp.

Data processing

Evaluation of data accuracy (bias and precision): Y. Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf.

Evaluation of precision of length and other biological variables is based on methods described under STREAM MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies".
(https://dcf.ec.europa.eu/regional-coordination/regional-grants_en) .

Editing and imputation methods: N

A manual has not been prepared yet.
The estimation of the length composition of the catches is made using the analytical methods described in the ICES Workshop on Sampling and Calculation Methodology for Fisheries Data – WKSCMFD. Age distribution is calculated using the estimated length frequency distribution of landings and the age-length keys (ALKs), based on analytical methods.

Quality document associated to a dataset: Y. Quality documents are produced when data quality check tools (RDBQC R package) are used.

Validation of the final dataset: Based on Recommendations issued by RCG Med&BS, the available quality check tools (RoME for MEDITS survey and the RDBQC R package for commercial landings) should be used before the submission of data.

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*All species caught with LLD_SWO

Sampling scheme type: Commercial fishing trip

Observation type: SciObsAtSea

Time period of validity: from 2025 until 2027

Short description (max 100 words): This sampling scheme aims at collecting length samples and discards from catches at-sea for all species listed in Table 1 of the EU MAP Delegated Decision annex and also PETS species, that are caught with surface longlines targeting swordfish. This sampling scheme aims also at collecting biological variables (weight, sex, maturity) from swordfish, albacore and bluefin tuna when they are gutted at sea.

It is noted that the fishery is closed from 1 January – 31 March, and during summer months the activity is limited, since the vessels are engaged in the albacore fishery. Around 12 vessels are involved in this fishery.

Description of the population

Population targeted: All catches made by the Cyprus licensed vessels operating with drifting longlines targeting swordfish. The primary sampling unit (PSU) is vessel.

Population sampled: Scientific on-board observation will cover catches of Cyprus vessels operating with drifting longlines targeting swordfish, which have minimum length 15m and land in Cyprus. It is noted that from 2022 all vessels targeting swordfish will be landing in Cyprus. Vessels with length less than 15m are excluded; due to their limited space there are difficulties in accommodating observers and there are also safety risks during fishing operation practices.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description:
The target event is 4 sampled trips. The sampling allocation is defined as follows:
A list of vessels with a minimum length of 15m that are engaged in swordfish fishery is made, based on their fishing license and previous fishing activity from ERS records; this list contains around 10 vessels. Vessels from this list are randomly ranked, and the first 4 are selected. Months of swordfish fishing activity are also listed based on previous fishing activity from ERS records, and randomly ranked; the first 4 months are selected. Pairs of vessels – months are made based on the ranking (e.g. first vessel selected is paired with first month selected). For each combination of vessel – month selected, a further random selection is made for selecting the fortnight; the first convenient (based on vessel availability) trip to sample within the fortnight is sampled.

During the sampled trip all hauls will be sampled, in which all individuals will be recorded and sampled.

In previous WPs, trips were selected by randomly selecting dates; following communication with the relevant vessel owners, the trips closest to the selected dates were sampled. It has been proved in practice that it is difficult to follow such sampling design, because usually vessels arrive at ports soon after the fishing trip is finished, and may start a new fishing trip at the same day. Also, a small number of vessels is involved in this fishery, and each one may use a different landing site. Furthermore, we consider that when the vessel is not defined, there is a risk of introducing bias from observer convenience. It has been proved that it is easier to follow a sampling design when vessels are selected first, allowing the observes to communicate better with the owners / captains and to have adequate time for arranging for the trips to be sampled.

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Design follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html)

. **Link to sampling protocol documentation:** The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Protocol follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year: As mentioned before, vessels engaged in swordfish fishery are listed and randomly selected; in the case a selected vessel is not active during the period it was selected, then it is replaced by the first vessel in the ranking that has not been selected for sampling. Results from random selection are recorded, as well as the adjustments made, if any. It is noted that the Data Collection Team has real time access to the ERS and VMS system, and good communication with fishing vessel owners/captains; the information on fishing activity is always available, for making adjustments.

Data capture

Means of data capture: The means used for collecting the data include a scale with range from 1g to 300 kg, a flexible measuring tape, and a measuring board tape. Observers are also instructed to take photos, especially in the case of PETS occurrence. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument.

Quality checks documentation: Y
Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Reference:
ICES. 2009. Report of the Workshop on Methods to Evaluate and Estimate the Accu-racy of Fisheries Data used for Assessment (WKACCU), 27–30 October 2008, Bergen, Norway. ICES CM 2008\ACOM:32. 41 pp.

Data storage

National database: Procedures have initiated for the development of a new database.

International database: ICCAT statistical databases, available at https://www.iccat.int/en/accesingdb.html)

Quality checks and data validation documentation: N.
It is expected that with the future use of a regional database for RCG LP data, quality check tools and data validation documentation will be developed/ adjusted from existing ones.

Sample storage

Storage description: No sample storage is done from this sampling scheme.
Sample analysis: No sample storage and relevant analysis is done from this sampling scheme, all biological data are collected on-board.

Data processing

Evaluation of data accuracy (bias and precision): Y
Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU
http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf .

Evaluation of precision of length is based on methods described under MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies" (https://dcf.ec.europa.eu/regional-coordination/regional-grants_en) .

Editing and imputation methods: Y

https://iccat.int/Documents/SCRS/Manual/CH4/CH4-ENG.pdf

Quality document associated to a dataset: N.

Validation of the final dataset: Under MARE/2016/22 RECOLAPE WP5, data-quality assessment procedures have been developed at national and regional level, which will be consulted before providing data to end-user (ICCAT). Furthermore, the statistical forms used for providing data to ICCAT include codes, instructions and drop-down lists of codes, for facilitating the provision of data using the correct format.

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_SWO

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_SWO

Sampling scheme type: Commercial fishing trip

Observation type: SciObsOnShore

Time period of validity: from 2025 until 2027

Short description (max 100 words): This sampling scheme aims at collecting length samples from landings from all commercial species listed in Table 1 of the EU MAP Delegated Decision annex, that are caught with surface longlines targeting swordfish. The sampling scheme aims also at collecting weight from swordfish, albacore and bluefin tuna, recording the relevant presentation of the individuals.

It is noted that the fishery is closed from 1 January – 31 March, and during summer months the activity is limited, since the vessels are engaged in the albacore fishery. Around 12 vessels are involved in this fishery.

Description of the population

Population targeted: All landings made by the Cyprus licensed vessels operating with drifting longlines targeting swordfish. The primary sampling unit (PSU) is vessel.

Population sampled: Scientific observation on shore will cover all catches of Cyprus vessels operating with drifting longlines targeting swordfish and landing in Cyprus. It is noted that from 2022 all vessels targeting swordfish will be landing in Cyprus.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description: The target is 6 sampled trips (1 for every month of fishing activity of this fishery). The sampling allocation is defined as follows:
A list of vessels that are engaged in swordfish fishery is made, based on their fishing license and previous fishing activity from ERS records; a vessel from this list is randomly selected with replacement every month the fishery is active (1 vessel selected per month). For selecting the sampled trip, for each month a random selection is made on the fortnight; the first convenient trip (based on vessel availability) within the selected fortnight is sampled.

During the sampled trip all individuals will be recorded and sampled.

In previous WPs, trips were selected by randomly selecting dates; following communication with the relevant vessel owners, the trips closest to the selected dates were sampled. It has been proved in practice that it is difficult to follow such sampling design, because usually vessels arrive at ports soon after the fishing trip is finished, and may start a new fishing trip at the same day. Also, a small number of vessels is involved in this fishery, and each one may land in a different landing site. Furthermore, we consider that when the vessel is not defined, there is a risk of introducing bias from observer convenience. It has been proved that it is easier to follow a sampling design when vessels are selected first, allowing the observes to communicate better with the owners / captains and to have adequate time for arranging for the trips to be sampled.

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Design follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Protocol follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
As mentioned before, vessels engaged in swordfish fishery are listed and randomly selected; in the case a selected vessel is not active during the period it was selected, then it is replaced by the first vessel in the ranking that has not been selected for sampling. Results from random selection are recorded, as well as the adjustments made, if any. It is noted that the Data Collection Team has real time access to the ERS and VMS system, and the information on fishing activity is always available, for making adjustments.

Data capture

Means of data capture: The means used for collecting the data include a scale with range from 1g to 300 kg, a flexible measuring tape, and a measuring board tape. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument

Quality checks documentation: Y
Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Data storage

National database: Procedures have initiated for the development of a new database.

International database: ICCAT statistical databases, available at https://www.iccat.int/en/accesingdb.html)

Quality checks and data validation documentation: N.
It is expected that with the future use of a regional database for RCG LP data, quality check tools and data validation documentation will be developed/ adjusted from existing ones.

Sample storage

Storage description: No sample storage is done from this sampling scheme.
Sample analysis: No sample storage and relevant analysis is done from this sampling scheme, all biological data are collected on-board.

Data processing

Evaluation of data accuracy (bias and precision): Y
Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU
http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf .

Evaluation of precision of length is based on methods described under MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies" (https://dcf.ec.europa.eu/regional-coordination/regional-grants_en).

Editing and imputation methods: Y
https://iccat.int/Documents/SCRS/Manual/CH4/CH4-ENG.pdf

Quality document associated to a dataset: N.

Validation of the final dataset: Under MARE/2016/22 RECOLAPE WP5, data-quality assessment procedures have been developed at national and regional level, which will be consulted before providing data to end-user (ICCAT). Furthermore, the statistical forms used for providing data to ICCAT include codes, instructions and drop-down lists of codes, for facilitating the provision of data using the correct format.

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*All species caught with LLD_ALB

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsAtSea*Commercial fishing trip*All species caught with LLD_ALB

Sampling scheme type: Commercial fishing trip

Observation type: SciObsAtSea

Time period of validity: from 2025 until 2027

Short description (max 100 words):
This sampling scheme aims at collecting length samples and discards from catches at-sea for all species listed in Table 1 of the EU MAP Delegated Decision annex, and also PETS species that are caught with surface longlines targeting albacore. This sampling scheme aims also at collecting biological variables (weight, sex, maturity) from swordfish, albacore and bluefin tuna when they are gutted at sea.
It is noted that the fishery is seasonal, with a period from June to August and main activity in July and engages around 32 vessels.

Description of the population

Population targeted: All catches made by the Cyprus licensed vessels operating with drifting longlines targeting albacore. The primary sampling unit (PSU) is vessel x trip.

Population sampled: Scientific on-board observation will cover catches of Cyprus vessels that land in Cyprus and have a minimum length of 15m. It is noted that all vessels targeting albacore land their catch in Cyprus. Vessels with length less than 15m are excluded; due to their limited space there are difficulties in accommodating observers and there are also safety risks during fishing operation practices.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description:

The target event is 7 trips. The sampling allocation is defined as follows:
A list of vessels with a minimum length of 15m that are engaged in albacore fishery is made, based on their fishing license and previous fishing activity from ERS records; this list usually contains around 13 vessels. A single random draw is performed from the relevant list, for selecting the first 7 vessels that will be sampled. In order to determine the dates for each vessel x trip, a second draw is performed for randomly selecting and assigning the sampled trip.

In previous WPs, trips were selected by randomly selecting dates; following communication with the relevant vessel owners, the trips closest to the selected dates were sampled. It has been proved in practice that it is difficult to follow such sampling design, because usually vessels arrive at ports soon after the fishing trip is finished, and may start a new fishing trip at the same day. Furthermore, we consider that when the vessel is not defined, there is a risk of introducing bias from observer convenience. It has been proved that it is easier to follow a sampling design when vessels are selected first, allowing the observes to communicate better with the owners / captains and to have adequate time for arranging for the trips to be sampled.

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Design follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Protocol follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
As mentioned before, vessels engaged in albacore fishery are listed and randomly selected; in the case a selected vessel is not active, then it is replaced by the first vessel in the ranking that has not been selected for sampling. Results from random selection are recorded, as well as the adjustments made, if any. It is noted that the Data Collection Team has real time access to the ERS and VMS system, and good communication with fishing vessel owners/captains; the information on fishing activity is always available, for making adjustments.

Data capture

Means of data capture:
The means used for collecting the data include a scale with range from 1g to 300 kg, a flexible measuring tape, and a measuring board tape. Observers are also instructed to take photos, especially in the case of PETS occurrence. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument.

Quality checks documentation: Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Data storage

National database: Procedures have initiated for the development of a new database.

International database: ICCAT statistical databases, available at https://www.iccat.int/en/accesingdb.html)

Quality checks and data validation documentation: N.
It is expected that with the future use of a regional database for RCG LP data, quality check tools and data validation documentation will be developed/ adjusted from existing ones.

Sample storage

Storage description: Sample storage concerns age structures collected for *Thunnus alalunga*, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. The number collected is small, considering that based on Large Pelagic user needs received, the required age data are: T (20/1000t) on a triennial basis.
Sample analysis:

The ICCAT manual includes information on sampling, preparation and reading of age structures of large pelagic (https://www.iccat.int/Documents/SCRS/Manual/CH4/CH4_9-ENG.pdf).

The following manual is also consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf. The relevant manual includes information on preparation of age structures and age estimation of *T. alalunga*.

Data processing

Evaluation of data accuracy (bias and precision): *Y*
Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU
http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf .

Evaluation of precision of length is based on methods described under MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies" (https://dcf.ec.europa.eu/regional-coordination/regional-grants_en).

Editing and imputation methods: Y

https://iccat.int/Documents/SCRS/Manual/CH4/CH4-ENG.pdf

Quality document associated to a dataset: N.

Validation of the final dataset: Under MARE/2016/22 RECOLAPE WP5, data-quality assessment procedures have been developed at national and regional level, which will be consulted before providing data to end-user (ICCAT). Furthermore, the statistical forms used for providing data to ICCAT include codes, instructions and drop-down lists of codes, for facilitating the provision of data using the correct format.

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_ALB

MS : CYP

Region: Mediterranean and Black Sea

Sampling scheme identifier: SciObsOnShore*Commercial fishing trip*list of commercial species caught with LLD_ALB

Sampling scheme type: Commercial fishing trip

Observation type: SciObsOnShore

Time period of validity: from 2022 until 2024

Short description (max 100 words):
Sampling scheme aiming at collecting length samples from landings from all commercial species listed in Table 1 of the EU MAP Delegated Decision annex that are caught with surface longlines targeting albacore. This sampling scheme aims also at collecting weight from swordfish, albacore and bluefin tuna, recording the relevant presentation of the individuals.

The fishery is seasonal, with a period from June to August and engages around 32 vessels.

Description of the population

Population targeted: All landings made by the Cyprus licensed vessels operating with drifting longlines targeting albacore. The primary sampling unit (PSU) is vessel.

Population sampled: Scientific observation on shore will cover landings of Cyprus vessels that land in Cyprus. It is noted that all vessels targeting albacore land their catch in Cyprus.

Stratification: No stratification is planned.

Sampling design and protocols

Sampling design description: The target event is 12 trips, with 4 sampled trips per month of fishing activity (June, July, August), and more specifically 2 sampled trips per fortnight. The sampling allocation is defined as follows:

A list of vessels engaged in albacore fishery is made, based on their fishing license and previous fishing activity from ERS records. A random selection is performed each month to determine the 4 vessels for which dedicated landing events will be sampled. An additional draw is made for each fortnight, for selecting 2 dates for each fortnight. As a fixed design, the first vessel to be drawn will be linked with the sampling of the first landing event of that month. Each subsequent selected vessel will be matched with the next landing event.

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

Regional coordination: The sampling design and protocol was not developed as part of a regional or multi-lateral agreement.

Link to sampling design documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument.

Design follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html)

Link to sampling protocol documentation: The documentation is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/A22B9A733AB6CF3242258330002187A3?OpenDocument,

and
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/5C667104B416A5A0C22586C500320E18?OpenDocument

Protocol follows international recommendations: Y (https://www.iccat.int/en/iccatmanual.html).

Sampling implementation

Recording of refusal rate: Y.

Monitoring of sampling progress within the sampling year:
As mentioned before, vessels engaged in albacore fishery are listed and randomly selected; in the case a selected vessel is not active during the period it was selected (this may happen at the beginning and at the end of the season), then it is replaced by the first vessel in the ranking that has not been selected for sampling. Results from random selection are recorded, as well as the adjustments made, if any. It is noted that the Data Collection Team has real time access to the ERS and VMS system, and good communication with fishing vessel owners/captains; the information on fishing activity is always available, for making adjustments.

Data capture

Means of data capture:
The means used for collecting the data include a scale with range from 1g to 300 kg, a flexible measuring tape, and a measuring board tape. Observers are also instructed to take photos, especially in the case of PETS occurrence. Data are recorded in the relevant templates available for this sampling scheme.

Data capture documentation: Data capture documentation is available at the following link: http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58?OpenDocument.

Quality checks documentation: Quality checks on data capture are made based on potential sources of bias, which have been identified by consulting WKACCU Report (ICES. 2009), available in http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf).

Data storage

National database: Procedures have initiated for the development of a new database.

International database: ICCAT statistical databases, available at https://www.iccat.int/en/accesingdb.html)

Quality checks and data validation documentation: N.
It is expected that with the future use of a regional database for RCG LP data, quality check tools and data validation documentation will be developed/ adjusted from existing ones.

Sample storage

Storage description:
Sample storage concerns age structures collected for Thunnus alalunga, which are stored in the DFMR Headquarters in spaces used by the Data Collection Team. The number collected is small, considering that based on Large Pelagic user needs received, the required age data are: T (20/1000t) on a triennial basis.
Sample analysis:
The ICCAT manual includes information on sampling, preparation and reading of age structures of large pelagic (https://www.iccat.int/Documents/SCRS/Manual/CH4/CH4_9-ENG.pdf).
The following manual is also consulted: Carbonara, P., Follesa, M.C., eds. 2019. Handbook on fish age determination: a Mediterranean experience. Studies and Reviews. No. 98. Rome, FAO. 2019. 192 pp. https://www.fao.org/3/ca2745en/CA2745EN.pdf. The relevant manual includes information on preparation of age structures and age estimation of T. alalunga.

Data processing

Evaluation of data accuracy (bias and precision): *Y*
Evaluation of bias in data processing is made based on the scorecard for bias detection, developed under ICES WKACCU
http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2008/WKACCU/wkaccu_2008.pdf .

Evaluation of precision of length is based on methods described under MARE/2016/22 STREAM project Deliverable 3.3 "Upgrade the methodological framework and tools for sampling optimization, implement and report case studies" (https://dcf.ec.europa.eu/regional-coordination/regional-grants_en).

Editing and imputation methods: Y
https://iccat.int/Documents/SCRS/Manual/CH4/CH4-ENG.pdf

Quality document associated to a dataset: N.

Validation of the final dataset: Under MARE/2016/22 RECOLAPE WP5, data-quality assessment procedures have been developed at national and regional level, which will be consulted before providing data to end-user (ICCAT). Furthermore, the statistical forms used for providing data to ICCAT include codes, instructions and drop-down lists of codes, for facilitating the provision of data using the correct format.

Sampling scheme identifier: Market Samples

MS: CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: Market Samples
Sampling scheme type: Commercial fishing trip
Observation type: SciObsOnShore
Time period of validity: from 2025 until 2027
Short description (max 100 words): This sampling scheme identifier is related with the bilateral agreement between Cyprus and Malta, based on which "the Cyprus trawlers involved in a shared métier with Malta and landing their catch in Maltese ports will be included in the sampling scheme organized by Malta for the collection of biological data". There is only one trawler from Cyprus operating in GSA15, which was active in 2021-2022. The sampling scheme organized by Malta concerns the collection of market samples from GSA15, purchased through commercial sales in order to measure and assess commercially landed species.
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 and data validation 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:**

Sampling scheme identifier: Onboard Observations

MS: CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: Onboard Observations
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Short description (max 100 words): This sampling scheme identifier is related with the bilateral agreement between Cyprus and Malta, based on which"the Cyprus trawlers involved in a shared métier with Malta and landing their catch in Maltese ports will be included in the sampling scheme organized by Malta for the collection of biological data". There is only one trawler from Cyprus operating in GSA15, which was active in 2021-2022. The sampling scheme concerns the collection of biological data from commercial catches at-sea in GSA15.
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:**

Sampling scheme identifier: Stock-Based Sampling

MS: CYP

Region: Mediterranean and Black Sea
Sampling scheme identifier: Stock-Based Sampling
Sampling scheme type: Biological parameters specific
Observation type: SciObsOnShore
Time period of validity: from 2025 until 2027
Short description (max 100 words): This sampling scheme identifier is related with the bilateral agreement between Cyprus and Malta, based on which "the Cyprus trawlers involved in a shared métier with Malta and landing their catch in Maltese ports will be included in the sampling scheme organized by Malta for the collection of biological data". There is only one trawler from Cyprus operating in GSA15, which was active in 2021-2022. The sampling scheme concerns the collection of biological parameters from commercial landings.
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:
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: SelfOnShore*recreational (off site surveys)*triennial estimation of population of fishers

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: SelfOnShore*recreational (off site surveys)*triennial estimation of population of fishers
Sampling scheme type: recreational (off site surveys)
Observation type: SelfOnShore
Time period of validity: 2026
Short description (max 100 words): The aim of this sampling scheme is to estimate the population of

recreational fishers at shore, for whom currently there is no license system, through a telephone survey. For the other segments of recreational fishery (fishing from boat and spear fishing) there is an annual license system, therefore there are no estimation needs of their population. This sampling scheme is part of a regional activity. The telephone survey will be carried out by a market research agency.

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Description of the population

Population targeted: The Target Population is the residents of Cyprus aged 16 years and above.

Population sampled: All part of the targeted population is included in the sampling.

Stratification: The selection of the sample will be based on random multistage sampling, and will cover urban, semi-urban, and rural areas throughout the country.

Sampling design and protocols

Sampling design description: Landline and cell phone numbers will be randomly selected from the national telephone directory, and to cover households not included there, a fraction of the sample will derive from random cell phone number generation. A random, multistage, stratified sampling strategy will be followed. Numbers will be randomly selected in a way that postal areas and area types within (urban or rural) are proportionally represented in the sample according to their population size (based on the most recent population census), so that households in each area have equal selection possibility and no household is called more than once. Demographic data will be collected, and participants will be asked if they (or other people in the household and how many) generally fish in the sea from shore. Interest in participating in a more detailed data survey will be recorded, in the case of adults; in the case of interest, the contact details of the recreational fisher will be requested and recorded. Personal data protection rules will be applied.

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

Regional coordination: The provisions of the RWP Med&BS 2025-2027 will be followed.

Link to sampling design documentation:

Design follows international recommendations:

Link to sampling protocol documentation:

Protocol follows international recommendations:

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year: The monitoring will be under the control and supervision of the Research and Call Center managers of the market research agency that will carry out the survey. The data processing validation will cover 100% of the questionnaires.

Data capture

Means of data capture: The telephone survey is a quantitative research method.

Data capture documentation:

Quality checks documentation:

Data storage

National database: The telephone survey will be conducted by a market research agency. The results will not be stored in a database.

International database: N.

Quality checks and data validation documentation:

Sample storage

Storage description: NA **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:**

Sampling scheme identifier: SelfOnShore*recreational (off site surveys)*annual collection of data for all species

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: SelfOnShore*recreational (off site surveys)*annual collection of data for all species
Sampling scheme type: recreational (off site surveys)
Observation type: SelfOnShore
Time period of validity: from 2025 until 2027
Short description (max 100 words): The aim of this sampling scheme is to identify priority species and vulnerable species incidentally caught in recreational fisheries of Cyprus, as well as to collect and estimate catches and releases from the different segments of recreational fishery, using a multispecies approach. Two methods will be used in Cyprus: telephone survey and logbook through mobile application (Cy-FIS). Concerning the telephone survey, the standardized questionnaire included as Annex I of the RWP Med&BS 2025-2027 will be used as template, for all segments of recreational fishery. Cy-FIS was developed for DFMR and co-financed by EMFF 2014-2020 - Measure 3.1 - Control and Enforcement of the Operational Program (OP) "Thalassa 2014-2020" (https://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/0F1CAF8EFD1EC207C22589EC0034B9F8?OpenDocument) . This sampling scheme is part of a regional activity. **RWP Med&BS 2025-2027**
Description of the population
Population targeted: Concerning the use of Cy-FIS, the targeted population is all recreational fishermen in Cyprus. **Population sampled:** All targeted population. The use of Cy-FIS is mandatory for the licensed recreational fishermen, while it is optional for the recreational fishermen from shore with no fishing license. **Stratification:** There is no stratification for the use of Cy-FIS.
Sampling design and protocols
Sampling design description: The collection of recreational data using a logbook scheme through the mobile application Cy-FIS is mandatory for all recreational fishers with an annual fishing license (boat fishing and spearfishing), and optional for recreational fishers from shore that are not required to own a fishing license. All fishing trips of all licensed fishers are expected to be recorded in terms of effort, catch per species (landings and releases. **Is the sampling design compliant with the 4S principle?:** NA. **Regional coordination:** There is no regional coordination concerning the use of a logbook scheme through a mobile application. There is a binding action in the RWP Med&BS 2025-2027 for MS to apply multispecies approach and collect data from off-site surveys, indicating the type of the off-site survey (telephone and /or logbook) for collecting data and species, and taking into consideration the recommendations and procedures

proposed by the GFCM Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea.

Link to sampling design documentation: The GFCM Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea is available at: https://www.fao.org/gfcm/publications/series/technical-paper/669/en/.

Design follows international recommendations: Y.

Link to sampling protocol documentation: N/A

Protocol follows international recommendations: The GFCM Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea is available at: https://www.fao.org/gfcm/publications/series/technical-paper/669/en/.

Sampling implementation

Recording of refusal rate: Y

Monitoring of sampling progress within the sampling year: The use of Cy-FIS is mandatory for all licensed fishermen, and optional for fishermen not required to own a license. Considering the low fishing activity recorded by recreational fishermen in Cy-FIS in the past, the DCF team will encourage recreational fishermen to use the application. A DCF team dedicated to recreational fishery has established good communication with recreational fishing associations from all segments, and it is expected that this enhanced communication will facilitate the collection of data through the Cy-FIS. The telephone survey that will cover all segments of recreational fishery may also be used for encouraging recreational fishermen to use Cy-FIS for recording their fishing activity.

Data capture

Means of data capture: The Cy-FIS free mobile application will be used for recording data at trip level with the use of a logbook scheme. Cameras may also be used for providing photos.

Data capture documentation: https://www.fao.org/gfcm/publications/series/technical-paper/669/en/.

Quality checks documentation: https://www.fao.org/gfcm/publications/series/technical-paper/669/en/.

Data storage

National database: NA
International database: NA

Quality checks and data validation documentation:

Sample storage

Storage description: NA
Sample analysis: NA

Data processing

Evaluation of data accuracy (bias and precision): Y (https://www.fao.org/gfcm/publications/series/technical-paper/669/en)

Editing and imputation methods: Y (https://www.fao.org/gfcm/publications/series/technical-paper/669/en)

Quality document associated to a dataset: N

Validation of the final dataset: For data quality checks before the data are provided to end users, the Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea, as well as relevant reports from the ICES Working Group on Recreational Fisheries Surveys will be consulted.

Related to Table 2.6 and Text Box 2.6 (Research survey at sea)

Sampling scheme identifier: MEDITS

MS : CYP
Region: Mediterranean and Black Sea
Sampling scheme identifier: MEDITS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Short description (max 100 words): The main objectives of the survey are: - To create time series of standardized abundance and biomass indices of demersal species in the Mediterranean Sea, allowing the identification of spatiotemporal variations in their abundance and distribution - To collect biological data from a reference list of 82 target species (including 32 elasmobranchs) assigned in two groups, allowing the estimation of population structure and biological parameters. Sampling activities covered by the survey are listed in Table 2.6. Stomach sampling for *Merluccius merluccius* is an additional sampling activity, in accordance with RWP Med&BS 2025-2027 (Table 4.1 and Text Box 4.3). **RWP Med&BS 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:**

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 implementing years 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: Complementary data collection of fishing activity * Probability Sample Survey

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): Complementary data collection of fishing activity
Sampling scheme: random sampling
Variables: Fishing activity variables (Table 6 of EU MAP Delegated Decision annex) to be reported at metier and segment level [Days at sea, Fishing days, GT * Days at sea, GT * Fishing days, Number of trips, Number of fishing operations, Number of nets(m) * soak time (days), Number of nets / Length, Number of hooks, Number of lines, Numbers of pots, traps, Live Weight of landings total and per species]
Supra region(s): Mediterranean Sea and Black Sea
Survey planning

Complementary data collection of fishing activity applies to active vessels using passive gears with length 0-< 6 m and 6-< 12 m.

Based on Chapter II point 3.1 of the EU MAP Delegated Decision annex, data on fishing activity shall cover variables indicated in Table 6 at the lowest relevant geographic level by fleet segment and metier level 6.

Complementary data collection is required for vessels with length 0-6m and 6-12m for the following reasons:
-The use of logbooks, which provide information on effort variables, is not required for fishing vessels less than 10 metres length.
-For fishing vessels <10m, sales notes and sales receipts are considered as a proxy for fishing days, days-at-sea, fishing trips and fishing operations; however, these effort variables cannot be assigned to metiers. Furthermore, sales notes and sales receipts cannot be related with certain effort variables (e.g. length of nets, number of hooks, soaking time).
-Although all fishing vessels in Cyprus are required to record their landings irrespectively of quantities caught (through logbooks, sales notes and sales receipts), in the absence of logbooks the landings of vessels<10m cannot be assigned to metiers.

Survey design and strategy

5. **Data sources**: logbooks, sales notes, sales receipts for fishermen who are not required to use sales notes, and Fleet Vessel Register

6. **Sample sizes:** The PSU will be the landing site on a given day. The SSU will be the cluster of trips within the PSU, aiming to sample all vessels that land from morning until midday, which is the landing time for most of fishermen.

7. **Survey methods:** Complementary data on effort and landings by metier will be collected through a probability sample survey. The PSU will be the landing site on a given day, which will be selected randomly four times per week. SSU will be the cluster of trips within the PSU, aiming to sample all vessels that land from morning until midday, which is the landing time for most of fishermen. For each sampled trip, data on métiers and quantities of gears used will be recorded, as well as all quantities of species, assigned to each métier. This probability sample survey will take place as part of the biological sampling; this information is collected in parallel with biological sampling by DFMR since the introduction of "metier" in data collection.

8. Additional information used in the survey strategy: No additional information.

Estimation design

4. **Calculation method for population estimate:** For complementary data collection on landings, the aim is to estimate the percentage of landings of each species assigned to each métier. For complementary data collection on effort, the aim is to estimate the % of fishing days, days-at-sea, fishing trips and fishing operations assigned to each métier. In case during a fishing day more than one métier is exercised, one fishing day/day-at-sea/ fishing trip/fishing operation will be assigned to each of the métiers exercised by the vessel.

5. **Calculation method for derived data:** For complementary data collection on landings, the percentage of landings of each species assigned to each métier will be raised to the total landings (which derive from data collected under Control Regulation), allowing the estimation of landings by species by métier. For complementary data collection on effort, the % of fishing days, days-at-sea, fishing trips and fishing operations assigned to each métier will be raised to the total number of fishing days/ days-at-sea/ fishing trips/fishing operations (which is estimated from number of sales notes and sales receipts collected under Control Regulation), allowing the estimation of these effort variables by métiers. Based on data collected on length of nets, number of hooks, number of pots and soaking time, an average value of these variables will be estimated by métier, and will be raised to the total number of fishing trips/days by métier.

6. **Nonresponse handling:** In general, there is a very good communication between the Data Collection Team and fishermen. In the rare case that fishermen refuse repeatedly to provide information on their fishing activity, contacts from the DFMR Head of fisheries division and data collection are made with

the fishermen for alleviating the problem.
Error checks
Data on complementary fishing activity data are collected on-site, during biological sampling. Observers may evaluate whether information provided on gears and quantities used (length of nets, number of hooks) are correct. In addition, cross -checks may be made for vessels over 10m length, from logbooks. Concerning landings data, quantities are also weighted (as whole or partly in the case of large quantities) by species. Based on experience, observers may evaluate whether the information provided on the gear used for catching the different species may be erroneous. All paper forms used for recording fishing activity data are stored. Electronic entries are checked and may be cross-checked with data recorded in paper forms.
Data storage and documentation
3. Data storage: Procedures have initiated for the development of a new database. At the moment, data are stored electronically in protected files. 4. Documentation: NA at the moment.
Revision
The methodology used for collecting fishing activity data by metier in parallel with biological sampling, for fleet segments not required to use logbooks, has been the same since the introduction of "metier" in data collection. The number of sampled trips though have increased considerably from 2020, following the increase of available human resources for data collection.
Confidentiality
5. Are procedures for confidential data handling in place and documented? NA 6. Are protocols to enforce confidentiality between DCF partners in place and documented? NA 7. Are protocols to enforce confidentiality with external users in place and documented? NA 8. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation. No. The complementary data collection of fishing activity does not include the collection of confidential data. For all data collected by the DFMR that are related to natural persons, rules set by the General Data Protection Regulation (Reg. (EU) 2016/679) are respected and followed. A document stating how the DFMR treats personal data, complying with the GDPR, is available at (in Greek).

Sampling scheme identifier: Socioeconomic data on Fisheries_ 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): Socio-economic data on fisheries
Sampling scheme: Census

Variables: Days at sea (all segments-control regulation), Energy consumption (DTS2440, PGP1218), Energy costs (DTS2440, PGP1218), Full-time equivalent (FTE) (DTS2440, PGP1218) , Gross debt (DTS2440, PGP1218) , Gross value of landings (all segments-control regulation), Investments in tangible assets (net purchase of assets) (DTS2440, PGP1218), Mean age of vessels (all segments-FVR-national statistics), Mean LOA of vessels (all segments-FVR-national statistics), Number of vessels (all segments-FVR-national statistics), Other income (DTS2440, PGP1218), Other non-variable costs (DTS2440, PGP1218), Other variable costs (DTS2440, PGP1218), Paid labour (DTS2440, PGP1218), Personnel costs (DTS2440, PGP1218), Repair and maintenance costs (DTS2440, PGP1218), Total value of assets (DTS2440, PGP1218 for value of assets information), Total vessel power (all segments-FVR-national statistics), Total vessel tonnage (all segments-FVR-national statistics), Unpaid labour (DTS2440, PGP1218), Employment by age (DTS2440, PGP1218), Employment by employment status (DTS2440, PGP1218), Employment by gender (DTS2440, PGP1218), Employment by level of education (DTS2440, PGP1218), Employment by nationality (DTS2440, PGP1218), FTEs by gender (DTS2440, PGP1218), Unpaid labour by gender (DTS2440, PGP1218).
Note: In parenthesis it is indicated for which fleet segments the sampling scheme census is concerned. For the variables: days at sea and gross value of landings the information is collected based on the Control regulation and that it concerns all fleet segments and no survey planning is needed. The same stands for the variables whose information is collected according to the FVR (national statistics).

Supra region(s): Mediterranean Sea and Black Sea

Survey planning

Two main fishing technique categories are used for Census, which are: vessels using polyvalent passive gears only over 12m (PGP) and demersal trawlers (DTS).

Our fleet includes 33 polyvalent vessels using passive gears over 12 m (PGP) in 12-<18m length class, 3 vessels in 18-<24m length class and 2 vessel in 24-<40m length class. Because of the small population of the two length groups and for sampling purposes and confidentiality reasons, all polyvalent vessels using passive gears over 12 m (PGP) are included in a single category, 12-<18m (clustering is explained in Text Box 5.2). Therefore, PGP consists of 38 vessels.

Due to the very small number of demersal trawlers (DTS) below 24m (2 vessels) they could be regrouped in the 24-<40m length group (3 vessels), since they are similar and to ensure the consistency of data from previous years. Since, all lengths of demersal trawlers have been grouped, their total population consists of 5 vessels.

Survey design and strategy

9. Data sources: Logbooks, Sales notes, Questionnaires, National Statistics such as the Fleet Vessel Register.

10. Sample sizes: Census will be performed, therefore there is no sample.

11. Survey methods: The most important tool that will be used is the post/face-to face interviews based on predetermined questionnaires.

12. Additional information used in the survey strategy: There is not any auxiliary information.

Estimation design

7. Calculation method for population estimate: Census will be performed, therefore there is no sample.
8. Calculation method for derived data: Imputed values are described in Indirect Scheme.
9. Nonresponse handling: In the case of trawlers, purse seiners and polyvalent passive gears vessels over 12m, where a census will be performed, non-responsive units may exist. The method used to raise the final estimates to total population is the adjustments of raising factors, where the factors is the total number of licensed active vessels.

Error checks

So far any validations and identification of errors are taken place manually. Specifically, typing errors can occur while data are being recorded, coded, edited or imputed. Sometimes, errors are incorrectly identified during the data analysis phase. Certainly, the interviewees may also provide incorrect answers

to avoid reporting confidential data (because of concerns about taxes, legal issues or even competition). Even when errors are discovered, they can be wrongly corrected because of poor imputation procedures. Usually, interviewers can be asked again some questions that we think is wrong as an opportunity to double check the reporting.
In the case of Partial Non-Response (PNR) where missing values identified in the control procedure, are treated by imputation and specifically the "mean of the group", in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf. and handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study), according to the RWP ECON.
Moreover, measurement and processing errors are located through unreasonable and extreme values of the data. An unreasonable value is a value that has no natural meaning of interpretation of the variable (e.g. a negative value of a variable that can only take positive values). An extreme value is a value that is considerably remote, compared to the majority of the rest of the variable values. In order to address the problems related to the unreasonable or extreme values that appear on some vessels in basic technical and economic parameters that are used for the estimation of the data call variables, we use "mean of the group", in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf. and handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study), based on the RWP ECON.

Data storage and documentation

5. Data storage: A national database exists, but there are plans for developing a new one, since the current one is useful only for storing data, with many limitations. A study is ongoing, with duration of around two years, aiming the formation of the DFMR' s strategy on all information systems used/required by the DFMR; under this study all current information systems and procedures for collecting, processing and disseminating data by the DFMR are being reviewed by experts, who will propose best ways for fulfilling EU and national requirements related to all its activities.
6. Documentation: The methodologies are documented and they are already available on the website at the following link.
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58/$file/Methodology%20Report%20-%20DCF%202021%20V1.pdf

Revision

The methodology adopted and described above is controlled for its proper implementation at all stages. In particular, during the sampling period, we communicate with the correspondents at regular time intervals in order to ascertain the proper process of collecting the questionnaires. When the questionnaires are collected, the material is evaluated; for example, the number of questionnaires collected per correspondent and the completeness of the data is checked

Confidentiality

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

Yes. Only authorized people can have the exclusive right of access to that information. In addition, DFMR's employees are bounded by confidentiality and have the obligation to use the data accessed exclusively for statistical purposes. Any other use of such data is prohibited beyond the end of their duties.
For all data collected by the DFMR that are related to natural persons, rules set by the General Data Protection Regulation (Reg. (EU) 2016/679) are respected and followed. A document stating how the DFMR treats personal data, complying with the GDPR, is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/page09_gr/pag09_gr?OpenDocument (in Greek).

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

We do not have other partners in collecting socioeconomics data besides the DFMR employees.

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

Yes. We do not give raw data to external end-users. The data are provided in such aggregated format that no one can identify the individual statistical units (fishing vessels) or their owner or to whom these data belong to. Furthermore, a password is needed in order to have access in the database, which only authorized people can have it.

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

No except in the case of the Purse seiner targeting BFT fleet segment since only one vessel belongs to this segment.

Sampling scheme identifier: Socioeconomic data on Fisheries_ 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): Socio-economic data on fisheries

Sampling scheme: Probability Sample Survey

Variables: Energy consumption, Energy costs, Gross debt, Investments in tangible assets (net purchase of assets), Other income, Other non-variable costs, Other variable costs, Personnel costs, Repair and maintenance costs, Total value of assets, Employment by level of education.

Supra region(s): Mediterranean Sea and Black Sea

Survey planning

Two main fishing technique categories are used for random sampling, which are: vessels using passive gears only for vessels <12m (PG) and a new category, which represents the segments Polyvalent "passive gears only" (category C licences) (PGO). The fishing activity of vessels using polyvalent passive gears only (category C licences) is performed on a periodic basis since they are allowed to fish only a total of approximately 100 days each year, under a 2007 national legislation. This category cannot be integrated with the existing segments of Vessels using Polyvalent passive gears only' below 12m since the data of previous years would not be comparative and we would face problems of bias.

Polyvalent "passive gears only" (category C licences) (PGO) has a total population of 415 vessels. In 0-<6m length group (PGO0006) there are 346 vessels, and 6-<12m length group (PGO0612) includes 69 vessels. Vessels using passive gears only <12m (PG) are divided into two subcategories as follows: vessels using passive gears only 0-<6m (PG0006) which includes 25 vessels and vessels using passive gears only 6-<12m (PG0612) with 302 vessels.

Survey design and strategy

1. Data sources: Questionnaires
2. Sample sizes:

Number of vessels in stratum	Sample rate

We will

<50	50%
50 - 500	25%
500 - 2000	10%
>2000	5%

apply a "disproportionate allocation" sampling scheme (Sapsford and Jupp, 2006). This is also in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf.. This strategy allows for keeping the sample as large as possible in order to have a higher coverage rate for the smaller-sized segments, while trying to minimize as much as possible the variance of each stratum. In other words, the size of the sample in each stratum is inversely proportional to the stratum's population size, as follows below:

Following the previous table the sample size of our segments will be:

Segments	**Sample size (population*sample rate)**
PG0006	14
PG0612	75
PGO0006	86
PGO0612	19

After the sample size for every stratum has been determined, the sample units can be chosen using random sampling without replacement and with equal probabilities. Each unit of the population has the same probability to be part of the sample and this is:
Pi =1/Ni where, Ni = the total population of the segment i
Randomness can be achieved by assigning a random number to every fishing vessel belonging to the population, using "RAND" function in excel. After that, sorting the list of vessels of a specific segment by their random number will take place. Therefore, according to the sample size (n_i), that determined before, the first n_i vessels of the list will be in the sample.

3. Survey methods:

The most important tool that will be used is the post/face-to face interviews based on predetermined questionnaires.

4. Additional information used in the survey strategy:

There is not any auxiliary information.

Estimation design

1. Calculation method for population estimate:

The method used to raise the final estimates to total population is the adjustments of raising factors, where the factors is the total number of licensed active vessels, vessels fishing at least for one day.

2. Calculation method for derived data:

Imputed values are described in Indirect Scheme.

3. Nonresponse handling:

Existence of non-responsive units it could affect the response rate. In order to maintain the response rate we will use replacement units. More specifically, the "substitute" vessels can be pulled from the subsequent next-in-sequence list of vessels identified in the random sampling procedure explained in the section of Survey design and strategy under determination of sample size. This treatment is in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf.

Error checks

So far, any validations and identification of errors are taken place manually. Specifically, typing errors can occur while data are being recorded, coded, edited or imputed. Sometimes, errors are incorrectly identified during the data analysis phase. Certainly, the interviewees may also provide incorrect answers to avoid reporting confidential data (because of concerns about taxes, legal issues or even competition). Even when errors are discovered, they can be wrongly corrected because of poor imputation procedures. Usually, interviewers can be asked again some questions that we think is wrong as an opportunity to double check the reporting.
In the case of Partial Non-Response (PNR) where missing values identified in the control procedure, are treated by imputation and specifically the "mean of the group", in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf. and handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study) based on the RWP ECON.
Moreover, measurement and processing errors are located through unreasonable and extreme values of the data. An unreasonable value is a value that has no natural meaning of interpretation of the variable (e.g. a negative value of a variable that can only take positive values). An extreme value is a value that is considerably remote, compared to the majority of the rest of the variable values. In order to address the problems related to the unreasonable or extreme values that appear on some vessels in basic technical and economic parameters that are used for the estimation of the data call variables, we use "mean of the group", in line with the FAO "Handbook for fisheries socio-economic sample survey" https://www.fao.org/3/i6970e/i6970e.pdf. and handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study) based on the RWP ECON.

Data storage and documentation

1. Data storage:

A national database exists, but there are plans for developing a new one, since the current one is useful only for storing data, with many limitations. A study is ongoing, with duration of around two years, aiming the formation of the DFMR's strategy on all information systems used/required by the DFMR; under this study all current information systems and procedures for collecting, processing and disseminating data by the DFMR are being reviewed by experts, who will propose best ways for fulfilling EU and national requirements related to all its activities.

2. Documentation: The methodologies are documented and they are already available on the website at the following link.

http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58/$file/Methodology%20Report%20-%20DCF%202021%20V1.pdf

Revision

The methodology adopted and described above is controlled for its proper implementation at all stages. In particular, during the sampling period, we communicate with the correspondents at regular time intervals in order to ascertain the proper process of collecting the questionnaires. When the questionnaires are collected, the material is evaluated; for example, the number of questionnaires collected per correspondent and the completeness of the data is checked. The coverage rate of the proposed sample is compared with the response rate of sample units per fleet segment.

Confidentiality

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

Yes. Only authorized people can have the exclusive right of access to that information. In addition, DFMR's employees are bounded by confidentiality and have the obligation to use the data accessed exclusively for statistical purposes. Any other use of such data is prohibited beyond the end of their duties.

For all data collected by the DFMR that are related to natural persons, rules set by the General Data Protection Regulation (Reg. (EU) 2016/679) are respected and followed. A document stating how the DFMR treats personal data, complying with the GDPR, is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/page09_gr/pag09_gr?OpenDocument (in Greek).

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

We do not have other partners in collecting socioeconomics data besides the DFMR employees.

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

Yes. We do not give raw data to external end-users. The data are provided in such aggregated format that no one can identify the individual statistical units (fishing vessels) or their owner or to whom these data belong to. Furthermore, a password is needed in order to have access in the database, which only authorized people can have it.

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

No except in the case of the Purse seiner targeting BFT fleet segment since only one vessel belongs to this segment.

Sampling scheme identifier: Socioeconomic data on Fisheries_ Indirect Survey

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): Socio-economic data on fisheries

Sampling scheme: Indirect Survey

Variables: Consumption of fixed capital (all segments plus Inactive), Number of fishing enterprises/units, Operating subsidies, Subsidies on investments, Total value of assets, Value of physical capital (all segments plus Inactive), Value of unpaid labour, Full-time equivalent (FTE) (PG0006, PG0612, PGO0006, PGO0612), Paid labour (PG0006, PG0612, PGO0006, PGO0612), Unpaid labour (PG0006, PG0612, PGO0006, PGO0612), Employment by age (PG0006, PG0612, PGO0006, PGO0612), Employment by employment status (PG0006, PG0612, PGO0006, PGO0612), Employment by gender (PG0006, PG0612, PGO0006, PGO0612), Employment by nationality (PG0006, PG0612, PGO0006, PGO0612), FTEs by gender (PG0006, PG0612, PGO0006, PGO0612), Unpaid labour by gender (PG0006, PG0612, PGO0006, PGO0612).

Supra region(s): Mediterranean Sea and Black Sea

Survey planning

Indirect survey for the whole population for the above-mentioned variables will be performed.

Survey design and strategy

1. Data sources: administrative sources - estimation using PIM method, information from Licence system, DFMR's records and estimation, EU-Fisheries Fund.

2. Sample sizes: Indirect survey will be performed, therefore there is no sample.

3. Survey methods: Indirect survey will be performed using the mentioned data sources.

4. Additional information used in the survey strategy: There is not any auxiliary information.

Estimation design

1. Calculation method for population estimate: Indirect survey will be performed, therefore there is no sample.

2. Calculation method for derived data:

- The variables: Consumption of fixed capital, Total value of assets (for the assets part) and Value of physical capital for all the fleet segments including the inactive ones for Consumption of fixed capital and Value of physical capital are estimated using the PIM method in accordance with the RCG ECON recommendations.
- The variable Number of fishing enterprises/units is estimated using information that the owners of the vessels are provided when they applied for the licence.
- The variables: Operating subsidies and Subsidies on investments are collected from DFMR's records because DFMR is the responsible authority for the implementation of state aid in fishery sector and also of the European Fisheries Fund 2021-2027.
- For the variable value of unpaid labour the FTE method will be applied where the average wage by fleet segment is used.
- Full-time equivalent (FTE) variable in Indirect Collection Scheme is applicable only for Polyvalent "passive gears only" (category C licences) 0-<6m (PGO0006), Polyvalent "passive gears only" (category C licences) 6-<12m (PGO0612), vessels using passive gears only 0-<6m (PG0006) vessels using passive gears only 6-<12m (PG0612). This variable is estimated using administrative sources. In particular, it is estimated based on the time these fleet segments are used to perform their main fishing activities using a variety of fishing gears (nets, pots, longlines etc.).
- Paid labour variable is also applicable only for PG0006, PG0612, PGO0006 and PGO0612 vessels, based on our Licence system. The fishermen of these fleet segments are individuals who need to satisfy certain criteria according to the national legislation before getting the licence. The fishermen need to make an application and as a result, a lot of information is gathered at the state of evaluating each application. The variables unpaid labour and unpaid labour by age are also collected from DFMR's licence system.
- The collection of the social data started in 2018 for the 2017 data. The collection of the social data are on a triennual data collection and thus the next one will be in 2027 for the 2026 data We follow the relevant guidelines of the RCG ECON. The variables: Employment by age, Employment by employment status, Employment by gender, Employment by nationality, FTEs by gender and Unpaid labour by gender as in the case of paid labour are collected from DFMR's records based on its licence system for PG0006, PG0612, PGO0006 and PGO0612 fleet segments.

3. Nonresponse handling:

Indirect survey will be performed, therefore there aren't any non-responsive units.

Error checks

Indirect survey will be performed for the above-mentioned variables; therefore, errors are not expecting.

Data storage and documentation

1. Data storage:

A national database exists, but there are plans for developing a new one, since the current one is useful only for storing data, with many limitations. A study is ongoing, with duration of around two years, aiming the formation of the DFMR's strategy on all information systems used/required by the DFMR; under this study all current information systems and procedures for collecting, processing and disseminating data by the DFMR are being reviewed by experts, who will propose best ways for fulfilling EU and national requirements related to all its activities.

2. Documentation:

The methodologies are documented and they are already available on the website at the following link.
http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/All/6DC46542CDE2BC644225833000214B58/$file/Methodology%20Report%20-%20DCF%202021%20V1.pdf

Revision

The methodology adopted and described above is controlled for its proper implementation at all stages. In particular, each year the survey used for each variable is revised based on RCG ECON recommendations like in the case the PIM method and the relevant FAO or other handbooks.

Confidentiality

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

Yes. Only authorized people can have the exclusive right of access to that information. In addition, DFMR's employees are bounded by confidentiality and have the obligation to use the data accessed exclusively for statistical purposes. Any other use of such data is prohibited beyond the end of their duties.
For all data collected by the DFMR that are related to natural persons, rules set by the General Data Protection Regulation (Reg. (EU) 2016/679) are respected and followed. A document stating how the DFMR treats personal data, complying with the GDPR, is available at http://www.moa.gov.cy/moa/dfmr/dfmr.nsf/page09_gr/pag09_gr?OpenDocument (in Greek).

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

We do not have other partners in collecting socioeconomics data besides the DFMR employees.

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

Yes. We do not give raw data to external end-users. The data are provided in such aggregated format that no one can identify the individual statistical units (fishing vessels) or their owner or to whom these data belong to. Furthermore, a password is needed in order to have access in the database, which only authorized people can have it.

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

No except in the case of the Purse seiner targeting BFT fleet segment since only one vessel belongs to this segment.