

EUROPEAN COMMISSION DIRECTORATE-GENERAL FOR MARITIME AFFAIRS AND FISHERIES

Directorate C: Fisheries Policy Atlantic, North Sea, Baltic and Outermost Regions Unit C3: Scientific Advice and Data Collection

Call MARE/2020/08

## Grant Agreement SI2.839815

Streamlining the establishment of regional work plans in the Mediterranean and Black Sea



**European Maritime and Fisheries Fund (EMFF)** 

# WP4 – Drafting the workplan

# **Deliverable 4.1 – Draft regional work plans**

Authors: Ligas A., Spedicato M.T.

Core Team: I. Bitetto, M. Sbrana, C. Musumeci, V. Raykov, M. Yankova, A. Cervantes, M. González, I. Thasitis, S. Nicheva, K. Zhelev, F. Masnadi, S. Vitale, F. Fiorentino, S. Kavadas, V. Čikeš Keč, N. Vrgoč, I. Isajlović, A. Adamidou, M. Koutrakis



1. EXECUTIVE SUMMARY	3
2. INTRODUCTION	3
3. NON-BINDING DRAFT REGIONAL WORK PLAN 2023 FOR THE	
MEDITERRANEAN AND BLACK SEA	4
4. ANNEX: Med&BS RWP 2023 Tables	32



## **1. EXECUTIVE SUMMARY**

This document, Deliverable D4.1 "Draft regional work plans", is the result of the activities performed under Work Package 4 "Drafting the workplan" of the STREAMLINE project.

This document presents the proposal for a draft non-binding Regional Work Plan for 2023 that was prepared in strict cooperation with the RCG Med&BS, and submitted in October 2022 to COM for being evaluated by the STECF EWG 22-18 on the Evaluation of work plans for data collection and data transmission issues.

## 2. INTRODUCTION

Based on the work under work packages 1 to 3, the Work Package 4 of the STREAMLINE project has developed, in a co-creative work process with the RCG Med&BS, a draft non-binding Regional Work Plan (RWP) for 2023 on the topics addressed during the implementation of the project.

The flow from WP1 to WP2 and the outcomes from WP2 represented the basis to address relevant topics in biological samplings, stomach contents, by-catch and recreational fishery data collection that fed WP4.

The co-creative process took advantage from the feedback received from the National experts participating in the WP2 workshops, on the basis of the continuous communication with RCG across all the key steps of the project.

The draft RWP brought together the existing knowledge from earlier grants and MS pilot studies, as well as the additional work carried out under this grant, and was shared and discussed with the RCG Med&BS for endorsement.

The draft RWP for 2023 for the Mediterranean and Black Sea was prepared in line with the EU-MAP in force from 2022 onwards.

As agreed during the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) annual meeting (6-9 September 2022), and through e-mail exchange and some bilateral meetings for further refinement, this Regional Workplan is a non-binding test for 2023. The RCG Med&BS, with the technical support of STREAMLINE regional grant (MARE/2020/08), agreed on the following points:

- 1. Regional coordination for sampling marine recreational fisheries (Text Box 2.4);
- 2. Regional coordination for sampling plan for biological data (Text Box 2.5);
- 3. Regional coordination for Research surveys at sea (Text Box 2.6 and Table 2.6);

4. Regional coordination for the monitoring of the incidental catches of sensitive species (Text Box 4.2);

5. Demersal fish stomach contents collection and analysis (Text Box 4.3 and Table 4.1).



# 3. NON-BINDING DRAFT REGIONAL WORK PLAN 2023 FOR THE MEDITERRANEAN AND BLACK SEA



# 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 16 July 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 16 July 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 on data collection in the fisheries and aquaculture sectors, and repealing Implementing Decisions (EU) 2016/1701 and (EU) 2018/1283



# Regional Work Plan for data collection in the fisheries and aquaculture sectors in the Mediterranean and Black Sea

2023 Version 1

20221014



# CONTENTS

SECTION 1: GENERAL INFORMATION
DATA COLLECTION FRAMEWORK AT NATIONAL LEVEL
TEXT BOX 1A: TEST STUDIES DESCRIPTION
TEXT BOX 1B: OTHER DATA COLLECTION ACTIVITIES
SECTION 2: BIOLOGICAL DATA
TEXT BOX 2.3: DIADROMOUS SPECIES DATA COLLECTION IN FRESHWATER
TEXT BOX 2.4: RECREATIONAL FISHERIES
TEXT BOX 2.5: SAMPLING PLAN DESCRIPTION FOR BIOLOGICAL DATA
TEXT BOX 2.6: RESEARCH SURVEYS AT SEA
SECTION 3: FISHING ACTIVITY DATA
TEXT BOX 3.1: FISHING ACTIVITY VARIABLES DATA COLLECTION STRATEGY
TEXT BOX 3.2: FISHING ACTIVITY VARIABLES DATA COLLECTION STRATEGY (FOR INLAND EEL COMMERCIAL FISHERIES)
SECTION 4: IMPACT OF FISHERIES ON MARINE BIOLOGICAL RESOURCES
TEXT BOX 4.2: INCIDENTAL CATCHES OF SENSITIVE SPECIES
TEXT BOX 4.3: FISHERIES IMPACT ON MARINE HABITATS
SECTION 5: ECONOMIC AND SOCIAL DATA IN FISHERIES
TEXT BOX 5.2: ECONOMIC AND SOCIAL VARIABLES FOR FISHERIES DATA COLLECTION 23
SECTION 6: ECONOMIC AND SOCIAL DATA IN AQUACULTURE
TEXT BOX 6.1: ECONOMIC AND SOCIAL VARIABLES FOR AQUACULTURE DATA COLLECTION 25
SECTION 7: ECONOMIC AND SOCIAL DATA IN FISH PROCESSING
TEXT BOX 7.1: ECONOMIC AND SOCIAL VARIABLES FOR FISH PROCESSING DATA COLLECTION
ANNEX 1.1 - QUALITY REPORT FOR BIOLOGICAL DATA SAMPLING SCHEME
ANNEX 1.2 - QUALITY REPORT FOR SOCIOECONOMIC DATA SAMPLING SCHEME



## SECTION 1: GENERAL INFORMATION

## Data collection framework at regional level

As agreed during the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) annual meeting (6-9 September 2022), and through e-mail exchange and some bilateral meetings for further refinement, this Regional Workplan is a non-binding test for 2023. The RCG Med&BS, with the technical support of STREAMLINE regional grant (MARE/2020/08), agreed on the following points:

- 1. Regional coordination for sampling marine recreational fisheries (Text Box 2.4);
- 2. Regional coordination for sampling plan for biological data (Text Box 2.5);
- 3. Regional coordination for Research surveys at sea (Text Box 2.6 and Table 2.6);
- 4. Regional coordination for the monitoring of the incidental catches of sensitive species (Text Box 4.2);
- 5. Demersal fish stomach contents collection and analysis (Text Box 4.3 and Table 4.1).

All Member States involved in the RCG Med&BS will participate to Points 1, 3, 4 and 5.

Spain, France, Italy, Slovenia, Croatia, Bulgaria and Romania will participate to Point 2.

(*max. 1000 words*)

## **Text Box 1a: Test studies description**

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex. This text box applies to the work plan and the annual report.

1. Aim of the test study

2. Duration of the test study

3. Methodology and expected outcomes of the test study

(max 900 words per study)

## Text Box 1b: Other data collection activities

General comment: This text box applies to the work plan and the annual report. Use this text box to provide information on other data collection activities that relate to your EMFAF operational programme and need to be included in the work plan and the annual report. Describe activities that are funded by the DCF but fulfil objectives under other EMFAF priorities, like marine knowledge, or activities funded by the DCF, but without a direct link to the EU MAP specific requirements or WP template tables, like freshwater fisheries. You can also include one-off specific studies for a particular end-user need that do not enter the regular data collection. 1. Aim of the data collection activity

2. Duration of the data collection activity

3. Methodology and expected outcomes of the data collection activity

(max 900 words per activity)

## SECTION 2: BIOLOGICAL DATA

## Text Box 2.3: Diadromous species data collection in freshwater

General comment: This Textbox fulfils Article 5(2)(a), Article 6 (3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II, point 2.1(b) and point 2.3 of the EU MAP Delegated Decision annex. Use this text box to give an overview of the methodology used for the data collected from freshwater commercial fisheries for salmon, sea trout and eel, and from research surveys on salmon and sea trout in freshwater, and on eel in any relevant habitat including coastal waters.

Method selected for collecting data.

Describe briefly the method for collecting the variables presented in Table 2.3. Detailed descriptions are to be included in Annex 1.1. If variables are not directly collected but estimated the method of estimation should be described here.

## **Text Box 2.4: Recreational Fisheries**

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 for the data collected on marine and freshwater recreational catches.

Description of the sampling scheme/survey according to Table 2.4 (please refer to Table 2.4 in the NWPs of the ten Med&BS Member States).

The non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea is aimed at:

- Estimating the population of recreational fishers by segment (fishing gear-technique; e.g., shore, boat, spear fishing, etc.) and sub-region\*.

Identification of the list of priority species by sub-region\*.

Taking into consideration the recommendations and procedures proposed by the GFCM Handbook (<u>https://www.fao.org/gfcm/publications/series/technical-paper/669/en/</u>), and the experience gained by means of the implementation of the pilot studies, each MS will



implement this non-binding RWP in 2023 following their own procedures (e.g., telephone surveys, license system, etc.).

\*This applies to MS covering more than one sub-region: e.g., Italy (Western Med, Central Med, Adriatic) and Greece (Central Med, Eastern Med); Spain and France will aim at providing estimates for western Mediterranean recreational fisheries, provided that these are considered reliable and robust.

With the aim of facilitating this process and the setting of minimum standards, standardized protocols for performing the surveys were provided and shared (see Deliverable D2.3 of the STREAMLINE grant).

The protocols are also attached here:



(max 900 words per region)

## Text Box 2.5: Sampling plan description for biological data

*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) and 4.1 of the EU MAP Delegated Decision annex. This text box complements Table 2.5.

Based on the activities performed under Task 2.1 of the STREAMLINE regional grant, the Regional Coordination Group for the Mediterranean and Black Sea (RCG Med&BS) agreed that the sampling optimization strategy R routines can represent a suitable tool for drafting Regional Work Plans on the collection of commercial fisheries data, including SSFs (please see MARE/2016/22 STREAM Final Report, and the embedded Deliverable D3.3 at <a href="https://datacollection.jrc.ec.europa.eu/mare-2016-22-strengthening-regional-cooperation">https://datacollection.jrc.ec.europa.eu/mare-2016-22-strengthening-regional-cooperation</a>). STREAMLINE Task 2.1 further refined the R tools and routines (SD Tool and BioSim Tool) and performed analyses on sampling strategy optimization in four case studies identified in cooperation with the RCG Med&BS. The four case studies are summarized in the table below:

GSAs	Countries	Stocks	Métiers
29	Bulgaria, Romania	Sprattus sprattus, Scophthalmus maximus	OTM, FNP, GNS
1-2-5-6-7	Spain, France	Aristeus antennatus, Merluccius merluccius, Parapenaeus longirostris	OTB_DES, OTB_MDD, OTB_DWS, LLS, GNS
17-18	Croatia, Italy, Slovenia	Merluccius merluccius, Mullus barbatus, Nephrops norvegicus, Parapenaeus longirostris, Solea solea	OTB_DES, FPO, TBB, GNS, GTR, LLS
17-18	Croatia, Italy, Slovenia	Engraulis encrasicolus, Sardina pilchardus	PTM, PS

The analyses on the four case studies were performed taking advantage from the data sent by all the Med&BS EU Member States through the Data Call launched by STREAMLINE in 2021.



The results obtained by Task 2.1 are presented in the attached document (Task\_2\_1\_Summary\_results.docx). However, those results have to be considered as preliminary, and further work will be performed in the future by the incoming ISSG on Sampling Optimization (Scientific Network) to better refine the analyses and propose future sampling plans based on an optimized sampling strategy.

Task\_2\_1\_Summary\_re sults.docx

## Text Box 2.6: Research surveys at sea

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. It is intended to specify which research surveys at sea set out in Table 2 of the EU MAP Implementing Decision will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU-MAP Implementing Decision or whether it is an additional survey.

## International bottom trawl survey in the Mediterranean (MEDITS)

1. Objectives of the survey

The MEDITS survey programme intends to produce basic information on benthic and demersal species in terms of population distribution as well as demographic structure, on the continental shelves and along the upper slopes at a global scale in the Mediterranean Sea, through systematic bottom trawl surveys.

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

The MEDITS is conducted in spring - summer period from April to September based on MEDITS protocol using specially designed bottom trawl net GOC 73. Sampling stations are randomly distributed according to the depth strata (10-50; 50-100; 100-200; 200-500; 500-800 m) and the number of stations is proportional to the surface of each stratum.

MEDITS data are collected, processed and analysed according to the common protocol (MEDITS-Handbook. Version n. 9, 2017), to produce information (i.e. population distribution, abundance, size composition etc.), on benthic and demersal species found in an area with a depth ranging from 0 to 800 m. The working zone (on the continental shelves and along the upper slopes) has been adopted to cover at best the distribution areas of the main exploited or potentially exploitable species, considering the administrative and technical constraints of the project.

The stations are distributed in each GSA applying a random stratified sampling scheme using as strata the geographical combination of zones and depth.

In order to improve the quality of the MEDITS data and the consistency of the information collected a routine (RoME, Bitetto et al., 2017) has been developed for common use, which rationale has been incorporated in the checks made at JRC level during the data upload and the assessment working groups (STECF EWGs).

This non-binding RWP should serve to harmonize methodologies with the aim of providing appropriate scientific data for informing stock assessment and fisheries management, with particular attention to the survey period. The survey period shall be agreed between the MEDITS Steering Committee and the RCG Med&BS, and reported in the survey



manual/protocol, and in Table 2.6. This shall be achieved with the finalizing of the binding RWP to be implemented in the period 2025-2027.

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

Since 2001, European MSs bordering the Mediterranean are obliged to carry out MEDITS survey yearly in the framework of the EU Data Collection. Italy, France, Spain, Croatia, Greece, Malta, Slovenia, and Cyprus are involved in the MEDITS and permanent links are maintained with relevant bodies (i.e., RCG Med&BS, MEDITS Steering Committee, and GFCM). Targets number of hauls, by area and participating countries, are reported in the Annex III of the MEDITS Handbook (MEDITS-Handbook Version n. 9, 2017).

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

Targets number of hauls, by area and participating countries, are reported in the Annex III of the MEDITS Handbook (MEDITS-Handbook Version n. 9, 2017).

## Beam Trawl Survey (SOLEMON)

1. Objectives of the survey

Common sole, *Solea solea*, is an important resource in the GFCM area. About 22% of the GFCM landings of common sole come from the Adriatic Sea. In GSA 17, common sole are targeted by "rapido" trawl and set nets, that amount to an annual value of landings of around 40 million Euros.

The main survey objectives are:

a) Assessing abundance and distribution in GSA17 of sole and other important demersal resources by surveys with "rapido" gears suitable to seize flatfish and other benthic animals.b) Pursuing the studies on the ecosystem impact of the "rapido" trawl fishery.

c) Finally, survey data will also contribute to the setting of the GES and targets for the Adriatic Sea in the framework of an ecosystem approach. Thus, matching to the requirement of the implementation of the MFSD (DIRECTIVE 2008/56/EC).

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

The survey should cover sole presence within the GSA 17 that, according to the genetic information pertains as a single stock.

All this holds also for benthic fish and shellfish of commercial interest, including rays and other elasmobranchs, since EU greatly focuses on such vulnerable resources. Survey should be carried out based on the protocol used since 2005 (SoleMon, 2019; Survey – Handbook Version 2019) and utilising the same gear. The gear is a modified beam trawl named as "rapido" trawl and should be appositely planned to fish on different types of bottom. The research vessel should utilize two gears simultaneously in each haul.

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

Data will be shared in WGs, both at EU and Mediterranean level, and with all Adriatic member States through common database AtrIS. Targets number of hauls, by area and participating countries, are reported in the Solemon Handbook (SoleMon, 2019).



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

Italy, Croatia and Slovenia to cooperate and coordinate.

## Pelagic Trawl Survey in the Black Sea (PTSBS)

1. Objectives of the survey

The aim of the pelagic trawl survey in the Black Sea is the assessment of the stock biomass of sprat (*Sprattus sprattus*) (Table 2.6 - Research surveys at sea). Furthermore, an analysis of the distribution and abundance of the other species caught as by-catch will be presented.

\* Estimating abundance indices (by number and biomass) of the main pelagic species of commercial interest distributed at a depth between 10 m and 100 m;

\* Describing the demographic structure of species of interest to the fishery, together with spatial distribution patterns;

\* Undertaking size and biological sampling, including extraction of parts to determine the age of the main species targeted by the fishery;

\* Assessing the impact of fishing activity on the environment.

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

The surveys for sprat are planned in Spring and Autumn each year. Each survey includes 30 mid-water trawl hauls in Romania, and 36 in Bulgaria.

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

According to the agreement between Bulgaria and Romania, both countries will undertake annually research surveys in their territorial waters and EEZ under their jurisdiction, following common methodology, harmonization of biological data sampling and analysis and harmonization of stock assessment methods.

Both countries will follow the methodologies published in their web pages, accomplished by the Technical guidelines for scientific surveys in the Mediterranean and the Black Sea. - FAO Fisheries and Aquaculture Technical Papers No. 641, and methodologies already adopted by other EU countries: MEDIAS HANDBOOK. The pelagic trawl survey results are presented during the MEDIAS meeting.

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

Romania and Bulgaria commit to provide the financial means for the scientific surveys and working meetings.

The type of participation was marked in Table 2.6 as 'Combination'. The 'Combination' consists of 'Financial', 'Technical' and 'Personnel', but none of them is a matter of Cost-sharing agreement, because the signed agreement is only for coordination of methodologies and activities.

## Bottom trawl survey in the Black Sea (BTSBS)

1. Objectives of the survey

The aim of the bottom trawl survey in the Black Sea is the assessment of the stock biomass of turbot (*Scophthalmus maximus*) (Table 2.6 - Research surveys at sea), along the Romanian



and Bulgarian Black Sea coasts, estimation of the biomass and abundance of the reference species by depth strata and study of size/age and sex structure, food composition, by-catch, distribution of the stock. Furthermore, an analysis of the distribution and abundance of the other species caught as by-catch will be presented (piked dogfish and whiting).

\* Estimating abundance indices (by number and biomass) of the main pelagic species of commercial interest distributed at a depth between 10 m and 100 m;

\* Describing the demographic structure of species of interest to the fishery, together with spatial distribution patterns;

\* Undertaking size and biological sampling, including extraction of parts to determine the age of the main species targeted by the fishery;

\* Assessing the impact of fishing activity on the environment.

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

In Romania, two surveys for turbot stock assessment by swept area method will be conducted, in April-May and November - December. The surveyed region will be divided into four strata, depending on the depth – Stratum 1 (15-35 m), Stratum 2 (35-50 m), Stratum 3 (50-75 m) and Stratum 4 (75-100 m). For assessment of turbot, whiting and piked dogfish abundance and biomass, the surveyed territory will be divided into 100 squares. The sampling will be carried out at 40 randomly chosen fields (rectangles) in the spring and 40 in autumn, situated at a depth between 15-100 m. Each rectangle is with sides 10'Lat × 10'Long, while the total area is 125.16 km2 (measured by GIS), large enough for a standard lug extent in a meridian direction to fit within the field boundaries.

In Bulgaria, the BTSBS is conducted in May-June and November-December each year. The survey design follows the scheme of the previous demersal surveys, e.g. the region will be divided into four strata, depending on the depth – Stratum 1 (15-35 m), Stratum 2 (35-50 m), Stratum 3 (50-75 m) and Stratum 4 (75-100 m). For assessment of abundance and biomass, the surveyed territory is divided into 143 squares, each of them with sides 5 x 5 Nm, area 25 Nm2. The sampling will be carried out at 36 randomly chosen fields (rectangles), situated at a depth between 15-100 m. Each rectangle is with sides 5'Lat × 5'Long, while the total area is 62.58 km2 (measured by GIS). Each field should be marked with letters and digits for better distinction.

The seabed area covered during a single haul represents a basic measurement unit, considered representative, as turbots do not aggregate in dense assemblages. The duration of each haul is 60 min at the trawling speed of 2.2-2.6 knots.

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

According to the agreement between Bulgaria and Romania, both countries will undertake annually research surveys in their territorial waters and EEZ under their jurisdiction, following common methodology, harmonization of biological data sampling and analysis and harmonization of stock assessment methods.

Both countries will follow the methodologies published in their web pages, accomplished by the Technical guidelines for scientific surveys in the Mediterranean and the Black Sea. - FAO Fisheries and Aquaculture Technical Papers No. 641, and methodologies already adopted by other EU countries: MEDITS handbook. The bottom trawl survey results are presented during the MEDITS meeting.

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



Romania and Bulgaria commit to provide the financial means for the scientific surveys and working meetings.

The type of participation was marked in Table 2.6 as 'Combination'. The 'Combination' consists of 'Financial', 'Technical' and 'Personnel', but none of them is a matter of Cost-sharing agreement, because the signed agreement is only for coordination of methodologies and activities.

## Pan-Mediterranean Acoustic Survey (MEDIAS)

## 1. Objectives of the survey

The MEDIAS survey programme intends to evaluate the abundance and spatial distribution of small pelagic fish resources by direct methods (acoustics), independently of the data provided by commercial fisheries; Target species are anchovy and sardine.

2. Description of the survey design and methods used in the survey for each type of data collection as listed in Survey is conducted in the summer-autumn period of the year. Acoustic data for fish abundance estimation are collected by calibrated scientific echo sounder at 38kHz; Fish samples are collected by use of pelagic trawl net, with aim to provide information needed for echograms scrutiny, as well as for collection of fish biological data; Abiotic environmental data (measurements of temperature and salinity) collections are made by CTD vertical profiles, while additional biotic data in pelagic ecosystem are obtained by plankton sampling (acoustic at 120kHz and/or vertical hauls).

Collection of navigational data ensures that all other collected data are geo-referenced (suitable for spatial analyses). Manual of the survey is available at http://www.mediasproject.eu/medias/website/handbooks-menu.html, and it contains a graphical map of the surveys.

This non-binding RWP should serve to harmonize methodologies with the aim of providing appropriate scientific data for informing stock assessment and fisheries management, with particular attention to the survey period. The survey period shall be agreed between the MEDIAS Steering Committee and the RCG Med&BS, and reported in the survey manual/protocol, and in Table 2.6. This shall be achieved with the finalizing of the binding RWP to be implemented in the period 2025-2027.

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

The MEDIAS acoustic surveys, performed in spring-summer, should cover a series of areas in the Mediterranean EU MS (Spain, France, Croatia, Italy, Slovenia and Greece) with a standardised methodology. As proposed in the RCG Med&BS 2022 recommendation 7, Malta shall carry out the survey within GSA 15 on a voluntary basis, and this commitment will also be reflected in the NWP.

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

The geographical areas that will be covered by the MEDIAS surveys and the respective days at sea per participating countries are reported in Table 1 of the Medias manual (MEDIAS-Handbook, 2012).



## **SECTION 3: FISHING ACTIVITY DATA**

## Text Box 3.1: Fishing activity variables data collection strategy

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

Explain the reasons for implementing complementary data collection

Information on the sampling schemes is available in Annex 1.2 document template. However, MS is invited to highlight additional information here on sampling schemes and sampling frames deemed necessary to understand the actual sampling design planned for the implementation year(s).

(max. 900 words)

## Text Box 3.2: Fishing activity variables data collection strategy (for inland eel

#### commercial fisheries)

General comment: This text box fulfils Article 5(2)(c), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 3.2 of the EU MAP Delegated Decision annex. It is intended to describe the methods and data sources used to estimate fishing capacity, effort and landings data.

MS is invited to describe inland eel commercial fisheries landings, effort and capacity data collection. Please list or describe e.g. number of fishing entities, fishing methods as well as associated units used.

(max. 900 words)



## **SECTION 4: IMPACT OF FISHERIES ON MARINE BIOLOGICAL RESOURCES**

## **Text Box 4.2: Incidental catches of sensitive species**

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.

This text box is complementary to information on the sampling schemes provided in the quality document (Annex 1.1). It serves to highlight information on sampling schemes and sampling frames related to incidental catches of sensitive species.

This task was focused on the incidental catch of vulnerable species (i.e. sea turtles, cetaceans, seabirds, sharks and rays). It is aimed at collating inputs towards the filling in of the gaps identified in WP1 regarding bycatch monitoring, to identify aspects and specific topics to be addressed in the perspective of possible implementation of regional work plans in the Mediterranean and Black Sea.

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?

An attempt was made to perform a preliminary risk assessment. The information was collected from the following sources:

1. Data from the most recent Member States Annual Reports and National Work Plans (2017-2019, 2020, 2021);

2. MS Pilot Studies on Incidental Catch of Vulnerable Species;

3. Data from the recent GFCM publication "Regional review of incidental catch of vulnerable species in Mediterranean and Black Sea fisheries";

4. ICES data call (WGBYC);

5. Expert knowledge.

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

A quali-quantitative approach was attempted to identify the Gears were identified by means of the review process performed under STREAMLINE (Task 2.2). However, further work is needed to better define and identify hot spot areas of interaction between fisheries and vulnerable species. The incoming ISSG on RWPs that will be supporting the RCG Med&BS will represent the suitable platform to further progress towards this goal.

- What are the methods to calculate the observation effort?

The proposed observation effort is based on two scenarios aimed at achieving, in general, the 0.5% (target suggested in the FAO-GFCM Handbook 2019) and 1% coverage of the total number of PSUs performed by gear and GSA (according to FDI data 2015-2020). In some cases, lower thresholds could be, such as in the monitoring of set nets, where the number of trips expected at 1% coverage would be too high to be achieved. In contrast, higher targets (1.5%) could be fixed for some fisheries (e.g., pelagic pair trawl).



In any case, the level of monitoring will ultimately be determined by the financial and human resources available to address the task and the collaboration offered by fisheries stakeholders (FAO-GFCM Handbook 2019). Therefore, any sampling design/coverage shall be accompanied with a cost-benefit analysis to explore whether it is financially viable to meet the relevant targets.

PSUs for metiers targeting large pelagic species (e. g., drifiting longlines) should be agreed also with RCG LP and ICCAT.

In both the Mediterranean and Black Sea, attention shall be paid to the interaction between cetaceans and set nets (e.g., depredation) that could possibly lead to cases of incidental bycatch and stranding (e.g., due to ingestion of parts of the nets).

- 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 follow the recommendations from regional grants (e.g., STREAM) and the available literature and expert groups in the Med&BS area.
- RCG MED & BS 2021 Recommendation 8: Agreement on methodology for data collection on incidental catch of vulnerable species.
- FAO. 2019. Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: Methodology for data collection. FAO Fisheries and Aquaculture Technical Paper No. 640. Rome, FAO: https://www.fao.org/gfcm/publications/series/technical-paper/640/en/

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

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

## YES

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

YES

Additional information on sampling schemes

Based on the review of the available information performed under STREAMLINE Task 2.2, WP2 and WP4 identified the areas (GSAs and/or Countries) where bycatch data have been recorded and reported for different groups of vulnerable species, thus the areas most susceptible to this negative interaction.

Then, for each candidate group of vulnerable species, the draft non-binding RWP proposes, by gear and area, the numbers of primary sampling units, PSU (i.e. the fishing trip and/or the fishing day), that should be carried out to improve the current coverage. Depending on the group of vulnerable species, the gear and



the reported fishing effort, and with the aim of achieving a standard coverage among different areas, two possible scenarios were presented (0.5 and 1.0% coverage).

The proposed number of observations can be achieved following different methods, not only through onboard observations, but also through questionnaires, logbook, self-reporting by fishers, etc., following the approaches and methodologies proposed by the FAO-GFCM Manual (2019) "Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: Methodology for data collection".

As a starting point, a preliminary list of species to be considered has also been agreed, and is based on the one provided by the FAO-GFCM Manual (2019). However, the final list of species shall be defined according to all relevant international conventions and EU regulations considered in EU MAP (e. g., COMMISSION DELEGATED DECISION (EU) 2021/1167).

Group of vulnerable species	Family	Species	Common name
	Balaenopteridae	Balaenoptera acutorostrata	Common minke whale
		Balaenoptera borealis	Sei whale
		Balaenoptera physalus	Fin whale
		Megaptera novaeangliae	Humpback whale
	Balaenidae	Eubalaena glacialis	North Atlantic right whale
	Physeteridae	Physeter macrocephalus	Sperm whale
		Kogia sima	Dwarf sperm whale
	Phocoenidae	Phocoena phocoena	Harbour porpoise
Cetaceans	Delphinidae	Steno bredanensis	Rough-toothed dolphin
_		Grampus griseus	Risso's dolphin
		Tursiops truncatus	Common bottlenose dolphi
		Stenella coeruleoalba	Striped dolphin
		Delphinus delphis	Common dolphin
<i>r</i>		Pseudorca crassidens	False killer whale
		Globicephala melas	Long-finned pilot whale
		Orcinus orca	Killer whale
	Ziphiidae	Ziphius cavirostris	Cuvier's beaked whale
		Mesoplodon densirostris	Blainville's beaked whale
Seals	Phocidae	Monachus monachus	Mediterranean monk seal



Group of vulnerable species	Family	Species	Common name
Group of vulnerable species Sharks, Rays, Chimaeras	Alopiidae	Alopias vulpinus	Common thresher
		Carcharhinus plumbeus	Sandbar shark
	Carcharhinidae	Carcharodon carcharias	Great white shark
		Prionace glauca	Blue shark
	Centrophoridae	Centrophorus granulosus	Gulper shark
	Cetorhinidae	Cetorhinus maximus	Basking shark
	Gymnuridae	Gymnura altavela	Spiny butterfly ray
	Hexanchidae	Heptranchias perlo	Sharpnose sevengill shark
	1000000	Isurus oxyrinchus	Shortfin mako
	Lamnidae	Lamna nasus	Porbeagle
Sharks, Rays, Chimaeras	Myliobatidae	Mobula mobular	Devil fish
	Odentersididee	Carcharias taurus	Sand tiger
-	Odontaspididae	Odontaspis ferox	Small-tooth sand tiger shar
$\land$	Oxynotidae	Oxynotus centrina	Angular rough shark
	Prictidao	Pristis pectinata	Smalltooth sawfish
	Tistuae	Pristis pristis	Common sawfish
		Dipturus batis	Blue skate
V	B-114-2	Leucoraja circularis	Sandy ray
	кајідае	Leucoraja melitensis	Maltese skate
		Rostroraja alba	White skate
	Dhinabatidaa	Rhinobatos cemiculus	Blackchin guitarfish
	Kninobatidae	Rhinobatos rhinobatos	Common guitarfish
		Sphyrna lewini	Scalloped hammerhead
	Sphyrnidae	Sphyrna mokarran	Great hammerhead
		Sphyrna zygaena	Smooth hammerhead
		Squatina aculeata	Sawback angelshark
	Squatinidae	Squatina oculata	Smoothback angelshark
		Squatina squatina	Angelshark
	Triakidae	Galeorhinus galeus	School/Tope shark

Group of vulnerable species	Family	Species	Common name
	Falconidae	Falco eleonorae	Eleonora's falcon
	Alcedinidae	Ceryle rudis	Pied kingfisher
		Halcyon smyrnensis	White-throated kingfisher
	Charadriidae	Charadrius alexandrinus	Kentish plover
		Charadrius leschenaultii columbinus	Greater sand plover
	Hydrobatidae	Hydrobates pelagicus melitensis*	European storm-petrel (Mediterranean)
		Hydrobates pelagicus*	European storm-petrel
		Larus audouinii*	Audouin's gull
Cophirds		Larus armenicus*	Armenian gull
Seabirus		Larus genei*	Slender-billed gull
		Larus melanocephalus*	Mediterranean gull
	Laridae	Sternula albifrons*	Little tern
		Thalasseus bengalensis*	Lesser crested tern
		Thalasseus sandvicensis*	Sandwich tern
		Hydroprogne caspia*	Caspian tern
•		Gelochelidon nilotica*	Common Gull-billed tern
	Pandionidae	Pandion haliaetus	Osprey
	2 10 1221	Pelecanus crispus	Dalmatian pelican
	Pelecanidae	Pelecanus onocrotalus	Great white pelican
	Phalacrocoracidae	Gulosus aristotelis desmarestii	European shag (Mediterranean)
		Microcarbo pygmaeus	Pygmy cormorant
	Phoenicopteridae	Phoenicopterus roseus	Greater flamingo
	Procellariidae	Calonectris diomedea*	Scopoli's shearwater
		Calonectris borealis*	Cory's shearwater
		Puffinus yelkouan*	Yelkouan shearwater
		Puffinus mauretanicus*	Balearic shearwater
	Scolopacidae	Numenius tenuirostris	Slender-billed curlew

\*The only birds which can be considered as seabirds. The other species in the table are mentioned as "aves" in Annex II of the Barcelona Convention. Some of them belong to the so-called water-bird or aquatic bird (e.g. birds that inhabit or depend on bodies of water or wetland areas).



Group of vulnerable species	Family	Species	Common name
		Caretta caretta	Loggerhead turtle
Sea turtles		Chelonia mydas	Green turtle
	Cheloniidae	Eretmochelys imbricata	Hawksbill Turtle
		Lepidochelys kempii	Kemp's ridley sea turtle
		Lepidochelys olivacea	Olive ridley sea turtle
	Dermochelyidae	Dermochelys coriacea	Leatherback sea turtle
	Trionychidae	Trionyx triunguis	African softshell turtle

Member State may add specific contextual information related to a region and the implementation year(s), for instance highlighting new developments not yet detailed in the quality document, regional adaptation and/or perspectives for the future. Insert the information under the same sampling scheme identifier as in Table 2.5.

Additional description on sampling frames

Member State may add complementary description to what includes the 'Sampling frame description' column of Table 2.5. Insert the information under the same identifier and name as in columns 'Sampling frame identifier' and 'Sampling frame description' of Table 2.5, and in the same order (Sampling frame identifier + Sampling frame description).

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

## **Text Box 4.3: Fisheries impact on marine habitats**

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

1. Aim of the study: Non-binding RWP on fish stomach contents collection and analysis in the Med&BS

2. Duration of the study: 2023

3. Methodology and expected outcomes of the study

In the Mediterranean, the stomach sampling shall be based on European hake, *Merluccius merluccius*, and on the MEDITS international trawl survey. However, in order to cover all the quarters (and a larger size range), it is suggested to sample other full stomachs of European hake from the biological sampling of commercial fisheries, in the quarters not covered by the MEDITS survey. The stomach sampling of European hake shall be done according to three size classes: Juveniles, sub-adults and adults.

In addition, it is proposed to sample the stomachs of monkfish and anglerfish, *Lophius piscatorius* and *L. budegassa*. It is suggested to sample full stomachs of monkfish and anglerfish during all the year, taking advantage of both the MEDITS survey and the biological sampling of commercial fisheries.

In the Black Sea, the stomach sampling shall be based on turbot, *Scophthalmus maximus*, and on the Black Sea international surveys. However, in order to cover all the quarters, it is suggested to sample full stomachs of turbot also from the biological sampling of commercial fisheries, in the quarters not covered by the surveys. The stomach sampling of S. maximus shall be done according to three size classes: juveniles, discarded adults, and adults.



In addition, it is suggested to sample the stomachs of Mediterranean horse mackerel and sprat, *Trachurus mediterraneus* and *Sprattus sprattus*. It is proposed to sample full stomachs of the two species during all the year, taking advantage of both the surveys and the biological sampling of commercial fisheries. The subdivision of stomachs to be sampled between the two EU MSs (Bulgaria, Romania) was proportionally assigned.

Please see Table 4.1.

(max 900 words per study)



## **SECTION 5: ECONOMIC AND SOCIAL DATA IN FISHERIES**

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

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

1. Description of clustering

In cases where a fleet segment has less than 10 vessels:

- (a) Clustering may be necessary in order to design the sampling plan and to report economic variables;
- (b) Member States shall report which fleet segments have been grouped at the national level and shall justify the clustering on the basis of statistical analysis;
- (c) In their annual report, Member States shall report the number of sampled vessels for each fleet segment regardless of any clustering made to collect or provide the data."

Clustering should be described, and information should be given on the segments that are clustered. MS should distinguish between segments considered for clustering as follows:

- (a) Important segments with distinct characteristics;
- (b) Segments similar to other segments;
- (c) Non-important segments with distinct characteristics.

Importance of fleet segments should be assessed in terms of landings (value and volume) and/or effort. Similarity should be demonstrated using expert knowledge on fishing patterns or on available data on landings and/or effort.

For each of the cases described, MS should apply the following approaches for clustering according to the different characteristics of fleet segments:

- (a) Important segments with distinct characteristics
- (b) Such segments should not be clustered unless strictly necessary in data reporting for confidentiality reasons. Data should be separately collected for these segments and included in national totals (unless separate identification is then made possible as a consequence).
- (c) Segments similar to other segments
- (d) Such segments can be clustered for sampling purposes, as well as for confidentiality reasons. The segments merged should be selected according to criteria that should be fully explained and justified by the MS. In particular, the approach to determine similarity should be clearly described by the MS.
- (e) Non-important segments with distinct characteristics
- (f) Such segments can be clustered for sampling purposes, as well as for confidentiality reasons. These segments can be merged with other non-important segments. Clustering of these segments with other important segments should be avoided. MS should explain how the lower importance had been determined and for which reasons the clustered segments have been selected. Clusters should be named after the biggest segment in terms of number of vessels or economic significance.

2. Description of activity indicator

If the MS is using activity indicator for dividing the fleet segment into different activity levels, use "L" for the low activity vessels and "A" for the normal economic activity vessels please provide description of activity methodology used.

3. Deviation from the RCG ECON (ex. PGECON) definitions Describe and justify any deviations from variable definitions as listed in '<u>EU MAP Guidance Document</u>' in the JRC/DCF website.

(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 Please provide % of the MS production from the latest EU aquaculture production reported to the EUROSTAT.

2. Deviation from the RCG ECON (ex. PGECON) definitions Describe and justify any deviations from variable definitions as listed in 'EU MAP Guidance Document' in the DCF website. (max. 900 words)



#### SECTION 7: ECONOMIC AND SOCIAL DATA IN FISH PROCESSING

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

General comment: This text box fulfils Article 5(2)(f), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 7 of the EU MAP Delegated Decision annex. MS should provide justification for complementary data collection for fish processing.

This text box is optional, since all information on the sampling schemes is available in Annex 1.2 document template. MS is invited to highlight additional information here on sampling schemes and sampling frames deemed necessary to understand the actual sampling design planned for the region and the implementation year(s).

(max. 900 words)



## ANNEX 1.1 - QUALITY REPORT FOR BIOLOGICAL DATA SAMPLING SCHEME

The quality report fulfils Article 6(3)(d) of Regulation (EU) 2017/1004. This document is intended to specify data to be collected under Chapter II, point 2 of the EU MAP Delegated Decision annex: Biological data on exploited biological resources caught by Union commercial and recreational fisheries. Use this document to state whether documentation in the data collection process (design, sampling implementation, data capture, data storage, sample storage and data processing) exists and identify where this documentation can be found. Names of sampling schemes and strata shall be identical to those in Tables 2.2, 2.3, 2.4, 2.5, 2.6 and 4.1 of the WP/AR. In case of quality information on scientific surveys, use the survey acronym as a sampling scheme identifier. For mandatory surveys, refer to Table 1 of the EU MAP Implementing Decision annex, see also MasterCodeList 'Mandatory survey at sea'.

MS	:
	•

**Region:** 

Sampling scheme identifier:

Sampling scheme type:

**Observation type:** 

Time period of validity: from when until when

Short description (max 100 words): e.g. sampling scheme aiming at collecting length samples from commercial landings on-shore for all species listed in Table 1 of the EU MAP Delegated Decision annex. The scheme covers mainland and all outermost regions ('RUP' in French, Portuguese, and Spanish).

## **Description of the population**

**Population targeted:** Specify which are the primary sampling units (PSU), e.g. all national port\*days (information present in former Table 4B). For research surveys: specify the main target species from a survey perspective (as opposed to Table 1 in the Annex to the Implementing Decision) and the main survey area.

**Population sampled:** Specify which part of the target population will be sampled and specify which part of the target population is unreachable for sampling or excluded for some reason to explain, *e.g. major ports being listed as auctions excluding all minor ports and no sampling during the week-ends.* For research surveys at sea describe target species in single-species surveys or ecosystem component (*e.g. demersal, pelagic*) in multispecies surveys.

**Stratification:** Explain the logic taken to stratify the population and the number of strata generated, *e.g. population stratified in 3 geographical lots (from A to B, from B to C and from C to D). Each lot is then stratified by auction.* 

## Sampling design and protocols

**Sampling design description:** Describe how the sampling allocation is defined; how PSU and SSU are selected for sampling; indicate for which catch fraction the sampling scheme applies.

Is the sampling design compliant with the 4S principle?: Y/N/NA (NA for e.g. surveys and diadromous and recreational sampling schemes)

**Regional coordination:** Indicate if the sampling design and protocols were developed as part of a regional or multi-lateral agreement, and if yes, refer to the agreement (table 1.3) and list all MS participating.



**Link to sampling design documentation:** Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, Member State shall provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on the sampling design exists, Member State shall provide some details in the textbox.

**Compliance with international recommendations:** Indicate 'Y' (yes) if the sampling design is in line with international recommendations, and 'N' if not. If no relevant expert or coordination groups exist, the sampling design should be shortly explained in the text, and should be available upon request for the evaluators.

**Link to sampling protocol documentation:** Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on the sampling design exists, provide details on the sampling protocol in this textbox.

**Compliance with international recommendations:** Member State shall state 'Y' (yes) if the sampling protocol is in line with international recommendations, and 'N' if not. If no relevant expert or coordination groups exist, the sampling protocol should be shortly explained in the text, and should be available upon request for the evaluators.

## Sampling implementation

**Recording of refusal rate:** Indicate with 'Y' (yes) or 'N' (no), or 'NA' (not applicable, in case of research surveys). If 'N' (no), indicate when (year) documentation will be available.

**Monitoring of sampling progress within the sampling year:** Indicate how sampling allocations are adjusted (if needed) and followed-up, what are the mechanisms in place to resolve issues and adopt mitigation measures during the sampling year?

#### Data capture

**Means of data capture:** short description (+ photo optionally). Indicate what are the means for collecting the data, e.g. scales, measuring board, dedicated software, ...

**Data capture documentation:** Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on data capture (e.g. measuring protocols, maturity staging, manual for the data capture means etc.) exists, provide some details in the textbox.

**Quality checks documentation:** Indicate with 'Y' (yes) or 'N' (no). If 'N' (no), indicate when (year) documentation will be available. Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on the quality checks exists, provide some details in the text box.

## Data storage

**National database:** Provide the name of national database, if applicable. Otherwise, insert 'NA' (not applicable). Provide a link if the database is accessible through a website.

**International database:** Provide the name of international database(s) and the organisation hosting the database, if applicable. Otherwise, insert 'NA' (not applicable). Provide a link if the database is accessible through a website.

**Quality checks and data validation documentation:** Provide link to webpage where the documentation can be found. Otherwise, provide some details in the text box.

#### Sample storage

Storage description: Indicate the type of soft tissues and hard parts stored (e.g. age structures, stomach, plankton, genetics) and the location used for samples storage; how long the samples are stored; how conservation and maintenance as well as access to samples are organised; whether the samples are stored under the



auspices/responsibility of an international organization; if yes, which one. Provide a link to information on quantities of sampled stored by species/stock, geographic sub-area and by year.

Sample analysis: Provide a brief description or the references to documents, including link to webpages (e.g. age reading manuals, EGs reports and protocols) if adequate, where information on the processing of the samples is provided.

#### Data processing

**Evaluation of data accuracy (bias and precision):** Indicate with 'Y' (yes) or 'N' (no). If 'N' (no), indicate when (year) documentation will be available. Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on the evaluation of data accuracy exists, provide some details in the textbox.

**Editing and imputation methods:** Indicate with 'Y' (yes) or 'N' (no). If 'N' (no), indicate when (year) documentation will be available. Provide a link to a webpage where the documentation can be found. If no link is available, but documentation exists, provide a literature reference (author(s), year and type of publication - e.g. internal report). If no documentation on the editing and imputation methods exists, provide some details in the textbox.

**Quality document associated to a dataset:** Is there a publication digital object identifier (DOI) created? Is there a document summarising the estimation process followed?

Validation of the final dataset: How are datasets validated (quality checked) before providing to enduser?



#### 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.

## **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):

#### Sampling scheme:

Variables:

**Supra region(s):** 

## Survey planning

Provide a short description of the population the sampling scheme applies to; e.g. '*less active vessels using passive gears*'.

## Survey design and strategy

List data sources; e.g. interviews, registers, log books, sales notes, VMS, financial accounts etc. Describe how the sample sizes were determined.

Describe survey methods and distribution; e.g. questionnaire forms by post, by email, on website, by phone etc. access to other datasets etc.

Describe the role of auxiliary information, if any, in the strategy: e.g. for validation, cross referencing, fall back data source etc.

## **Estimation design**

Describe method of calculating population estimate from sample. Describe method of calculating derived data: e.g. imputed values. Describe treatment of nonresponse.

## **Error checks**

Describe potential errors and how and where in the process these are detected, avoided or eliminated e.g., data;



duplication, double counting, respondent error, upload error, processing error etc.

#### Data storage and documentation

Describe how the data is stored.

Provide link to webpage where additional methodological documentation can be found, if any.

## Revision

Describe the frequency of the methodology review e.g., revision of; segmentation, survey method per segment, per variable etc.

## Confidentiality

Are procedures for confidential data handling in place and documented?

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

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

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



## 4. ANNEX: Med&BS RWP 2023 Tables



