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



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

**WP2 – Filling information gaps**

**Task 2.3 Recreational fisheries**

**Deliverable 2.3 – Reports of the workshops and guidelines on  
the best practice methodologies for sampling, processing,  
analysing and managing biological and spatial data on RF**

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## 1. EXECUTIVE SUMMARY

This document, Deliverable 2.3 “Reports of the workshops and guidelines on the best practice methodologies for sampling, processing, analysing and managing biological and spatial data on RF”, describes the activities and achieved outcomes of the Task 2.3 of the STREAMLINE project.

Under Task 2.3, a questionnaire based survey was conducted, in order to evaluate the similarities/differences between sampling methods applied in various countries, identify strengths and weaknesses, as perceived by the participants, of methodology used, and to record mitigation measures applied by data collectors in order to upgrade/refine the quality of data obtained.

The questionnaire was made available on-line in late November 2021 and ran for a period of two months and was widely distributed among the project partners as well as related for a (ICES, GFCM, RCG MED&BS).

The questionnaire was organised in five sections (Annex I)

- 1) Section 2: General Description of the STREAMLINE project and targets. General information of the participant
- 2) Section 2: Data collection – Methodology
- 3) Section 3: General view on a regionally coordinated RF data collection and analysis
- 4) Section 4: RF data collection and analysis
- 5) Section 5: General view on the RF data collection and analysis program

Overall, 26 responses were yielded, with representatives from all Mediterranean-European countries participating in the survey, as well as experts from Finland, Ireland, the Netherlands, and the UK. Responders work in 22 out of the 31 Mediterranean GSAs, with the majority of them being involved in data analysis, on-site and off-site surveys. The principle drivers of data collection were for the needs of EUMAP and for assessment and management, and data was mainly collected at a national level (e.g. within prefectures, regions) (Fig. 1). For the purposes of data collection, a wide variety of methodology is being applied, and in general there is a combination of two or more methods. The most frequently used methods were on-site interviews, mobile applications and recall surveys, performed on a monthly basis.

During the plenary discussion at the RCG Med&BS and STREAMLINE Joint Workshop on Recreational Fisheries (27th April 2022, online), the group of participants agreed on a draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea and an associated roadmap. The draft proposal will be circulated by the RCG Med&BS Chairs among the National Correspondents, and will be considered, revised and finalized via written procedure before the RCG Med&BS annual meeting in September 2022, with the support of STREAMLINE. The final approval will be achieved during the RCG Med&BS annual meeting. The draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea is the following:

- Estimation of 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, and the experience gained by means of the implementation of the pilot studies, each MS will implement this task following their own procedures (e.g., telephone surveys, license system, etc.). With the aim of facilitating this process and the setting of minimum standards, a standardized protocol for performing the surveys will be provided and shared.

This draft proposal will be circulated by the RCG Med&BS Chairs among the National Correspondents, and will be considered, revised and finalized via written procedure before the RCG Med&BS annual meeting in September 2022, with the support of STREAMLINE.

The final approval will be achieved during the RCG Med&BS annual meeting. The RCG Med&BS, supported by STREAMLINE, will then submit the proposal for consideration by the Commission and the STECF (STECF EWG 22-18 Evaluation of Work Plans for data collection and data transmission issues, 24-28 October 2022).

With the aim of facilitating the work of MSs and national experts involved in the data collection on RFs, the STREAMLINE Task 2.3 Core Team drafted a template for performing off-site surveys, and a template for on-site surveys.



## 2. INTRODUCTION

Recreational fisheries (RF) are important economic drivers with profound social interactions among practitioners throughout the world. It constitutes a cherished hobby that supports coastal socioeconomics (Pawson et al., 2007; Armstrong et al., 2013; Hyder et al., 2017). According to GFCM (Grati et al., 2021), RF is defined as “*a non-commercial fishing activity exploiting marine living resources for recreation, tourism or sport*”. In cases that recreational fishers use the fish caught for personal/family consumption, there is a fine line between on the definition of what is subsistence fishing and RF (FAO, 2017), but the different definitions used are in agreement that RF has a non-commercial and non-profit purpose (Hyder et al., 2017). The above mentioned definition is the one endorsed by both GFCM and RCG MED&BS, and thus the one adopted for the purposes of the current work.

Despite RF being a leisure activity, its impact on biological and fisheries resources is considered significant. In Europe, the marine recreational fishers are estimated to be approximately 8.7 million (participation rate of 1.6%) operating 77.6 million days per year, and spending as much as €5.9 billion annually for their activity (Hyder et al., 2018). According to official reports of the European Parliament (EP, 2018), the estimated economic impact of European marine recreational fisheries in the EU alone is estimated at EUR 8.4 billion (comprising EUR 4.2 billion in direct, EUR 1.8 billion in indirect and EUR 2.5 billion in induced expenditure). In addition, marine RF supports an estimated 99,000 full-time equivalent jobs (FTEs) in Europe, comprising 57,000 direct, 18,000 indirect and 24,000 induced jobs, and generating an average economic value of EUR 49,000 per year per FTE. In the European Union alone, the FTEs are estimated as high as 84,000 FTEs (50,000 direct, 15,000 indirect and 20,000 induced jobs). RF catches can be as high as 10-50% of the total fisheries catch (Font and Lloret, 2014), and in some cases it may even exceed that of small-scale fisheries (Khalfallah et al., 2017), whereas their impact may vary between fish stocks, representing 2-72 % of total catch (EP, 2018). The increasing extent of the activity made the inclusion of recreational fisheries in fisheries management and conservation a necessity.

Due to the specificities of MRF, data collection and monitoring require methodological approaches different from those used in other types of fisheries (ICES, 2010; ICES, 2013). Acknowledging this need, GFCM issued in 2021 the “*Handbook for recreational fisheries data collection in the Mediterranean and Black Sea*” (Grati et al., 2021) (hereafter referred to as “GFCM-RF handbook”). The GFCM-RF handbook is an exhaustive and thorough account of data collection methodology and practices, as well as related statistical analyses, and has been endorsed by RCG MED&BS, and used in the Member States’ planning of RF pilot studies within the EUMAP.

Data gaps and needs on RF have been exhaustively described by Grati (2019), while thorough guidelines have been produced (Grati et al. 2019, 2021) and pilot studies started in most of the EU countries. Yet, provided the difficulties in data collection of the RF sector, the steps forward, despite important, are still at low pace. This slow progression has been attributed to several challenges, mainly due to the lack of a co-ordinated and easy-to-apply monitoring scheme for all participating countries. Within STREAMLINE project and specifically Task 2.3 effort is being made, building on the information collated by the STREAM project and other actions, as well as revisions of RFs monitoring programs (pilot studies), to evaluate the shortcomings of previous efforts on RF data collection and to propose a simple regional coordinated work plan (RWP) that will represent the basis for drafting future RWPs on recreational fisheries.



In addition, the STREAMLINE WP1 performed a comprehensive analysis of the different deliverables of the previous regional grants with emphasis in the methodological aspects developed under the different actions. Moreover, the outcomes of the pilot studies implemented by the different Mediterranean and Black Sea Member states have been analysed as well as the work performed on the issue of regional sampling schemes by different scientific fora such as STECF, GFCM or ICES. Actions recommended by the Regional Coordination Group for the Mediterranean and the Black Sea (hereafter RCG Med&BS) have also been taken into account.

In parallel, *ad hoc* questionnaires have been submitted to the relevant National Correspondents for Data Collection in order to have a clear picture on the prospects to implement regional sampling plans in the different areas of the Mediterranean and the Black Sea. These questionnaires concerned, respectively, GSAs 1-7 (Spain and France); 9-10-11 (Italy); 15 (Malta); 17-18 (Italy, Slovenia and Croatia), 22-23-25 (Cyprus and Greece) and GSA 29 (Bulgaria and Romania).

Through the analysis of the elements above and their discussion with the RCG Med&BS, a number of conclusions have been set, and associated actions have been proposed as follows:

- For the whole Mediterranean and Black Sea Regions, data on recreational fisheries are sparse and difficult to obtain in a reliable way, as the licence and information systems are not homogeneous. Several pilot studies have been implemented in most of the MSs with different approaches, intensity, coverage and reliability of results. Despite the progress achieved in previous grants, it is commonly assumed that further work is needed at national and regional level.
- In general, the estimation of the “population” of recreational fishers is considered important, through nationwide probabilistic surveys (e.g., telephone surveys) and also the on-site validation of catches and biological parameters, since self-reporting has a lot of problems regarding misidentification of species or estimating lengths or weights.
- The establishment of a list of priority species based on regional specificities is a priority. In this regard, work developed in the framework of GFCM and RCG Med&BS should form the basis for establishing such a list.

Based on the above conclusions and with the aim to address the identified barriers and needs for the implementation of Regional Sampling Plans in the Mediterranean and Black Sea, a number of actions are proposed as follows:

- MS to ensure that their national methodology is in line with methodologies prescribed in the GFCM handbook on recreational fisheries starting from 2022
- RCG to plan further work to review list of species and discuss methodologies and type of data to be collected

### 3. ACTIVITIES PERFORMED IN TASK 2.3

#### 3.1.2 Questionnaire survey



Within the STREAMLINE project, a questionnaire based survey was conducted, in order to evaluate the similarities/differences between sampling methods applied in various countries, identify strengths and weaknesses, as perceived by the participants, of methodology used, and to record mitigation measures applied by data collectors in order to upgrade/refine the quality of data obtained.

The questionnaire was made available on-line in late November 2021 and ran for a period of two months and was widely distributed among the project partners as well as related for a (ICES, GFCM, RCG MED&BS).

The questionnaire was organised in five sections (Annex I)

- 6) Section 2: General Description of the STREAMLINE project and targets. General information of the participant
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### 3.1.2 STREAMLINE and RCG Med&BS Joint workshop on RFs

The RCG Med&BS and STREAMLINE Joint Workshop on recreational fisheries organized in response to the Recommendation n. 3 RCG Med&BS 2021 met online on the 27<sup>th</sup> April 2022 (Zoom platform), with the support of the RCGs Secretariat. The meeting was attended by 33 experts from the ten EU Member States of the Mediterranean and Black Seas, and two representatives of the Commission (DG MARE).

For each Member State (MS), a brief presentation of the current implementation of the monitoring of RFs under the national work plans was provided focussing on the methodological aspects. The presentations allowed to gain a good insight on the current status of implementation of the monitoring of RFs under the national work plans in the Mediterranean and Black Sea. Despite some specificities at national level, the approaches used are in line with the GFCM Handbook guidelines. Some MSs, such as Croatia, Cyprus and Slovenia, take advantage of a well implemented license system, while the other MSs are carrying out screening surveys (e.g., telephone surveys). All the MSs are progressing well in defining the population of recreational fishers.

The STREAMLINE project provided a presentation on the results of the review of the available elements (and gaps) for the implementation of a regional approach in the Med&BS (Work Package 1); in addition, the summary of the results of an online survey on RFs launched by STREAMLINE was also provided. The questionnaire was widely distributed among networks of experts (e.g. GFCM, ICES, RCG MED&BS), and yielded 26 responses. All Mediterranean-European countries participated in the survey, as well as experts from Finland, Ireland, the Netherlands, and the UK. Responders work in 22 out of the 31 Mediterranean GSAs, with the majority of them being involved in data analysis, on-site and off-site surveys. The principle drivers of data collection were for the needs of EU-MAP (and other institutional purposes, such as MSFD) and for assessment and management, and data was mainly collected at a national level (e.g. within prefectures, regions). For the purposes of data collection, a wide variety of methods is being used. The most frequently used were on-site interviews, mobile applications and recall surveys, performed on a monthly basis. Finally, the overall perception of responders was that a



regional co-ordinated plan on RF data collection and analysis is beneficial, displaying both strengths and weaknesses.

## 4. RESULTS

### 4.1 Analysis of questionnaires

Overall, 26 responses were yielded, with representatives from all Mediterranean-European countries participating in the survey, as well as experts from Finland, Ireland, the Netherlands, and the UK. Responders work in 22 out of the 31 Mediterranean GSAs, with the majority of them being involved in data analysis, on-site and off-site surveys. The principle drivers of data collection were for the needs of EUMAP and for assessment and management, and data was mainly collected at a national level (e.g. within prefectures, regions) (Fig. 1). For the purposes of data collection, a wide variety of methodology is being applied, and in general there is a combination of two or more methods. The most frequently used methods were on-site interviews, mobile applications and recall surveys, performed on a monthly basis (Fig. 2).





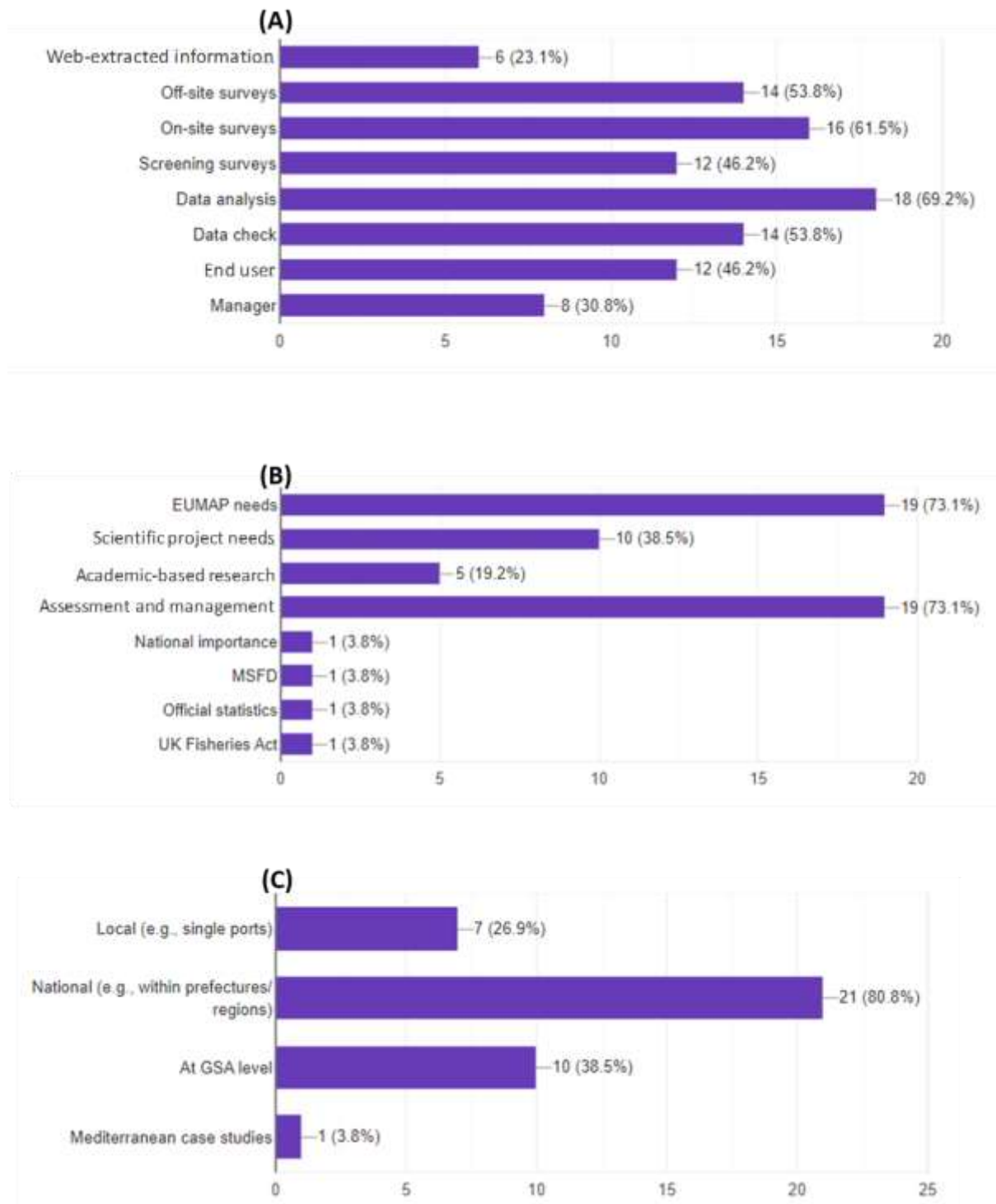


Fig. 1 – Results on the level of involvement in recreational fisheries (RF) data collection, analysis and use (A), principal drivers for (B) and spatial scale of (C) RF data collection.

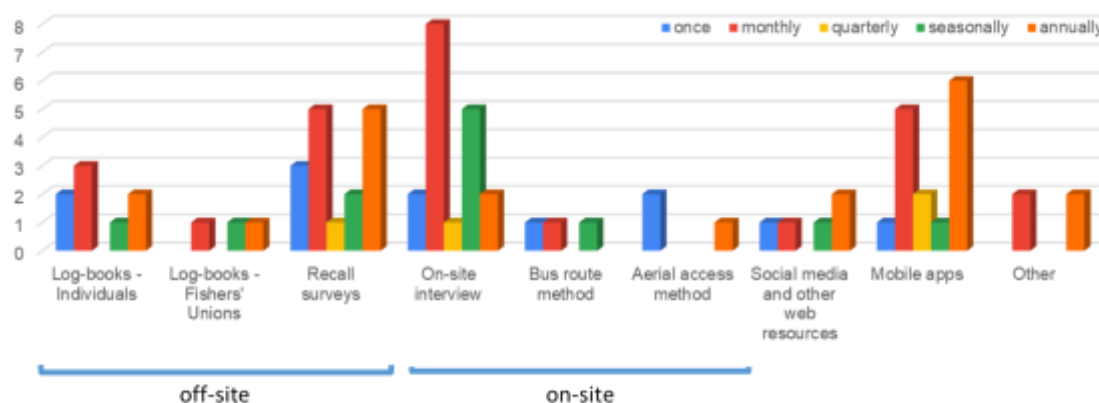


Fig. 2 – Most frequently used methods for data collection on recreational fisheries.

The overall perception of responders (88.5%) was that there is a need for a minimum biological data to be collected, and that is the individual length and weight of the organisms caught. More information, like sex and age (i.e. acquisition of otoliths) would be of interest, but recreational fishers are already negative in allowing measuring their fish, and thus dissecting would be more difficult. In addition, if the catch consists of numerous fish (as it is often the case in the Mediterranean), undersized fish, or commercially exploited fish, recreational fishers tend to refuse cooperating. Finally, the time required to even just measure and weigh the catch (especially in cases with high abundances) can be also restrictive, provided that fishers might get the feeling their leisure time is being restricted. Therefore, demands for more biological information will be difficult to meet.

The list of species as indicated by GFCM/RCG MED&BS is considered as a useful tool, but as it is still unclear what a “priority species” actually is, the list should not be restrictive or binding. A multispecies survey module should be followed, so as to make surveying cost efficient. In addition, the list should be updated regularly, and could include species of importance within the EUMAP (i.e. species that their stocks are assessed), that are important at the National level, highly priced fish, species under conservation status (e.g. groupers), and/or species that are targeted by recreational fishers.

Data collection displayed several difficulties, that could be summarised as follows:

- Reluctance of fishers to participate, lack of trust, denial;
- Spatially limited, lack of human resources to conduct surveys, time consuming;
- Low numbers from specific gears/techniques (e.g. from boats, spear gunners);
- No official databases on licences/MR fishers; and if such exist, there is the issue of GDPR;
- Processing large volumes of data, difficulty in homogenising data in order to generate a coherent picture.

In order to mitigate the above mentioned difficulties, a series of actions take place, such as maintaining engagement (through regular recalls, cooperation with association/unions, assistance from corresponding Ministry Departments); investing more time and funds, and performing more intensified (spatiotemporal) samplings; using improved web-based (e.g. fish recognition apps; self-reporting, media advertising) and telephone communication; and, in few cases, rewarding for participating (e.g. hats, hooks, t-shirts as gifts).

Finally, the overall perception of responders was that a regional co-ordinated plan on RF data collection and analysis is beneficial, displaying both strengths and weaknesses (Fig. 2). According to some responders the work on RF data collection was not coordinated from the start and there was a high degree of fragmentation (different methodological approaches, areas of interest, priority species, etc.). This was considered as potentially undermining the capacity to fully understand the RF activity and its effects on the ecosystem, the economy, and the society.

**From the results of the questionnaire there was a clear need for a simple methodology, with common species that should be easy to apply and consistent throughout the Mediterranean EU. This would make RF monitoring feasible and the results attained comparable among countries.**

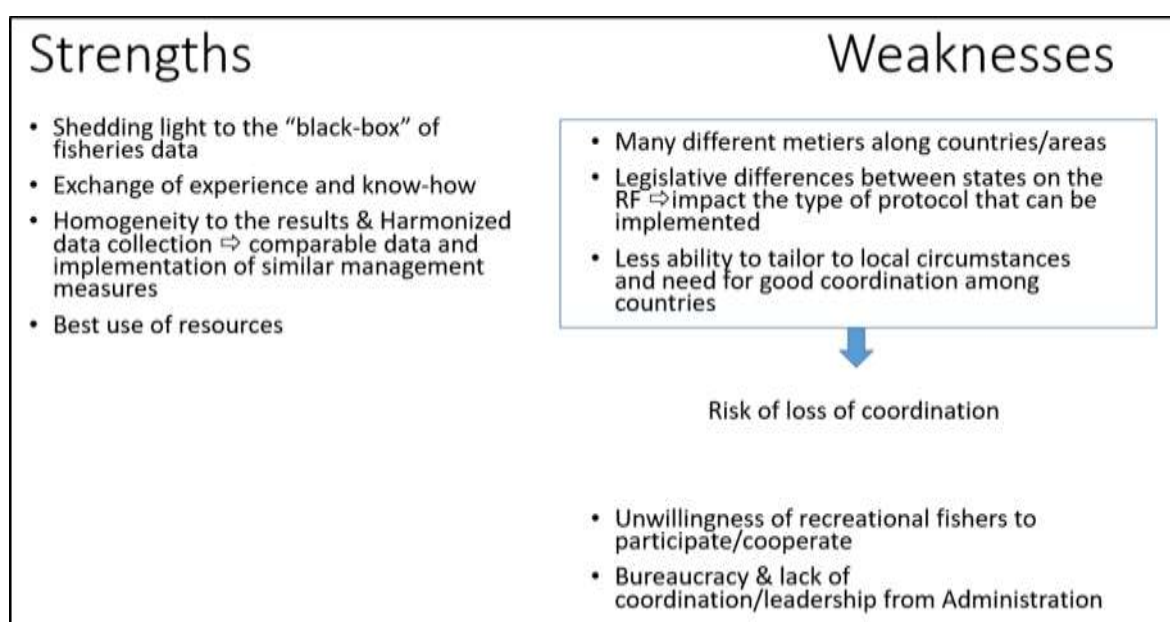


Fig. 3 – Summarised strengths and weaknesses of a co-ordinated data collection plan regarding Marine Recreational Fisheries.

#### 4.1.2 Outcomes of the Joint workshop on RFs

During the plenary discussion, the group of participants agreed on a draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea and an associated roadmap. The draft proposal will be circulated by the RCG Med&BS Chairs among the National Correspondents, and will be considered, revised and finalized via written procedure before the RCG Med&BS annual meeting in September 2022, with the support of STREAMLINE. The final approval will be achieved during the RCG Med&BS annual meeting.

The draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea is the following:



- Estimation of 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, and the experience gained by means of the implementation of the pilot studies, each MS will implement this task following their own procedures (e.g., telephone surveys, license system, etc.). With the aim of facilitating this process and the setting of minimum standards, a standardized protocol for performing the surveys will be provided and shared.

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The final approval will be achieved during the RCG Med&BS annual meeting. The RCG Med&BS, supported by STREAMLINE, will then submit the proposal for consideration by the Commission and the STECF (STECF EWG 22-18 Evaluation of Work Plans for data collection and data transmission issues, 24-28 October 2022).

#### 4.1.3 Protocols for off-site and on-site surveys

With the aim of facilitating the work of MSs and national experts involved in the data collection on RFs, the STREAMLINE Task 2.3 Core Team drafted a template for performing off-site surveys, and a template for on-site surveys. As a reference point, the protocols used in Greece and compiled by the Fisheries Research Institute (FRI) in Kavala, Greece, were used (Papadopoulos et al., 2022). The Task 2.3 Core Team is particularly grateful to the colleagues of FRI, for their invaluable support further drafting the templates.

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## 6. ANNEXES

### ANNEX I – Online questionnaire

#### **Section 1: Questionnaire on Recreational Fishing sampling**

Recreational fishing (RF) sampling is included in the 2022-2027 EUMAP, aiming towards filling in knowledge gaps on the effects of RF on aquatic resources and stocks.

In the last few years, RF has been in the spotlight on international fora (e.g., GFCM, RCG Med&BS), and roadmaps and guidelines have been compiled and tested in the frame of pilot projects. This scenario resulted in the need for further fine-tuning of the methodology and enhancement of regional co-ordination.

The STREAMLINE regional grant, funded under the EU Call for Proposals MARE/2020/08 is focusing in fostering a commonly accepted regionally coordinated protocols. To this end, expert opinion is of high-value in accomplishing a commonly agreed methodology that will meet both data collector and end-users' needs.

This questionnaire is designed to identify the strengths and weaknesses of protocols already used, as well as listing your opinion about what should be refined and how in future RF routine monitoring programs.

Name

Country

Institute

Function

email

Level of involvement in RF data collection, analysis and use (*multiple answers*)

- Web-extracted information analysis (e.g., social media, RF unions' web page analysis)
- Off-site surveys
- On-site surveys
- Screening surveys
- Data analysis
- Data check
- End user (e.g., NCs, stock assessment, ecosystem modeller, etc.)
- Manager
- Other: \_\_\_\_\_



## **Section 2: Data collection – Methodology**

Please specify the methodology used in data collection. Please skip if you are not involved in data collection

What is the principal driver for data collection (*multiple answers*)

EUMAP needs

For the needs of scientific projects

Academic-based research (e.g., master thesis, PhD, etc.)

Assessment and management purposes (e.g., stock assessment, management plans, etc.)

Other: \_\_\_\_\_

Spatial scale of data collection

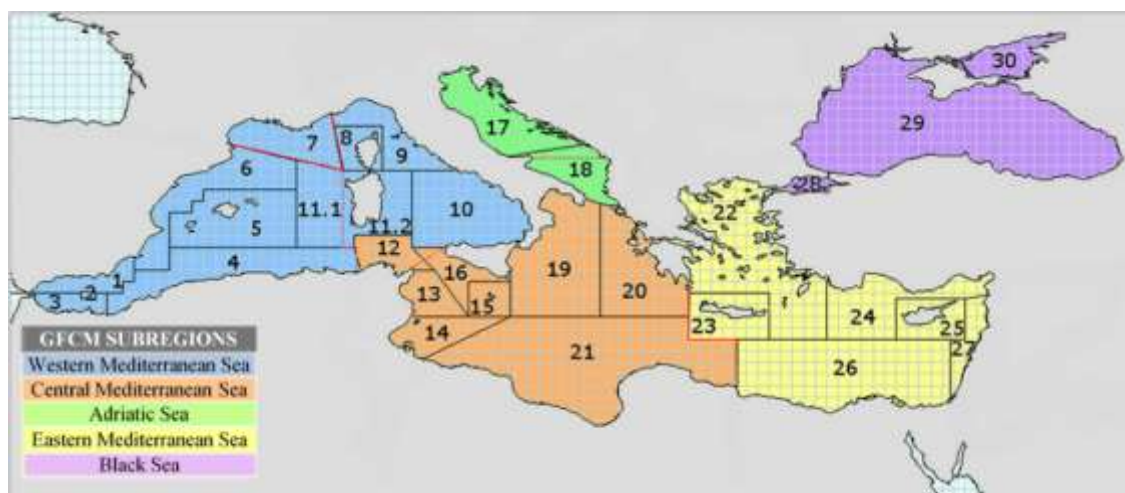
Local (e.g., single ports)

National (e.g., within prefectures/regions)

At GSA level

Other: \_\_\_\_\_

What are the areas sampled (please also indicate the GSA, if possible) (*multiple answers*)



1 Northern Alboran Sea	11.2 Eastern Sardinia	22 Aegean Sea
2 Alboran Island	12 Northern Tunisia	23 Crete
3 Southern Alboran Sea	13 Gulf of Hammamet	24 Northern Levant Sea





4 Algeria	14 Gulf of Gabes	25 Cyprus
5 Balearic Islands	15 Malta	26 Southern Levant Sea
6 Northern Spain	16 Southern Sicily	27 Eastern Levant Sea
7 Gulf of Lion	17 Northern Adriatic Sea	28 Marmara Sea
8 Corsica	18 Southern Adriatic Sea	29 Black Sea
9 Ligurian & N. Tyrrhenian Sea	19 Western Ionian Sea	30 Azov Sea
10 South and C. Tyrrhenian Sea	20 Eastern Ionian Sea	Other _____
11.1 Western Sardinia	21 Southern Ionian Sea	

Which methodology is being used and at which frequency (e.g. once, monthly, quarterly, etc.)? Please list difficulties encountered and if applicable, mitigation measures (multiple answers)

Method	Sampling frequency	Difficulties	Mitigation measures taken
• Offsite surveys			
○ Log-books			
▪ Through individuals			
▪ Through RF associations			
○ Recall surveys			
○ other			
• On-site surveys			
○ On-site interviews			
○ Bus route method			
○ Aerial access method			
• Social media and other web resources (please define)			
• Mobile apps			
• Other			

### **Section 3: General view on a regionally coordinated RF data collection and analysis**

Do you consider that a regional co-ordinated plan on RF data collection and analysis is beneficial?

- Yes
- No

Please indicate possible strengths/weaknesses of such a co-ordinated plan (justification needed). Reply even if you answered yes in the previous question.

### **Section 4: RF data collection and analysis**

Should a minimum biological information be collected?





- Yes
- No

What is the minimum information that should be collected, with respect to biological data (*multiple answers*)

individual length

individual weight

sex

otoliths for ageing

Other: \_\_\_\_\_

The following draft list of priority species has been proposed for biological sampling in RF (RCG Med&BS Annual Meeting (7<sup>th</sup> -9<sup>th</sup> September 2021) - Recommendation 3, RCG Med&BS):

Mediterranean Sea: *Dicentrarchus labrax*, *Dentex dentex* and *Epinephelus* spp.

Black Sea: *Pomatomus saltatrix*, *Trachurus mediterraneus ponticus*, Gobidae and Mugilidae

Do you agree with this list?

- Yes
- No
- Other: \_\_\_\_\_

Do you think that other species should be included? Which ones? \_\_\_\_\_

Do you think that some species should be excluded? Which and for what reason? \_\_\_\_\_

Additional comments/suggestions? \_\_\_\_\_

## **Section 5: General view on the RF data collection and analysis program**

Do you consider that a regional co-ordinated plan on RF data collection and analysis holds potential conflicts and/or synergies with other end-users (e.g., MSFD, conservation NGOs, etc.)? Please explain

\_\_\_\_\_

Would you like to be further involved in the RF program (e.g. workshops, working groups, etc.)?

- Yes
- No



Final comments/suggestions? \_\_\_\_\_



## ANNEX II – Minutes of the Joint Workshop on Recreational Fisheries

### Joint Workshop on Recreational Fisheries (Recommendation n. 3 RCG Med&BS 2021)

**27<sup>th</sup> April 2022, 9.00-13.00 CEST, online**

#### Minutes of the meeting

The RCG Med&BS and STREAMLINE Joint Workshop on recreational fisheries organized in response to the Recommendation n. 3 RCG Med&BS 2021 met online on the 27<sup>th</sup> April 2022 (Zoom platform), with the support of the RCGs Secretariat. The meeting was attended by 33 experts from the ten EU Member States of the Mediterranean and Black Seas (see List of participants), and two representatives of the Commission (DG MARE) (see Annex I). The workshop was opened by Alessandro Ligas, STREAMLINE Coordinator, who welcomed the participants and thanked for the large attendance. He then provided the participants with a general overview of the main objectives of the meeting, stressing the importance of the strict cooperation between the RCG Med&BS and the STREAMLINE grant to achieve the common target represented by the expected results of coordinated regional work for the fisheries data collection in the Mediterranean and Black Seas.

Jurgen Mifsud, chair of the RCG Med&BS, briefly presented the work and functioning of the RCG, reiterating the Recommendations from the 2021 RCG meeting, with particular focus on those related to the cooperation between the RCG and the regional grant.

Venetia Kostopoulou, DG MARE Unit C3, expressed interest in the possible outcomes of the workshop and welcomed the ongoing cooperation between the RCG Med&BS and STREAMLINE. She also underlined the need to ensure convergence between the processes followed in the RCG Med&BS and the GFCM.

For each Member State (MS), a brief presentation of the current implementation of the monitoring of recreational fisheries (RFs) under the national work plans was provided focussing on the methodological aspects.

The presentations allowed to gain a good insight on the current status of implementation of the monitoring of RFs under the national work plans in the Mediterranean and Black Sea. Despite some specificities at national level, the approaches used are in line with the GFCM Handbook guidelines. Some MSs, such as Croatia, Cyprus and Slovenia, take advantage of a well implemented license system, while the other MSs are carrying out screening surveys (e.g., telephone surveys). All the MSs are progressing well in defining the population of recreational fishers.

Mrs Kostopoulou welcomed the progress made by the MSs in implementing the monitoring of RFs and reiterated the important contribution played by the pilot studies that MSs conducted in previous years. She considers that the experience gained and progress made through the implementation of both the pilot studies and the current monitoring of RFs under the national work plans can provide a solid basis and the elements to allow the MSs, with the support of the RCG and the STREAMLINE grant, drafting regional work plans on the monitoring of RFs and, in parallel, fulfil the GFCM requirements.

Ricard Buxó (Spain) pointed out the need of progress towards an improved pan-regional cooperation between Atlantic and Med&BS MSs and RCGs.



The STREAMLINE project provided a presentation on the results of the review of the available elements (and gaps) for the implementation of a regional approach in the Med&BS (Work Package 1); in addition, the summary of the results of an online survey on RFs launched by STREAMLINE was also provided. The questionnaire was widely distributed among networks of experts (e.g. GFCM, ICES, RCG MED&BS), and yielded 26 responses. All Mediterranean-European countries participated in the survey, as well as experts from Finland, Ireland, the Netherlands, and the UK. Responders work in 22 out of the 31 Mediterranean GSAs, with the majority of them being involved in data analysis, on-site and off-site surveys. The principle drivers of data collection were for the needs of EU-MAP (and other institutional purposes, such as MSFD) and for assessment and management, and data was mainly collected at a national level (e.g. within prefectures, regions). For the purposes of data collection, a wide variety of methods is being used. The most frequently used were on-site interviews, mobile applications and recall surveys, performed at a monthly basis. Finally, the overall perception of responders was that a regional co-ordinated plan on RF data collection and analysis is beneficial, displaying both strengths and weaknesses.

During the plenary discussion, the group of participants agreed on a draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea and an associated roadmap (see Annex III). The draft proposal will be circulated by the RCG Med&BS Chairs among the National Correspondents, and will be considered, revised and finalized via written procedure before the RCG Med&BS annual meeting in September 2022, with the support of STREAMLINE. The final approval will be achieved during the RCG Med&BS annual meeting.

While closing the meeting, Mr Ligas and Mr Mifsud took the chance to thank all the experts for the large participation and proactive support.

The meeting closed at 13.00 CET.

#### Annex I - List of participants

Name and surname	E-mail address	Affiliation
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## Annex II - Agenda

- 9.00, Welcome and opening of the works, adoption of the agenda – A. Ligas (STREAMLINE Coordinator) and J. Mifsud (RCG Med&BS Chair)



- 9.10, Brief presentation from each Member State on methodological aspects of RFs monitoring under their National Work Plan (5 minutes each)
- 10.15, Presentation of the available elements for drafting Regional Work Plans on RFs in the Med&BS – STREAMLINE Task 2.3 Core Team
- 10.45, Coffee break
- 11.00, Plenary discussion on possible proposals for draft Regional Work Plans on RFs in the Med&BS
- 12.30, Wrap-up and conclusions, roadmap agreement
- 13.00, Closing of the works.

#### Annex III - Draft proposal for a non-binding RWP on recreational fisheries in the Med&BS

The plenary discussion that followed the presentations by each Member State (MS) and STREAMLINE allowed the group of participants agreeing on a draft proposal for a non-binding regional work plan (RWP) on recreational fisheries (RFs) in the Mediterranean and Black Sea.

- Estimation of 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, and the experience gained by means of the implementation of the pilot studies, each MS will implement this task following their own procedures (e.g., telephone surveys, license system, etc.). With the aim of facilitating this process and the setting of minimum standards, a standardized protocol for performing the surveys will be provided and shared.

This draft proposal will be circulated by the RCG Med&BS Chairs among the National Correspondents, and will be considered, revised and finalized via written procedure before the RCG Med&BS annual meeting in September 2022, with the support of STREAMLINE.

The final approval will be achieved during the RCG Med&BS annual meeting. The RCG Med&BS, supported by STREAMLINE, will then submit the proposal for consideration by the Commission and the STECF (STECF EWG 22-18 Evaluation of Work Plans for data collection and data transmission issues, 24-28 October 2022).

\*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.



### ANNEX III – Off-site survey template/protocol



Streamline-proposed  
offsite questionnaire.c

### ANNEX IV – On-site survey template/protocol



Streamline-proposed  
onsite questionnaire.c

