



Food and Agriculture
Organization of the
United Nations



General Fisheries
Commission for
the Mediterranean

ISSN 1020-7236

GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN



Report of the forty-fifth session
Tirana, Albania, 7–11 November 2022

45

GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

REPORT OF THE FORTY-FIFTH SESSION

Tirana, Albania, 7–11 November 2022

Required citation:

FAO. 2023. *General Fisheries Commission for the Mediterranean (GFCM) – Report of the forty-fifth session. Tirana, Albania, 7– 11 November 2022*. General Fisheries Commission for the Mediterranean No. 45. Rome. <https://doi.org/10.4060/cc6375en>

The designations employed and the presentation of material in this information product do not imply the expression of any opinion whatsoever on the part of the Food and Agriculture Organization of the United Nations (FAO) concerning the legal or development status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. The mention of specific companies or products of manufacturers, whether or not these have been patented, does not imply that these have been endorsed or recommended by FAO in preference to others of a similar nature that are not mentioned.

ISBN 978-92-5-137924-0

© FAO, 2023



Some rights reserved. This work is made available under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 IGO licence (CC BY-NC-SA 3.0 IGO; <https://creativecommons.org/licenses/by-nc-sa/3.0/igo/legalcode>).

Under the terms of this licence, this work may be copied, redistributed and adapted for non-commercial purposes, provided that the work is appropriately cited. In any use of this work, there should be no suggestion that FAO endorses any specific organization, products or services. The use of the FAO logo is not permitted. If the work is adapted, then it must be licensed under the same or equivalent Creative Commons licence. If a translation of this work is created, it must include the following disclaimer along with the required citation: "This translation was not created by the Food and Agriculture Organization of the United Nations (FAO). FAO is not responsible for the content or accuracy of this translation. The original [Language] edition shall be the authoritative edition."

Disputes arising under the licence that cannot be settled amicably will be resolved by mediation and arbitration as described in Article 8 of the licence except as otherwise provided herein. The applicable mediation rules will be the mediation rules of the World Intellectual Property Organization <http://www.wipo.int/amc/en/mediation/rules> and any arbitration will be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law (UNCITRAL).

Third-party materials. Users wishing to reuse material from this work that is attributed to a third party, such as tables, figures or images, are responsible for determining whether permission is needed for that reuse and for obtaining permission from the copyright holder. The risk of claims resulting from infringement of any third-party-owned component in the work rests solely with the user.

Sales, rights and licensing. FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org. Requests for commercial use should be submitted via: www.fao.org/contact-us/licence-request. Queries regarding rights and licensing should be submitted to: copyright@fao.org.

PREPARATION OF THIS DOCUMENT

This document is the final version of the report adopted in November 2022 by the General Fisheries Commission for the Mediterranean at its forty-fifth session, held in Tirana, Albania.

ABSTRACT

The forty-fifth session of the General Fisheries Commission for the Mediterranean (GFCM) and the twelfth session of the Committee on Administration and Finance were held in Tirana, Albania, from 7 to 11 November 2022 and attended by delegates from 22 contracting parties, two cooperating non-contracting parties and two non-contracting parties. Representatives from 13 intergovernmental and non-governmental organizations, the Fisheries and Aquaculture Division of the Food and Agriculture Organization of the United Nations (FAO) and the GFCM Secretariat as well as invited experts were also in attendance.

During the session, progress in activities related to fisheries, aquaculture, compliance and other strategic activities was reviewed. In relation to the management of fisheries and compliance in the GFCM area of application, 17 binding recommendations were adopted, dealing with: i) multiannual management plans for European eel and red coral in the Mediterranean Sea, turbot fisheries in the Black Sea, blackspot seabream in the Alboran Sea, demersal stocks in the Strait of Sicily, and giant red shrimp and blue and red shrimp in the Strait of Sicily, the Ionian Sea and the Levant Sea; ii) a fishing effort regime for key demersal stocks in the Adriatic Sea; iii) a regional research programme for rapa whelk in the Black Sea; iv) minimum standards for fisheries restricted areas in the GFCM area of application, v) minimum rules for sustainable recreational fisheries in the Mediterranean Sea; vi) the establishment of a GFCM logbook; vii) the regulation of transshipment in the GFCM area of application; viii) international joint inspection and surveillance schemes outside the waters under national jurisdiction in the Strait of Sicily and in the Ionian Sea; and ix) information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application. In addition, the Commission adopted four resolutions in relation to fisheries and aquaculture.

Moreover, the Commission adopted revised GFCM Rules of Procedure and unanimously approved the proposal by the FAO Director-General to appoint Mr Bernal as the new GFCM Executive Secretary. The GFCM Executive Secretary ad interim, Mr Manuel Barange, was thanked for greatly facilitating the implementation of all 2021–2022 intersessional activities.

Finally, the Commission adopted its programme of work for the next intersession and approved its autonomous budget for 2023, amounting to USD 2 291 799, and its autonomous budget for 2024 and 2025, both amounting to USD 2 462 221, as well as a number of strategic actions to be funded through extrabudgetary resources. The Commission also endorsed the new Bureau of the Committee on Administration and Finance and extended the mandate of the Bureau of the Scientific Advisory Committee on Aquaculture until 2024.

CONTENTS

Opening and arrangements of the session	1
Progress on cooperation matters	1
Report on intersessional activities in 2021–2022	1
Management of mediterranean and black sea fisheries and aquaculture	2
Advice on aquaculture development	2
Fisheries management and conservation advice	3
Advice on compliance issues	10
Issues stemming from the Compliance Committee	11
Identification and clarification process	11
Data quality indicators	11
List of vessels presumed to have carried out illegal, unreported and unregulated fishing	11
Vessel monitoring system and related controls system	11
Catch documentation schemes	12
Compendium of GFCM decisions and GFCM regional repository of national legislation	12
Other compliance-related matters	12
Programme of work for the period 2022–2024	12
Scientific Advisory Committee on Fisheries and Working Group on the Black Sea (fisheries)	12
Scientific Advisory Committee on Aquaculture and Working Group on the Black Sea (aquaculture)	20
Compliance Committee	22
Meetings	23
Amendment of the GFCM rules of procedure	26
Twelfth session of the Committee on Administration and Finance	26
Report from the Secretariat on administrative and financial issues	26
GFCM budget and contributions by contracting parties for 2023–2025	27
Election of the Committee on Administration and Finance Bureau	28

Endorsement of the Bureau of the Scientific Advisory Committee on Aquaculture and Committee on Administration and Finance	28
Any other matter	28
Date and place of the forty-sixth session	28
Adoption of conclusions and recommendations	28

APPENDIXES

1. Agenda	32
2. List of participants/Liste des participants	33
3. List of documents	45
4. Recommendation GFCM/45/2022/1 on a multiannual management plan for European eel in the Mediterranean Sea, amending Recommendation GFCM/42/2018/1	47
5. Recommendation GFCM/45/2022/2 on a management plan for the sustainable exploitation of red coral in the Mediterranean Sea, amending Recommendation GFCM/43/2019/4	49
6. Recommendation GFCM/45/2022/3 on a multiannual management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3), repealing Recommendations GFCM/44/2021/4, GFCM/43/2019/2 and GFCM/41/2017/2	51
7. Recommendation GFCM/45/2022/4 on a multiannual management plan for the sustainable exploitation of demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/12 and GFCM/42/2018/5	63
8. Recommendation GFCM/45/2022/5 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/7 and GFCM/43/2019/6	77
9. Recommendation GFCM/45/2022/6 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Ionian Sea (geographical subareas 19 to 21), repealing Recommendations GFCM/44/2021/8 and GFCM/42/2018/4	88
10. Recommendation GFCM/45/2022/7 on a multiannual management plan for sustainable demersal trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24 to 27), repealing Recommendation GFCM/42/2018/3	99
11. Recommendation GFCM/45/2022/8 on the implementation of a fishing effort regime for key demersal stocks in the Adriatic Sea (geographical subareas 17 and 18) in 2023, stemming from Recommendation GFCM/43/2019/5	110
12. Recommendation GFCM/45/2022/9 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/43/2019/3	113
13. Recommendation GFCM/45/2022/10 on a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/42/2018/9	115

14. Recommendation GFCM/45/2022/11 on the establishment of a set of minimum standards for fisheries restricted areas in the GFCM area of application	117
15. Recommendation GFCM/45/2022/12 on the establishment of a set of minimum rules for sustainable recreational fisheries in the Mediterranean Sea	124
16. Recommendation GFCM/45/2022/13 on the establishment of a GFCM logbook, amending Recommendation GFCM/35/2011/1	137
17. Recommendation GFCM/45/2022/14 on the regulation of transshipment in the GFCM area of application	139
18. Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6	146
19. Recommendation GFCM/45/2022/16 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21)	149
20. Recommendation GFCM/45/2022/17 on information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application, amending Recommendation GFCM/33/2009/6 and repealing Recommendation GFCM/44/2021/18	162
21. Resolution GFCM/45/2022/1 on empowering women in the aquaculture sector	164
22. Resolution GFCM/45/2022/2 on a research programme on jellyfish in the western Mediterranean (geographical subareas 1 to 3)	166
23. Resolution GFCM/45/2022/3 on the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea	174
24. Resolution GFCM/45/2022/4 on the launch of a roadmap for the establishment of a fisheries restricted area in the Cabliers coral mounds in the Alboran Sea with a view to adopting adequate protection and management measures	178
25. Concept notes for research programmes and pilot projects	180
26. Terms of reference and roadmaps for select activities	214
27. Amended Rules of Procedure of the General Fisheries Commission for the Mediterranean	221
28. Autonomous budget of the GFCM for 2023–2025	238
29. Contributions to the GFCM budget for 2023 (based on 2018–2020 averages)	241

OPENING AND ARRANGEMENTS OF THE SESSION

1. The forty-fifth session of the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO) was held in Tirana, Albania, from 7 to 11 November 2022. The session was chaired by Mr Roland Kristo, GFCM Chairperson, and attended by delegates from 22 contracting parties, 2 cooperating non-contracting parties, 2 non-contracting parties, representatives of 13 intergovernmental and non-governmental organizations, FAO, and the GFCM Secretariat. The Commission was informed about the statement of competence and voting rights by the European Union and its Member States. The adopted agenda, list of participants and list of documents are provided in Appendixes 1 to 3.

2. At the opening of the session, celebrations were held to mark the seventieth anniversary of the entry into force of the Agreement for the Establishment of the General Fisheries Commission for the Mediterranean and to review key milestones reached. Interventions by Ms Frida Krifca, Minister for Agriculture and Rural Development of Albania, Mr Manuel Barange, Director, FAO Fisheries and Aquaculture Division, on behalf of the FAO Director-General, and Mr Roland Kristo, GFCM Chairperson, recalled the evolution of the GFCM over its seven decades of existence and the long journey to becoming a modern, efficient and effective regional fisheries management organization. The role of FAO, which has made it possible for the GFCM to thrive, as well as the increased commitment of countries to fisheries sustainability and aquaculture development, were acknowledged.

3. All delegations in attendance took the floor to celebrate this anniversary and express their sincere appreciation and continued support for the work of the GFCM. In particular, they praised the results achieved over time and underlined that sound scientific advice and regional cooperation represented two essential pillars of the GFCM's growing success. Furthermore, delegations renewed their commitment towards reaching, together, the ambitious goals set by the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea (GFCM 2030 Strategy) in the framework of upcoming projects and initiatives to be spearheaded by the GFCM. To mark this historic moment, the GFCM unveiled its new logo and visual identity, premised on the five GFCM subregions coming together under a common regional umbrella.

PROGRESS ON COOPERATION MATTERS

4. Following the presentation by the GFCM Executive Secretary ad interim on the foundations and extent of GFCM partnerships, including how it had greatly facilitated the conclusion of cooperation arrangements with many organizations, the Commission acknowledged the momentous progress made over time. Gratitude was expressed to the donors, particularly the European Union, for the continuous financial support provided to empower GFCM partnerships.

5. Several partner organizations confirmed that they attached significant importance to their active cooperation with the GFCM, as this had enabled the execution of joint activities for the benefit of Mediterranean and Black Sea fisheries and marine ecosystems. Considering the common priorities being pursued, including within the GFCM 2030 Strategy, the promotion of more synergies and commonalities was strongly encouraged.

REPORT ON INTERSESSIONAL ACTIVITIES IN 2021–2022

6. The GFCM Chairperson reported on the work accomplished by the GFCM during the 2021–2022 intersession, breaking down activities carried out within the framework of the relevant GFCM statutory bodies, namely the Scientific Advisory Committee on Aquaculture (CAQ), the Scientific Advisory Committee on Fisheries (SAC), the Working Group on the Black Sea (WGBS) and the

Compliance Committee (CoC). He noted that all activities expected to be undertaken during the intersession had been successfully completed, despite the continuing impacts of the COVID-19 pandemic.

7. The Commission welcomed the significant amount of work carried out over the intersession, which also substantially contributed to the GFCM 2030 Strategy in its first year of implementation. Delegations reflected on their direct engagement in these activities, including as a result of the resumed provision of technical assistance at the national level and of the fruitful collaboration between countries at the subregional level.

MANAGEMENT OF MEDITERRANEAN AND BLACK SEA FISHERIES AND AQUACULTURE

Advice on aquaculture development

8. Noting the importance of aquaculture in the region, the Commission welcomed the progress made in terms of formulation of advice on aquaculture issues (namely to promote efficient governance in support of responsible investment, improve the perception of aquaculture and maximize the use of technology and information systems) and acknowledged the continuous support of contracting parties and cooperating non-contracting parties (CPCs). In particular, the Commission praised the activities conducted at the subregional level through the aquaculture demonstration centres and encouraged the further establishment of training and research centres across the Mediterranean and Black Sea region in order to promote good practices, including restorative aquaculture.

9. The Commission acknowledged the success of the training for young women in aquaculture organized in Tunisia and agreed on the importance of repeating similar sessions, addressing aspects such as technology and fish feed as well as the coexistence of marine protected areas (MPAs) and aquaculture facilities.

10. Recognizing the important contribution of women working in the aquaculture sector and their essential role for economic development, food security and livelihoods among coastal communities, the Commission, based on a proposal made by Egypt, adopted Resolution GFCM/45/2022/1 on empowering women in the aquaculture sector, available in Appendix 21. The resolution encourages CPCs to promote and support the empowerment of women in the aquaculture sector through the development of national and sectoral strategies and policies.

11. Considering the need to further enhance the sustainability of the sector through the diversification of farmed species, systems and practices, the Commission noted that efforts should be made to implement the *Guidelines in support of social acceptability for sustainable aquaculture development*, *Guidelines on assessing and minimizing the possible impacts from the use of non-indigenous species in aquaculture*, *Guidelines on aquaculture restocking and stock enhancement*, and *Guidelines for streamlining aquaculture licensing and leasing processes*, adopted by the Commission.

12. The Commission endorsed the reorganization of the CAQ as a light, flexible and efficient structure whereby the Bureau operates with the support of six technical advisory groups on: environment and climate change; value chain and market access; aquatic animal health and biosecurity; governance and responsible investment in aquaculture; innovation and technology; and spatial planning for aquaculture.

Fisheries management and conservation advice

Quality of fisheries advice and data

13. Recognizing the need to continue focusing on enhancing data quality, harmonizing data collection and promoting transparency and replicability, the Commission underlined that it was crucial to establish a validation system for fleet data (i.e. capacity), noting these data were at the basis of all management actions. In this respect, it recalled the potential role of MedSea4Fish in bolstering comprehensive and standardized data collection efforts.

Status of Mediterranean stocks

14. Despite an increased coverage of advice on stock status, the Commission noted that some priority species and/or geographical subareas (GSAs) had yet to be assessed, many assessments were still qualitative, and some key fisheries were still in need of technical elements for management. The Commission praised the progress made but stressed that stocks considered outside safe biological limits were still prevalent and that the regional situation was still far from achieving the sustainability targets set by several recommendations and by the GFCM 2030 Strategy. The fact that the fishing sector was already experiencing socioeconomic impacts as a result of the poor status of stocks, making them even more vulnerable to crises such as the COVID-19 pandemic or the recent drastic increase of fuel prices, was also noted. In light of this, the Commission underlined the need to concentrate on the provision of advice for priority species and key fisheries, and in particular for stocks under management plans (e.g. common dolphinfish [*Coryphaena hippurus*], blackspot seabream [*Pagellus bogaraveo*] in the Alboran Sea, deep-water rose shrimp [*Parapenaeus longirostris*] in the Strait of Sicily, European eel [*Anguilla anguilla*], small pelagic and demersal species in the Adriatic Sea, European hake [*Merluccius merluccius*] in the entire Mediterranean, deep-water red shrimp [*Aristaeomorpha foliacea* and *Aristeus antennatus*] in the eastern-central Mediterranean), in order to speed up the implementation of efficient management measures and evaluate their contributions to enhance stock status.

European hake in the Mediterranean

15. The Commission noted that, notwithstanding the improvements triggered by existing management plans in the central Mediterranean and the Adriatic Sea, European hake remained the most exploited priority species in the Mediterranean, underscoring the need to urgently plan for its recovery at a regional level. The Commission underlined the need to adapt fleet capacity and effort to fishing opportunities and called on the SAC to formulate scientific advice and technical elements, including a toolbox of potential management measures, taking into account life history and life stages as well as the diversity and multispecies nature of the fisheries targeting the species. In particular, the SAC was invited to evaluate the expected efficiency of measures such as effort reduction, spatio-temporal measures, fisheries restricted areas (FRAs), minimum conservation reference size, and improved selectivity (e.g. mesh size increase, use of T90 mesh, application of grids, modifications to the trawl doors, etc.). The Commission took note of the work underway in the context of selectivity pilot studies and dedicated working groups addressing selectivity, data analysis and essential fish habitats (EFH), as well as other measures adopted in the context of GFCM multiannual management plans or at the level of the European Union in the western Mediterranean, and suggested the GFCM Secretariat ensure coordination among these activities to facilitate the compilation of comprehensive advice.

European eel

16. Acknowledging the critical status of European eel, the low recruitment levels and the results of the research programme, the Commission agreed to implement a second phase of the GFCM research programme on European eel, as well as to create a permanent GFCM Expert Group on European eel in the Mediterranean and revise TASK VII.6-EEL of the Data Collection Reference Framework (DCRF) in line with SAC advice.

17. The Commission also agreed on the need to strengthen transitional management measures while collecting additional data to inform a long-term management plan. With this in mind, based on a proposal by the European Union, the Commission adopted Recommendation GFCM/45/2022/1 on a multiannual management plan for European eel in the Mediterranean Sea, amending Recommendation GFCM/42/2018/1, as reproduced in Appendix 4. This decision establishes a total ban on recreational fisheries and two options for alternative temporal closures at the discretion of CPCs, to be communicated to the GFCM Secretariat together with their adopted national management plans. Taking due account of the fact that the lowest recruitment levels ever recorded had been reached, the Commission agreed to further evaluate the possibility of implementing additional measures addressing glass eel, *inter alia* a total ban, catch limitations or determining key habitats, also based on the outcomes of the socioeconomic analysis to be performed under the second phase of the research programme in 2023 towards the implementation of new long-term measures in 2024.

18. Furthermore, taking into account the crucial need to address all sources of anthropogenically induced mortality, the Commission agreed on the importance of working towards the improvement and maintenance of habitats and migratory routes, in collaboration with all relevant partners working on European eel in its distribution range.

Red coral

19. The Commission took note of the possible overexploitation status of red coral (*Corallium rubrum*) in the Mediterranean and praised the advances made on the implementation of the research programme on this emblematic species, despite the delays caused by the COVID-19 pandemic. Considering the importance of red coral in the ecosystem, the Commission underlined the need to continue collecting comprehensive data on populations and fisheries in the Mediterranean, as well as to provide technical assistance to improve their quality and completeness, in view of keeping exploitation to a minimum. With this in mind, the Commission adopted, on the basis of a proposal by the European Union, Recommendation GFCM/45/2022/2 on a management plan for the sustainable exploitation of red coral in the Mediterranean Sea, amending Recommendation GFCM/43/2019/4, as reproduced in Appendix 5. Among other provisions, this recommendation foresees the extension of the deadline for the establishment of a permanent catch documentation scheme (CDS) to 2024 and the extension of the research programme to 2023. The Commission noted the need to inform the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) about the GFCM red coral management plan and collaborate in this regard, ahead of the next CITES meeting.

Management of western Mediterranean fisheries

20. Acknowledging that blackspot seabream in the Strait of Gibraltar was again found to be overexploited with a low fishing mortality, the Commission adopted, based on a proposal of the European Union, Recommendation GFCM/45/2022/3 on a multiannual management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3), repealing Recommendations GFCM/44/2021/4, GFCM/43/2019/2 and GFCM/41/2017/2, as reproduced in Appendix 6. The recommendation establishes a long-term management plan over eight years, starting with a three-year transitional phase foreseeing, *inter alia*, catch limits, a limit on fishing

capacity and temporal closures, followed by long-term management measures including yearly catch limits and spatio-temporal measures.

21. Recognizing the overexploited status of a number of small pelagic stocks, particularly sardine (*Sardina pilchardus*) and anchovy (*Engraulis encrasicolus*) in the Alboran Sea, and the importance of these fisheries in terms of catches and socioeconomic impact, the Commission agreed on the need to study the possibility of harmonizing national measures, improve the collection of data and work towards a management plan for the sustainability of these fisheries, among Algeria, Morocco and Spain. As a first step, an expert meeting also addressing issues related to climate change, interactions with large pelagics and food chain issues was proposed (terms of reference in Appendix 26/B).

22. Highlighting the importance of common dolphinfish fisheries in the western and central Mediterranean, and noting that a first assessment considered the species to be sustainably exploited, the Commission expressed its satisfaction on the successful implementation of monitoring, control and surveillance actions following the previously adopted Recommendation GFCM/44/2021/11 on management measures for the use of anchored fish aggregating devices in common dolphinfish fisheries in the Mediterranean Sea, amending Recommendation GFCM/43/2019/1. In this regard, the Commission recommended to continue ensuring the effective implementation of measures, in particular regarding fish aggregating devices, while advancing with the research programme. The Commission took note of the interest expressed by Libya to participate in the research programme. The Commission recommended that, based on the results of the research programme, a decision be taken at its next session in 2023 regarding the potential adoption of a long-term management plan.

23. Noting the extensive jellyfish blooms in the Mediterranean and the Black Sea that occurred in recent years and the adverse effects of the proliferation of these species on the fishing, aquaculture and tourism industries, the Commission adopted, following a proposal tabled by Morocco, Resolution GFCM/45/2022/2 on a research programme on jellyfish in the western Mediterranean (geographical subareas 1 to 3), available in Appendix 22. The Commission recalled that jellyfish also presented similar challenges in other subregions and expressed hope that the methodology developed by this research programme could serve as a model for replication across the region.

24. With a view to advancing towards the protection of deep-sea vulnerable marine ecosystems (VMEs) and EFH through adequate protection and management measures, and following a technical proposal for a FRA in the Cabliers coral mounds presented at the twenty-third session of the SAC (FAO headquarters, Rome, Italy, June 2022), the Commission adopted, following a proposal tabled by the European Union, Resolution GFCM/45/2022/4 on the launch of a roadmap for the establishment of a fisheries restricted area in the Cabliers coral mounds in the Alboran Sea with a view to adopting adequate protection and management measures, available in Appendix 24. This decision lays the grounds for the future establishment of a FRA through the implementation of scientific surveys and monitoring towards assessing the exact geographical delimitation of the subject area, in coordination with all CPCs involved, in line with Article 3 of the resolution.

Management of central Mediterranean fisheries

25. Recognizing that, despite improvements, the stocks of European hake and deep-water rose shrimp in the Strait of Sicily (GSAs 12 to 16) were still considered to be outside safe biological limits and that existing management measures needed to be reinforced, the Commission adopted, following a proposal tabled by the European Union, Recommendation GFCM/45/2022/4 on a multiannual management plan for the sustainable exploitation of demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/12 and GFCM/42/2018/5, available in Appendix 7. This decision upgrades the previously adopted multiannual management plan and is foreseen to be implemented in two stages, including a first transitional phase

that implements an effort regime, catch limits and spatial measures and advances scientific work to identify long-term measures.

26. The Commission reviewed a request made by Libya to divide its coast (GSA 21) into three marine subareas, based on the size of the coastline, topography and ecosystems, and dynamics of the fleet. Acknowledging that the SAC had found the proposal to be based on solid technical foundations, the Commission agreed on the subdivision of GSA 21 into GSAs 21.1, 21.2 and 21.3.

Management of eastern-central Mediterranean fisheries

27. While acknowledging the impressive amount of work done on deep-water red shrimp in the eastern-central Mediterranean, and the fact that the status of assessed stocks was overexploited and/or in overexploitation, the Commission underlined the need to advance on completing the scientific basis for advice and reinforcing management measures on the fishery in the Strait of Sicily and the Ionian and Levant Sea. The Commission also highlighted the need to address the selectivity of trawlers targeting deep-water red shrimp. In light of this, it adopted, based on proposals tabled by the European Union: i) Recommendation GFCM/45/2022/5 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/7 and GFCM/43/2019/6; ii) Recommendation GFCM/45/2022/6 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Ionian Sea (geographical subareas 19 to 21), repealing Recommendations GFCM/44/2021/8 and GFCM/42/2018/4; and iii) Recommendation GFCM/45/2022/7 on a multiannual management plan for sustainable demersal trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24 to 27), repealing Recommendation GFCM/42/2018/3, available as Appendixes 8, 9 and 10, respectively. These decisions establish multiannual management plans to be implemented in two stages, with a transitional phase consisting of an effort/capacity freeze, transitional catch limits, a temporal closure, a permanent inspection scheme and work towards defining the fishing footprint and identifying the most appropriate spatial measures, in view of adopting long-term measures from 2026.

Management of eastern Mediterranean fisheries

28. Acknowledging the work carried out on round sardinella (*Sardinella aurita*) in the eastern Mediterranean to significantly improve data collection and perform benchmark assessments in GSAs 24, 26 and 27, as well as the preparation of a toolbox of management measures, the Commission agreed to finalize the pending benchmark assessments and advance towards a future management plan in 2023 for relevant GSAs. In this respect, the Commission tasked the SAC with identifying technical elements.

29. In recognizing the fast spread of non-indigenous species (NIS) in the Mediterranean and the fact that the eastern Mediterranean was considered a hotspot for these species, the Commission agreed on launching a pilot study on NIS in the eastern subregion (concept note in Appendix 25/B) towards developing a model to be exported to other subregions. In addition, considering the need to compile the growing body of information and experience on NIS in many Mediterranean countries, and taking note of the offer from Türkiye, the Commission agreed to create a Mediterranean-wide NIS observatory based in this country with the objective of fostering regional discussions on best practices for the management of NIS.

Management of Adriatic Sea fisheries

30. Noting that the stocks of both sardine and anchovy in GSAs 17 and 18 continued being in overexploitation and/or overexploited, and recalling the requests of Recommendation GFCM/44/2021/20 on a multiannual management plan for the sustainable exploitation of small pelagic stocks in the Adriatic Sea (geographical subareas 17 and 18), the Commission endorsed the criteria for the establishment of an allocation scheme for quotas in the Adriatic Sea small pelagic fishery. The Commission encouraged CPCs to continue with their efforts in establishing an allocation key in advance of the forty-sixth session of the Commission.

31. The Commission noted that, despite still being in overexploitation, the status of Adriatic key demersal stocks had improved, showing the positive effects of the management plan in place. Nevertheless, the Commission recognized that the fishing sector was suffering from the increased costs of fuel. With this in mind, the Commission underlined the importance of continuing to apply all existing measures and adopted, on the basis of a proposal by the European Union, Recommendation GFCM/45/2022/8 on the implementation of a fishing effort regime for key demersal stocks in the Adriatic Sea (geographical subareas 17 and 18) in 2023, stemming from Recommendation GFCM/43/2019/5, as reproduced in Appendix 11. The Commission noted that the SAC could explore, in 2023, the possibility of establishing a compensation scheme to encourage the use of more selective gear.

Management of Black Sea fisheries

32. The Commission praised the work done on priority species in the Black Sea, with particular reference to the BlackSea4Fish project. In order to progress on the road towards ensuring sustainability of priority stocks, the Commission agreed to further enhance data quality through the continuation of data preparation meetings and the enhancement of capabilities in stock assessment. To this end, it endorsed the proposed roadmaps for the finalization of the benchmark assessments of Black Sea anchovy (*Engraulis encrasicolus ponticus*) and European sprat (*Sprattus sprattus*) and the improvement of the assessments of piked dogfish (*Squalus acanthias*) and horse mackerel (*Trachurus mediterraneus ponticus*), available in Appendixes 26/D, 26/E, 26/F and 26/G respectively, and encouraged improving age reading for these species.

33. The Commission welcomed the finalization of the benchmark of turbot (*Scophthalmus maximus*) with newly estimated reference points, which revealed a stock overexploited and in overexploitation with stable fishing mortality and increasing biomass. It agreed to continue taking action to improve input data, ensure a reduction in fishing mortality and estimate illegal, unreported and unregulated (IUU) fishing. Considering the Working Group on the Black Sea was deferred, the Commission agreed to postpone a revision of the turbot total allowable catch. It adopted, following a proposal tabled by the European Union, Recommendation GFCM/45/2022/9 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/43/2019/3, available in Appendix 12, which rolled over the current quotas.

34. Considering that, on a precautionary basis, piked dogfish was considered depleted in the Black Sea and noting the scarcity of information on this species, the Commission endorsed a concept note on a research programme in response to Recommendation GFCM/44/2021/10 on management measures for sustainable piked dogfish fisheries in the Black Sea (geographical subarea 29) (Appendix 25/A), as well as a roadmap to improve the piked dogfish assessment (Appendix 26/F).

35. Acknowledging that, despite improvements, red mullet (*Mullus barbatus*) was still considered to be in overexploitation, with several issues related to data availability, the Commission agreed to

continue working towards the identification of a package of potential control and conservation measures (e.g. minimum conservation reference size) and address data deficiencies.

36. The Commission noted the significant improvements in the assessment of rapa whelk (*Rapana venosa*) and welcomed the stakeholder consultations carried out in Bulgaria, Romania and Türkiye with the aim of discussing current and potential management measures, expressing satisfaction in the work done. In order to allow time to finalize the work towards proposing technical elements for management, and considering that the stock was assessed to be around maximum sustainable yield, the Commission adopted, based on a proposal of the European Union, Recommendation GFCM/45/2022/10 on a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/42/2018/9, available in Appendix 13.

37. In light of the extremely critical situation of sturgeon (*Acipenseridae*) populations in the Black Sea and in response to Resolution GFCM/44/2021/5 on the mitigation of fisheries impacts for the conservation of sturgeons in the Black Sea (geographical subarea 29), the Commission endorsed the concept note for a pilot study to address critical issues related to the marine portion of the sturgeon lifecycle (Appendix 25/C), noting it should be launched as soon as possible.

Additional advice at the regional level, including on interactions between fisheries and the marine environment and ecosystems

38. The Commission commended the creation of the GFCM database on sensitive benthic habitats and species, acknowledging that it provided a primary source of data for the formulation of objective and standardized advice on priority areas for spatial management. In this respect, it stressed the importance of continuously populating the database with quality data, in line with the roadmap towards the future use and development of the database. The Commission also remarked on the future need to work on assessing the potential impacts of changing the depth limits of the GFCM 1000 m FRA, noting that this assessment would require advancing the knowledge on the distribution of VMEs as well as on the determination of the bottom trawling fishing footprint and on potential gear-related management measures.

39. Recognizing that FRAs were an important management tool but that their effectiveness depended on sound principles for their establishment and monitoring, the Commission adopted, based on a proposal of the European Union, Recommendation GFCM/45/2022/11 on the establishment of a set of minimum standards for fisheries restricted areas in the GFCM area of application, available in Appendix 14. It was underlined that this recommendation followed a subregional approach in order to best adapt to the specificities of each subregion. Furthermore, it was suggested to carry out an assessment of existing FRAs in accordance with the provisions of Recommendation GFCM/45/2022/11.

Issues related to the provision of advice on fisheries

40. In light of the socioeconomic relevance of recreational fisheries and their potential impacts on several priority commercial species in overexploitation status, and recalling the different nature of this sector, which cannot commercialize its catches, the Commission stressed the need to continue monitoring recreational fisheries in order to facilitate their management and avoid negative impacts of this sector, including on commercial fisheries. Appreciation was expressed for the efforts made in recent years to lay the foundation for progress on this topic at the regional level. In order to further advance in this work, the Commission adopted, following a proposal tabled by the European Union, Recommendation GFCM/45/2022/12 on the establishment of a set of minimum rules for sustainable recreational fisheries in the Mediterranean Sea (Appendix 15), including provisions for the development of a research programme.

41. The Commission applauded efforts made to progress on the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea (RPOA-SSF), in particular efforts to engage stakeholders at the regional level, underlining the importance of giving fishers a platform to regularly exchange among themselves. In view of accelerating advances towards the full implementation of the RPOA-SSF, the Commission adopted, following a proposal tabled by the European Union, Resolution GFCM/45/2022/3 on the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea, available in Appendix 23. Strong support was expressed for the priority actions listed therein, including on topics ranging from social issues to innovative technology, climate change and the role of women, among others. To better support these efforts, the Commission endorsed the revised terms of reference for the Working Group on Small-Scale Fisheries (WGSSF), available in Appendix 26/A.

42. The Commission recognized the significant efforts deployed, as well as the important results obtained, within the framework of scientific surveys-at-sea and regional monitoring programmes (i.e. discards, incidental catch of vulnerable species and depredation) as well as the testing of mitigation measures. The importance of continuing all aforementioned activities was stressed, in line with the objectives of the GFCM 2030 Strategy, and in collaboration with experts and partners, via the MedSea4Fish and BlackSea4Fish technical assistance projects. In particular, the Commission recognized with satisfaction the work underway in the Black Sea on cetacean bycatch in turbot fisheries, in collaboration with the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS), indicating it could serve as a model to follow for the implementation of other pilot studies on vulnerable species.

43. The Commission also agreed on the need to advance on analysing the data collected through surveys-at-sea and monitoring programmes in order to provide advice on a number of topics (e.g. stock assessment, identification of hotspot areas for vulnerable species, main fleet segments responsible for discards and incidental catch of vulnerable species, etc.). The Commission also agreed to continue working on the identification, testing and implementation of efficient mitigation measures with a view to presenting the results to the relevant working groups. To this end, the Commission endorsed the establishment of the Working Group on the Analysis of Fisheries Monitoring Data (WGANALYSIS) in order to coordinate the analysis of data and information collected in the context of relevant monitoring programmes, stressing the need to interact with other relevant working groups, such as the Working Group on Fishing Technology (WGFIT) and the Working Group on Vulnerable Marine Ecosystems and Essential Fish Habitats (WGVME-EFH).

44. Acknowledging the importance of continuing the implementation of the pilot study on trawl selectivity in the Strait of Sicily (GSAs 12 to 16), which tests different selectivity measures and aims to mitigate the adverse impacts of trawl fishing for juveniles of key species in this area, the Commission stressed the need to enlarge the scope of the pilot study with new mitigation measures. To this end, it invited CPCs to participate in this initiative with a view to replicating it in other areas of the Mediterranean and the Black Sea as soon as possible.

45. The Commission highlighted the importance of obtaining better information and technical advice on the status of vulnerable species and the need to implement activities for the mitigation of impacts on specific vulnerable groups, as required by the recently adopted GFCM recommendations on the mitigation of fisheries impacts for the conservation of vulnerable species in the Mediterranean. Emphasizing that the time was ripe to have clear objectives for reducing interactions between vulnerable species and fishing activities, as well as clear and coordinated actions to achieve those objectives, the Commission also gave its full support to the development of a regional plan of action on vulnerable species, in line with the proposed roadmap (Appendix 26/C), and encouraged CPCs to implement pilot projects in line with recommendations adopted in 2021. The Commission acknowledged the work done by ACCOBAMS to address the issue of incidental catch of cetaceans by

illegal driftnets at a Mediterranean level and encouraged the SAC to continue the work on incidental catch of vulnerable species by all types of gear.

Advice on compliance issues

General Fisheries Commission for the Mediterranean Logbook

46. Acknowledging the need to streamline and enhance the use of the GFCM logbook established in 2010 in order to improve data collection, including on vulnerable species, in line with various recommendations adopted by the GFCM since the introduction of this tool, the Commission, based on a proposal submitted by the European Union, adopted Recommendation GFCM/45/2022/13 on the establishment of a GFCM logbook, amending Recommendation GFCM/35/2011/1, as reproduced in Appendix 16. This recommendation contributes, among other things, to supporting the work of fishers while raising awareness on their important role in facilitating the reporting of data to the GFCM.

Transshipment in the General Fisheries Commission for the Mediterranean area of application

47. Considering the recently agreed global guidelines for transshipment by the FAO Committee on Fisheries, and the need to tackle this issue at the regional level by establishing general principles and procedures to be applied in the GFCM area of application, the Commission, based on a proposal submitted by the European Union, adopted Recommendation GFCM/45/2022/14 on the regulation of transshipment in the GFCM area of application, as reproduced in Appendix 17. This recommendation provides for the prohibition of transshipment at sea, except in case of *force majeure*.

International joint inspection schemes

48. The Commission underscored the need to support ongoing cooperation among CPCs in the context of international joint inspection schemes in order to ensure adequate monitoring of commercial fisheries in the GFCM subregions. This was stressed both in the context of existing schemes, which should be expanded and continued (i.e. Strait of Sicily), and where these schemes were not yet in place (i.e. Ionian Sea). To this end, on the basis of two proposals submitted by the European Union, the Commission adopted i) Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6, as reproduced in Appendix 18, and ii) Recommendation GFCM/45/2022/16 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21), as reproduced in Appendix 19. These recommendations expand the reach of international joint inspection schemes in the GFCM area of application, thereby contributing to curtail IUU fishing activities.

General Fisheries Commission for the Mediterranean record of vessels over 15 metres

49. Stressing the urgency to fine-tune the compulsory data fields relating to fishing vessels available via the GFCM record of fishing vessels larger than 15 metres in length overall authorized to fish in the GFCM area of application (GFCM-AVL), the Commission, based on a proposal submitted by the European Union, adopted Recommendation GFCM/45/2022/17 on information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application, amending Recommendation GFCM/33/2009/6 and repealing Recommendation GFCM/44/2021/18, as reproduced in Appendix 20. This recommendation also allows for the integration of vessel names in Latin characters in the GFCM-AVL.

ISSUES STEMMING FROM THE COMPLIANCE COMMITTEE

Identification and clarification process

50. The Commission, in recalling the progress made by CPCs in the steady implementation of GFCM recommendations and the submission of data and information to the GFCM Secretariat, celebrated the confirmation of compliance category 1 for the European Union and its Member States, Morocco and Türkiye. On this occasion, it also encouraged other CPCs to attain full compliance and reach compliance category 1 and, to this end, it instructed the GFCM Secretariat to dispatch letters to CPCs which, based on the analysis made by the CoC, were close to attaining compliance category 1.

51. The Commission agreed on the importance of urgently strengthening the CoC so that the identification and clarification process could produce more meaningful and tangible outcomes, while enabling the constant provision of tailored technical assistance to CPCs. In this regard, it underscored that efforts would be made to operationalize the CoC, in line with the recommendations stemming from the second GFCM performance review, as relating to compliance, and in light of the practice of relevant regional fisheries management organizations (RFMOs) having advanced compliance mechanisms in place. The GFCM Secretariat would backstop the reporting of progress on the strengthening of the CoC, both to the next session of the Committee and to the annual session of the Commission.

Data quality indicators

52. Following the positive assessment by the CoC of the results of the implementation of data quality indicators through the DCRF online platform (data reference year 2020), the Commission welcomed the progress made in facilitating the use of this tool to support the identification and clarification process and agreed to continue applying data quality indicators, in collaboration with the SAC.

List of vessels presumed to have carried out illegal, unreported and unregulated fishing

53. Having considered a number of amendments to the draft GFCM list of vessels presumed to have carried out illegal, unreported and unregulated fishing (GFCM IUU vessel list) proposed by the European Union, the Commission adopted the new GFCM IUU vessel list and requested that the GFCM Secretariat publish it on its website and disseminate it to the secretariats of other RFMOs. It also called upon the GFCM Secretariat to streamline cross-listing procedures in close consultation with the secretariats of other RFMOs.

Vessel monitoring system and related controls system

54. The Commission recalled the importance of following through with the establishment of a GFCM vessel monitoring system (VMS) and related controls system, building upon the results of the various pilot projects carried out with the technical support of the GFCM Secretariat, including in collaboration with other RFMOs. It also invited CPCs to volunteer to undertake tests on VMS centralized and decentralized approaches, as well as on e-logbook and gear sensors, considering the importance of collecting and analysing relevant information towards the establishment of a GFCM VMS and related controls system and as part of awareness-raising efforts. In this regard, the Commission expressed great satisfaction for the results of the tests carried out so far, including on gear sensors, and for the positive dynamics created, fully involving CPCs in coordination with the GFCM Secretariat.

Catch documentation schemes

55. In referring to the ongoing progress on the establishment of a GFCM CDS based on pilot projects addressing red coral, Black Sea turbot and European eel, the Commission urged for the operationalization of the pilot project on a red coral CDS and prompted additional progress towards the development of a GFCM CDS.

Compendium of GFCM decisions and GFCM regional repository of national legislation

56. The Commission welcomed the updated Compendium of GFCM Decisions in three languages (Arabic, English and French) and agreed that efforts would be made to endorse it as soon as feasible during the 2022–2023 intersession, preferably by the end of January 2023. In addition, the Commission acknowledged with satisfaction the developments related to the adoption and amendment of new national legislation by some CPCs, thanks to the strong technical cooperation between their national authorities and the GFCM Secretariat in the context of the GFCM regional repository of national legislation (GFCM-Lex).

Other compliance-related matters

57. The Commission reviewed the turbot quotas set by Recommendation GFCM/43/2019/3 amending Recommendation GFCM/41/2017/4 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), based on the provisions of the recommendation in paragraph 1e). In light of the exceptional circumstances faced by the fisheries sector in 2021 due to the COVID-19 pandemic, the Commission agreed to carry over the unused European Union turbot quota from 2021 (amounting to 22.5 tonnes and corresponding to 15 percent of the initial allocated quota of 150 tonnes) to 2023, subject to internal validation within the European Union 2023 fishing opportunities regulation for the Mediterranean and the Black Sea.

PROGRAMME OF WORK FOR THE PERIOD 2022–2024

Scientific Advisory Committee on Fisheries and Working Group on the Black Sea (fisheries)

Regional issues

- Ensure priority multiannual management plans (e.g. European eel, common dolphinfish, blackspot seabream in the Alboran Sea, deep-water rose shrimp in the Strait of Sicily, red coral, small pelagics in the Adriatic and Black Sea turbot), as well as decisions of regional nature (e.g. on minimum standards for FRAs, incidental catch of vulnerable species, RPOA-SSF priority actions, recreational species and decarbonization, among others) are addressed adequately at subregional level, through the subregional committees.

Stock assessment and strengthened advice

- Compile relevant information and consolidate networks of experts, including external experts, on the assessment of priority species towards increasing the coverage of assessment and increasing the number of stocks with quantitative advice (fishing mortality and/or biomass) with respect to reference points, towards effectively supporting management.
- Finalize the benchmark assessments of sardine in GSAs 17 and 18, red mullet in GSAs 17 and 18 and round sardinella in GSAs 24 to 27, launch a benchmark for deep-water rose shrimp in the Adriatic Sea and central Mediterranean (GSAs 12 to 16, 17, 18, 19 and 20), and organize relevant data preparation.

- Continue supporting the regular collection of socioeconomic data, including for the small-scale segment, and support plans to address socioeconomic needs as well as the integration of socioeconomic data into management discussions.
- Conduct training activities to strengthen capacity at the subregional level on new stock assessment models and management strategy evaluation, including on the use of socioeconomic models and data-limited methods across a number of assessment models, as well as on model diagnostics and model selection and the standardization and estimation of surveys-at-sea information.
- Develop a methodology for the determination and/or revision of a minimum conservation reference size (MCRS) for GFCM priority species for the Mediterranean and the Black Sea at the subregional level and by fishing gear in order to preserve the stocks of priority species, including in particular blackspot seabream, blue and red shrimp, giant red shrimp, and demersal species in the Strait of Sicily.

Data collection and quality indicators

- Continue working on the implementation of quality indicators for all fisheries data transmitted through the DCRF online platform (including data that have been recently included in the platform in line with the DCRF harmonization process) and ensure the implementation of streamlined quality summary outputs as arising from the DCRF technical consultation.
- Keep the DCRF manual up to date and complete the release of data transmission tools on the DCRF online platform for those reporting requirements that have been harmonized with the DCRF but are not yet included on the platform.
- Implement, in advance of expert groups and SAC sessions, a validation system for the data received in order to better support the formulation of advice, while ensuring constant coordination with national focal points.
- Conduct a pilot study aimed at tracking changes and trends in the capacity of each CPC fleet.

Small-scale fisheries, including priority actions for the implementation of the RPOA-SSF

- Enhance the scientific monitoring of SSF activities, particularly the compilation of information for the assessment of agreed priority species by subregion, in addition to carrying out the second phase of socioeconomic surveys, before the end of 2023, including those along the SSF value chain.
- Implement the activities planned in the framework of the Small-Scale Fishers' Forum (SSF Forum), paying close attention to the priorities highlighted in the RPOA-SSF, in particular gender, participatory processes, vulnerable species and youth engagement.
- Advance on the implementation of activities within the RPOA-SSF and launch a mid-term review of the RPOA-SSF's objectives and outcomes to assess progress made, review lessons learnt and provide recommendations on possible readjustments and improvements.

Recreational fisheries

- Prepare a concept note for a research programme on recreational fishing activities (which may also be extended to Black Sea countries) for review by the SAC at its session in 2023.

- Progress in the analysis of available recreational fisheries data and regulations from all countries, including the ongoing pilot studies on recreational fisheries data collection, towards producing a summary of the current state of recreational fisheries and provide technical assistance to additional countries interested in setting up recreational fisheries data collection.
- Improve data collection and promote awareness campaigns on the incidental catch of vulnerable species (i.e. sharks and rays, sea turtles, seabirds) in recreational fisheries.
- Strengthen the Working Group on Recreational Fisheries (WGRF) network of recreational fishing associations, federations and other stakeholder groups, with a view to facilitating their engagement in the work of the WGRF and supporting bottom-up initiatives.
- Assess the impacts of all types of recreational fisheries gear on the sector's priority species.

European hake in the Mediterranean

- Compile comprehensive advice on European hake at a regional level, including by coordinating among the WGFIT, the WGANALYSIS, and the WGVME-EFH.

European eel

- Revise DCRF Task VII.6-Eel based on the proposal of the research programme.
- Implement a second phase of the research programme concentrating on socioeconomic analyses, the development of long-term standardized monitoring and stakeholder awareness (also addressing the importance of recording effort at the level of regional management units), as well as pilot studies in key sites.
- Coordinate with relevant organizations, including CITES, the Convention on the Conservation of Migratory Species of Wild Animals (CMS), the European Inland Fisheries and Aquaculture Advisory Commission (EIFAAC), the International Council for the Exploration of the Sea (ICES) and the Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP).
- Perform an assessment of the effectiveness of the management measures included in Recommendation GFCM/42/2018/1 on a multiannual management plan for European eel in the Mediterranean Sea, as well as of suitable catch limits or effort measures, minimum sizes, appropriate technical measures (e.g. mesh and hook sizes) and other possible measures resulting in selectivity improvements.

Red coral

- Continue implementing the research programme on red coral, to be completed in 2023.
- Advance on the implementation of a permanent CDS within the framework of the CoC.
- Assess levels of red coral IUU fishing.
- Coordinate with relevant organizations, such as CITES and UNEP/MAP.

Blue crabs

- Advance in the implementation of the research programme on blue crabs.

Spatial management

- Foresee and implement scientific monitoring plans to assess the effectiveness of all FRAs, including their socioeconomic effects, according to the proposed scientific monitoring minimal standards; particular reference is made to assessing the effectiveness and possible expansion of the FRAs in the Strait of Sicily in protecting spawners of key species.
- Investigate the effectiveness of existing FRAs and provide advice on potential modifications when required, in line with Recommendation GFCM/45/2022/11.
- Execute the roadmap towards the future use and development of the GFCM database on sensitive benthic habitats and species and organize training activities on its use.
- Work towards a complete analysis of the spatial distribution of bottom trawl fishing effort, starting with the implementation of the updated roadmap to analyse the overlap between VMEs and the deep-water red shrimp fishery in the central-eastern Mediterranean.
- Launch an activity to compile information on fishing activity between 600 m and 1000 m towards a potential revision of the 1000 m FRA.
- Continue working towards the identification and proposal of priority EFH and/or areas hosting VMEs for which spatial and/or temporal measures could be implemented.
- Coordinate with relevant organizations, including UNEP/MAP.

Vulnerable species

- Advance towards the development of a draft Regional Plan of Action for Vulnerable Species (RPOA-VUL), following the proposed roadmap (Appendix 9/L) and incorporating the key elements underlined by the experts during the WGFIT.
- Coordinate with relevant organizations, including ACCOBAMS and UNEP/MAP.

Selectivity

- Continue carrying out tests in selectivity of different types of gear, in particular bottom trawls.

Monitoring programmes

- Continue supporting key regional activities including:
 - implementing scientific surveys-at-sea (both demersal and pelagic-acoustic), socioeconomic surveys, and discard monitoring activities, using harmonized methodologies and aiming for best possible coverage;
 - Implementing incidental catch of vulnerable species and depredation monitoring programmes, in line with relevant existing and upcoming methodologies for data collection, continuing the work previously carried out within the MedBycatch and depredation projects and in cooperation with relevant partners in the region, and expanding the areas to be covered;
 - establishing pilot projects to mitigate the impact of fisheries on vulnerable species and addressing the priority groups of vulnerable species highlighted in recently adopted

recommendations as well as those emanating from the results of ongoing research projects such as MedBycatch;

- testing the efficacy of selective devices and mitigation measures that could improve the selectivity of fishing gear, reducing discards and mitigating incidental catch of vulnerable species and depredation, as well as other impacts on VMEs and vulnerable species;
- working towards the identification of alternatives for the decarbonization of the fishing industry;
- testing and validating the use of DNA metabarcoding in select monitoring activities;
- carrying the pilot project on marine litter trials to test the efficacy of the experimental trawl gear, to remove only litter from the seabed without affecting marine resources, and expanding the project in other areas;
- exploring opportunities to provide technical assistance to countries that have not, to date, advanced on improving selectivity in their national fisheries; and
- monitoring NIS across the Mediterranean, including through the establishment of the observatory.

Advances towards an adaptation strategy for climate change

- In preparation of a dedicated session within the upcoming GFCM Forum on Fisheries Science (Fish Forum), continue the work towards technical advice on the impacts of climate change on fisheries and potential mitigation actions, incorporating climate-related variables in the assessment of the status of resources, when relevant.
- Consider the possibility of conducting a pilot project to study the impact on fisheries of the non-indigenous jellyfish species *Beroe ovata* and *Mnemiopsis leidyi* in the Black Sea.

Subregional issues

Western Mediterranean

- In the context of blackspot seabream fisheries:
 - Follow up on the scientific workplan and conclusions of the data preparation meeting held in October 2022.
 - Explore the possibility of an experimental scientific survey-at-sea.
 - Provide technical information for the adoption of additional management measures and work towards filling current gaps in scientific knowledge, according to the updated technical elements.
 - Evaluate the impact of different types of gear exploiting blackspot seabream on fishing mortality.
- In the context of dolphinfish fisheries, for both western and central Mediterranean:

- Continue implementing the research programme on common dolphinfish, including organizing workshops for: i) coordinating pilot field studies; ii) analysing and preparing the data for stock assessment; iii) training on stock assessment and management strategy evaluation methods; and iv) start discussions on potential management measures towards the definition of a long-term management plan.
- In the context of small pelagic fisheries:
 - Continue improving the quality of advice, including through the improvement of data collection, in particular in Algeria and the integration of survey data and the use of statistical catch-at-age methods, and start working towards drafting technical elements for a management plan.
 - Provide technical assistance to Algeria with regard to collecting relevant information in GSA 4.
 - Organize an expert meeting to provide guidance on possible harmonization of management measures already in place and discuss other management measures aimed at preserving small pelagics in the Alboran Sea.
- Implement pilot project(s) on gear selectivity to assess the biological impacts of technical selectivity measures on fish stocks and the potential for stock recovery, taking into consideration the characteristics of the fisheries in the subregion and in each country.
- In relation to the Cabliers coral mounds, coordinate interested countries, i.e. Algeria, Morocco, and European Union-Spain and relevant partners, in organizing a deep-water survey coordinated by the GFCM Secretariat with the involvement of external experts, in line with Resolution GFCM/45/2022/4.
- Integrate the final results of the Transboran project into the assessment of priority stocks for the western Mediterranean, including through a session within the working groups on stock assessment.
- Launch and implement a research programme on jellyfish in GSAs 1 and 3.

Central Mediterranean

- In the context of European hake, deep-water rose shrimp, red mullet and Norway lobster (*Nephrops norvegicus*) fisheries:
 - Confirm the persistence of identified nursery grounds in the northern and southern Strait of Sicily, including through the continuation and expansion of existing surveys and the implementation of new ones (e.g. the shelf and slopes at the borders of the Malta plateau, GSAs 12, 13 and 14, the Gulf of Hammamet and the Gulf of Tunis).
 - Further investigate the contribution of deep-water gillnet, longline and trammel net fisheries to fishing mortality-at-age of the European hake stock and assess whether a ban on fishing within established and new FRAs could be applied to longlines and gillnets.
 - Increase the understanding of the reproductive peaks, the recruitment and spawning periods of relevant species.

- Provide technical information in support of the adoption of additional management measures and work towards filling current gaps in scientific knowledge according to the updated technical elements.
- Investigate the existence of shark nursery areas in the subregion.
- Implement the pilot study on selectivity in trawl fisheries in the Strait of Sicily.

Central-eastern Mediterranean

- In the context of deep-water red shrimp fisheries:
 - Annually assess the status of deep-water red shrimp stocks towards providing quantitative advice.
 - Identify EFH areas for juveniles and spawners.
 - Finalize the workplan for the determination of fishing grounds using all data available and perform an overlap analysis of the distributions of the two species.
 - Provide technical information in support of the adoption of additional management measures and fill current gaps in scientific knowledge according to the updated technical elements.
 - Perform an assessment of alternative management scenarios in a data-limited context.
 - Implement the roadmap to guide the work needed to analyse the overlap between VMEs and deep-water red shrimp fishing grounds.
 - Provide information (e.g. electronic recording and reporting system [ERS], VMS and logbooks) to allow for the estimation of catches by GSA of origin.
 - Implement a pilot project to improve the selectivity of trawl nets fishing deep-water red shrimp in the Strait of Sicily, the Ionian Sea and the Levant Sea, including an investigation of the usefulness of grids for the minimization of bycatch of vulnerable megafauna.

Eastern Mediterranean

- Review and enhance data collection efforts for priority species in the eastern Mediterranean towards improving input data for stock assessment.
- Draft technical elements for the management of round sardinella in the eastern Mediterranean.
- Organize training on data-limited management strategy evaluation applicable to round sardinella and/or deep-water red shrimp in the eastern Mediterranean.
- Continue supporting the implementation of an exploratory demersal trawl survey in Lebanon.
- Launch a pilot study on NIS in the eastern Mediterranean, consolidating an integrated monitoring platform for these species (NIS observatory) and expanding the preliminary local ecological knowledge (LEK) study previously carried out.

Adriatic Sea

- Compile relevant information on priority species, in particular for Norway lobster and red mullet in GSAs 17–18, towards fulfilling the requirements of existing recommendations and providing quantitative advice on stock status.
- Launch and implement a pilot study to underpin the biology and ecology of *Isidella elongata* in GSA 18 and implement the roadmap towards the establishment of a southern Adriatic FRA.
- Discuss the establishment of a network of EFHs in the subregion, based on the extensive information and analyses available, at the Subregional Committee for the Adriatic Sea (SRC-AS).
- Implement pilot project(s) on fishing gear selectivity to assess the biological impacts of technical selectivity measures on fish stocks and the potential for stock recovery, taking into consideration the characteristics of the fisheries in the subregion and in each country.
- In the context of demersal fisheries:
 - Evaluate the impacts of the longline sector on the stock of European hake, including through the analysis of partial mortality by fleet within the context of the Working Group on Stock Assessment for Demersal Species (WGSAD).
 - Update and revise the tentative roadmap towards a quantitative management strategy evaluation for demersal fisheries.
- In the context of small pelagic fisheries:
 - Perform a quantitative management strategy evaluation for small pelagic fisheries according to the agreed roadmap.

Black Sea

- Continue implementing the pilot project on cetacean bycatch in turbot fisheries, in collaboration with ACCOBAMS.
- Launch the Black Sea subregional scientific database.
- Launch a research programme for piked dogfish.
- Continue executing the roadmap, as a step-by-step approach, for the determination of technical elements for the management of rapa whelk fisheries in the Black Sea.
- Improve the estimation of bycatch of priority species, including estimates of discards and discards by age/length of red mullet, whiting (*Merlangius merlangus*) and horse mackerel, and organize a workshop for the use of discards data in the assessment.
- Perform a standardized analysis of red mullet misidentification in catches across the whole of the Black Sea using genetics.
- Ensure the implementation of surveys-at-sea that provide fishery-independent indexes of abundance for the main commercial species, in particular regarding i) acoustic estimates for anchovy, horse mackerel, and sprat; and ii) the extension of the coverage of demersal trawl surveys, and provide improved indices for all demersal fish stocks.

- Finalize the benchmark assessments for anchovy and sprat in the 2022–2023 intersession.
- Perform a benchmark for rapa whelk in 2022–2023.
- Launch the pilot project on sturgeon.

Scientific Advisory Committee on Aquaculture and Working Group on the Black Sea (aquaculture)

Efficient governance in support of responsible investment

- Continue working with partner organizations and CPCs on the development of responsible aquaculture investment principles for the Mediterranean and the Black Sea and encourage cooperation among southern Mediterranean countries.
- Carry out pilot studies on the application of the *Guidelines for the streamlining of aquaculture licensing and leasing processes* by providing assistance to countries in developing enabling legal and administrative frameworks.
- Carry out pilot case studies to identify responsible investment practices in aquaculture, based on environmental, social and governance criteria in order to highlight the positive societal impacts of aquaculture and promote knowledge sharing and synergies between relevant stakeholders.
- Start developing and providing technical tools (such as technical guidance) focused on small-scale farmers in order to improve their access to financial services, including credit, deposit, payment, insurance, and other risk management services.

Practices supporting the sustainability of the aquaculture industry

- Continue to support the implementation of allocated zones for aquaculture within spatial planning frameworks, in both marine and inland areas, through capacity-building activities and the definition of specific roadmaps to improve data collection and coordination between stakeholders.
- Support CPCs in diversifying farmed species and restorative aquaculture, systems and practices (including shrimp, shellfish, seaweed, sea urchin and sea cucumbers and integrated multi-trophic aquaculture) through capacity-building, knowledge sharing and collaboration with producers.
- Update and further the work on environmentally friendly farming systems in the Mediterranean and the Black Sea by providing technical guidance, including for the implementation of nature-based solutions, environmental monitoring programmes, biosecurity and the prevention and control of pathologies.
- Continue to support applied research and capacity-building, focusing on responsible practices and state-of-the-art techniques for nature-based solutions.
- Continue restorative aquaculture activities on restocking and extend these to other subregions and priority species such as sturgeon.
- Develop an assessment on the environmental impact of non-indigenous farmed shrimp species.

- Further explore the interactions between MPAs and aquaculture in the region.

Perception of aquaculture and social acceptability

- Support CPCs in developing communication strategies focusing on consumers in order to improve the social acceptability of aquaculture.
- Establish educational aquaculture programmes and activities in schools.
- Enhance best practices through engagement with producers and their organizations, focusing on small-scale farming, women and young people.
- Continue the work to support a consumer-responsive aquaculture sector, including through building capacities in business planning and marketing.
- Strengthen knowledge sharing among countries on relevant policies promoting producer organizations, certification, gender equality and inclusiveness in the aquaculture sector.

Information System for the Promotion of Aquaculture in the Mediterranean, technology and information systems

- Continue to assess and ensure the consistency of data submitted by CPC national focal points via the Information System for the Promotion of Aquaculture in the Mediterranean (SIPAM) online platform, in accordance with Recommendation GFCM/41/2017/1 on the reporting of aquaculture data and information, repealing Recommendation GFCM/35/2011/6.
- Propose new tools and methodologies for data collection and analysis related to demand and consumption and socioeconomic data, as well as qualitative data.
- Continue to follow the progress made in the field of aquaculture data collection (production centres, production statistics and market data) at the national level.
- Continue to implement activities aimed at strengthening the role of aquaculture in national economies and the sector's socioeconomic dimension through the establishment of pilot studies on value chain analysis.
- Advance towards applied technologies and artificial intelligence in aquaculture production operations through capacity-building and knowledge-sharing activities, with consideration given to the results progressively achieved through voluntary pilots carried out by CPCs on environmental monitoring.
- Continue to carry out capacity-building and training on aquaculture production and market data collection, in line with the harmonized methodologies developed during the GFCM expert consultations carried out in September 2018.
- Consolidate the establishment of the Black Sea Aquaculture Observatory, building upon the results of the feasibility phase and leveraging the ongoing modernization process of the SIPAM database and its electronic platform, and launch the feasibility phase for its extension to the Mediterranean.

- Improve aquaculture information systems through the use of modern technologies and reinforce production and market data management practices by streamlining data collection, analysis and dissemination processes.
- Enhance capacity-building of national focal points in reporting NIS used in aquaculture.

Other priorities

- Continue organizing specific trainings through the aquaculture demonstration centres, including a training on offshore cage manufacturing, implementation and repair in Tunisia.
- Develop and implement a technical assistance project on innovative aquaculture techniques in southern Mediterranean countries, including knowledge transfer and exchange.

Compliance Committee

- Continue the identification and clarification process with a view to identifying cases of non-compliance through compliance tables and the compliance assessment scheme.
- Address issues related to the streamlining of data/information submission through a dedicated workshop, to be organized jointly with the SAC and held prior to the transmission of requests for clarification to CPCs.
- Further the application of data quality indicators on the DCRF online platform in the context of the identification and clarification process.
- Resume the provision of technical assistance to CPCs in order to accelerate progress towards full compliance with GFCM decisions.
- Liaise to the maximum extent possible with other RFMOs' secretariats to report to the CoC and the Commission on their practices regarding actions against non-compliance with a view to adopting an annex containing these measures related to the relevant category and gravity of non-compliance as specified in Part II.6 of Resolution GFCM/44/2021/13 on appropriate measures to deter non-compliance.
- Accelerate the reform and the strengthening of the CoC in accordance with Resolution GFCM/44/2021/11 on the follow-up of the second GFCM performance review.
- Assess the implementation of the closure period for European eel.
- Streamline cross-listing and updates of the GFCM IUU vessel list through the active involvement of the GFCM Secretariat in the RFMOs' IUU Vessel List Exchange Group.
- Operationalize the pilot red coral CDS and accelerate progress towards the development of a GFCM CDS on the basis of the outcomes of pilot CDS underway and expert advice.
- Continue the ongoing pilots and carry out voluntary pilots involving CPCs, with a view to establishing a GFCM VMS, including the testing of ERS, winch sensors and other monitoring, control and surveillance technologies, relative to the priorities of CPCs.
- Integrate the FRA toolkit into ongoing technical work on enhanced monitoring by the GFCM, including via the testing of additional technologies (e.g. VIIRS and SAR).

- Start the evaluation of the implementation of Recommendation GFCM/45/2022/11 and propose any remedial measures to improve compliance, as per part IV of this recommendation.
- Support the transposition of GFCM recommendations through the consolidation of GFCM-Lex and, to this end, provide legal support to CPCs.
- Ensure the implementation of Resolution GFCM/44/2021/6 on the application of an International Maritime Organization number, amending Resolution GFCM/41/2017/6, in close coordination with the International Maritime Organization (IMO) Secretariat.
- Keep the CoC abreast of developments related to measures against IUU fishing at the global and regional levels.
- Facilitate the implementation of permanent inspection schemes for demersal fisheries in the Strait of Sicily and for deep-water red shrimp fisheries in the Strait of Sicily, the Ionian Sea and the Levant Sea.

MEETINGS

SAC/WGBS meetings	Date	Modality/Location ¹
Data preparation for a benchmark on sardine in the Adriatic Sea	29 November – 2 December 2022	Online
Working group on stock assessment for demersal species (WGSAD)	12–17 December 2022	Hybrid – Rome, Italy
Working group on stock assessment for small pelagic species (WGSASP)		
Joint SAC/CoC Workshop on data collection and submission and the management of compliance-related information, including a session on fishing capacity	17–20 January 2023	In person – Naples, Italy
Benchmark session of sardine in the Adriatic Sea	13–17 February 2023	Hybrid – Split, Croatia (TBC)
Meeting on the Regional Plan of Action on Vulnerable Species (RPOA-VUL)	14 February	Online
Benchmark session for deep-water rose shrimp (GSAs 12–16, 17, 18, 19 and 20)	20–24 February 2023	Hybrid – FAO headquarters, Rome, Italy
Working group on Management Strategy Evaluation (WGMSE) on Adriatic Sea small pelagics – Session 1: preparatory meeting on methods	2–3 March 2023	Online

¹ The exact modality will be decided in advance of the meeting based on the evolution of the COVID-19 pandemic.

SAC/WGBS meetings	Date	Modality/Location¹
Working group on vulnerable marine ecosystems and essential fish habitats (WGVME-EFH), including ad hoc session on <i>Isidella</i>	7–10 March 2023	Hybrid – FAO headquarters, Rome, Italy
Finalization of the benchmark assessment of red mullet in the Adriatic Sea	13–16 March 2023	Hybrid – FAO headquarters, Rome, Italy
Meeting on decarbonization of the fishing industry	14–15 March 2023	Hybrid – FAO headquarters, Rome, Italy
Subregional Committee for the central Mediterranean (SRC-CM)	28–30 March 2023	Hybrid – Tunis, Tunisia
Finalization of the benchmark assessment of sardinella in the eastern Mediterranean	3–5 April 2023	Hybrid – FAO headquarters, Rome, Italy
Subregional Committee for the western Mediterranean (SRC-WM)	12–14 April 2023	Hybrid – Malaga, Spain
Subregional Committee for the eastern Mediterranean (SRC-EM)	10–12 May 2023	Hybrid – Beirut, Lebanon
WGSASP session on small pelagics in the Adriatic Sea	15–18 May 2023	Hybrid – location TBD
Working Group on Red Coral (WGREDCORAL)	23–24 May 2023	Hybrid – FAO headquarters, Rome, Italy
WGMSE on Adriatic Sea small pelagics – Session 2: presentation of results	29 May 2023	Hybrid – Split, Croatia
Subregional Committee for the Adriatic Sea (SRC-AS), including a session on quota allocation schemes for small pelagic species in the Adriatic Sea	30 May–2 June 2023	Hybrid – Split, Croatia
Working Group for the analysis of fisheries monitoring data (WGANALYSIS)	6–7 June 2023	Hybrid – FAO headquarters, Rome, Italy
Working Group on the Management of European Eel (WGMEASURES-EEL)	8–9 June 2023	Hybrid – FAO headquarters, Rome, Italy
Twenty-fourth session of the Scientific Advisory Committee on Fisheries (SAC)	20–23 June 2023	In person – Beirut, Lebanon
Benchmark assessment of Black Sea anchovy	4–6 July 2023	Hybrid – Burgas, Bulgaria TBD

SAC/WGBS meetings	Date	Modality/Location¹
Working Group on Blackspot Seabream (WGSBR)	12 July 2023	Online
Subregional group on stock assessment for the Black Sea (SGSABS), including a rapa whelk benchmark assessment	17–21 July 2023	Hybrid – Burgas, Bulgaria TBD
Tenth meeting of the Working Group on the Black Sea (WGBS), including a session to discuss the incorporation of climatic impacts on sprat assessment and management advice, MCRS and temporal closures	25–28 July 2023	Hybrid – Burgas, Bulgaria
Working Group on Fishing Technology (WGFiT)	TBD 2024	TBD

CAQ meetings	Date	Modality/Location*
Workshop on microalgae and macroalgae culture and applications	5–6 December 2022	Hybrid – Jeddah, Saudi Arabia
Workshop on promoting the social acceptability of aquaculture in the Mediterranean and the Black Sea: a journey from farm to fork	3 May 2023	Hybrid – Lyon, France
Workshop on best practices for promoting social acceptability of aquaculture products and improving local consumption	21–22 February 2023	Hybrid – Aqaba, Jordan
Workshop on the use of innovative technologies to prevent and control finfish diseases	13–14 April 2023	Hybrid – Tunisia
Workshop on strengthening cooperation on responsible investment among southern Mediterranean countries	17–18 May 2023	In person – Egypt
Intersessional meeting of the Scientific Advisory Committee on Aquaculture, including a SIPAM session	11–13 July 2023	In person – Italy
Workshop on allocated zones for aquaculture, best practices and lessons learned: highlights on the GFCM and RECOFI experiences	13–14 March 2023	TBD – Oman
Thirteenth session of the Scientific Advisory Committee on Aquaculture, including a SIPAM session and first technical advisory group meeting	TBD 2024	In person – Tunisia

CoC meetings	Date	Modality/Location*
Joint SAC/CoC Workshop on data collection and submission and the management of compliance-related information, including a session on fishing capacity	17–20 January 2023	In person – Naples, Italy
Working group on IUU fishing (WGIUU), including a session on the clarification process	2–5 May 2023	In person – Rhodes, Greece
Working group on vessel monitoring system and related control system (WGVMS)		
Sixteenth session of the Compliance Committee (CoC)		

GFCM/Strategic meetings (transversal meetings)	Date	Modality/Location*
MedFish4Ever Conference	3–4 October 2023	In person – Malta
Forty-sixth session of the GFCM	6–10 November 2023	In person – Split, Croatia
International Symposium on Fisheries and Aquatic Sciences (SOFAS) 2023	TBD October 2023	In person – Trabzon, Türkiye
Second GFCM Forum on Fisheries Science (Fish Forum)	19–23 February 2024	In person – Türkiye
Regional Aquaculture Conference	December 2024	In person – Bari, Italy TBC
Black Sea Conference	TBD	In person – TBD

58. The execution of workplan activities will depend on the availability of experts, data and funds. They may be complemented by additional meetings as necessary, including needed data preparation meetings, coordination meetings within research programmes and pilot projects/studies, meetings to finalize agreed roadmaps as well as SSF Forum events.

AMENDMENT OF THE GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN RULES OF PROCEDURE

59. The Commission adopted the revised GFCM Rules of Procedure with the addition of a new paragraph (number 3) to Rule V governing the term of office of the GFCM Executive Secretary. This paragraph reintroduces the term of office of five years plus an additional consecutive term of five years, for a maximum total of ten years, and will be applicable to the new GFCM Executive Secretary. The revised GFCM Rules of Procedure are available in Appendix 27.

TWELFTH SESSION OF THE COMMITTEE ON ADMINISTRATION AND FINANCE

Report from the Secretariat on administrative and financial issues

60. The Committee reviewed financial expenditures for 2021 against both the autonomous budget and several projects supporting the GFCM mandate. It also reviewed administrative and

financial issues related to the implementation of GFCM activities during the intersession and to the functioning of the GFCM Secretariat.

61. In relation to the withdrawal of Japan from the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) in 2020 and its outstanding contribution to the 2021 GFCM autonomous budget adopted in 2019, FAO Legal Office expressed a non-compelling advice whereby Japan would be free to decide whether or not to pay such contribution. In light of Japan's decision not to do so, it was decided to exceptionally – and without setting a legal precedent – write off the outstanding balance from GFCM accounting books.

62. In response to the objection raised by Egypt during the adoption of the 2022 autonomous budget owing to the increase in their contribution, relevant information on the calculations substantiating the increase had been provided during the intersession and at two meetings of the heads of delegation with the GFCM Secretariat held during the session. Regarding the FAO aquaculture production estimates, which form the basis of the production component for the calculation of contracting parties' assessed contribution, it was concluded that Egypt would nominate a focal point to oversee the formal submission of the Egyptian aquaculture data to FAO in a timely manner, and work with FAO experts to resolve statistical classification issues.

63. The Committee agreed that the GFCM working capital fund would continue to be replenished with unspent balances, 3.5 percent of contributions received as well as additionally with arrears from outstanding payments.

General Fisheries Commission for the Mediterranean budget and contributions by contracting parties for 2023–2025

64. It was recalled that the autonomous budget for 2023 had been the object of a meeting of the heads of delegation of contracting parties, where the GFCM Secretariat was requested to revise the proposal available in document GFCM:45/2022/7, keeping the same level of 2023 contributions for all contracting parties but Egypt, for which the aquaculture subcomponent used to calculate the contribution would be based – on an exceptional basis – on GFCM SIPAM data instead of the usual FAO aquaculture production statistics. This would trigger an overall decrease in the 2023 autonomous budget compared to 2022. The Committee agreed that, this being an exception, the total autonomous budget in 2024 would return to 2022 levels.

65. The Committee adopted its autonomous budget for 2023, amounting to USD 2 291 799, and its autonomous budget for 2024 and 2025, both amounting to USD 2 462 221, as reproduced in Appendix 28/A, 28/B and 28/C, respectively. Related contributions due by contracting parties for 2023 are presented in Appendix 29, while contributions for 2024 and 2025 will be calculated ahead of the relevant sessions of the Committee once required data will become available.

66. The adopted budget for 2023 covers the staff listed in document GFCM:45/2022/7. Additionally, the positions of Fishery Officer (Environment) and Fishery Officer (both P-4), still vacant, will be relaunched and covered by the autonomous budget. In line with the recent FAO Administrative Circular AC2022/09, which reopens the possibility of upgrading encumbered positions, the Commission agreed on the principle of recognition and career progression advocated at the forty-third GFCM session (Greece, November 2019), and reconfirmed its agreement to the proposal to upgrade the Programme Associate (G-6) to G-7, the Office Assistant (G-5) to G-6/G-7 and Office Assistant (G-3) to G-4. The Commission furthermore requested the GFCM Executive Secretary to explore any possible options with relevant FAO units to ensure this career progression within GFCM be materialized as soon as possible.

Election of the Committee on Administration and Finance Bureau

67. The Committee endorsed Ms Ivana Petrina Abreu (Croatia) as Chairperson, with the rest of the CAF Bureau to be composed of Mr Atif Salah Megahed (Egypt) as first Vice-Chairperson, and Mr Rachid Boukedjouta (Algeria) as second Vice-Chairperson.

ENDORSEMENT OF THE BUREAU OF THE SCIENTIFIC ADVISORY COMMITTEE ON AQUACULTURE AND COMMITTEE ON ADMINISTRATION AND FINANCE

68. The Commission endorsed the new CAF Bureau for two years and extended the mandate of the CAQ Bureau, namely Mr Ibrahim Al Hawi (Lebanon) as Chairperson, Mr Mohamed El Araby (Egypt) as First Vice-Chairperson and Ms Ilaria Ferraro (Italy) as Second Vice-Chairperson, until 2024.

ANY OTHER MATTER

69. The GFCM Chairperson referred to the revised procedure for the selection and appointment of the Secretaries of Article XIV bodies, adopted by the FAO Council in 2021 and subsequently endorsed by the GFCM at its extraordinary session held in the same year. He recalled the selection process, managed by FAO and including select GFCM members, and informed the Commission that the FAO Director-General had referred to the Commission for approval of his proposal to appoint Mr Miguel Bernal, Spanish national, currently serving as Senior Fishery Officer at the GFCM Secretariat.

70. The Commission, having considered the outcomes of the selection process, unanimously approved the proposal by the FAO Director-General to appoint Mr Bernal as the new GFCM Executive Secretary and wished him success with the performance of his duties in the first five-year term, as per the term of office defined in the revised GFCM Rules of Procedure and as soon as the internal onboarding procedure would be completed by FAO.

71. Mr Bernal conveyed his utmost gratitude to the GFCM Membership as well as to FAO for entrusting him with this significant responsibility. He recalled the important and positive role that Article XIV bodies can play in the context of the Organization, as well as the benefits for the GFCM to be part of it, and affirmed his commitment to further maximize advantages for both FAO and the GFCM during his tenure, as of the day of his entry on duty.

72. The Commission thanked the GFCM Executive Secretary ad interim, Mr Manuel Barange, who had greatly facilitated the implementation of all 2021–2022 intersessional activities, thereby contributing to the prompt and effective discharge of the duties vested by CPCs in the GFCM Secretariat, in close coordination with the FAO Fisheries and Aquaculture Department.

DATE AND PLACE OF THE FORTY-SIXTH SESSION

73. The Commission took note of the kind invitation made by the delegation of Croatia to host the forty-sixth session in 2023, subject to final confirmation by relevant authorities.

ADOPTION OF CONCLUSIONS AND RECOMMENDATIONS

74. The report, including its appendices, was adopted on 11 November 2022.

List of annexes

1. Agenda
2. List of participants
3. List of documents
4. Recommendation GFCM/45/2022/1 on a multiannual management plan for European eel in the Mediterranean Sea, amending Recommendation GFCM/42/2018/1
5. Recommendation GFCM/45/2022/2 on a management plan for the sustainable exploitation of red coral in the Mediterranean Sea, amending Recommendation GFCM/43/2019/4
6. Recommendation GFCM/45/2022/3 on a multiannual management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3), repealing Recommendations GFCM/44/2021/4, GFCM/43/2019/2 and GFCM/41/2017/2
7. Recommendation GFCM/45/2022/4 on a multiannual management plan for the sustainable exploitation of demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/12 and GFCM/42/2018/5
8. Recommendation GFCM/45/2022/5 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/7 and GFCM/43/2019/6
9. Recommendation GFCM/45/2022/6 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Ionian Sea (geographical subareas 19 to 21), repealing Recommendations GFCM/44/2021/8 and GFCM/42/2018/4
10. Recommendation GFCM/45/2022/7 on a multiannual management plan for sustainable demersal trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24 to 27), repealing Recommendation GFCM/42/2018/3
11. Recommendation GFCM/45/2022/8 on the implementation of a fishing effort regime for key demersal stocks in the Adriatic Sea in 2023 (geographical subareas 17 and 18), stemming from Recommendation GFCM/43/2019/5
12. Recommendation GFCM/45/2022/9 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/43/2019/3
13. Recommendation GFCM/45/2022/10 on a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/42/2018/9
14. Recommendation GFCM/45/2022/11 on the establishment of a set of minimum standards for fisheries restricted areas in the GFCM area of application
15. Recommendation GFCM/45/2022/12 on the establishment of a set of minimum rules for sustainable recreational fisheries in the Mediterranean Sea

16. Recommendation GFCM/45/2022/13 on the establishment of a GFCM logbook, amending Recommendation GFCM/35/2011/1
17. Recommendation GFCM/45/2022/14 on the regulation of transshipment in the GFCM area of application
18. Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6
19. Recommendation GFCM/45/2022/16 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21)
20. Recommendation GFCM/45/2022/17 on information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application, amending Recommendation GFCM/33/2009/6 and repealing GFCM/44/2021/18
21. Resolution GFCM/45/2022/1 on empowering women in the aquaculture sector
22. Resolution GFCM/45/2022/2 on a research programme on jellyfish in the western Mediterranean (geographical subareas 1 to 3)
23. Resolution GFCM/45/2022/3 on the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea
24. Resolution GFCM/45/2022/4 on the launch of a roadmap for the establishment of a fisheries restricted area in the Cabliers coral mound in the Alboran Sea with a view to adopting adequate protection and management measures
25. Concept notes for research programmes and pilot projects
 - A. Concept note for a research programme on piked dogfish in the Black Sea
 - B. Concept note for a pilot study on non-indigenous species in the eastern Mediterranean
 - C. Concept note for a pilot study on sturgeon in the Black Sea
26. Terms of reference and roadmaps for select activities
 - A. Revised terms of reference for the Working Group on Small Scale Fisheries
 - B. Terms of reference for an Expert meeting on the management of small pelagics in the Alboran sea
 - C. Roadmap towards a Regional Plan of Action for Vulnerable Species in the Mediterranean and the Black Sea
 - D. Roadmap for future work on Black Sea anchovy

- E. Roadmap for the finalization of the benchmark assessment of European sprat in the Black Sea
 - F. Roadmap for the assessment of piked dogfish in the Black Sea
 - G. Roadmap for the improvement of input data for the assessment of horse mackerel in the Black Sea
27. Amended Rules of procedure of the General Fisheries Commission for the Mediterranean
28. Autonomous budget of the General Fisheries Commission for the Mediterranean for 2023–2025
- A. Autonomous budget of the General Fisheries Commission for the Mediterranean for 2023
 - B. Autonomous budget of the General Fisheries Commission for the Mediterranean for 2024
 - C. Autonomous budget of the General Fisheries Commission for the Mediterranean for 2025
29. Contributions to the GFCM budget for 2023 (based on 2018–2020 averages)

Appendix 1

Agenda

Celebration of the seventieth anniversary of the GFCM and opening of the forty-fifth session

Meeting of the heads of delegation of contracting parties

Adoption of the agenda and session arrangements

Management of Mediterranean and Black Sea fisheries and aquaculture

Issues stemming from the Compliance Committee (CoC)

Programme of work for the period 2022–2024

Amendment of the GFCM Rules of Procedures

Twelfth session of the Committee on Administration and Finance (CAF)

Endorsement of the Bureau of the CAQ and CAF

Any other matter

Date and place of the forty-sixth session

Adoption of conclusions and recommendations

List of participants

MEMBERS OF THE GFCM

ALBANIA

Frida KRIFCA
Minister for Agriculture and Rural
Development

Arian PALLUQI*
Head
Fisheries and Aquaculture Unit
Ministry of Agriculture and Rural
Development

Marco KULE
Ministry of Agriculture and Rural
Development

Arlinda DEDI
Ministry of Agriculture and Rural
Development

Xhelsian ABEDIN
Ministry of Agriculture and Rural
Development

ALGERIA

Fouad GUENATRI*
Focal Point to GFCM
Ministère de la pêche et des productions
halieutiques

Mohamed Elias BENDJEDDA
Sous-directeur de l'administration des
moyens
Ministère de la pêche et des productions
halieutiques

Louisa ATMANI
Sous-directrice de la coopération
Ministère de la pêche et des productions
halieutiques

Abderrahmane HENTOUR
Chargé du contrôle des activités de la pêche
Ministère de la pêche et des productions
halieutiques

Rachid BOUKEDJOUTA
Expert
Centre National de recherche et de
Développement de la pêche et de
l'aquaculture CNRDPA

Naciba LABIDI-NEGHLI
Sous Directrice de la Recherche
Ministère de la Pêche et des Productions
Halieutiques

BULGARIA

Momtchil RAYTCHEVSKI
Ambassador of Bulgaria to Albania

Georgi RALCHEV*
First Secretary
Permanent Representation of Bulgaria to the
EU

Ivailo SIMEONOV
Director of Common fisheries policy
Ministry of Agriculture

Vanya STAMATOVA
Executive Director
Executive Agency for Fisheries and
Aquaculture

Dobrin LECHEV
Director
Directorate "Management of Fisheries and
Conservation of Fish Resources"
Executive Agency for Fisheries and
Aquaculture

Mihaela VELINOVA
State Expert
Directorate General for Fisheries Policy
Ministry of Agriculture

Plamen PETKOV
State Expert
Directorate General for Fisheries Policy,
Ministry of Agriculture

CROATIA

Ante MISURA*
Director
Directorate of Fisheries
Ministry of Agriculture

Ivana PETRINA ABREU
Head of Sector
Ministry of Agriculture
Ante VUJEVIC
Ministry of Agriculture

Josipa RUNJAK
Senior Advisor
Ministry of Agriculture

Nedo VRGOC
Expert

CYPRUS

Myrto IOANNOU*
Senior Fisheries Officer
Department of Fisheries and Marine Research

Charis CHARILAOU
Fisheries Officer A'
Department of Fisheries and Marine Research

Nikolas MICHAELIDIS
Fisheries Officer
Department of Fisheries and Marine Research

Ioannis THASITIS
Fisheries Officer
Department of Fisheries and Marine Research

Katerina GEORGIU
Fisheries Officer

Savvas KAFOURIS
Fisheries and Marine Research Officer
Department of Fisheries and Marine Research

EGYPT

Atif Salah MEGAHED*
General Director of Fisheries
Lakes and Fish Resources Protection and
Development Agency

Mohammed EL ARABY
Director of the Technical Support Unit
Lakes and Fish Resources Protection and
Development Agency

Alaa EL HAWEET
Emeritous Professor
Arab Academy for Science, Technology &
Maritime Transport

Doaa Hafez SHAWKY
Director of International Agreement
Department
Lakes and Fish Resources Protection and
Development Agency

Doaa Abdou Mahmoud TAWFEEK
General Director of International Agreement
Department
Lakes and Fish Resources Protection and
Development Agency

Shimaa HUSSIN
Expert
Lakes and Fish Resources Protection and
Development Agency

Abdelrazek BADR
Expert
Lakes and Fish Resources Protection and
Development Agency

EUROPEAN UNION

Lena ANDERSSON PENCH
Director for Fisheries Policy for the
Mediterranean and the Black Sea
Directorate General for Maritime Affairs and
Fisheries
European Commission

Valerie LAINÉ*
Head of Unit
Directorate General for Maritime Affairs and
Fisheries
European Commission

Larissa BURU
Directorate General for Maritime Affairs and
Fisheries

Giacomo Chato OSIO
Policy Officer
Directorate General for Maritime Affairs and Fisheries
European Commission

Pinelopi BELEKOU
Policy Officer
Directorate General for Maritime Affairs and Fisheries
European Commission

Antoine BIGOT
Directorate General for Maritime Affairs and Fisheries
European Commission

Neil ANSELL
Head of Sector
Mediterranean Sea and International Waters
European Fisheries Control Agency

Maria Teresa SPEDICATO
COISPA

Anne-Cécile DRAGON
Directorate General for Maritime Affairs and Fisheries
European Commission

Yordanka CHOBANOVA
Directorate General for Maritime Affairs and Fisheries
European Commission

Bianca WILES
Directorate General for Maritime Affairs and Fisheries
European Commission

Laura RULL DEL AGUILA
Directorate General for Maritime Affairs and Fisheries
European Commission

Nour ENGUELEGUELE
Directorate General for Maritime Affairs and Fisheries
European Commission

Nicolas STURARO
Directorate General for Maritime Affairs and Fisheries
European Commission

Venetia KOSTOPOULOU
Directorate General for Maritime Affairs and Fisheries
European Commission

Louise ROCHE
Directorate General for Maritime Affairs and Fisheries
European Commission

Christina KAATZ
Administrator
General Secretariat
Council of the European Union

Ladislav ILCIC
Member of the European Parliament

Predrag Fred MATIC
Member of the European Parliament

Rosa D'AMATO
Member of the European Parliament

Bjorn STOCKHAUSEN
Advisor on Fisheries
European Parliament

Anita GULAM
Advisor
European Parliament

Filippo SEGATO
Advisor
European Parliament

FRANCE

Céline JURGENSEN*
Ambassadeur
Représentation Permanente de la France
auprès des Nations Unies à Rome

Sylvain FOURNEL
Representant Permanent Adjoint
Représentation Permanente de la France
auprès des Nations Unies à Rome

Michel LEVEQUE
Représentation Permanente de la France
auprès des Nations Unies à Rome

Raoul MILLE
Représentation Permanente de la France
auprès des Nations Unies à Rome

Louis DE BRONDEAU
Représentation Permanente de la France
auprès des Nations Unies à Rome

Louis-Barthélémy LEGOUX
Représentation Permanente de la France
auprès des Nations Unies à Rome

Léa KVATERNIK
Représentation Permanente de la France
auprès des Nations Unies à Rome

Clémence LARRAT
Secrétariat d'État chargé de la Mer
Direction Générale des Affaires Maritimes, de
la Peche et de l'Aquaculture

Pauline GAUTIER
Secrétariat d'État chargé de la Mer
Direction Générale des Affaires Maritimes, de
la Peche et de l'Aquaculture

Soizic SCHWARTZ
Secrétariat d'État chargé de la Mer
Direction Générale des Affaires Maritimes, de
la Peche et de l'Aquaculture

Amandine COLLARD
Secrétariat d'État chargé de la Mer
Direction Générale des Affaires Maritimes, de
la Peche et de l'Aquaculture

Alix MATHIEU
Secrétariat d'État chargé de la Mer
Direction Générale des Affaires Maritimes, de
la Peche et de l'Aquaculture

Fanny VOLAGE
Observateur
Comité national des pêches maritimes et des
élevages marins

Clara HENISSART
Observateur
Organisation de producteurs du Levant

Rosalie CRESPIE
Comité national des pêches maritimes et des
élevages marins

GREECE

Marina PETROU*
General Director for Fisheries
Ministry of Rural Development & Food

Stamatis KAMPOLIS
Ministry of Rural Development & Food

Kostas KOUTSIS
Head of Dept. for International Organizations,
RFMOs & International Relations
Ministry of Rural Development & Food
Directorate General for Fisheries

Triantafyllos KOUNTOURIS
Fisheries Officer
Ministry of Rural Development & Food

George FLERIS

Angeliki KALLARA
Director
Directorate of Aquaculture
Ministry of Rural Development & Food

Maria SFENDILAKI
Director
Directorate of Fisheries and Fishery Resources
Management
Ministry of Rural Development & Food

Panagiotis TSACHAGEAS
Deputy Director
Directorate for Control of Fishing Activities
& Products
Ministry of Rural Development & Food

Maria OIKONOMOU
Head of Department of Capture Fisheries
Management
Ministry of Rural Development & Food

Michael CHATZIEFSTATHIOU
Head of Department for Common Fisheries
Policy & Common Market Organization
Ministry of Rural Development & Food

Eirini KOTROTSOU
Head of Department for Ecosystemic
Management of Fishery Resources
Ministry of Rural Development & Food

Evangelia LYRITSI
Head of Section
Directorate of Aquaculture
Ministry of Rural Development & Food

Georgia PAPAIOANNOU
Head of Section
Directorate of Aquaculture
Ministry of Rural Development & Food

Ntinos KIOUSIS
Ministry of Rural Development & Food

Theodora KOUTSOGAKI
Ministry of Rural Development & Food

George LAGONIKAKIS
Ministry of Rural Development & Food

Alexandra CHRYSOCHOOU
Ministry of Rural Development & Food

ISRAEL

Nir FROYMAN*
Head of Department
Department of Fisheries and Aquaculture
Ministry of Agriculture & Rural Development

ITALY

Riccardo RIGILLO*
Director General
General Directorate for Maritime Fisheries
and
Aquaculture

Mauro COLAROSI
Officer
General Directorate for Maritime Fisheries
and
Aquaculture

Lorenzo Giovanni MAGNOLO
Officer
General Directorate for Maritime Fisheries
and
Aquaculture

Ilaria FERRARO
Technical Assistance
General Directorate for Maritime Fisheries
and
Aquaculture

Irene Adelaide FORCELLA
General Directorate for Maritime Fisheries
and
Aquaculture

LEBANON

Louis LAHOUD*
Director General of Agriculture
Ministry of Agriculture

Imad LAHOUD
Head of Department
Fisheries & Wildlife Department
Ministry of Agriculture

LIBYA

Hisham GHMATI*
General Director
Marine Biology Research Center

Masoudah Abd Alraheem AMEEDAH
General Manager
National Aquaculture Project

Faraj Safi Aldeen ALTAYIB
General Authority for Marine Fisheries

Ali ELFITURI
Focal Point to GFCM

Younus Faraj ABDULRAZIQ
Director of the Office of the Minister
Ministry of Marine Wealth

Ahmed Moh Hadha GHANAI
Head of International Cooperation
Ministry of Marine Wealth

MALTA

Gilbert BALZAN*
Director
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Jurgen MIFSUD
Chief Scientific Officer
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Kimberley GRECH
Manager
Fisheries Control Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Claire ABELA
Senior Fisheries Protection Officer
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Michelle MIZZI
Assistant Manager
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Michael ALBANOZZO
Scientific Officer
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Miriam GAMBIN
Scientific Officer
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Kelly CAMILLERI
Assistant Manager
Fisheries Research Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Owen ZAMMIT
Economics Officer
Fisheries Control Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Myfanwy CORTIS
Assistant Manager
Fisheries Control Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Karl CUTAJAR
Scientific Officer
Aquaculture Directorate
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

Stephen BRINCAT
Scientific Officer
Fisheries Management Unit
Department of Fisheries and Aquaculture
Ministry for Agriculture, Fisheries and Animal
Rights

MONACO

MONTENEGRO

KATARINA BURZANOVIC*
Director
Directorate of Fisheries
Ministry of Agriculture, Forestry and Water
Management

Aleksandar JOKSIMOVIC
Director
Institute for Marine Biology

Milica DIVANOVIC
Directorate of Fisheries
Ministry of Agriculture, Forestry and Water
Management

Deniz FRJULCKIC
Directorate of Fisheries
Ministry of Agriculture, Forestry and Water
Management

MOROCCO

Zakia DRIOUICH
Secrétaire Générale
Département de la pêche maritime

Fatima Zohra HASSOUNI *
Chef de la Division de la Durabilité et
Aménagement des Ressources Halieutiques
Département des Pêches Maritimes

Bouchra HAOUJAR
Cheffe de Service des Espèces Marines
Migratrices et des Espaces protégés
Département des Pêches Maritimes

Yassine LAAROUSI
Chef de la Division de la Coopération
Département des Pêches Maritimes

Zineb EL FATOUANI
Cadre à la direction de contrôle des activités
de la pêche maritime
Département des Pêches Maritimes

Mohamed Amine MANSOURI
Chef de Service des Études
Agence Nationale du Développement de
l'Aquaculture

Mohammed MALOULI IDRISI
Chef du Centre Régional de Tanger
Institut National de Recherche Halieutique

Abdellatif HMIDANE
Chef de Service de Coordination de la Lutte
contre la pêche INN
Département des Pêches Maritimes

Houda AYOUCHE
Représentant Permanent Adjoint du Royaume
du Maroc auprès des Agences Onusiennes
basées à Rome

Ihssane FERTOUS
Représentant Permanent Suppléant du
Royaume du Maroc auprès des Agences
Onusiennes basées à Rome

ROMANIA

Eugen PREDATU
First Deputy Minister
Counsellor of the Romanian Embassy in Tirana

Alexandru GHEORGHE*
Counsellor
National Agency for Fisheries and Aquaculture

Aurel MAXIM
Senior Adviser
National Agency for Fisheries and Aquaculture

Ancuta KAZMIROVICZ
Public Manager
National Agency for Fisheries and Aquaculture

Alexandra PLESCAN
Senior Counsellor
National Agency for Fisheries and Aquaculture

Victor NITA
Senior Scientist
NIMRD "Grigore Antipa"

SLOVENIA

Jernej SVAB*
Ministry of Agriculture, Forestry and Food

Bety BREZNIK
Ministry of Agriculture, Forestry and Food

Milena RADENKOVIC
Deputy Head of Mission
Embassy of the Republic of Slovenia in Tirana

Polona BUNIC
Ministry of Agriculture, Forestry and Food

SPAIN

Alicia VILLAUZ IGLESIAS*
Secretaria General de Pesca
Ministerio de Agricultura, Pesca y
Alimentación

Isabel ARTIME GARCIA
Directora General de Pesca Sostenible
Ministerio de Agricultura, Pesca y
Alimentación

Encarnacion BENITO REVUELTA
Subdirectora Adjunta
Caladero Nacional y Aguas de la Union
Europea
Ministerio de Agricultura, Pesca y
Alimentación

Elena LOPEZ ANDREU
Jefa de Servicio
Caladero Nacional y Aguas de la Union
Europea
Ministerio de Agricultura, Pesca y
Alimentación

Angela COTRINA GUTIERREZ
Jefa de Servicio
Caladero Nacional y Aguas de la Union
Europea
Ministerio de Agricultura, Pesca y
Alimentación

Joaquin ROSON FERNANDEZ
Jefe de Sección
Caladero Nacional y Aguas de la Union
Europea
Ministerio de Agricultura, Pesca y
Alimentación

Paloma CARBALLO TEJERO
Jefa de Area
Acuicultura, Comercialización Pesquera y
Acciones Estructurales
Ministerio de Agricultura, Pesca y
Alimentación

Julian GARCIA BAENA
Acuicultura, Comercialización Pesquera y
Acciones Estructurales
Ministerio de Agricultura, Pesca y
Alimentación

SYRIAN ARAB REPUBLIC

Abdel Latif ALI*
General Director
General Commission for Fisheries
Resources

TUNISIA

Ridha M'RABET*
Directeur Général
Direction Générale de pêche et de
l'aquaculture

Hamadi MEJRI
Deputy Director of Fish Resources
Conservation
Ministry of Agriculture, Water Resources and
Fisheries

TÜRKIYE

Esra DENIZCI CAKMAK*
Ministry of Agriculture and Forestry
Directorate General of Fisheries and
Aquaculture

Erdinç GÜNES
Senior Fishery Officer
Ministry of Agriculture and Forestry
Directorate General of Fisheries and
Aquaculture

Irine LOMASHVILI *
Chief Specialist of the Department
Of Biodiversity and Forestry Policy
Ministry of Environmental Protection
And Agriculture

Maia CHKHOBADZE
Head of Biodiversity Control Service
Ministry of Environmental Protection
And Agriculture

Marina MGELADZE
Head of the Fisheries, Aquaculture and Water
Biodiversity Department
National Environmental Agency (NEA)

Archil PARTSVANIA
Deputy Head of the Licensing Department
National Environmental Agency (NEA)

SAUDI ARABIA

Yousef Saleh ALHAFEDH

Philippos PAPAGEORGIOU

NON CONTRACTING PARTIES

PORTUGAL

Fernanda GUIA
Expert
Directorate General for Natural
Resources, Safety and Maritime Services

RUSSIAN FEDERATION

Maria MARCHENKO
Third Secretary
Embassy of the Russian Federation to Albania

Anastasia PODOLYAN
Representative of the Federal Agency
for Fisheries within the Permanent Mission
of the Russian Federation to FAO
and other UN Agencies in Rome

OBSERVERS FROM INTERGOVERNMENTAL ORGANIZATIONS

ACCOBAMS

Susana SALVADOR
Executive Secretary

Célia LE RAVALLEC
Programme and Project Officer

EUROFISH

Toni BARTULIN
Senior Project Manager

ICCAT

Camille MANEL
Executive Secretary

ICES

Alan HAYNE
General Secretary

SPA/RAC

Khalil ATTIA
Director

Anis ZARROUK
Project Manager

UNEP/MAP

Tatjana HEMA
Coordinator

OBSERVERS FROM NON-GOVERNMENTAL ORGANIZATIONS

BLACK SEA ADVISORY COUNCIL

Yordan GOSPODINOV
Secretary General

MEDAC

Antonio MARZOA NOTLEVSEN
President

Rosa CAGGIANO
Executive Secretary

Marzia PIRON
Executive Assistant

MEDREACT

Domitilla SENNI
Director

Stephan BEAUCHER
Consultant

Alex BARTOLI

Vittoria GNETTI

Sandrine POLTI

MEDITERRANEAN STEWARDSHIP COUNCIL

David PARRENO DUQUE
Fisheries Manager

OCEANA

Nicolas FOURNIER
Campaign Director

Vanya VULPERHORST
Campaign Director

Helena ALVAREZ
Senior Marine Scientist

OCEANCARE

Fabienne MCLELLAN
Managing Director

Johannes Alexander MULLER
Ocean Policy Expert

WWF

Giuseppe DI CARLO
Director
WWF Mediterranean Marine Initiative

Marco COSTANTINI
Regional Manager on Fisheries
WWF Mediterranean Marine Initiative

Carlotta BIANCHI
Policy and Advocacy Officer
WWF Mediterranean Marine Initiative

Mosor PRVAN
WWF Adria

BUREAU OF THE GFCM AND ITS SUBSIDIARY BODIES

GFCM Bureau

Roland KRISTO
Deputy Minister
Ministry of Agriculture and Rural
Development
Albania

**Chairperson of the Scientific Advisory
Committee on Fisheries (SAC)**

Alaa Eldin ELHAWEET
Dean of College of Fisheries Technology
and Aquaculture
Arab Academy for Science, Technology &
Maritime transport,
Egypt

**Chairperson of the Scientific Advisory
Committee on Aquaculture (CAQ)**

Ibrahim AL HAWI
Advisor of the Minister
Ministry of Agriculture
Lebanon

**Chairperson of the Compliance Committee
(CoC)**

Hamadi MEJRI
Deputy Director of Fish Resources

Conservation
Ministry of Agriculture, Water Resources and
Fisheries
Tunisia

**Vice-Chairperson of the Committee on
Administration and Finance (CAF)**

Atif Salah MEGAHED
General Director of Fisheries
Lakes and Fish Resources Protection and
Development Agency
Egypt

**Coordinator of the Working Group on the
Black Sea (WGBS)**

Galina NIKOLOV
Bulgaria

FAO FISHERIES AND AQUACULTURE DEPARTMENT

Luca CERIOLA
Fishery Officer
MedSudMed Project

Nicoletta MILONE
Fishery Information Officer
AdriaMed Project

GFCM SECRETARIAT

Manuel BARANGE
Director of Fisheries and Aquaculture
GFCM Executive Secretary a.i.
Food and Agriculture Organization of the
United Nations

Miguel BERNAL
Senior Fishery Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Elisabetta MORELLO
Fishery Resources Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Nicola FERRI
Legal and Institutional Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Houssam HAMZA
Aquaculture Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Margherita SESSA
Programme and Liaison Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Dominique BOURDENET
Knowledge Management Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Federico DE ROSSI
Data Compliance Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Marin MIHANOVIC
Fishery Officer
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations
Subregional Technical Unit for the Adriatic Sea

Anna CARLSON
Fishery Officer for socio-economic issues
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Claudia ESCUTIA
Programme Associate
General Fisheries Commission for the
Mediterranean

Food and Agriculture Organization of the
United Nations

Matteo STARNONI
Programme and Liaison Assistant
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Paolo CARPENTIERI
Fishery Resources Monitoring Specialist
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Ahmed SILIMAN
Compliance Coordinator
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Ysé BENDJEDDOU
Publications Coordinator
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Stefano LELLI
Fishery Expert for the Eastern Mediterranean
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

Adèle PEENAERT
Senior Communication Coordinator
General Fisheries Commission for the
Mediterranean
Food and Agriculture Organization of the
United Nations

List of documents

GFCM:45/2022/1	Provisional agenda and timetable
GFCM:45/2022/2	Report on fisheries intersessional activities in 2021–2022, recommendations and workplan for 2022–2024
GFCM:45/2022/3	Report on aquaculture intersessional activities in 2021–2022, recommendations and workplan for 2022–2024
GFCM:45/2022/4	Report on compliance intersessional activities in 2021–2022, recommendations and workplan for 2022–2024
GFCM:45/2022/5 (CAF 12)	Report on financial issues in 2021
GFCM:45/2022/6 (CAF 12)	Report of the Secretariat on administrative issues during the 2021–2022 intersession
GFCM:45/2022/7 (CAF 12)	GFCM budget and contracting parties contributions for 2023–2025
GFCM:45/2022/8	Proposal by Libya for the division of geographical subarea 21 into three marine subareas (available in English only)
GFCM:45/2022/9	Amendment of the GFCM Rules of Procedure (available in English and French)
GFCM:45/2022/Inf.1	List of documents (available in English and French)
GFCM:45/2022/Inf.2	Provisional list of participants
GFCM:45/2022/Inf.3	Statement of competence and voting rights by the European Union and its member States (available in English only)
GFCM:45/2022/Inf.4	GFCM framework for cooperation and arrangements with contracting parties, cooperating non-contracting parties, relevant non-contracting parties and partner organizations (available in English only)
GFCM:45/2022/Inf.5	Report of the forty-fourth session of the General Fisheries Commission for the Mediterranean (online, 2–6 November 2021) (available in English and French [advance copy])
GFCM:45/2022/Inf.6	Report of the twenty-third session of the Scientific Advisory Committee on Fisheries (FAO headquarters, 21–24 June 2022) (available in English and French) (advance copies)
GFCM:45/2022/Inf.7	Report of the fifteenth session of the Compliance Committee (Larnaca, Cyprus, 27 May 2022) (bilingual) (advance copy)
GFCM:45/2022/Inf.8	Report of the twelfth session of the Scientific Advisory Committee on Aquaculture (Casablanca, Morocco, 7–9 June 2022) (bilingual)
GFCM:45/2022/Inf.9	Conclusions of the “Mediterranean and Black Sea SSF Dialogue: learning from past experiences for a common future vision giving voice to small-scale fishers” (IYAFA 2022 SSF Summit) (Rome, Italy, 3 September 2022) (available in English only)

GFCM:45/2022/Inf.10	Report of the Subregional Group on Stock Assessment for the Black Sea (SGSABS) (online, 4–8 July 2022) (available in English only)
GFCM:45/2022/Inf.11	Report of the Working Group to establish a fair and equitable allocation for Adriatic small pelagics (online, 12 July 2022)
GFCM:45/2022/Inf.12	Conclusions of the meeting on aquaculture market data (Casablanca, Morocco, June 2022) (available in English only)
GFCM:45/2022/Inf.13	Summary of the SSF Forum workshop “Stakeholder input on the management of rapa whelk fisheries in the Black Sea” (online, 9 May 2022) (available in English only)
GFCM:45/2022/Inf.14	Strategy to develop sustainable shrimp aquaculture in select countries of the southern and eastern Mediterranean (available in English only)
GFCM:45/2022/Inf.15	Results of the application of fisheries data quality indicators on the DCRF online platform (available in English only)
GFCM:45/2022/Inf.16	RPOA-SSF Monitoring framework (available in English only)
GFCM:45/2022/Inf.17	Draft GFCM IUU vessel list (available in English only)
GFCM:45/2022/Inf.18	Status of the Compendium on GFCM decisions
GFCM:45/2022/Inf.19	Progress on the ongoing joint VMS pilot projects between the GFCM and NEAFC/ICCAT/IOTC (available in English only)
GFCM:45/2022/Dma.1	Manual of the GFCM Data Collection Reference Framework (DCRF) 2018, version 22.2 (available in English and French)
GFCM:45/2022/Dma.2	FAO. 2021. <i>The Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea</i> . Rome (available in Arabic, English, French and Spanish)
GFCM:45/2022/Dma.3	FAO. 2022. <i>Suivi des captures accidentelles d'espèces vulnérables en Méditerranée et en mer Noire: méthode de collecte des données</i> . FAO Document technique sur les pêches et l'aquaculture n°640. Rome, FAO.
GFCM:45/2022/Dma.4	FAO. 2022. <i>Suivi des rejets en Méditerranée et en mer Noire: méthode de collecte des données</i> . FAO Document technique sur les pêches et l'aquaculture n°639. Rome, FAO. (advance copy)
GFCM:45/2022/Dma.5	FAO. 2022. <i>Dolphin depredation in Mediterranean and Black Sea fisheries: methodology for data collection</i> . FAO Fisheries and Aquaculture Technical Paper No. 688. Rome, FAO. (advance copy)
GFCM:45/2022/Dma.6	FAO. 2022. <i>Guidelines in support of social acceptability for sustainable aquaculture development</i> . Rome, FAO. (advance copy)
GFCM:45/2022/Dma.7	FAO. 2022. <i>Guidelines for streamlining aquaculture licensing and leasing processes</i> . Rome, FAO. (advance copy)
GFCM:45/2022/Dma.8	FAO. 2022. <i>Guidelines on assessing and minimizing the possible impacts from the use of non-indigenous species in aquaculture</i> . Rome, FAO. (advance copy)
GFCM:45/2022/Dma.9	FAO. 2022. <i>Guidelines on aquaculture restocking and stock enhancement</i> . Rome, FAO. (advance copy)
GFCM:45/2022/Dma.10	FAO. 2022. <i>BlackSea4Fish Activities and achievements 2020–2021</i> . Rome, FAO.

Recommendation GFCM/45/2022/1 on a multiannual management plan for European eel in the Mediterranean Sea, amending Recommendation GFCM/42/2018/1

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objectives of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

DEEPLY CONCERNED that the Scientific Advisory Committee on Fisheries (SAC) concluded, at its twenty-third session (Italy, June 2022), that the stock of European eel (*Anguilla anguilla*) remains in a critical state and has reached its lowest recruitment levels ever recorded, despite the transitional measures set out in Recommendation GFCM/42/2018/1 on a multiannual management plan for European eel in the Mediterranean Sea;

TAKING NOTE that the SAC recommended strengthening existing transitional measures in 2022 while continuing work towards informing future long-term management measures for 2023;

ACKNOWLEDGING the conclusion of the GFCM Research Programme on European eel that recreational fishing of European eel often overlaps with illegal, unregulated and unreported (IUU) fishing;

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/42/2018/1

1. Paragraph 3 of Recommendation GFCM/42/2018/1 shall be modified as follows:

“With due regard to the critical state of the European eel stock as reported by the SAC and to the consequent urgency in restoring the conservation state of this stock, CPCs agree that all activities capturing European eel shall be covered by this plan, namely targeted and incidental catch.”

2. Paragraph 19 of Recommendation GFCM/42/2018/1 shall be modified as follows:

“Having regard to the closure period, CPCs shall decide on one of the following options to be applied and shall report their decision to the GFCM Secretariat:

Option 1

Contracting parties and cooperating non-contracting parties shall establish an annual fishing closure of six consecutive months, during which landings of European eel at all stages (glass eel, yellow eel and silver eel) shall be prohibited. In order to reduce fishing mortality effectively, the closure period shall be defined by the CPCs in their respective national management plans, together with the measures defined in paragraph 18, taking into account the temporal migration patterns of European eel in the CPC concerned.

Option 2

Contracting parties and cooperating non-contracting parties shall establish an annual fishing closure consisting of three consecutive months, from 1 January to 31 March, as well as three additional months to be chosen between 1 April and 30 November, during which landings of European eel at all stages (glass eel, yellow eel and silver eel) shall be prohibited. In order to reduce fishing mortality effectively, the closure period shall be defined by the CPCs in their respective national management plans, together with the measures defined in paragraph 18, taking into account the temporal migration patterns of European eel in the CPC concerned.”

3. Paragraph 19 bis shall be added to Recommendation GFCM/42/2018/1 as follows:

“The Compliance Committee (CoC) shall, during its sixteenth session, assess the implementation of the measure referred to in paragraph 19. In the event that it is established that a CPC has failed to comply with its obligations referred to in paragraph 19, the CoC shall immediately require the CPC concerned to take the necessary measures in order to achieve the objectives of the present recommendation.”

4. Paragraph 20 bis shall be added to Recommendation GFCM/42/2018/1 as follows:

“Contracting parties and cooperating non-contracting parties shall ensure that recreational fishing of European eel at all stages (glass eel, yellow eel and silver eel) is prohibited in all habitats.”

5. Paragraph 27 of Recommendation GFCM/42/2018/1 shall be modified as follows:

“Where IUU fishing is known to occur, available data, including estimates, shall also be transmitted to the GFCM Secretariat no later than the forty-third session of the GFCM.”

6. Paragraph 47 of Recommendation GFCM/42/2018/1 shall be deleted.

Recommendation GFCM/45/2022/2 on a management plan for the sustainable exploitation of red coral in the Mediterranean Sea, amending Recommendation GFCM/43/2019/4

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

NOTING the conclusion of the Scientific Advisory Committee on Fisheries (SAC), at its twenty-third session (Italy, June 2022), on the importance of improving the quality and completeness of data sent by contracting parties and cooperating non-contracting parties (CPCs), especially regarding the average diameter of harvested red coral colonies and the percentage of undersized colonies;

FURTHER NOTING that the SAC advised extending the deadline to 2024 (currently 2023) for the entry into force of a permanent catch documentation scheme (CDS) and extending the research programme on red coral to 2023, including the use of remotely operated vehicles (ROVs) for scientific purposes;

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/43/2019/4

1. Paragraph 47 of Recommendation GFCM/43/2019/4 on a management plan for the sustainable exploitation of red coral in the Mediterranean Sea shall be amended as follows:

“For a transitional period of four years (2020–2023), CPCs may participate in the pilot phase of the CDS, during which all of the above traceability measures shall be fully implemented.”

2. Paragraph 50 of Recommendation GFCM/43/2019/4 shall be amended as follows:

“Upon the advice of the CoC, the GFCM shall adopt the permanent CDS for red coral at its forty-sixth session and CPCs shall begin implementing it on 1 January 2024.”

3. Paragraph 51 of Recommendation GFCM/43/2019/4 shall be amended as follows:

“In addition to the provisions related to red coral contained in Recommendation GFCM/40/2016/2, CPCs shall report the data listed below:

- a) number of red coral fishing authorizations granted to fishers and to authorized vessels;
- b) number of dives per authorized fisher and fishing trip;
- c) number of authorized fishers on board for each fishing trip; and
- d) diameter of each colony harvested or average of diameter by landing.

When available, this data should be provided at the bank, GFCM statistical grid and national levels. Such data shall be reported by 30 June of each year.”

4. Paragraph 53 of Recommendation GFCM/43/2019/4 shall be amended as follows:

“The use of remotely operated vehicles (ROVs) shall be allowed through the end of the research programme referred to in paragraph 58 for scientific purposes only and within CPC authorized research programmes led by scientific institutions. Such authorizations shall be without prejudice to stricter measures adopted by CPCs.”

5. Paragraph 58 of Recommendation GFCM/43/2019/4 shall be amended as follows:

“In 2020, the GFCM shall launch the research programme on red coral endorsed by the SAC at its twenty-first session and referred to in Appendix 9 of its report. The research programme shall be completed in 2023. The research programme shall, in particular, evaluate the trigger for closure as established in paragraph 22.”

Recommendation GFCM/45/2022/3 on a multiannual management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3), repealing Recommendations GFCM/44/2021/4, GFCM/43/2019/2 and GFCM/41/2017/2

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve the marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks above levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration requires that, in the context of establishing an ecosystem-based fisheries management framework, all key fisheries should be managed with management plans;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that fishing mortality should be kept below safe thresholds to ensure long-term high yields while limiting the risk of stock collapse and guaranteeing stable and more viable fisheries;

CONSIDERING the socioeconomic importance of fisheries exploiting blackspot seabream, especially at the local level, and the need to ensure their sustainability;

RECALLING that transitional management measures (Recommendation GFCM/41/2017/2 on the management of blackspot seabream fisheries in the Alboran Sea (geographical subareas 1 to 3) for a two-year transition period) and adaptive management measures (Recommendation GFCM/43/2019/2 on a management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea [geographical subareas 1 to 3], rolled over by Recommendation GFCM/44/2021/4) have been adopted to manage the stock of blackspot seabream in the Alboran Sea;

NOTING that the Scientific Advisory Committee on Fisheries (SAC) has recurrently, including in 2022, considered that the stock of blackspot seabream (*Pagellus bogaraveo*) is in overexploitation in the geographical subareas (GSAs) 1 to 3;

RECALLING that according to the latest SAC scientific advice in 2022, the blackspot seabream stock is overexploited, with low fishing mortality due to low biomass ($F/F_{msy} = 0.78$, $SSB/SSB_{lim} = 0.91$);

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement the following recommendation:

PART I

General objectives, geographical scope and definition

General objectives

1. The present recommendation establishes a multiannual management plan for sustainable fishing activities in the Alboran Sea (geographical subareas [GSAs] 1 to 3) exploiting blackspot seabream by means of handlines and set and mixed longlines. On the basis of SAC advice, the scope of this recommendation could be extended to other types of fishing gear.
2. The multiannual management plan shall be consistent with the precautionary approach. It shall be designed to provide high long-term yields consistent with the MSY and to guarantee a low risk of stock collapse while maintaining the sustainability and relative stability of fisheries and dependent industries.
3. Contracting parties and cooperating non-contracting parties (CPCs) whose vessels are actively fishing in GSAs 1 to 3 agree to implement such a multiannual management plan for the fisheries concerned and in accordance with the general and specific objectives and measures set forth by this recommendation.
4. A set of transitional precautionary management measures for the Alboran Sea shall be developed in order to ensure that stocks and fisheries progress towards biologically sustainable levels while minimizing socioeconomic impacts and finalizing scientific advice by the SAC.
5. The multiannual management plan for the concerned fisheries shall also pursue a reduction in illegal, unreported and unregulated (IUU) fishing activities in GSAs 1 to 3.

Geographical scope

6. The multiannual management plan provided by the present recommendation shall apply to GSAs 1, 2 and 3.

Definitions

7. For the purpose of this recommendation:

- a) “ F_{msy} ” means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum yield.
- b) “ B_{lim} ” means the limit reference point, expressed as spawning stock biomass below which there may be reduced reproductive capacity.
- c) “ B_{pa} ” means the precautionary reference point, expressed as spawning stock biomass, that ensures that the spawning stock biomass has less than a 5 percent probability of being below B_{lim} .
- d) “Stock within safe biological limits” means a stock with a high probability of its estimated spawning biomass at the end of the previous year being higher than the limit biomass reference point (B_{lim}).
- e) “Alboran Sea” means GSAs 1 to 3 as defined in Resolution GFCM/33/2009/2 on the establishment of geographical subareas in the GFCM area of application, amending Resolution GFCM/31/2007/2.
- f) “Vessel actively fishing” means any vessel catching blackspot seabream and entitled by the CPC whose flag it flies to carry out specific fishing operations during a specified period in a given area or for a given fishery under specific conditions.
- g) “Key stock” means marine organisms pertaining to the blackspot seabream (*Pagellus bogaraveo*) species.
- h) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7.
- i) “Authorized ports” means ports or places close to the shore designated by CPCs according to paragraphs 40 and 41 of this recommendation.

PART II

Specific objectives and transitional measures

- 8. The multiannual management plan shall aim to contribute to the objectives mentioned in Article 2 and to the principles listed in Article 5 of the GFCM Agreement.
- 9. The multiannual management plan shall, in particular:
 - a) apply the precautionary approach to fisheries management;
 - b) apply to recreational and commercial fisheries;
 - c) ensure that exploitation levels of key stocks are at maximum sustainable yield (MSY) as soon as possible and at the latest by 31 December 2030;
 - d) prevent increases in fishing capacity in comparison to year 2018–2021 levels;
 - e) prevent increases in the number of lines (maximum 30 lines per vessel per day), hydraulic pullers on board (maximum 3 pullers on board) and number of hooks (maximum 1 000 hooks)

per person on board, maximum 2 600 hooks per vessel) and fix hook size (minimum L = 3.95 cm, minimum S = 1.65 cm);

- f) protect nursery and spawning areas and essential fish habitats important for the key stock from 2024 onwards;
- g) contribute to the elimination of discards by avoiding and reducing unwanted catches below minimum conservation reference size (MCRS) and by ensuring that all catches are landed. Exemptions to the total landing of catches should be granted upon proper scientific justification for the high survivability of the unharmed specimen, which shall be released immediately into the sea in the area where it has been caught; and
- h) provide for measures to adjust fishing capacity and catches to fishing mortality levels consistent with MSY with a view to ensuring economically viable fleets without overexploiting marine living resources.

10. The multiannual management plan shall be based on a two-step approach whereby: i) during the transitional period 2023–2025, a provisional catch limit regime shall be applied; and ii) from 2026 onwards, yearly catch limits shall be adopted in order to reach F_{msy} and remain within safe biological limits. The yearly catch limits shall be proposed by the SAC based on an evaluation of the state of the stocks using up-to-date scientific data.

11. In 2023, 2024 and 2025, a transitional fishing regime shall be established. Contracting parties and cooperating non-contracting parties shall ensure that national catch limits and a maximum number of hooks of minimum size, namely $L \geq 3.95$ cm and $S \geq 1.65$ cm, are established for blackspot seabream, aligned with annual reductions of 7 percent in hook number and of 7 percent in catch limits in order to produce reductions proportional to the fishing mortality stemming from each fleet. Such reductions should be made with respect to the catch limits of 2018–2021 and the number of hooks over the same period, with a maximum of 70 hooks by line, maximum 30 lines per day and 2 600 hooks per vessel. Based on this paragraph, the catch limits and number of hooks for 2023, 2024 and 2025, with the temporary allocation, are established in Annex 1. Each CPC may, in addition, establish individual allocations by fleet segment for catch limits and number of hooks.

12. During the transitional period, recreational fishing activities shall be limited to one fish per fisher per day with a MCRS of 40 cm and a strict prohibition shall be implemented during the closure period of commercial fisheries. In addition, each CPC shall make an effort to ensure the reporting of catches from recreational fisheries, when applicable. Based on SAC advice in 2025, management measures (including, if necessary, a full prohibition) shall be updated.

13. In 2023, 2024 and 2025, CPCs shall be fully committed to supporting and updating the blackspot seabream benchmark assessment and the management strategy evaluation provided for in paragraph 15, in line with Appendix 5/B of the report of the twenty-third session of the SAC. In 2025, the GFCM shall decide, based on the SAC advice and the latest available status of stocks, on the catch limits and other measures to be applied in 2026.

14. A Working Group on Blackspot Seabream (WGSBR) shall be established by the GFCM in 2023, within 30 calendar days following the twenty-fourth session of the SAC in 2023, in order to analyse and assess the benefits of spatio-temporal restrictions with a view to defining further appropriate restrictions to protect spawning and nursery areas for the key stock.

15. The SAC, at its twenty-fifth session in 2024, shall give a mandate to the WGSBR to update a blackspot seabream benchmark in 2024 and the Workshop on the assessment of management measures (WKMSE) to carry out a management strategy evaluation.

16. The catch limits and hook limits for the period 2023–2025 established by CPC as in paragraphs 11 and 12 shall be set without prejudice to the discussions to take place in the context of the working group referred to in paragraphs 14 and 15 of this recommendation.

PART III

Long-term management plan

17. A long-term management plan for the period 2026–2030 is established. Each year, on the basis of SAC advice and the advisory timing provided in paragraphs 35 and 36, the GFCM shall establish yearly catch limits.

18. Over the first three years, beginning with 2026, the variation between annual catch limits in comparison to the previous year shall not exceed 10 percent, while for the remaining years of the plan, it shall not exceed 20 percent. These limitations on the variation between annual catch limits shall not apply in the case that the stock is not within safe biological limits.

Safeguards

19. The operational objective of the multiannual management plan shall be to maintain fishing mortality for blackspot seabream stock within the agreed precautionary reference values for F_{msy} , with a view to achieving or maintaining F_{msy} levels in accordance with the objectives of this recommendation.

20. Where, based on SAC scientific advice, the spawning biomass of the blackspot seabream stock is below B_{pa} , the GFCM shall take remedial measures to ensure the rapid return of the concerned stock to a level capable of producing MSY. In particular, catch limits shall be set at levels consistent with producing a fishing mortality lower than F_{msy} , taking into account the decrease in biomass.

21. Where, based on SAC scientific advice, the spawning biomass of blackspot seabream is below B_{lim} , the GFCM shall take further remedial measures to ensure the rapid return of the concerned stock to a level capable of producing MSY. In particular, such remedial measures may include suspending the targeted fishery of the concerned stock and an adequate reduction in catch limits.

PART IV

Technical and conservation measures

Spatial and temporal closures

22. Over the transitional period from 2023 to 2025, CPCs shall apply specific temporal closures at the fleet level (even if not simultaneously for different type of fishing gear), with a view to protecting the key stock during spawning periods. Such closures shall cover the key areas of distribution of blackspot seabream in the Alboran Sea and affect all vessels concerned by this recommendation for periods of no less than 30 continuous days per fleet segment. Such closures shall take place from December to March. Each CPC shall submit the closure period to the GFCM Secretariat and the list of vessels concerned.

23. The SAC shall evaluate in 2023 the impact of all types of fishing gear on the fishing mortality of blackspot seabream in order to decide if it is necessary to include other types of fishing gear in the closure area measure or any other management measure deemed necessary.

24. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 30 April 2023 and thereafter annually, the spatial restrictions, as defined in paragraph 22, that apply in the waters under their jurisdiction, with a view to protecting spawning and nursery areas for blackspot seabream stock.

Minimum conservation reference size

25. Through the end of 2023, as a transitional measure, it shall be prohibited to land specimens of blackspot seabream measuring a total length of less than 30 cm.

26. In 2023, the WGSBR shall analyse and assess the benefits of updating the MCRS in order to define further appropriate restrictions with a view to protecting juvenile fish of the key stock and allowing for an increase in the spawning biomass. On the basis of the results of this working group and the advice of the SAC, the GFCM will adopt at its forty-sixth session an MCRS for blackspot seabream.

PART V

Fleet management measures

27. Contracting parties and cooperating non-contracting parties shall ensure that the overall fleet capacity of fleets fishing blackspot seabream with handlines and set and mixed longlines in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers, does not exceed, over the duration of this recommendation's mandate, the fleet capacity for the same fisheries averaged over the years 2018–2021. Based on this paragraph, the number of vessels and their characteristics are established in Annex 2.

28. Contracting parties and cooperating non-contracting parties shall adapt, with respect to fishing opportunities (catch limits and number of hooks), the overall fleet capacity of fleets operating with handlines, set and mixed longliners and fishing blackspot seabream in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers.

29. Vessels authorized under the scope of this recommendation to fish blackspot seabream in the Alboran Sea shall be listed by the CPC whose flag they fly.

30. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 1 August of the first year and by 31 March of each subsequent year, the list of the vessels flying their flag and fishing blackspot seabream during the current year or forthcoming years. This list shall include, for each vessel, the information referred to in Annex 3.

31. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish blackspot seabream and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

32. Each CPC shall ensure that adequate mechanisms are set up to record each fishing vessel in a national fleet register and to record vessels' catches and fishing effort via the logbook, as well as to monitor fishing vessels' activities and landings via catch and effort sampling surveys according to the rules stipulated by each CPC.

33. The above provisions are without prejudice to Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART VI
Scientific monitoring, adaptation and revision of the plan

34. The SAC shall provide, on an annual basis beginning from 2023, advice on the status of the key stock in the Alboran Sea, including specific objectives for catch and hook limits to maintain fishing mortality within agreed precautionary fishing mortality reference points and to maintain or restore the key stock at levels that can produce MSY in accordance with the objectives set out in paragraphs 2 and 9.

35. Since a rapid provision of scientific advice is essential for the stock to recover, CPCs shall annually ensure that either all scientific fisheries (echo-survey) and/or commercial (catch and discard) data collected in year N are provided to the GFCM Secretariat by 1 April of year N+1 in order to perform a yearly updated stock assessment in May (year N+1). From 2025, on the basis of scientific advice and while taking into account socioeconomic effects on fleets and industry, the SAC annually will propose catch limits by single species to be adopted by the GFCM at its annual session (year N+1) and implemented from 1 January (year N+2).

36. Based on SAC advice, the GFCM may review the content of the multiannual management plan.

37. Where SAC advice indicates that the general or specific objectives of the multiannual management plan are not being met, the GFCM shall decide on additional or alternative management measures to contribute to achieving those objectives.

38. Where, for any reason (e.g. lack of appropriate data), the SAC is not in a position to provide accurate advice on the stock status of the key stock and on its exploitation level, the GFCM shall decide on the most appropriate management measures to ensure the sustainability of the fisheries. These measures shall be based on SAC advice in accordance with the precautionary approach and taking into consideration environmental and socioeconomic elements in a way that guarantees the sustainability of the fisheries.

PART VII
Specific measures to address illegal, unreported and unregulated fishing

39. Contracting parties and cooperating non-contracting parties shall establish a mechanism to ensure that vessels actively fishing in the Alboran Sea declare all catches of the key stock. If possible, the obligation to electronically declare catches, as well as catches of non-target species exceeding 50 kg, shall apply, irrespective of the volume of the catch, to vessels above 12 m and vessels catching more than 10 000 kg per year regardless of their length from 1 January 2023. Meanwhile, for vessels below 12 m catching less than 10 000 kg per year, the Compliance Committee (CoC) shall assess the most appropriate system of catch reporting.

40. Each CPC shall designate landing points at which landings by vessels actively fishing for the key stock in the Alboran Sea shall take place.

41. For each designated port, the concerned CPC shall specify permitted landing.

42. Contracting parties and cooperating non-contracting parties shall carry out inspections on the basis of a risk analysis.

43. It shall be prohibited to land or transship from fishing vessels any quantity of the key stock fished in the Alboran Sea at any place other than the ports designated by CPCs in accordance with paragraph 41.

44. Contracting parties and cooperating non-contracting parties shall transmit to the GFCM Secretariat, no later than 30 April 2023 and subsequently by 30 November each year, any changes to the list of the designated landing points at which landings of key stock in the Alboran Sea may take place.

45. Contracting parties and cooperating non-contracting parties shall engage to cooperate in the fight against IUU fishing activities, in particular through sharing information and gathering intelligence to fight against illegal activities.

46. Part VII of this recommendation is without prejudice to Recommendation GFCM/41/2017/7.

PART VIII

Monitoring, control and surveillance programme

47. Vessels operating with handlines and set and mixed longliners catching blackspot seabream in the Alboran Sea shall be allowed to carry out specific fishing activities only if these are indicated in a valid fishing authorization issued by the competent authorities.

48. Starting from 30 April 2023, authorized vessels above 15 m length overall shall be equipped with a vessel monitoring system (VMS) or another geolocation system allowing control authorities to track their activity at all times during the fishing trips. At the latest by 1 January 2024, authorized vessels above 10 m length overall shall be equipped with a VMS or another geolocation system allowing control authorities to track their activity at all times during the fishing trips.

49. Contracting parties and cooperating non-contracting parties shall monitor the consumption of the catch limit set respectively in accordance with paragraphs 10 and 11, as well as Annex 1 until the end of the transitional period and thereafter in paragraph 17 as follows:

For individual CPC catch limits, beginning from the date when 80 percent of the quota has been exhausted, the CPC concerned shall communicate to the GFCM monthly reports on catch. Such report should be sent by the fifteenth day of the month for the previous month. When the catch limit has been reached, the CPC shall prohibit the catch of blackspot seabream, taking into account paragraph 18.

PART IX

National management plans

50. In order to ensure adequate conservation of blackspot seabream stock, CPCs shall adopt fisheries management measures or national management plans in the Alboran Sea.

51. Contracting parties and cooperating non-contracting parties shall notify the GFCM Secretariat, from 30 September 2023, of the management measures or management plans adopted at the national level. Where appropriate, should these measures be modified, CPCs shall communicate such modifications by 30 April of the following year.

PART X

Final provisions

52. The present recommendation repeals Recommendations GFCM/44/2021/5, GFCM/43/2019/2 and GFCM/41/2017/2.

53. The multiannual management plan established by this recommendation remains in force for eight years from the date of its adoption.

54. Measures in this recommendation shall be without prejudice to stricter measures adopted by CPCs.
55. On the basis of SAC scientific advice, the GFCM may revise this recommendation after four years.

Annex 1

Fishing opportunities (catch limits and number of hooks) for blackspot seabream in the Alboran Sea (GSAs 1–3) over the transitional period 2023–2025

In line with paragraphs 10 and 11, the catch limits (average 2018–2021) and the number of hooks for 2022 are reported in the tables below:

	Catch limits (in tonnes)		
	2023	2024	2025
European Union	32	29.76	27.67
Morocco	140	130.2	121

	Number of hooks			
	2022	2023	2024	2025
European Union	213 200*	198 276	184 397	171 489
Morocco	845 000*	785 850	730 840	679 682

*calculated for 2022 as the number of vessels in the GFCM database multiplied by 2 600 hooks per vessel.

Annex 2

Fishing capacity for fleets capturing blackspot seabream in the Alboran Sea (GSAs 1–3) as target and bycaught species are shown in the table below:

	Number of vessels	
	Hooks, lines and longliners	Hooks, lines and multipurpose vessels of less than 12 m
European Union	82	0
Morocco	75	250

Annex 3

Subject to more detailed provisions under the GFCM data collection reference framework (DCRF), the list referred to in paragraphs 31 and 32 shall contain, for each vessel, the following information:

- vessel name;
- national registration number (code assigned by the relevant CPC);
- vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001);
- port of registration (full name of the port);
- previous name (if any);
- previous flag (if any);
- previous details of deletion from other registers (if any);
- international radio call sign (if any);
- VMS (indicate yes/no);
- vessel type, length overall (LOA) and gross tonnage (GT) and engine power expressed in kW;
- name and address of owner(s) and/or charter and/or operator(s);
- main target species;
- main gear used for blackspot seabream and DCRF fleet segment allocation; and
- time period authorized for fishing with longlines or any other gear likely to fish blackspot seabream (if any such authorization).

Recommendation GFCM/45/2022/4 on a multiannual management plan for the sustainable exploitation of demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/12 and GFCM/42/2018/5

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks at levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration requires that, in the context of establishing an ecosystem-based fisheries management framework, all key fisheries should be managed with management plans;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that States “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that fishing mortality should be kept below safe thresholds to ensure long-term high yields while limiting the risk of stock collapse and guaranteeing stable and more viable fisheries;

CONSIDERING the socioeconomic importance of fisheries and the need to ensure their sustainability;

RECALLING that owing to the importance of this area, different recommendations have been adopted for the Strait of Sicily since 2015:

- Recommendation GFCM/39/2015/2 on the establishment of a set of minimum standards for bottom trawling fisheries of demersal stocks in the Strait of Sicily, pending the development and adoption of a multiannual management plan, that includes a common minimum conservation reference size (MCRS) of 20 mm carapace length (CL) for deep-water rose shrimp and 20 cm total length for European hake;
- Recommendation GFCM/40/2016/4 establishing a multiannual management plan for the fisheries exploiting European hake and deep-water rose shrimp in the Strait of Sicily (geographical subareas 12 to 16), that applies to vessels operating with bottom trawls over 10 m in total length bringing in a catch of these species that represents at least 25 percent of the total catch in live weight or value;
- Recommendation GFCM/41/2017/8 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16);
- Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/39/2015/2 and GFCM/40/2016/4;
- Recommendation GFCM/43/2019/6 on management measures for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Strait of Sicily (geographical subareas 12, 13, 14, 15 and 16) that introduces a general framework for the management of deep-water shrimps in the area and was rolled over by Recommendation GFCM/44/2021/7; and
- Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical subareas 12 to 16) rolled over by Recommendation GFCM/44/2021/12;

NOTING that the Scientific Advisory Committee on Fisheries (SAC) acknowledged, at its twenty-third session in 2022, the status of the most important commercial demersal stocks, namely European hake and deep-water rose shrimp in the Strait of Sicily, which have been in overexploitation in recent years;

CONSIDERING that the management measures adopted since 2015 have been an important first step towards a unified management of fisheries resources and have contributed to establishing an internationally binding framework that started moving the demersal stock towards sustainable exploitation levels and combatted illegal, unreported and unregulated (IUU) fishing;

NOTING, however, that in biological terms, the management plan set forth in Recommendation GFCM/42/2018/5 has not achieved its MSY goal due to a lack of annually established fishing effort or catch limitations set on the basis of scientific advice and the capacity of the fleets being out of balance with the demersal stocks;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following Recommendation:

PART I
General objectives, geographical scope and definitions

General objectives

1. The present recommendation establishes a multiannual management plan for sustainable demersal fishing activities in the Strait of Sicily (geographical subareas 12 to 16) exploiting key demersal stocks of European hake and deep-water rose shrimp by means of bottom trawlers. On the basis of SAC advice, the scope of this recommendation could be extended to other types of fishing gear and other stocks.
2. The multiannual management plan shall be consistent with the precautionary approach. It shall be designed to provide high long-term yields consistent with the MSY and to guarantee a low risk of stock collapse while maintaining the sustainability and relative stability of fisheries and dependent industries. The plan should take account of the mixed nature of the fisheries and the nature of stock dynamics.
3. Contracting parties and cooperating non-contracting parties (CPCs) whose vessels are actively fishing in geographical subareas (GSAs) 12 to 16 agree to implement such a multiannual management plan for the fisheries concerned and in accordance with the general and specific objectives and measures set forth by this recommendation.
4. A set of transitional precautionary management measures for the Strait of Sicily shall be developed in order to ensure that the stocks and fisheries progress towards biologically sustainable levels while minimizing socioeconomic impacts and finalizing scientific advice by the SAC.
5. The multiannual management plan for the fisheries shall also pursue a reduction in IUU fishing activities in GSAs 12 to 16.

Geographical scope

6. The multiannual management plan provided by the present recommendation shall apply to GSAs 12 to 16.

Definitions

7. For the purpose of this recommendation:
 - a) “ F_{msy} ” means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum sustainable yield, or “ F_{msy} proxy”.
 - b) “ B_{lim} ” means the limit reference point, expressed as spawning stock biomass below which there may be reduced reproductive capacity.
 - c) “Stock within safe biological limits” means a stock with a high probability of its estimated spawning biomass at the end of the previous year being higher than the limit biomass reference point (B_{lim});
 - d) “ B_{pa} ” means the precautionary reference point, expressed as spawning stock biomass that ensures that the spawning stock biomass has less than a 5 percent probability of being below B_{lim} .

- e) “Strait of Sicily” means GSAs 12 to 16 as defined in Resolution GFCM/33/2009/2 on the establishment of geographical subareas in the GFCM area of application, amending Resolution GFCM/31/2007/2.
- f) “Vessel actively fishing” means any vessel fishing with demersal trawls in the Strait of Sicily on the key stocks and entitled by the CPC whose flag it flies to carry out specific fishing operations during a specified period in a given area or for a given fishery under specific conditions.
- g) “Fishing day” means any continuous period of 24 hours, or part thereof, during which a vessel is present in the Strait of Sicily and is searching for fish, shooting, setting, towing or hauling a fishing gear, taking catch on board, transshipping, retaining on board, processing on board, transferring or landing fish and fishery products.
- h) “Key stocks” means marine organisms pertaining to the species as defined:
 - European hake (*Merluccius merluccius*), and
 - deep-water rose shrimp (*Parapenaeus longirostris*).
- i) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7;
- j) “Designated landing point” means ports, or places close to the shore, designated by CPCs according to Recommendation GFCM/40/2016/1 on a regional scheme on port state measures to combat illegal, unreported and unregulated fishing in the GFCM area of application, including offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying of fishing vessels, where landings, transshipments, packaging and/or processing operations of fishery products are permitted.

PART II

Specific objectives and transitional measures

8. The multiannual management plan shall aim to contribute to the objectives mentioned in Article 2 and to the principles listed in Article 5 of the GFCM Agreement.
9. The multiannual management plan shall, in particular:
 - a) apply the precautionary approach to fisheries management;
 - b) ensure that exploitation levels of key stocks are at the MSY as soon as possible and at the latest by 31 December 2030;
 - c) prevent increases in fishing capacity and in fishing effort in relation to the year 2021;
 - d) protect nursery and spawning areas and essential fish habitats important for the key stocks in the Strait of Sicily;
 - e) contribute to the elimination of discards by avoiding and reducing unwanted catches and by ensuring that all catches are landed; and

- f) provide for measures to adjust the fishing capacity and catches to levels of fishing mortalities consistent with the MSY, with a view to ensuring economically viable fleets without overexploiting marine living resources.

10. The multiannual management plan shall be based on a two-step approach whereby: i) over the first three years, effort and catch limits and spatio-temporal measures shall be applied; and ii) from 2026, on the basis of new scientific data, the SAC shall evaluate the state of the stocks and, on the basis of the harvest control rules (HCRs), propose further measures and advisable yearly effort and catch limits per species, in line with the provisions in Parts II, III, IV, V and VI of this recommendation, that would contribute to reaching F_{msy} or F_{msy} proxy and staying within safe biological limits.

PART III **Transitional measures**

11. Fishing effort regime:

- a) For the period 2023–2025, a fishing effort regime shall apply to all vessels fishing with bottom trawls for European hake according to the fleet segment definition in Annex 1.
- b) The fishing effort limits by CPCs during the transitional period shall be established in accordance with Annex 1 on the basis of the fishing effort deployed by vessels flying the flag of those CPCs in 2021 as notified in the GFCM Data Collection Reference Framework (DCRF) database.
- c) If the SAC advice in 2024 does not confirm the continuity of a constructive evolution of fishing mortality towards a restoration of the size of the European hake stock, the fishing effort limits may be reviewed by the GFCM.

12. Catch limits for deep-water rose shrimp:

- a) For the period 2023–2025, a catch limit for deep-water rose shrimp for each CPCs shall be established based on the catches reported in 2021 with an annual reduction of 3 percent per year as defined in Annex 1.
- b) In case the SAC advice established in 2024 does not confirm the continuity of a constructive evolution of fishing mortality towards a restoration of deep-water rose shrimp stock, the catch limits may be reviewed by the GFCM.

13. In 2024 and 2025, the SAC shall assess the impacts of demersal longlines, gillnets and trammel nets targeting the spawning stock of European hake in the Strait of Sicily. It shall also assess the need to include the fleets using these types of gear in the multiannual management plan and to adopt specific spatial measures to protect the spawning stock of European hake in the Strait of Sicily.

14. In 2024 and 2025, the SAC shall assess the possibility of integrating the stocks of red mullet (*Mullus barbatus*), striped mullet (*Mullus surmuletus*) and Norway lobster (*Nephrops norvegicus*) into the fishing effort regime referred to in paragraph 11. On the basis of the SAC advice, the GFCM may establish a fishing effort regime applicable to fishing gear targeting these stocks and/or catch limits for these stocks.

15. In 2023, 2024 and 2025, CPCs shall be fully committed to supporting and completing the scientific assessments of the key species and the species referred to in paragraph 14 and the assessment of the management strategy provided for in paragraphs 17 to 19, as well as the

identification of spatial and temporal measures provided for in paragraphs 23 and 24 and of new restricted fishing areas in the southern Strait of Sicily provided for in paragraph 30.

16. By way of derogation from paragraphs 11 and 12, CPCs intending to start targeting key stocks shall submit a management plan for key stocks and a development plan during the period between the entry into force of this recommendation and the adoption of permanent management measures by the GFCM. The SAC shall review the development plan and formulate appropriate advice if it is not in line with the general and specific objectives set out in this recommendation. Pending possible amendments in line with the SAC advice, the GFCM shall make a decision on the adoption of such development plan.

17. The SAC, at its twenty-fifth session in 2024, shall give a mandate to the Workshop on the assessment of management measures (WKMSE) to carry out a management strategy evaluation in order to define the most appropriate HCRs for the key stocks to be implemented according to paragraphs 18 and 19, including socioeconomic aspects.

PART IV **Long-term management plan**

18. A long-term management plan for the period 2026–2030 is established. Each year, on the basis of updated SAC advice, the GFCM shall establish yearly effort or catch limits for the key stocks. Such limits shall be based on HCRs in line with paragraphs 17 and 19, which shall be proposed by the WKMSE and endorsed by the SAC for 2025.

19. The HCRs shall ensure, for the key stocks, a low probability of spawning stock biomass falling below B_{lim} (5 percent probability).

Safeguards

20. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{pa} , the GFCM shall take remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, fishing effort and/or catch limits shall be set at levels consistent with producing a fishing mortality lower than F_{msy} , taking into account the decrease in biomass.

21. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{lim} , the GFCM shall take further remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, such remedial measures may include suspending the fishery targeting the concerned stocks and an adequate reduction in fishing effort or catch limits.

PART V **Technical measures**

Spatial and temporal closures

22. Over the transitional period, the SAC shall: i) assess whether a ban on fishing within established and new fisheries restricted areas (FRAs) could be applied to longlines and gillnets; and ii) increase the understanding of the reproductive peaks, recruitment and spawning periods of relevant species to determine appropriate spatio-temporal measures through an analysis of fishery-independent and dependent information as well as of the scientific literature. Such measures could be implemented within the long-term management plan.

23. Over the transitional period, as a pilot measure, bottom longlines, gillnets and trammel nets targeting European hake spawning aggregations shall stop fishing for 30 consecutive days between the months of March and April. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 30 June 2023, and annually thereafter, these temporal restrictions.

24. Any fishing activity with bottom trawlers, irrespective of the vessels' length overall shall not be allowed between the coast and the 200 m depth isobath in GSA 14 (Gulf of Gabès). This closure shall apply every year from 1 July until 30 September.

Fisheries restricted areas

25. Fisheries restricted areas for the conservation and management of the key stocks shall be maintained where already established in the northern part or where newly established in the southern part of the Strait of Sicily.

26. The FRAs already adopted in Recommendation GFCM/42/2018/5 in the three areas of the Strait of Sicily as defined in Annex 2 of this recommendation shall be extended for the duration of this plan, as of 1 January 2023.

27. Any demersal fishing activity, including recreational fisheries, irrespective of the vessels' length overall, shall not be allowed in the FRAs referred to in paragraph 26.

28. In order to avoid accidental access to the FRAs referred to in paragraph 26, buffer areas extending 1 nautical mile beyond the FRAs shall be established as defined in Annex 2.

29. For any fishing activity with bottom trawls in the buffer areas established in paragraph 28, vessels shall ensure that their vessel monitoring system (VMS) is fully functional before entering the buffer zone. Those vessels not equipped with VMS transponders and aiming to fish in the buffer areas shall be equipped with another geolocation system allowing control authorities to track their activities.

30. In line with paragraph 25, the SAC shall examine the possibility of establishing new FRAs in the southern Strait of Sicily. In 2023, CPCs, with the support of the GFCM Secretariat, shall ensure the continuation of existing surveys-at-sea, as well as the monitoring of new areas (e.g. the shelf and slopes at the borders of the Malta plateau). Particular focus shall be given to the continuation of the scientific surveys in GSAs 12, 13 and 14 towards confirming European hake nursery areas in the Gulf of Hammamet and the Gulf of Tunis as potential temporary or permanent FRAs. In addition, CPCs shall continue efforts to map vulnerable marine ecosystems towards their protection from trawling in the Strait of Sicily. The CPCs concerned should submit necessary data for the evaluation of new FRAs in the southern Strait of Sicily one month ahead of the 2024 meeting of the Subregional Committee for the Central Mediterranean at the latest and support the work for their evaluation.

Minimum conservation reference size

31. During the transitional period, the SAC shall identify, in the context of Resolution GFCM/44/2021/2 on the definition of a minimum conservation reference size for priority stocks in the Mediterranean Sea, appropriate minimum conservation reference sizes (MCRS) for the key stocks lacking an MCRS to be then applied within the long-term management plan for all species covered.

32. Recommendation GFCM/40/2016/5 establishing a minimum conservation reference size for European hake in the Mediterranean Sea shall apply.

33. In line with Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/39/2015/2 and GFCM/40/2016/4, the MCRS for deep-water rose shrimp shall be set 20 mm CL.

34. Specimens of key stocks smaller than the MCRS defined in paragraphs 32 and 33 shall not be caught, retained on board, transhipped, transferred, landed, stored, sold, displayed or offered for sale by professional or recreational fisheries. The same provision applies for the remaining key stocks in the long-term management plan, in line with the MCRS established in paragraph 31.

PART VI

Fleet management measures

35. Contracting parties and cooperating non-contracting parties shall ensure that the overall fleet capacity of the fleets operating with bottom trawls and actively fishing for the key stocks does not exceed, in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers, over the duration of this recommendation, the fleet capacity for demersal fisheries in the year 2021.

36. Vessels authorized to fish the key stocks with bottom trawls in the Strait of Sicily shall be listed by the CPC whose flag they are flying.

37. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 1 August in the first year and by 31 March of each subsequent year, the list of vessels flying their flag and actively fishing for the key stocks for the current year or forthcoming years. This list shall include, for each vessel, the information referred to in Annex 3.

38. Each CPC shall ensure that adequate mechanisms are set up to record each fishing vessel in a national fleet register and to record vessels' catches and fishing effort via the logbook, as well as to monitor fishing vessels' activities and landings via catch and effort sampling surveys according to the rules stipulated by each CPC.

39. Contracting parties and cooperating non-contracting parties shall maintain and keep updated a register of the above-mentioned fishing authorizations. Unless specifically provided for in the DCRF, CPCs shall communicate the following to the GFCM Secretariat:

- a) the list of operating vessels for which such authorization has been issued for current or forthcoming year(s), no later than 31 March of each year; and
- b) a report on fishing activities carried out by the vessels referred to in paragraph 36 in an aggregated format, including the following minimum information – number of exploitation days, exploitation area, catches and discards of European hake and of deep-water rose shrimp – no later than 31 August of each year, starting from August 2023.

40. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish for the key species and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

41. The above provisions are without prejudice to Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART VII
Scientific monitoring, adaptation and revision of the plan

42. The SAC shall provide, on an annual basis starting from 2023, advice on the status of all the key stocks in the Strait of Sicily, including specific objectives to maintain fishing mortality within agreed precautionary fishing mortality reference points and to maintain or restore the key stocks at levels that can produce the maximum sustainable yield in accordance with the objectives set out in paragraph 9.

43. Based on SAC advice, the GFCM may review the content of the multiannual management plan.

44. Where SAC advice indicates that the general or specific objectives of the multiannual management plan are not being met, the GFCM shall decide on additional and/or alternative management measures to contribute to achieving those objectives.

45. Where, for any reason (e.g. lack of appropriate data), the SAC is not in a position to provide accurate advice on the stock status of the key stocks and on their exploitation levels, the GFCM shall decide on the most appropriate management measures to ensure the sustainability of the fisheries. These measures shall be based on SAC advice in accordance with the precautionary approach and taking into consideration environmental and socioeconomic elements in a way that guarantees the sustainability of the fisheries.

46. Contracting parties and cooperating non-contracting parties, with the support of GFCM Secretariat, shall ensure the implementation of the pilot project to improve trawl gear selectivity, in particular in fisheries targeting deep-water rose shrimp in the Strait of Sicily in 2023.

PART VIII
Specific measures to address illegal, unreported and unregulated fishing

47. Each CPC shall ensure that adequate mechanisms are in place for the registration of each fishing vessel in a national fleet register, for the recording of the vessel's catch and fishing effort in the logbook and for the monitoring of the vessel's fishing activities and landings by means of surveys and sampling of catches and fishing effort, carried out in accordance with the rules laid down by each CPC.

48. Each CPC shall designate landing points at which landings by vessels actively fishing for the key stocks in the Strait of Sicily shall take place.

49. For each designated port, the concerned CPC shall specify permitted landing and transshipping times and places.

50. Contracting parties and cooperating non-contracting parties shall carry out inspections on the basis of a risk analysis.

51. It shall be prohibited to land or transship from fishing vessels any quantity of key stocks fished in the Strait of Sicily at any place other than ports designated by CPCs in accordance with paragraph 48.

52. Contracting parties and cooperating non-contracting parties shall transmit to the GFCM Secretariat, no later than 30 April 2023 and subsequently on 30 November each year, any changes to the list of the designated landing points at which landings of key stocks in the Strait of Sicily may take place.

53. Contracting parties and cooperating non-contracting parties shall engage to cooperate in the fight against IUU fishing activities, in particular through sharing information and gathering intelligence to fight against illegal activities.

54. Part VII of this recommendation is without prejudice to Recommendation GFCM/41/2017/7.

PART IX

Monitoring, control and surveillance programme

55. Vessels operating with otter trawls, bottom longlines, gillnets and trammel nets exploiting key stocks in the Strait of Sicily shall be allowed to carry out specific fishing activities only if these are indicated in a valid fishing authorization issued by the competent authorities.

56. Authorized vessels shall be equipped with a VMS in accordance with Recommendation GFCM/33/2009/7.

57. Contracting parties and cooperating non-contracting parties shall monitor the consumption of the effort and catch limits, as follows: beginning from the date when 80 percent of the quota has been exhausted, the CPC concerned shall communicate to the GFCM monthly reports on effort and catch. Such a report should be sent by the fifteenth day of the month for the previous month. When the effort or catch limit has been reached, the CPC shall prohibit any further fishing effort on or catches of key stocks.

PART X

Permanent inspection scheme

58. The permanent inspection scheme established for demersal stocks by Recommendation GFCM/41/2017/8 is amended and extended with Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6, to cover this recommendation.

PART XI

National management plans

59. In order to ensure adequate conservation of the key stocks, CPCs shall adopt fisheries management measures or national management plans in the Strait of Sicily.

60. Contracting parties and cooperating non-contracting parties shall notify the GFCM Secretariat, from 30 September 2023, of the management measures or management plans adopted at the national level. Where appropriate, should these measures be modified, the CPCs shall communicate such modifications by 30 April of the following year.

PART XII

Final provisions

61. The multiannual management plan established by this recommendation shall remain in force for eight years from the date of its adoption.

62. Measures in this recommendation shall be without prejudice to stricter measures adopted by the CPCs.

63. On the basis of SAC scientific advice, the GFCM may revise this recommendation.

64. This recommendation repeals and replaces Recommendations GFCM/44/2021/12 and GFCM/42/2018/5.

Annex 1

Fishing opportunities by fleet segment for demersal fisheries in the Strait of Sicily (GSAs 12 to 16) over the transitional period 2023–2025.

In line with paragraphs 11 to 13, effort and catch limits are reported for each CPC with an active fleet fishing for the key stocks.

	Gear	Fleet segment	European Union 2023–2025	Tunisia 2023–2025
Effort regime for European hake (fishing days)	Otter trawlers	T-07	90	0
		T-08	188	0
		T-10	19 704	0
		T-11	3 870	25 994
		T-12	3	23 443

	European Union 2023	European Union 2024	European Union 2025	Tunisia 2023	Tunisia 2024	Tunisia 2025
Catch limit (tonnes) for deep-water rose shrimp	2 154	2 090	2 026	3 993	3 874	3 757

Geographical coordinates of fisheries restricted areas in the northern Strait of Sicily

Fisheries restricted area 1: East of Adventure Bank

Fisheries restricted area	
Latitude	Longitude
37° 23,850' N	12° 30,072' E
37° 23,884' N	12° 48,282' E
37° 11,567' N	12° 48,305' E
37° 11,532' N	12° 30,095' E

Buffer area	
Latitude	Longitude
37° 24,849' N	12° 28,814' E
37° 24,888' N	12° 49,536' E
37° 10,567' N	12° 49,559' E
37° 10,528' N	12° 28,845' E

Fisheries restricted area 2: West of Gela Basin

Fisheries restricted area	
Latitude	Longitude
37° 12,040' N	13° 17,925' E
37° 12,047' N	13° 36,170' E
36° 59,725' N	13° 36,175' E
36° 59,717' N	13° 17,930' E

Buffer area	
Latitude	Longitude
37° 13,041' N	13° 16,672' E
37° 13,049' N	13° 37,422' E
36° 58,723' N	13° 37,424' E
36° 58,715' N	13° 16,682' E

Fisheries restricted area 3: East of Malta Bank

Fisheries restricted area	
Latitude	Longitude
36° 12,621' N	15° 13,338' E
36° 12,621' N	15° 26,062' E
35° 59,344' N	15° 26,062' E
35° 59,344' N	15° 13,338' E

Buffer area	
Latitude	Longitude
36° 13,624' N	15° 12,102' E
36° 13,624' N	15° 27,298' E
35° 58,342' N	15° 27,294' E
35° 58,342' N	15° 12,106' E

Subject to more detailed provisions under the GFCM Data Collection Reference Framework (DCRF), the list referred to in paragraph 37 shall contain, for each vessel, the following information:

- Vessel name
- National registration number (code assigned by the CPCs)
- Vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001)
- Port of registration (full name of the port)
- Previous name (if any)
- Previous flag (if any)
- Previous details of deletion from other registers (if any)
- International radio call sign (if any)
- VMS (indicate yes/no)
- Vessel type, length overall (LOA) and gross tonnage (GT) and engine power expressed in kW
- Name and address of owner(s) and/or charter and/or operator(s)
- Main target species
- Main gear used for European hake and deep-water rose shrimp and DCRF fleet segment allocation
- Time period authorized for fishing with bottom trawl or any other gear likely to fish European hake and/or deep-water rose shrimp (if any of such authorization)

Recommendation GFCM/45/2022/5 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/7 and GFCM/43/2019/6

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental levels, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks at levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration requires that, in the context of establishing an ecosystem-based fisheries management framework, all key fisheries should be managed with management plans;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that fishing mortality should be kept below safe thresholds to ensure long-term high yields while limiting the risk of stock collapse and guaranteeing stable and more viable fisheries;

CONSIDERING the socioeconomic importance of fisheries and the need to ensure their sustainability;

RECALLING that owing to the importance of this area, different recommendations have been adopted for the Strait of Sicily, including Recommendation GFCM/43/2019/6 on management measures for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Strait of Sicily (geographical subareas 12, 13, 14, 15 and 16), rolled over by Recommendation GFCM/44/2021/7, that introduced a general framework for the management of deep-water red shrimps in the area.

NOTING that the Scientific Advisory Committee on Fisheries (SAC) acknowledged, at its twenty-third session, the status of the overexploitation in recent years of both giant red shrimp and blue and red shrimp;

CONSIDERING that the management measures adopted since 2019 for deep-water red shrimp fisheries in the Strait of Sicily have been an important first step towards a unified management of fisheries resources and have contributed to establishing an internationally binding framework that started moving the deep-water red shrimp stocks towards sustainable exploitation levels and combatted illegal, unreported and unregulated (IUU) fishing;

NOTING, however, that in biological terms, the plan set forth in Recommendation GFCM/43/2019/6 on management measures for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Strait of Sicily (geographical subareas 12, 13, 14, 15 and 16) has not achieved its MSY goal due to a lack of annually established catch limitations set on the basis of scientific advice and the fleets being out of balance with the deep-water red shrimp stocks;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following Recommendation:

PART I

General objectives, geographical scope and definitions

General objectives

1. The present recommendation establishes a multiannual management plan for sustainable demersal trawl fishing activities in the Strait of Sicily (geographical subareas [GSAs] 12 to 16) exploiting deep-water red shrimp stocks by means of demersal trawlers. On the basis of SAC advice, the scope of this recommendation could be extended to other types of fishing gear and other stocks.
2. The multiannual management plan shall be consistent with the precautionary approach. It shall be designed to provide high long-term yields consistent with the MSY and to guarantee a low risk of stock collapse while maintaining the sustainability and relative stability of fisheries and dependent industries.
3. Contracting parties and cooperating non-contracting parties (CPCs) whose vessels are actively fishing in GSAs 12 to 16 agree to implement such a multiannual management plan for the fisheries concerned and in accordance with the general and specific objectives and measures set forth by this recommendation.
4. A set of transitional precautionary management measures for the Strait of Sicily shall be developed in order to ensure that the stocks and fisheries progress towards biologically sustainable levels while minimizing socioeconomic impacts and finalizing scientific advice by the SAC.
5. The multiannual management plan for the fisheries concerned shall also pursue a reduction in IUU fishing activities in GSAs 12 to 16.

Geographical scope

6. The multiannual management plan provided by the present recommendation shall apply in GSAs 12 to 16.

Definitions

7. For the purpose of this recommendation:

- a) “ F_{msy} ’ ” means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum yield, or “ F_{msy} proxy”.
- b) “ B_{lim} ” means the limit reference point, expressed as spawning stock biomass, below which there may be reduced reproductive capacity.
- c) “Stock within safe biological limits” means a stock with a high probability of its estimated spawning biomass at the end of the previous year being higher than the limit biomass reference point (B_{lim}).
- d) “ B_{pa} ” means the precautionary reference point, expressed as spawning stock biomass, that ensures that the spawning stock biomass has less than a 5 percent probability of being below B_{lim} .
- e) “Strait of Sicily” means GSAs 12 to 16 as defined in Resolution GFCM/33/2009/2 on the establishment of geographical subareas in the GFCM area of application, amending Resolution GFCM/31/2007/2.
- f) “Vessel actively fishing” means any vessel fishing with demersal trawls on the key stocks and entitled by the CPC whose flag it flies to carry out specific fishing operations during a specified period, in a given area or for a given fishery under specific conditions. Fishing vessels non included in the list of authorized vessels are allowed to catch, retain on board, land and offer for sale limited quantities of key stocks that cannot exceed 15 percent of the total catch at any time of a fishing trip.
- g) “Fishing day” means any continuous period of 24 hours, or part thereof, during which a vessel is present within the Strait of Sicily and is searching for fish, shooting, setting, towing or hauling a fishing gear, taking catch on board, transshipping, retaining on board, processing on board, transferring or landing fish and fishery products.
- h) “Key stocks” or “deep-water red shrimps” means marine organisms pertaining to the species as defined:
 - giant red shrimp (*Aristaeomorpha foliacea*); and
 - blue and red shrimp (*Aristeus antennatus*).
- i) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7.

- j) “Designated landing point” means ports, or places close to the shore, designated by CPCs according to Recommendation GFCM/40/2016/1 on a regional scheme on port state measures to combat illegal, unreported and unregulated fishing in the GFCM area of application, including offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying of fishing vessels, at which landings, transshipments, packaging and/or processing operations of fishery products are permitted.

PART II

Specific objectives and transitional measures

8. The multiannual management plan shall aim to contribute to the objectives mentioned in Article 2 and to the principles listed in Article 5 of the GFCM Agreement.
9. The multiannual management plan shall, in particular:
- a) apply the precautionary approach to fisheries management;
 - b) ensure that exploitation levels of key stocks are at the MSY as soon as possible and at the latest by 31 December 2030;
 - c) prevent increases in fishing capacity and fishing effort in relation to year 2019;
 - d) protect nursery and spawning areas and essential fish habitats important for the key stocks in the Strait of Sicily;
 - e) contribute to the elimination of discards by avoiding and reducing unwanted catches and by ensuring that all catches are landed; and
 - f) provide for measures to adjust the fishing capacity and catches to fishing mortalities levels consistent with the MSY, with a view to ensuring economically viable fleets without overexploiting marine living resources.
10. The multiannual management plan shall be based on a two-step approach whereby: i) over the first three years, catch limits and spatio-temporal measures shall be applied; and ii) from 2026, on the basis of new scientific data, the SAC shall evaluate the state of the stocks and, on the basis of the harvest control rules (HCRs), propose further measures and advisable yearly catch limits per species in line with the provisions in Parts II, III, IV, V and VI of this recommendation, that would contribute to reaching F_{msy} or F_{msy} proxy and staying within safe biological limits.
11. In 2023, 2024 and 2025, a transitional fishing regime shall be established, during which at least all existing efficient measures should be implemented while scientific support is gathered, along with information towards the identification of long-term adaptive management measures based on future annual advice on the evolution of the state of resources and fisheries. Contracting parties and cooperating non-contracting parties shall ensure that a catch limit is established for the key stocks, aligned with annual reductions of 3 percent in 2023, 3 percent in 2024 and 3 percent in 2025. Such reductions should be in respect to reported catches in 2021. Based on this paragraph, the catch limits for 2023, 2024 and 2025, as well as the temporary allocations, are established in Annex1.
12. In 2023, 2024 and 2025, CPCs shall be fully committed to completing the scientific assessments of the key stocks and the management strategy evaluation provided for in paragraphs 14 to 16, as well as the identification of spatio-temporal measures provided for in paragraphs 19 and 20.

13. By way of derogation from paragraph 11, CPCs intending to start targeting deep-water red shrimps shall submit a management plan for deep-water red shrimps and a development plan during the period between the entry into force of this recommendation and the adoption of permanent management measures by the GFCM. The SAC shall review the development plan and formulate appropriate advice if it is not in line with the general and specific objectives set out in this recommendation. Pending possible amendments in line with SAC advice, the GFCM shall make a decision on the adoption of such a development plan.

14. The SAC, at its twenty-fifth session in 2024, shall give a mandate to the Workshop on the assessment of management measures to carry out a management strategy evaluation in order to define the most appropriate HCRs for the key stocks to be implemented according to paragraphs 15 and 16, including socioeconomic aspects.

PART III

Long-term management plan

15. A long-term management plan for the period 2026–2030 is established. Each year, on the basis of updated SAC advice, the GFCM shall establish yearly single-species catch limits for deep-water red shrimps. Such limits shall be based on HCRs in line with paragraph 16, which shall be proposed by the Workshop on the assessment of management measures and endorsed by the SAC in 2024 or 2025.

16. The HCRs shall ensure, for the deep-water red shrimp stocks, a low probability of spawning stock biomass falling below B_{lim} (5 percent probability).

Safeguards

17. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{pa} , the GFCM shall take remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, catch limits shall be set at levels consistent with producing a fishing mortality lower than F_{msy} , taking into account the decrease in biomass.

18. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{lim} , the GFCM shall take further remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, such remedial measures may include suspending the fishery targeting the concerned stocks and an adequate reduction in fishing effort or catch limits.

PART IV

Technical measures

Spatial and temporal closures

19. Over the transitional period, the SAC shall: i) finalize the identification of the fishing footprint on vulnerable marine ecosystems; and ii) on the basis of updated results from the project on Mediterranean Sensitive Habitats (MEDISEH), finalize the identification of essential fish habitat areas for juveniles and spawners of deep-water red shrimps. Such work shall increase the understanding of the reproductive peaks and recruitment and spawning periods of relevant species. On this basis, in 2024 the SAC shall determine appropriate spatio-temporal measures through an analysis of fishery-independent and dependent information, as well as on scientific literature. Such measures could be implemented within the long-term plan.

20. Over the transitional period, as a pilot measure, bottom trawlers targeting deep-water red shrimp spawning aggregations shall stop fishing for 30 consecutive days between the months of March

and September. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 30 June 2023, and annually thereafter, these temporal restrictions.

Minimum conservation reference size

21. During the transitional period, the SAC shall identify, in the context of Resolution GFCM/44/2021/2 on the definition of a minimum conservation reference size for priority stocks in the Mediterranean Sea, appropriate minimum conservation reference sizes (MCRS) for the deep-water red shrimps lacking an MCRS, to be then applied in the long-term management plan for the two species covered.

22. In the long-term management plan, specimens of the key stocks smaller than the MCRS as defined in paragraph 21, shall not be caught, retained on board, transshipped, transferred, landed, stored, sold, displayed or offered for sale by professionals.

PART V

Fleet management measures

23. Contracting parties and cooperating non-contracting parties shall ensure that the overall fleet capacity of the fleets operating with demersal trawls and actively fishing for key stocks does not exceed, in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers, over the duration of this recommendation, the fleet capacity for otter trawlers fishing deep-water red shrimps in the year 2019 as the fleet capacity was frozen at this level by Recommendation GFCM/43/2019/6.

24. Vessels authorized to fish the key stocks with demersal trawls in the Strait of Sicily shall be listed by the CPC whose flag they are flying.

25. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 1 August in the first year and by 31 March of each subsequent year, the list of the vessels flying their flag and actively fishing for the key stocks for the current year or forthcoming years. This list shall include, for each vessel, the information referred to in Annex 2.

26. Each CPC shall ensure that adequate mechanisms are set up to record each fishing vessel in a national fleet register and to record vessels' catches via the logbook, as well as to monitor fishing vessels' activities and landings via catch sampling surveys according to the rules stipulated by each CPC.

27. Contracting parties and cooperating non-contracting parties shall maintain and keep updated a register of the above-mentioned fishing authorizations. Unless specifically provided for in the GFCM Data Collection Reference Framework, CPCs shall communicate the following to the GFCM Secretariat:

- a) the list of operating vessels for which such authorization has been issued for current or forthcoming year(s), not later than 31 March of each year; and
- b) a report on fishing activities carried out by the vessels referred to in paragraph 24 in an aggregated format, including the following minimum information – number of exploitation days, exploitation area and catches and discards of deep-water red shrimps – no later than 31 August of each year, starting from August 2023.

28. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish for the key species and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

29. The above provisions are without prejudice to Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART VI

Scientific monitoring, adaptation and revision of the plan

30. The SAC shall provide, on an annual basis starting from 2023, advice on the status of both deep-water shrimp stocks in the Strait of Sicily, including specific objectives to maintain fishing mortality within agreed precautionary fishing mortality reference points and to maintain or restore the key stocks at levels that can produce the MSY in accordance with the objectives set out in paragraph 9.

31. Based on the SAC advice, the GFCM may review the content of the multiannual management plan.

32. Where SAC advice indicates that the general or specific objectives of the multiannual management plan are not being met, the GFCM shall decide on additional and/or alternative management measures to contribute to achieving those objectives.

33. Where, for any reason (e.g. lack of appropriate data), the SAC is not in a position to provide accurate advice on the stock status of the key stocks and on their exploitation levels, the GFCM shall decide on the most appropriate management measures to ensure the sustainability of the fisheries. These measures shall be based on SAC advice in accordance with the precautionary approach and taking into consideration environmental and socioeconomic elements in a way that guarantees the sustainability of the fisheries.

34. Contracting parties and cooperating non-contracting parties, with the support of the GFCM Secretariat, shall ensure the implementation of the pilot project to improve the selectivity of trawl nets fishing for deep-water red shrimps in the Strait of Sicily in 2023.

PART VII

Specific measures to address illegal, unreported and unregulated fishing

35. Each CPC shall ensure that adequate mechanisms are in place for the registration of each fishing vessel in a national fleet register, for the recording the vessel's catch and fishing effort in the logbook and for the monitoring of the vessel's fishing activities and landings by means of surveys and sampling of catches and fishing effort, carried out in accordance with the rules laid down by each CPC.

36. Each CPC shall designate landing points at which landings by vessels actively fishing for the key stocks in the Strait of Sicily shall take place.

37. For each designated port, the concerned CPC shall specify permitted landing and transshipping times and places.

38. Contracting parties and cooperating non-contracting parties shall carry out inspections on the basis of a risk analysis.

39. It shall be prohibited to land or transship from fishing vessels any quantity of key stocks fished in the Strait of Sicily at any place other than ports designated by CPCs in accordance with paragraph 36.

40. Contracting parties and cooperating non-contracting parties shall transmit to the GFCM Secretariat, no later than 30 April 2023 and subsequently on 30 November each year, any changes to the list of the designated landing points at which landings of key stocks in the Strait of Sicily may take place.

41. Contracting parties and cooperating non-contracting parties shall engage to cooperate in the fight against IUU fishing activities, in particular through sharing information and gathering intelligence to fight against illegal activities.

42. Part VII of this recommendation is without prejudice to Recommendation GFCM/41/2017/7.

PART VIII

Monitoring, control and surveillance programme

43. Vessels operating with otter trawls exploiting key stocks in the Strait of Sicily shall be allowed to carry out specific fishing activities only if these are indicated in a valid fishing authorization issued by the competent authorities.

44. Authorized vessels shall be equipped with a vessel monitoring system in accordance with Recommendation GFCM/33/2009/7.

45. Contracting parties and cooperating non-contracting parties shall monitor the consumption of the catch limits, as follows: beginning from the date when 80 percent of the quota has been exhausted, the CPC concerned shall communicate to the GFCM monthly reports on catch. Such a report should be sent by the fifteenth day of the month for the previous month. When the catch limit has been reached, the CPC shall prohibit any further catches of the key stocks.

PART IX

Permanent inspection scheme

46. The permanent inspection scheme established for demersal fisheries in the Strait of Sicily by Recommendation GFCM/41/2017/8 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16) is amended and extended with Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6, to also cover this recommendation.

PART X

National management plans

47. In order to ensure adequate conservation of deep-water red shrimp stocks, CPCs shall adopt fisheries management measures or national management plans in the Strait of Sicily.

48. Contracting parties and cooperating non-contracting parties shall notify the GFCM Secretariat, from 30 September 2023, of the management measures or management plans adopted at the national level. Where appropriate, should these measures be modified, the CPCs shall communicate such modifications by 30 April of the following year.

PART XI
Final provisions

49. The multiannual management plan establish by this recommendation shall remain in force for eight years from the date of its adoption.

50. Measures in this recommendation shall be without prejudice to stricter measures adopted by the CPCs.

51. On the basis of SAC scientific advice, the GFCM may revise this recommendation.

52. This recommendation repeals and replaces Recommendations GFCM/44/2021/7 and GFCM/43/2019/6.

Annex 1

Fishing opportunities for deep-water red shrimp fisheries in the Strait of Sicily (GSAs 12 to 16) over the transitional period 2023–2025.

In line with paragraphs 11 to 13, catch limits are reported for each CPC with an active fleet fishing for the key stocks.

	European Union 2023	European Union 2024	European Union 2025	Tunisia 2023	Tunisia 2024	Tunisia 2025
Catch limit (tonnes) for giant red shrimp	908	881	854	39	38	37
Catch limit (tonnes) for blue and red shrimp	104	101	98	126	122	119

Subject to more detailed provisions under the GFCM Data Collection Reference Framework (DCRF), the list referred to in paragraph 25 shall contain, for each vessel, the following information:

- Vessel name
- National registration number (code assigned by the CPCs)
- Vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001)
- Port of registration (full name of the port)
- Previous name (if any)
- Previous flag (if any)
- Previous details of deletion from other registers (if any)
- International radio call sign (if any)
- VMS (indicate yes/no)
- Vessel type, length overall (LOA) and gross tonnage (GT) and engine power expressed in kW
- Name and address of owner(s) and/or charter and/or operator(s)
- Main target species
- Main gear used for deep-water red shrimps and DCRF fleet segment allocation
- Time period authorized for fishing with bottom trawl or any other gear likely to fish deep-water red shrimps (if any of such authorization)

Recommendation GFCM/45/2022/6 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Ionian Sea (geographical subareas 19 to 21), repealing Recommendations GFCM/44/2021/8 and GFCM/42/2018/4

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve the marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks at levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration requires that, in the context of establishing an ecosystem-based fisheries management framework, all key fisheries should be managed with management plans;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that fishing mortality should be kept below safe thresholds to ensure long-term high yields while limiting the risk of stock collapse and guaranteeing stable and more viable fisheries;

CONSIDERING the socioeconomic importance of fisheries and the need to ensure their sustainability;

RECALLING that owing to the importance of this area, different recommendations have been adopted for the Ionian Sea, including Recommendation GFCM/42/2018/4 on management measures for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Ionian Sea (geographical subareas 19, 20 and 21) rolled over by GFCM/44/2021/8, which introduced a general framework for the management of deep-water red shrimps in the area;

NOTING that the Scientific Advisory Committee on Fisheries (SAC) acknowledged, at its twenty-third session, the status of both giant red shrimp and blue and red shrimp in the Ionian Sea, which have been in overexploitation in recent years;

CONSIDERING that the management measures adopted since 2018 have been an important first step towards a unified management of fisheries resources and have contributed to establishing an internationally binding framework that started moving the deep-water red shrimp stocks towards sustainable exploitation levels and combatted illegal, unreported and unregulated (IUU) fishing;

NOTING, however, that in biological terms, the plan set forth in Recommendation GFCM/42/2018/4 has not achieved its MSY goal due to a lack of annually established catch limitations set on the basis of scientific advice and the fleets being out of balance with the deep-water red shrimp stocks;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following recommendation:

PART I

General objectives, geographical scope and definitions

General objectives

1. The present recommendation establishes a multiannual management plan for sustainable demersal trawl fishing activities in the Ionian Sea (geographical subareas [GSAs] 19 to 21) exploiting deep-water red shrimp stocks by means of demersal trawlers. On the basis of SAC advice, the scope of this recommendation could be extended to other types of fishing gear and other stocks.
2. The multiannual management plan shall be consistent with the precautionary approach. It shall be designed to provide high long-term yields consistent with the MSY and to guarantee a low risk of stock collapse while maintaining the sustainability and relative stability of fisheries and dependent industries.
3. Contracting parties and cooperating non-contracting parties (CPCs) whose vessels are actively fishing in GSAs 19 to 21 agree to implement such a multiannual management plan for the fisheries concerned and in accordance with the general and specific objectives and measures set forth by this recommendation.
4. A set of transitional precautionary management measures for the Ionian Sea shall be developed in order to ensure that the stocks and fisheries progress towards biologically sustainable levels while minimizing socioeconomic impacts and finalizing scientific advice by the SAC.
5. The multiannual management plan for the fisheries shall also pursue a reduction in IUU fishing activities in GSAs 19 to 21.

Geographical scope

6. The multiannual management plan provided by the present recommendation shall apply to GSAs 19 to 21.

Definitions

7. For the purpose of this recommendation:

- a) “ F_{msy} ” means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum yield, or “ F_{msy} proxy”.
- b) “ B_{lim} ” means the limit reference point, expressed as spawning stock biomass, below which there may be reduced reproductive capacity.
- c) “Stock within safe biological limits” means a stock with a high probability of its estimated spawning biomass at the end of the previous year being higher than the limit biomass reference point (B_{lim}).
- d) “ B_{pa} ” means the precautionary reference point, expressed as spawning stock biomass, that ensures that the spawning stock biomass has less than a 5 percent probability of being below B_{lim} .
- e) “Ionian Sea” means GSAs 19 to 21 as defined in Resolution GFCM/33/2009/2 on the establishment of geographical subareas in the GFCM area of application, amending Resolution GFCM/31/2007/2.
- f) “Vessel actively fishing” means any vessel fishing with demersal trawls on the key stocks and entitled by the CPC whose flag it flies to carry out specific fishing operations, during a specified period, in a given area or for a given fishery under specific conditions. Fishing vessels non included in the list of authorized vessels are allowed to catch, retain on board, land and offer for sale limited quantities of key stocks that cannot exceed 15 percent of the total catch at any time of a fishing trip.
- g) “Fishing day” means any continuous period of 24 hours, or part thereof, during which a vessel is present within the Ionian Sea and is searching for fish, shooting, setting, towing or hauling a fishing gear, taking catch on board, transshipping, retaining on board, processing on board, transferring or landing fish and fishery products.
- h) “Key stocks” or “deep-water red shrimps” means marine organisms pertaining to the species as defined:
 - giant red shrimp (*Aristaeomorpha foliacea*); and
 - blue and red shrimp (*Aristeus antennatus*).
- i) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7.

- j) “Designated landing point” means ports, or places close to the shore, designated by CPCs according to Recommendation GFCM/40/2016/1 on a regional scheme on port state measures to combat illegal, unreported and unregulated fishing in the GFCM area of application, including offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying of fishing vessels, at which landings, transshipments, packaging and/or processing operations of fishery products are permitted.

PART II

Specific objectives and transitional measures

8. The multiannual management plan shall aim to contribute to the objectives mentioned in Article 2 and to the principles listed in Article 5 of the GFCM Agreement.
9. The multiannual management plan shall, in particular:
- a) apply the precautionary approach to fisheries management;
 - b) ensure that exploitation levels of key stocks are at the MSY as soon as possible and at the latest by 31 December 2030;
 - c) in continuity with Recommendation GFCM/43/2018/4, prevent increases in fishing capacity and effort in relation to the levels exerted during 2019 for the exploitation of key species in the Ionian Sea;
 - d) protect nursery and spawning areas and essential fish habitats important for the key stocks in the Ionian Sea.
 - e) contribute to the elimination of discards by avoiding and reducing unwanted catches and by ensuring that all catches are landed; and
 - f) provide for measures to adjust the fishing capacity and catches to levels of fishing mortalities consistent with the MSY, with a view to ensuring economically viable fleets without overexploiting marine living resources.
10. The multiannual management plan shall be based on a two-step approach whereby: i) over the first three years, catch limits and spatio-temporal measures shall be applied; and ii) from 2026, on the basis of new scientific data, the SAC shall evaluate the state of the stocks and, on the basis of the harvest control rules (HCRs), propose further measures and advisable yearly catch limits per species in line with the provisions in Parts II, III, IV, V and VI of this recommendation, that would contribute to reaching F_{msy} or F_{msy} proxy and staying within safe biological limits.
11. In 2023, 2024 and 2025, a transitional fishing regime shall be established, during which at least all existing efficient measures should be implemented while scientific support is gathered, along with information towards the identification of long-term adaptive management measures based on annual future advice on the evolution of the state of resources and fisheries. Contracting parties and cooperating non-contracting parties shall ensure that a catch limit is established for the key stocks, aligned with annual reductions of 3 percent in 2023, 3 percent in 2024 and 3 percent in 2025. Such reductions should be with respect to reported catches in 2021. Based on this paragraph, the catch limits for 2023, 2024 and 2025, as well as the temporary allocations are established in Annex 1.
12. In 2023, 2024 and 2025, CPCs shall be fully committed to completing the scientific assessments of the key stocks, and the management strategy evaluation provided for in paragraphs

14 to 16, as well as the identification of spatio-temporal measures provided for in paragraphs 19 and 20.

13. By way of derogation from paragraph 11, CPCs intending to start targeting deep-water red shrimps shall submit a management plan for deep-water red shrimps and a development plan during the period between the entry into force of this recommendation and the adoption of permanent management measures by the GFCM. The SAC shall review the development plan and formulate appropriate advice if it is not in line with the general and specific objectives set out in this recommendation. Pending possible amendments in line with SAC advice, the GFCM shall make a decision on the adoption of such a development plan.

14. The SAC, at its twenty-fifth session in 2024, shall give a mandate to the Workshop on the assessment of management measures to carry out a management strategy evaluation in order to define the most appropriate HCRs for the key stocks to be implemented according to paragraphs 15 and 16, including socioeconomic aspects.

PART III

Long-term management plan

15. A long-term management plan for the period 2026–2030 is established. Each year, on the basis of updated SAC advice, the GFCM shall establish yearly single-species catch limits for deep-water red shrimps. Such limits shall be based on HCRs in line with paragraph 16, which shall be proposed by the Workshop on the assessment of management measures and endorsed by the SAC in 2024 or 2025.

16. The HCRs shall ensure for the deep-water red shrimp stocks a low probability of spawning stock biomass falling below B_{lim} (5 percent probability).

Safeguards

17. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{pa} , the GFCM shall take remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, catch limits shall be set at levels consistent with producing a fishing mortality lower than F_{msy} , taking into account the decrease in biomass.

18. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{lim} , the GFCM shall take further remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, such remedial measures may include suspending the fishery targeting the concerned stocks and an adequate reduction in fishing effort or catch limits.

PART IV

Technical measures

Spatial and temporal closures

19. Over the transitional period, the SAC shall: i) finalize the identification of the fishing footprint on vulnerable marine ecosystems; and ii) on the basis of updated results from the project on Mediterranean Sensitive Habitats (MEDISEH), finalize the identification of essential fish habitat areas for juveniles and spawners of the deep-water red shrimps. Such work shall increase the understanding of the reproductive peaks and the recruitment and spawning periods of relevant species. On this basis, in 2024 the SAC shall determine appropriate spatio-temporal measures through an analysis of fishery-independent and dependent information, as well as of scientific literature. Such measures could be implemented within the long-term plan.

20. Over the transitional period, as a pilot measure, bottom trawlers targeting deep-water red shrimp spawning aggregations shall stop fishing for 30 consecutive days between the months of March and September. CPCs shall communicate to the GFCM Secretariat, no later than 30 June 2023, and annually thereafter, these temporal restrictions.

Minimum conservation reference size

21. During the transitional period, the SAC shall identify, in the context of Resolution GFCM/44/2021/2 on the definition of a minimum conservation reference size for priority stocks in the Mediterranean Sea, appropriate minimum conservation reference sizes (MCRS) for the deep-water red shrimps lacking an MCRS to be then applied within the long-term management plan for the two species covered.

22. In the long-term management plan, specimens of the key stocks smaller than the MCRS as defined in paragraph 21 shall not be caught, retained on board, transshipped, transferred, landed, stored, sold, displayed or offered for sale by professionals.

PART V

Fleet management measures

23. Contracting parties and cooperating non-contracting parties shall ensure that the overall fleet capacity of the fleets operating with demersal trawls actively fishing for key stocks does not exceed, in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers, over the duration of this recommendation, the fleet capacity for otter trawlers fishing deep-water red shrimps in the year 2019, in continuity with Recommendation GFCM/42/2018/4 on a multiannual management plan for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Ionian Sea (geographical subareas 19, 20 and 21).

24. Vessels authorized to fish the key stocks with demersal trawls in the Ionian Sea shall be listed by the CPC whose flag they are flying.

25. CPCs shall communicate to the GFCM Secretariat, no later than 1 August in the first year and by 31 March of each subsequent year, the list of the vessels flying their flag and actively fishing for the key stocks for the current year or forthcoming years. This list shall include, for each vessel, the information referred to in Annex 2.

26. Each CPC shall ensure that adequate mechanisms are set up to record each fishing vessel in a national fleet register and to record vessels' catches and fishing effort via the logbook, as well as to monitor fishing vessels' activities and landings via catch and effort sampling surveys according to the rules stipulated by each CPC.

27. CPCs shall maintain and keep updated a register of the above-mentioned fishing authorizations. Unless specifically provided for in the GFCM Data Collection Reference Framework, CPCs shall communicate the following to the GFCM Secretariat:

- a) the list of operating vessels for which such authorization has been issued for current or forthcoming year(s), no later than 31 March of each year; and
- b) a report on fishing activities carried out by the vessels referred to in paragraph 24, in an aggregated format, including the following minimum information – number of exploitation days, exploitation area and catches and discards of deep-water red shrimps – no later than 31 August of each year, starting from August 2023.

28. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish for the key species and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

29. The above provisions are without prejudice to Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART VI

Scientific monitoring, adaptation and revision of the plan

30. The SAC shall provide, on an annual basis starting from 2023, advice on the status of both deep-water red shrimp stocks in the Ionian Sea, including specific objectives to maintain fishing mortality within agreed precautionary fishing mortality reference points and to maintain or restore the key stocks at levels that can produce the MSY in accordance with the objectives set out in paragraph 9.

31. Based on the SAC advice, the GFCM may review the content of the multiannual management plan.

32. Where SAC advice indicates that the general or specific objectives of the multiannual management plan are not being met, the GFCM shall decide on additional and/or alternative management measures to contribute to achieving those objectives.

33. Where, for any reason (e.g. lack of appropriate data), the SAC is not in a position to provide accurate advice on the stock status of the key stocks and on their exploitation levels, the GFCM shall decide on the most appropriate management measures to ensure the sustainability of the fisheries. These measures shall be based on SAC advice in accordance with the precautionary approach and taking into consideration environmental and socioeconomic elements in a way that guarantees the sustainability of the fisheries.

34. CPCs, with the support of GFCM Secretariat, shall ensure the implementation of the pilot project to improve the selectivity of trawl nets fishing for deep-water red shrimps in the Ionian Sea in 2023.

PART VII

Specific measures to address illegal, unreported and unregulated fishing

35. Each CPC shall ensure that adequate mechanisms are in place for the registration of each fishing vessel in a national fleet register, for the recording of the vessel's catch and fishing effort in the logbook and for the monitoring of the vessel's fishing activities and landings, by means of surveys and sampling of catches and fishing effort, carried out in accordance with the rules laid down by each CPC.

36. Each CPC shall designate landing points at which landings by vessels actively fishing for the key stocks in the Ionian Sea shall take place.

37. For each designated port, the concerned CPC shall specify permitted landing and transshipping times and places.

38. Contracting parties and cooperating non-contracting parties shall carry out inspections on the basis of a risk analysis.

39. It shall be prohibited to land or transship from fishing vessels any quantity of key stocks fished in the Ionian Sea at any place other than ports designated by CPCs in accordance with paragraph 36.

40. Contracting parties and cooperating non-contracting parties shall transmit to the GFCM Secretariat, no later than 30 April 2023 and subsequently on 30 November each year, any changes to the list of the designated landing points at which landings of key stocks in the Ionian Sea may take place.

41. Contracting parties and cooperating non-contracting parties shall engage to cooperate in the fight against IUU fishing activities, in particular through sharing information and gathering intelligence to fight against illegal activities.

42. Part VII of this recommendation is without prejudice to Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application.

PART VIII

Monitoring, control and surveillance programme

43. Vessels operating with otter trawls exploiting key stocks in the Ionian Sea shall be allowed to carry out specific fishing activities only if these are indicated in a valid fishing authorization issued by the competent authorities.

44. Authorized vessels shall be equipped with a vessel monitoring system in accordance with Recommendation GFCM/33/2009/7.

45. Contracting parties and cooperating non-contracting parties shall monitor the consumption of the catch limits, as follows: beginning from the date when 80 percent of the quota has been exhausted, the CPC concerned shall communicate to the GFCM monthly reports on catch. Such a report should be sent by the fifteenth day of the month for the previous month. When the catch limit has been reached, the CPC shall prohibit any further catches of the key stocks.

PART IX

Permanent inspection scheme

46. An international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea is established with Recommendation GFCM/45/2022/16 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21) to cover this recommendation.

PART X

National management plans

47. In order to ensure adequate conservation of deep-water red shrimp stocks, CPCs shall adopt fisheries management measures or national management plans in the Ionian Sea.

48. Contracting parties and cooperating non-contracting parties shall notify the GFCM Secretariat, from 30 September 2023, of the management measures or management plans adopted at the national level. Where appropriate, should these measures be modified, the CPCs shall communicate such modifications by 30 April of the following year.

PART XI
Final provisions

49. The multiannual management plan established by this recommendation remains in force for eight years from the date of its adoption.

50. Measures in this recommendation shall be without prejudice to stricter measures adopted by the CPCs.

51. On the basis of SAC scientific advice, the GFCM may revise this recommendation.

52. This recommendation repeals and replaces Recommendation GFCM/44/2021/8 and GFCM/42/2018/4.

Annex 1

Fishing opportunities for deep-water red shrimp fisheries in the Ionian Sea (GSAs 19 to 21) over the transitional period 2023–2025. In line with paragraphs 10 and 11, catch limits are reported for each CPC with an active fleet fishing for the key stocks.

	European Union 2023	European Union 2024	European Union 2025	Tunisia 2023	Tunisia 2024	Tunisia 2025
Catch limit (tonnes) for giant red shrimp	393	381	370	5.8	5.6	5.5
Catch limit (tonnes) for blue and red shrimp	265	257	250	5.8	5.6	5.5

Subject to more detailed provisions under the GFCM Data Collection Reference Framework (DCRF), the list referred to in paragraph 25 shall contain, for each vessel, the following information:

- Vessel name
- National registration number (code assigned by the CPCs)
- Vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001)
- Port of registration (full name of the port)
- Previous name (if any)
- Previous flag (if any)
- Previous details of deletion from other registers (if any)
- International radio call sign (if any)
- VMS (indicate yes/no)
- Vessel type, length overall (LOA) and gross tonnage (GT) and engine power expressed in kW
- Name and address of owner(s) and/or charter and/or operator(s)
- Main target species
- Main gear used for deep-water red shrimps and DCRF fleet segment allocation
- Time period authorized for fishing with bottom trawl or any other gear likely to fish deep-water red shrimps (if any of such authorization)

Recommendation GFCM/45/2022/7 on a multiannual management plan for sustainable demersal trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24 to 27), repealing Recommendation GFCM/42/2018/3

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve the marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks at levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration requires that, in the context of establishing an ecosystem-based fisheries management framework, all key fisheries should be managed with management plans;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

TAKING INTO ACCOUNT the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea endorsed with Resolution GFCM/44/2021/12, and particularly its Target 1 “Fisheries and ecosystems: healthy seas and productive fisheries”;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that fishing mortality should be kept below safe thresholds to ensure long-term high yields while limiting the risk of stock collapse and guaranteeing stable and more viable fisheries;

CONSIDERING the socioeconomic importance of fisheries and the need to ensure their sustainability;

RECALLING that owing to the importance of fisheries in this area, Recommendation GFCM/42/2018/3 on a multiannual management plan for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24, 25, 26 and 27), as amended by Recommendation GFCM/44/2021/6, introduced a general framework for the management of deep-water red shrimps in the Levant Sea;

NOTING that the Scientific Advisory Committee on Fisheries (SAC) endorsed, at its twenty-third session, technical elements for deep-water red shrimp fisheries in the Levant Sea, including the possibility of a long-term multiannual management plan designed in a stepwise manner over eight years, starting with a three-year transitional period over which a restricted set of measures would be implemented while scientific evidence is gathered towards the identification of long-term adaptive management measures – including catch limits, minimum conservation reference sizes, spatial or spatio-temporal measures to protect juveniles and/or spawners and technical measures on selectivity;

CONSIDERING that the management measures adopted in 2018 have been an important first step towards a unified management of fisheries resources and have contributed to establishing an internationally binding framework that started moving the deep-water red shrimp stocks towards sustainable exploitation levels and combatted illegal, unreported and unregulated (IUU) fishing;

NOTING, however, that the multiannual management plan established by Recommendation GFCM/42/2018/3 has not yet achieved its operational objective of maintaining the fishing mortality within agreed precautionary reference points with a view to achieving or maintaining fishing mortality at MSY levels owing to issues related to data, and that hence the management measures need to be reinforced;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement the following recommendation:

PART I

General objectives, geographical scope and definitions

1. The present recommendation establishes a multiannual management plan for sustainable demersal trawl fishing activities in the Levant Sea (geographical subareas [GSAs] 24 to 27) exploiting deep-water red shrimp stocks by means of demersal trawlers. On the basis of SAC advice, the scope of this recommendation could be extended to other types of fishing gear and other stocks.
2. The multiannual management plan shall be consistent with the precautionary approach. It shall be designed to provide high long-term yields consistent with the MSY and to guarantee a low risk of stock collapse while maintaining the sustainability and relative stability of fisheries and dependent industries.
3. Contracting parties and cooperating non-contracting parties (CPCs) whose vessels are actively fishing in GSAs 24 to 27 agree to implement such a multiannual management plan for the fisheries concerned and in accordance with the general and specific objectives and measures set by this recommendation.
4. A set of transitional precautionary management measures for the Levant Sea shall be developed in order to ensure that the stocks and fisheries progress towards biologically sustainable levels while minimizing socioeconomic impacts and finalizing scientific advice by the SAC.

5. The multiannual management plan for the fisheries shall also pursue a reduction in IUU fishing activities in GSAs 24 to 27.

Geographical scope

6. The multiannual management plan provided by the present recommendation shall apply in GSAs 24 to 27.

Definitions

7. For the purpose of this recommendation:

- a) “ F_{msy} ” means the value of the estimated fishing mortality that, with a given fishing pattern and under current average environmental conditions, gives the long-term maximum yield, or “ F_{msy} proxy”.
- b) “ B_{lim} ” means the limit reference point, expressed as spawning stock biomass, below which there may be reduced reproductive capacity.
- c) “Stock within safe biological limits” means a stock with a high probability of its estimated spawning biomass at the end of the previous year being higher than the limit biomass reference point (B_{lim}).
- d) “ B_{pa} ” means the precautionary reference point, expressed as spawning stock biomass, that ensures that the spawning stock biomass has less than a 5 percent probability of being below B_{lim} .
- e) “Levant Sea” means GSAs 24 to 27 as defined in Resolution GFCM/33/2009/2 on the establishment of geographical subareas in the GFCM area of application, amending Resolution GFCM/31/2007/2.
- f) “Vessel actively fishing” means any vessel fishing with demersal trawls on the key stocks and entitled by the CPC whose flag it flies to carry out specific fishing operations, during a specified period, in a given area or for a given fishery under specific conditions. Fishing vessels not included in the list of authorized vessels are allowed to catch, retain on board, land and offer for sale limited quantities of key stocks that cannot exceed 15 percent of the total catch at any time of a fishing trip.
- g) “Fishing day” means any continuous period of 24 hours, or part thereof, during which a vessel is present within the Levant Sea and is searching for fish, shooting, setting, towing or hauling a fishing gear, taking catch on board, transshipping, retaining on board, processing on board, transferring or landing fish and fishery products.
- h) “Key stocks” or “deep-water red shrimps” means marine organisms pertaining to the species as defined:
 - giant red shrimp (*Aristaeomorpha foliacea*); and
 - blue and red shrimp (*Aristeus antennatus*).
- i) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation

GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

- j) “Designated landing point” means ports, or places close to the shore, designated by CPCs according to Recommendation GFCM/40/2016/1 on a regional scheme on port state measures to combat illegal, unreported and unregulated fishing in the GFCM area of application, including offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying of fishing vessels, at which landings, transshipments, packaging and/or processing operations of fishery products are permitted.

PART II

Specific objectives and transitional measures

8. The multiannual management plan shall aim to contribute to the objectives mentioned in Article 2 and to the principles listed in Article 5 of the GFCM Agreement.

9. The multiannual management plan shall, in particular:

- a) apply the precautionary approach to fisheries management;
- b) ensure that exploitation levels of key stocks are at the MSY as soon as possible and at the latest by 31 December 2030;
- c) in continuity with Recommendation GFCM/42/2018/3, in relation to the exploitation of key stocks in the Levant Sea, prevent increases in fishing capacity and effort from the levels exerted over the years 2014–2017 or over another period of three consecutive years, such as 2015–2018, provided that for such period the levels exerted do not go beyond 50 percent with respect to the 2014–2017 reference period;
- d) protect nursery and spawning areas and essential fish habitats important for the key stocks in the Levant Sea;
- e) contribute to the elimination of discards by avoiding and reducing unwanted catches and by ensuring that all catches are landed; and
- f) provide for measures to adjust the fishing capacity and catches to levels of fishing mortalities consistent with the MSY, with a view to ensuring economically viable fleets without overexploiting marine living resources.

10. The multiannual management plan shall be based on a two-step approach whereby: i) over the first three years, catch limits and spatio-temporal measures shall be applied; and ii) from 2026, on the basis of new scientific data, the SAC shall evaluate the state of the stocks and, on the basis of the harvest control rules (HCRs), propose further measures and advisable yearly catch limits per species in line with the provisions in Parts II, III, IV, V and VI of this recommendation, that would contribute to reaching F_{msy} or F_{msy} proxy and staying within safe biological limits.

11. In 2023, 2024 and 2025 a transitional fishing regime shall be established, during which at least all existing efficient measures should be implemented while scientific support is gathered, along with information towards the identification of long-term adaptive management measures based on annual future advice on the evolution of the state of resources and fisheries. Contracting parties and cooperating non-contracting parties shall ensure that a catch limit is established for the key stocks, aligned with annual reductions of 3 percent in 2023, 3 percent in 2024 and 3 percent in 2025. Such

reductions should be with respect to reported catches in 2021. Based on this paragraph, the catch limits for 2023, 2024 and 2025, as well as the temporary allocations, are established in Annex 1.

12. In 2023, 2024 and 2025, CPCs shall be fully committed to completing the scientific assessments of the key stocks and the management strategy evaluation provided for in paragraphs 16 to 19 and the identification of spatio-temporal measures provided for in paragraphs 22 and 23.

13. The catch limits by CPC for the period 2023–2025 in paragraphs 10 to 12 shall be set without prejudice to the discussions to take place in the context of the working group referred to under paragraph **Error! Reference source not found.**.

14. A working group shall be established by the GFCM in 2025, within 30 calendar days of the conclusion of the twenty-sixth SAC session, in order to establish a fair and equitable allocation key for Levant Sea key stocks, taking into consideration the efforts made by CPCs to manage deep-water red shrimp fisheries and the levels of historical catches, and apply in some cases stricter rules than those defined in this recommendation, also based on socioeconomic considerations.

15. By way of derogation from paragraph 14, CPCs intending to start targeting deep-water red shrimps shall submit a management plan for deep-water red shrimp fisheries and a development plan during the period between the entry into force of this recommendation and the adoption of permanent management measures by the GFCM. The SAC shall review the development plan and formulate appropriate advice if it is not in line with the general and specific objectives set out in this recommendation. Pending possible amendments in line with SAC advice, the GFCM shall make a decision on the adoption of such a development plan.

16. The SAC, at its twenty-fifth session in 2024, shall give a mandate to the Workshop on the assessment of management measures to carry out a management strategy evaluation in order to define the most appropriate HCRs for the key stocks to be implemented according to paragraphs 17 and 18, including socioeconomic aspects.

PART III **Long-term management plan**

17. A long-term management plan for the period 2026–2030 is established. Each year, on the basis of updated SAC advice, the GFCM shall establish annual single-species catch limits for deep-water red shrimps. Such limits shall be based on HCRs, in line with paragraph 18, which shall be proposed by the WKMSE and endorsed by the SAC in 2024 or 2025.

18. The HCRs shall ensure for the deep-water red shrimp stocks a low probability of spawning stock biomass falling below B_{lim} (5 percent probability).

19. Catch limits allocations to CPCs shall be based on the outcomes of the working group referred to under paragraph 14.

Safeguards

20. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{pa} , the GFCM shall take remedial measures to ensure the rapid return of the concerned stocks to levels above those capable of producing MSY. In particular, catch limits shall be set at levels consistent with producing a fishing mortality lower than F_{msy} , taking into account the decrease in biomass.

21. Where, based on SAC scientific advice, the spawning biomass of any of the key stocks is below B_{lim} , the GFCM shall take further remedial measures to ensure the rapid return of the concerned stocks

to levels above those capable of producing MSY. In particular, such remedial measures may include suspending the fishery targeting the concerned stocks and an adequate reduction in fishing effort or catch limits.

PART IV Technical measures

Spatial and temporal closures

22. Over the transitional period, the SAC shall: i) finalize the identification of the fishing grounds, hence the origin of catches and the fishing footprint on vulnerable marine ecosystems; and ii) on the basis of updated results from the project on Mediterranean Sensitive Habitats (MEDISEH), finalize the identification of essential fish habitat areas for juveniles and spawners of the deep-water red shrimps. Such work shall increase the understanding of the reproductive peaks and the recruitment and spawning periods of relevant species. On this basis, in 2024 the SAC shall determine appropriate spatio-temporal measures through an analysis of fishery-independent and dependent information, as well as of scientific literature. Such measures could be implemented within the long-term plan.

23. Over the transitional period, as a pilot measure, bottom trawlers targeting deep-water red shrimp spawning aggregations should stop fishing for 30 consecutive days between the months of March and December. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 30 June 2023, and annually thereafter, these temporal restrictions.

Minimum conservation reference size

24. During the transitional period, the SAC shall identify appropriate minimum conservation reference sizes (MCRS) for the deep-water red shrimps lacking an MCRS in the context of Resolution GFCM/44/2021/2 on the definition of a minimum conservation reference size for priority stocks in the Mediterranean Sea, to be then applied in the long-term plan for the two species covered.

25. In the long-term plan, specimens of key stocks smaller than the MCRS as defined in paragraph 24 shall not be caught, retained on board, transshipped, transferred, landed, stored, sold, displayed or offered for sale by professionals.

PART V Fleet management measures

26. Contracting parties and cooperating non-contracting parties shall ensure that the overall fleet capacity or fishing effort of the fleets operating with demersal trawls actively fishing for key stocks does not exceed, in terms of gross tonnage (GT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers, over the duration of this recommendation, the number of vessels or fishing effort for otter trawlers fishing deep-water red shrimps during the years 2014–2017 or over another period of three consecutive years, such as 2015–2018, provided that for such period the levels exerted do not go beyond 50 percent with respect to the 2014–2017 reference period.

27. Vessels authorized to fish the key stocks with demersal trawls in the Levant Sea shall be listed by the CPC whose flag they are flying.

28. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat, no later than 1 August in the first year and by 31 March of each subsequent year, the list

of the vessels flying their flag and actively fishing for the key stocks for the current year or forthcoming years. This list shall include, for each vessel, the information referred to in Annex 2.

29. Each CPC shall ensure that adequate mechanisms are set up to record each fishing vessel in a national fleet register and to record vessels' catches via the logbook, as well as to monitor fishing vessels' activities and landings via catch sampling surveys according to the rules stipulated by each CPC.

30. Contracting parties and cooperating non-contracting parties shall maintain and keep updated a register of the above-mentioned fishing authorizations. Unless specifically provided for in the GFCM Data Collection Reference Framework, the CPCs shall communicate the following to the GFCM Secretariat:

- a) the list of operating vessels for which such authorization has been issued for current or forthcoming year(s), not later than 31 March of each year; and
- b) a report on fishing activities carried out by the vessels referred to in paragraph 27, in an aggregated format, including the following minimum information – number of exploitation days, exploitation area and catches and discards of deep-water red shrimps – no later than 31 August of each year, starting from August 2023.

31. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish for the key species and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

32. The above provisions are without prejudice to Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART VI

Scientific monitoring, adaptation and revision of the plan

33. The SAC shall provide, on an annual basis starting from 2023, advice on the status of both deep-water red shrimp stocks in the Levant Sea including specific objectives to maintain fishing mortality within agreed precautionary fishing mortality reference points and to maintain or restore the key stocks at levels that can produce the MSY in accordance with the objectives set out in paragraph 9.

34. Based on the SAC advice, the GFCM may review the content of the multiannual management plan.

35. Where SAC advice indicates that the general or specific objectives of the multiannual management plan are not being met, the GFCM shall decide on additional and/or alternative management measures to contribute to achieving those objectives.

36. Where, for any reason (e.g. lack of appropriate data), the SAC is not in a position to provide accurate advice on the stock status of the key stocks and on their exploitation levels, the GFCM shall decide on the most appropriate management measures to ensure the sustainability of the fisheries. These measures shall be based on SAC advice in accordance with the precautionary approach and taking into consideration environmental and socioeconomic elements in a way that guarantees the sustainability of the fisheries.

37. Contracting parties and cooperating non-contracting parties, with the support of GFCM Secretariat, shall ensure the implementation of the pilot project to improve the selectivity of trawl nets fishing for deep-water red shrimps in the Levant Sea in 2023.

PART VII

Specific measures to address illegal, unreported and unregulated fishing activities

38. Each CPC shall ensure that adequate mechanisms are in place for the registration of each fishing vessel in a national fleet register, in order to record the vessel's catch and fishing effort in the logbook and to monitor the vessel's fishing activities and landings, by means of catch and effort sampling surveys, carried out in accordance with the rules laid down by each CPC.

39. Each CPC shall designate landing points at which landings by vessels actively fishing for the key stocks in the Levant Sea shall take place.

40. For each designated port, the concerned CPC shall specify permitted landing and transshipping times and places.

41. Contracting parties and cooperating non-contracting parties shall carry out inspections on the basis of a risk analysis.

42. It shall be prohibited to land or tranship from fishing vessels any quantity of key stocks fished in the Levant Sea at any place other than ports designated by CPCs in accordance with paragraph 39.

43. Contracting parties and cooperating non-contracting parties shall transmit to the GFCM Secretariat, no later than 30 April 2023 and subsequently on 30 November each year, any changes to the list of the designated landing points at which landings of key stocks in the Levant Sea may take place.

44. Contracting parties and cooperating non-contracting parties shall engage to cooperate in the fight against IUU fishing activities, in particular through sharing information and gathering intelligence to fight against illegal activities.

45. Part VII of this recommendation is without prejudice to Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application.

PART VIII

Monitoring, control and surveillance programme

46. Vessels operating with otter trawls exploiting key stocks in the Levant Sea shall be allowed to carry out specific fishing activities only if these are indicated in a valid fishing authorization issued by the competent authorities.

47. Starting from 30 April 2023, the authorized vessels above 12 m length overall shall be equipped with a vessel monitoring system. A CPC may grant to its authorized vessels of less than 15 m length overall flying its flag a derogation from the requirement to be fitted with a vessel monitoring system if they operate exclusively within the territorial seas of the CPC or/and never spend more than 24 hours at sea from the time of departure to the return to port. CPCs shall report these derogations, as well as the other control means deployed to monitor concerned fishing vessels, to the GFCM Secretariat without delay.

48. Contracting parties and cooperating non-contracting parties shall monitor the consumption of the catch limits, as follows: beginning from the date when 80 percent of the quota has been exhausted, the CPC concerned shall communicate to GFCM monthly reports on catch. Such a report should be sent by the fifteenth day of the month for the previous month. When the catch limit has been reached, the CPC shall prohibit any further catches of the key stocks.

PART IX
National management plans

49. In order to ensure adequate conservation of deep-water red shrimp stocks, CPCs shall adopt fisheries management measures or national management plans in the Levant Sea.

50. Contracting parties and cooperating non-contracting parties shall notify the GFCM Secretariat, from 30 September 2023, of the management measures or management plans adopted at the national level. Where appropriate, should these measures be modified, the CPCs shall communicate such modifications by 30 April of the following year.

PART X
Final provisions

51. The multiannual management plan established by this recommendation remains in force for eight years from the date of its adoption.

52. Measures in this recommendation shall be without prejudice to stricter measures adopted by the CPCs.

53. On the basis of SAC scientific advice, the GFCM may revise this recommendation.

54. This recommendation repeals and replaces Recommendation GFCM/42/2018/3 on a multiannual management plan for sustainable trawl fisheries targeting giant red shrimp and blue and red shrimp in the Levant Sea (geographical subareas 24, 25, 26 and 27), as amended by Recommendation GFCM 44/2021/6.

Annex 1

Fishing opportunities for the Levant Sea (GSAs 24 to 27) deep-water red shrimp fisheries for the transitional period 2023–2025. In line with paragraphs 11 to 13, catch limits are reported for each CPC with an active fleet fishing for the key stocks.

Catch limit per species (in tonnes)	European Union 2023	European Union 2024	European Union 2025	Türkiye 2023	Türkiye 2024	Türkiye 2025	Egypt 2023	Egypt 2024	Egypt 2025
Giant red shrimp	60	58	56	261	253	246	439	426	413
Blue and red shrimp	16	15	15	123	119	116	135	131	127

Subject to more detailed provisions under the GFCM Data Collection Reference Framework (DCRF), the list referred to in paragraph 28 shall contain, for each vessel, the following information:

- Vessel name
- National registration number (code assigned by the CPCs)
- Vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001)
- Port of registration (full name of the port)
- Previous name (if any)
- Previous flag (if any)
- Previous details of deletion from other registers (if any)
- International radio call sign (if any)
- VMS (indicate yes/no)
- Vessel type, length overall (LOA) and gross tonnage (GT) and engine power expressed in kW
- Name and address of owner(s) and/or charter and/or operator(s)
- Main target species
- Main gear used for deep-water red shrimps and DCRF fleet segment allocation
- Time period authorized for fishing with bottom trawl or any other gear likely to fish deep-water red shrimps (if any of such authorization)

Recommendation GFCM/45/2022/8 on the implementation of a fishing effort regime for key demersal stocks in the Adriatic Sea (geographical subareas 17 and 18) in 2023, stemming from Recommendation GFCM/43/2019/5

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards as well as to the potential impacts on small-scale fisheries and local communities;

CONSIDERING the most recent scientific advice, endorsed by the Scientific Advisory Committee on Fisheries (SAC) at its twenty-third session, showing an enduring overexploitation of most Adriatic key demersal stocks;

RECALLING that in January 2022 the first effort allocation, based on SAC advice, was established with Recommendation GFCM/44/2021/1 on the establishment of a fishing effort regime for key demersal stocks in the Adriatic Sea (geographical subareas 17 and 18), which entailed the first effort allocation of a five-year fishing effort regime established for the period 2022–2026 towards the achievement of the objectives set in paragraph 9 of Recommendation GFCM/43/2019/5 on a multiannual management plan for sustainable demersal fisheries in the Adriatic Sea (geographical subareas 17 and 18);

RECALLING that such allocations shall be expressed in fishing days per contracting party and cooperating non-contracting party (CPC) and effort group for the fleet segments and types of fishing gear;

CONSIDERING that the GFCM shall ensure that, for each CPC, increases or decreases towards effort allocation are in line with the formula in Annex 4 of Recommendation GFCM/43/2019/5 and with total effort in the area in the reference year by the effort groups listed in Annex 3, as reported starting from 2021;

ADOPTS, in conformity with the provisions of Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

1. The annual reduction in fishing mortality needed to achieve the maximum sustainable yield (F_{msy}) target in 2026 for all the key stocks shall be a progressive linear reduction until the maximum sustainable yield. In line with this progression, the overall reduction in fishing effort for 2023 shall globally be of 5.2 percent for otter trawl (OTB) gear and 3 percent for beam trawl (TBB) gear.
2. The fishing effort allocations for 2023, established in line with paragraph 1 of this recommendation and paragraph 12 of Recommendation GFCM/43/2019/5 and based on the latest scientific advice, are listed by CPC and effort group code in the annex of this recommendation. Effort allocations for 2023 shall cover the entire period from 1 January to 31 December and the fishing effort

days exerted over the months preceding the legal entry into force of this recommendation shall be accounted for, by effort group, against the effort consumption of 2023.

3. A CPC may amend its fishing effort allocations by transferring fishing days across fishing effort groups of the same geographical area and/or fishing gear, provided that the CPC applies a national conversion factor which is supported by the best available scientific advice. In 2023, the SAC shall provide conversion factors. The exchanged fishing days and conversion factor shall be made available immediately, and no later than after 10 working days, to the GFCM Secretariat and other concerned CPCs.

4. Fishing day allocations by vessel length, as established in paragraph 2 and in annex of this recommendation, shall not prejudge future segmentation.

Annex 1

Transitional fishing effort allocation to concerned contracting parties and cooperating non-contracting parties, expressed in fishing days and effort group code, for the period of 1 January 2023 to 31 December 2023

					Fishing days 2023		
Fishing gear type	Geographical subarea	Stocks concerned	Vessel length overalls	Effort group code	European Union	Albania	Montenegro ²
Otter trawls (OTB)	17–18	Red mullet; European hake; deep-water rose shrimp; norway lobster	< 12 m	OTB 12 <	13 372	0	
			≥ 12 m and < 24 m	OTB 12–24	97 124	16 015	
			≥ 24 m	OTB 24	8 561	5 711	
Beam trawls (TBB)	17	Common sole	< 12 m	TBB 12 <	194	0	0
			≥ 12 m and < 24 m	TBB 12–24	3 635	0	0
			≥ 24 m	TBB > 24	3 614	0	0

² Montenegro shall not exceed the effort limit of 3 000 fishing days (with OTB gear) per year, in accordance with paragraph 13 of Recommendation GFCM/43/2019/5.

Recommendation GFCM/45/2022/9 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/43/2019/3

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

RECALLING that in giving effect to the objective of the GFCM Agreement, the GFCM shall foster, as appropriate, a subregional approach to fisheries management and aquaculture development in order to better address the specificities of the Mediterranean and the Black Sea;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks above levels that can produce maximum sustainable yield;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

CONSIDERING that the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO) provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures”;

RECALLING that the 2016 Bucharest Declaration towards enhanced cooperation on Black Sea fisheries and aquaculture and the 2018 Sofia Ministerial Declaration on Black Sea fisheries and aquaculture provide a concrete set of actions for Black Sea riparian countries to implement, particularly with regard to existing management measures that will be complemented and expanded in order to progressively achieve exploitation at maximum sustainable yield;

TAKING INTO ACCOUNT the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea endorsed with Resolution GFCM/44/2021/12, particularly its Target 1 “Fisheries and ecosystems: healthy seas and productive fisheries”;

RECALLING Recommendation GFCM/41/2017/4 on a multiannual management plan for turbot fisheries in the Black Sea (geographical subarea 29), as amended by Recommendation GFCM/43/2019/3;

CONSIDERING the socioeconomic importance of fisheries exploiting turbot and the need to ensure their sustainability;

ACKNOWLEDGING that due to force majeure in 2022, the tenth meeting of the Working Group on the Black Sea (WGBS) was postponed to 2023, meaning that up-to-date scientific advice is expected in 2023;

CONSIDERING that certain fisheries management measures of the turbot multiannual management plan need to be extended to 2023, notably the total allowable catch (TAC) and the quotas allocated to contracting parties and cooperating non-contracting parties (CPCs), with a view to avoiding interruptions of fishing activities;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/43/2019/3

1. Paragraph 1 a) shall be amended and replaced as follows:

For the years 2020–2023, an annual TAC shall be set to 857 tonnes for CPCs, with the following allocation:

CPCs	Annual quotas 2020–2023 (in tonnes)	Percentage
European Union	150	17.5
Türkiye	497	58.0
Ukraine	160	18.7
Georgia	20	2.3
Others	30	3.5
Total	857	100.0

2. Paragraph 4 shall be amended and replaced as follows:

In the context of the multiannual management plan for turbot fisheries, the WGBS shall provide, at its tenth meeting in 2023, scientific advice including the necessary elements for setting biological reference points and for the revision of TAC and quotas, to be adopted by the GFCM at its forty-sixth session in 2023.

Recommendation GFCM/45/2022/10 on a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29), amending Recommendation GFCM/42/2018/9

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of living marine resources in the area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

RECALLING that in giving effect to the objective of the GFCM Agreement, the GFCM shall foster, as appropriate, a subregional approach to fisheries management and aquaculture development in order to better address the specificities of the Mediterranean and the Black Sea;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks at levels that can produce maximum sustainable yield (MSY);

RECALLING that the 2016 Bucharest Declaration towards enhanced cooperation on Black Sea fisheries and aquaculture, in particular the technical outputs of the expert meetings (Panel 1) in its annex, recommends cooperation with the GFCM towards the promotion of an ecosystem approach to fisheries management, which includes the collection of information on fisheries-related issues, such as relevant socioeconomic data, discards, incidental catch of vulnerable species, invasive species and other aspects of marine ecosystems;

RECALLING that the 2018 Sofia Ministerial Declaration on Black Sea fisheries and aquaculture calls upon Black Sea riparian countries to enhance multilateral cooperation and implement actions to improve the sustainability of resources, particularly with regard to data collection, scientific evaluation and the implementation of an ecosystem-based fisheries management framework in the Black Sea;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

CONSIDERING that the measures formulated by the GFCM shall be based on the best scientific advice available and on the work of the BlackSea4Fish project in supporting the advice delivered by the Working Group on the Black Sea (WGBS), taking into account relevant environmental, economic and social factors;

TAKING INTO ACCOUNT the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea endorsed with Resolution GFCM/44/2021/12, and particularly its Target 1 “Fisheries and ecosystems: healthy seas and productive fisheries”;

CONSIDERING the socioeconomic importance of rapa whelk fisheries in the Black Sea and the need to ensure their long-term economic sustainability;

RECALLING that Recommendation GFCM/42/2018/9 established a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29)

ACKNOWLEDGING that due to force majeure in 2022, the tenth meeting of the WGBS was postponed to 2023, meaning that up-to-date scientific advice based on the outcomes of the regional research programme is expected in 2023;

CONSIDERING that the regional research programme needs to be extended to 2023, with a view to improving scientific, technical and socioeconomic knowledge of these fisheries and supporting the GFCM in proposing and adopting new appropriate management and control measures, including monitoring of fishing activities and catches;

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/42/2018/9

Paragraph 9 of Recommendation GFCM/42/2018/9 shall be amended and replaced as follows:

The WGBS, at its annual meeting in 2023, shall assess the outcome of the regional research programme established by this recommendation, taking into consideration the national efforts made by CPCs to manage rapa whelk fisheries. The WGBS shall report back to the GFCM, at its forty-sixth session in 2023, and if deemed necessary, present proposals for the adaptation of the measures set by this recommendation and for complementary management and control measures.

Recommendation GFCM/45/2022/11 on the establishment of a set of minimum standards for fisheries restricted areas in the GFCM area of application

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

NOTING the United Nations Sustainable Development Goal (SDG) 14.5, which specifically calls for conserving at least 10 percent of coastal and marine areas, consistent with national and international law;

HAVING REGARD to Article 8 b) ii) of the GFCM Agreement aiming to minimize the impacts of fishing activities on marine living resources and their ecosystems;

HAVING REGARD to Article 8 b) iv) of the GFCM Agreement aiming “to establish fisheries restricted areas for the protection of vulnerable marine ecosystems, including, but not limited to, nursery and spawning areas [...]”;

RECALLING the 2017 Malta MedFish4Ever Ministerial Declaration and, in particular, its paragraph 38 on the development of “fisheries restricted and marine protected areas ensuring an effective protection of at least 10 percent of the Mediterranean Sea by 2020, in line with the United Nations Sustainable Development Goal 14.5 and Aichi Biodiversity Target 11”;

CONSIDERING that the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO) provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking into account the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

EMPHASIZING the need to improve the collection of scientific data regarding sensitive habitats, essential fish habitats and all sources of mortality for key species, including but not limited to data from fisheries within the GFCM area of application;

RECALLING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea fisheries, in particular its Output 1.3 “Efficient area-based conservation measures, technical and nature-based solutions strengthened to conserve biodiversity and enhance the productivity of marine living resources” that identifies “new fisheries restricted areas and, once established, enhances their efficiency and monitoring in order to manage the significant adverse impacts of fisheries on vulnerable species, ecosystems and essential fish habitats”;

CONSIDERING the objectives under Resolution GFCM/41/2017/5 on a network of essential fish habitats in the GFCM area of application, Resolution GFCM/43/2019/1 on the mapping of measures applicable to fisheries restricted areas in the GFCM area of application and Resolution GFCM/43/2019/3 on the implementation of a vessel monitoring system and an electronic logbook in the GFCM area of application;

RECALLING that the designation and evolution of each fisheries restricted area (FRA) must be science-based and prepared with all stakeholders involved, including fishers, scientists, local administrations and environmental non-governmental organizations;

TAKING INTO ACCOUNT the advice of the Scientific Advisory Committee on Fisheries (SAC) and the Compliance Committee (CoC) expressed in 2019, 2021 and 2022 on the establishment of minimum standards for conservation, monitoring and control in FRAs;

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

PART I

General objective, scope and definitions

General objective

1. This recommendation establishes minimum standards for FRAs designated by means of GFCM decisions, in order to increase the coherence of the network of FRAs, harmonize the management measures applied across regional sub-basins, better level the playing field among fishers and help to improve the conservation status of stocks and ecosystems.

Scope

2. This recommendation applies to all FRAs established by GFCM decisions. Fisheries restricted areas established after the entry into force of this recommendation shall comply with the provisions under this recommendation. Fisheries restricted areas established before the entry into force of this recommendation may be evaluated by the SAC and, if deemed necessary, revised according to the provisions of this recommendation.

Definitions

3. For the purpose of this recommendation, the following definitions shall apply:

- a) “Fisheries restricted area” or “FRA” means a geographically defined area in which some specific fishing activities are temporarily banned or restricted in order to improve the conservation and sustainable use of marine living resources in the GFCM area of application;
- b) “Essential fish habitat” means a habitat identified as essential to the ecological and biological requirements of critical life history stages of exploited fish species and that may require special protection to improve the status of the stocks and long-term sustainability;
- c) “Fishing authorization” means entitlement other than a fishing licence that is issued by contracting parties and cooperating non-contracting parties (CPCs) to allow a fishing vessel to engage in fishing activities with specific fishing gear, during a specified period and in a given area or for a given fishery under specific conditions;
- d) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities described in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

- e) "Fishing day" means any continuous period of 24 hours, or part thereof, during which a vessel is searching for fish, shooting, setting, towing or hauling a fishing gear, taking catch on board, transshipping, retaining on board, processing on board, transferring or landing fish and fishery products;
- f) "Recreational fishing" or "recreational fisheries" means a non-commercial fishing activity exploiting marine living resources for recreation, tourism or sports.

PART II

Management measures

4. For the purpose of managing and protecting FRAs from the impacts of any activity jeopardizing the conservation of the features characterizing the particular habitats protected by FRAs, fishing activities in FRAs shall be monitored by CPCs in the waters under their jurisdiction and/or sovereignty by annually providing to the GFCM a list of authorized fishing vessels, along with associated effort and capacity and any further parameters listed as relevant by the SAC.

5. Based on SAC evaluation, the establishment of a new FRA should generally comprise two types of zones with specific management measures discussed with stakeholders:

Zone A – permanent closure

6. Any professional fishing activity concerned by the specific objectives the FRA shall be prohibited.

7. Any recreational fishing activity shall be prohibited.

8. Fishing vessels transiting the zone shall have an operational transponder on board for vessel monitoring systems (VMS) and/or automated identification systems with increased data transmission frequency, and all fishing gear shall be lashed and stowed during the entire duration of the transit. Professional fishing vessels, in accordance with the GFCM recommendation, shall follow a direct course at a constant speed of no less than 6 knots, except in the case of force majeure or adverse conditions. In such cases, the master shall immediately inform the fisheries monitoring centre of the vessel's flag state so that it can report the force majeure to the competent authorities of the CPC.

Zone B – temporary closure

9. Fishing activities shall be prohibited for at least two months each year. The two-month period shall be evaluated by SAC.

10. Contracting parties and cooperating non-contracting parties shall establish a register of the fishing vessels authorized to fish in this zone.

PART III

Data collection, monitoring and research

11. Contracting parties and cooperating non-contracting parties shall ensure that:

- a) A scientific monitoring plan for each FRA is developed by the CPCs, following the GFCM protocol adopted at the twenty-third session of the SAC, which includes a FRA toolkit and integrated guidelines for the development of scientific monitoring plans. The monitoring plan should be validated by the SAC to provide an outline for the collection of information required to assess the effectiveness of the FRA towards the rebuilding of stocks and the protection of

habitats and vulnerable marine ecosystems and towards enhancing the densities of organisms in term of biomass and abundance within the FRA. The results of the FRA monitoring plan should be regularly reported and discussed within the relevant subsidiary bodies of the SAC. The monitoring plan and its efficiency should be assessed regularly by the SAC.

- b) Information on all vessels authorized to fish in zone B of the FRA is recorded by the CPCs (as listed in the annex) and made publicly available on the GFCM website.
- c) Information on fishing activities, catch data of key species, incidental catches, release and discarding of the sensitive species listed in either Annex II or Annex III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention), is recorded by the vessel owner in the electronic logbook or in an equivalent document, in line with international standards and the data reporting requirements of relevant GFCM recommendations.
- d) Such information is reported to the national authorities for notification to the GFCM Secretariat within their annual national reporting to the SAC, in line with the manual of the GFCM Data Collection Reference Framework.
- e) Any other additional measure to level the playing field between all vessels, such as or example 5 percent coverage of onboard observers or remote electronic monitoring, is taken to improve data collection in view of the scientific monitoring of key species.

12. As appropriate, the GFCM shall engage in capacity-building efforts and other research cooperative activities to improve knowledge on sensitive species, vulnerable marine ecosystems and essential fish habitats and to support the effective implementation of this recommendation, including entering into cooperative arrangements with other relevant international bodies.

PART IV Control and reporting measures

13. Contracting parties and cooperating non-contracting parties shall ensure that all measures are undertaken towards full compliance with monitoring, control and surveillance as the most fundamental aspects to ensuring the effectiveness of the FRA with respect to its primary conservation objectives.

14. Contracting parties and cooperating non-contracting parties shall communicate to the GFCM Secretariat the list of authorized vessels for the zone B of each FRA concerned no later than 30 April of each year, as well as the list of authorized vessels for the forthcoming year. For each vessel, the list shall contain the information detailed in the annex of this recommendation.

15. The GFCM Secretariat shall maintain and update the list of fishing vessels authorized to fish for key species and publish it on the GFCM website in a manner that is consistent with GFCM data confidentiality policy and procedures.

16. Contracting parties and cooperating non-contracting parties shall send to the GFCM Secretariat, by 31 May of each year, a report on management measures taken in FRAs by CPCs. To facilitate a common approach across the GFCM area of application, this report shall be prepared in accordance with common guidelines developed by the GFCM Secretariat. The report shall be published on the GFCM website within two months after its reception, ensuring that personal data is protected in accordance with GFCM confidentiality policy and procedures.

17. The report shall contain the conservation, control and management measures, the list of authorized vessels and related information on authorizations in the FRA, as well as the results of the inspection schemes, including, at a minimum, the number of infractions detected and committed outside the areas of sovereignty of the CPC, the type of infraction and the sanctions applied. The report shall seek to identify activities (e.g. fishing, transiting) by FRA.

18. For the vessels and vessel owners with identified infringements, the relevant CPCs shall prepare and include in their reports an action plan to reinforce the monitoring of the vessels concerned by this FRA that fly their flags.

19. If necessary, a dedicated Working Group on Fisheries Restricted Areas shall be established to assess the CPCs' reports and their action plans. The working group shall prepare a report for the SAC and the CoC that will evaluate and advise the GFCM on the management and enforcement of measures taken by the CPCs.

20. In accordance with GFCM recommendations, fishing vessels authorized to fish in zone B shall be equipped with remote electronic monitoring using increased data transmission frequency as well as an electronic logbook in correct working order or an equivalent document, and fishing gear on board or in use shall be duly identified, numbered and marked before the start of any fishing operation or navigation within the FRA.

21. To the extent possible, the frequency of data transmissions of vessel monitoring systems (VMS or automated identification systems) shall be of at least once every 30 minutes when a fishing vessel enters any zone of a FRA.

22. Each year, the CoC shall evaluate the implementation of the present recommendation and propose any remedial measures to improve compliance. Fishing in prohibited areas and periods shall be considered as a serious infringement (IUU fishing). The flag state shall ensure that the vessel that commits this serious infringement shall immediately cease its fishing activities and return to port for investigation.

PART V **Regionalization**

23. As of 2023, the GFCM shall adopt specific recommendations based on SAC advice in order to implement the principles of this recommendation in each of the following subregions:

- a) western Mediterranean Sea;
- b) central Mediterranean Sea;
- c) Adriatic Sea;
- d) eastern Mediterranean Sea; and
- e) Black Sea.

PART VI
Final provisions

24. Contracting parties and cooperating non-contracting parties shall call the attention of the relevant national and international authorities in order to protect each FRA and its two zones, A and B, from the impact of any activity that may jeopardize the conservation of the characteristic features of these particular habitats.

25. This recommendation shall be without prejudice to the adoption of stricter measures by CPCs for the vessels flying their flags.

26. The SAC and the CoC shall review the implementation of this recommendation on a yearly basis in order to issue recommendations where appropriate. Advice from the SAC shall take into account the specificities of commercial and recreational fisheries in each subregion listed in paragraph 23. Based on SAC advice, the minimum standards of management measures for FRAs shall be reviewed in 2031.

The list referred to in Part III shall contain, for each vessel and each FRA, the following information:

- name of vessel (in Latin characters);
- national registration number: the code representing the official vessel identifier as reported in the national fleet register (alphanumeric string);
- vessel registration number (country ISO 3-alpha code + 9 digits, e.g. xxx000000001);
- International Maritime Organization number or external marking number;
- registration authority: name of the authority that issued the registration of the vessel;
- name of the FRA;
- previous name (if any);
- previous flag (if any);
- previous details of deletion from other registers (if any);
- international radio call sign (if any);
- type of vessel, length overall (LOA) and gross tonnage (GT);
- main gear used to fish in zone B of the FRA;
- species targeted;
- seasonal period authorized for fishing in the FRA: period authorized for fishing in the FRA (from DD/MM/YYYY to DD/MM/YYYY and gear concerned);
- number of fishing days that can be exerted by each vessel; and
- number of fishing days operated by the vessel in zone B of the FRA during the year.

Recommendation GFCM/45/2022/12 on the establishment of a set of minimum rules for sustainable recreational fisheries in the Mediterranean Sea

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of living marine resources in the GFCM area of application;

FURTHER CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 (Fish Stocks Agreement);

FURTHER CONSIDERING that the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO) provides that states “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

NOTING the recommendations stemming from the FAO Technical Guidelines for Responsible Recreational Fisheries, in particular the following statement: “Management organizations should provide the mechanisms and the means for monitoring compliance and for enforcing regulations, but, regardless of the governance system, recreational fishers should share the responsibility for compliance by informing themselves and their fellows, and by self-policing”;

FURTHER NOTING the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing;

RECALLING the United Nations Sustainable Development Goals (SDGs), in particular SDG 14 “Life below water”;

NOTING the objectives of the GFCM 2030 Strategy towards the sustainability of Mediterranean and Black Sea fisheries;

RECALLING that the 2017 Malta Ministerial MedFish4Ever Declaration requires the establishment of baseline rules to ensure an effective management of recreational fisheries and to ensure “adequate data collection and exchange on all types of fleets including small-scale and recreational fisheries to reinforce scientific knowledge on fish stocks and ecosystems”;

NOTING that the 2018 Malta Ministerial Declaration on a Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea recognizes the interactions and synergies between recreational fisheries, small-scale fisheries and other marine economies, encourages their good cooperation, and calls for strengthening knowledge on their interactions and improving the control and surveillance of all fishing activities to combat illegal, unreported and unregulated (IUU) fishing;

CONSIDERING that the GFCM shall adopt management measures based on an ecosystem approach to fisheries to guarantee the maintenance of stocks above levels that can produce maximum sustainable yield (MSY);

RECOGNIZING the high socioeconomic value of recreational fisheries in the GFCM area of application, as well as their impacts on the stocks they exploit;

CONSIDERING that all measures formulated by the GFCM shall be based on the best available scientific advice and take into account relevant environmental, economic and social factors;

NOTING that the Scientific Advisory Committee on Fisheries (SAC), at its twenty-third session (Rome, June 2022), stressed the need to continue monitoring recreational fishing and to identify solutions to mitigate the pressures of this activity;

FURTHER NOTING that the SAC endorsed a revised list of species and expressed support for a dedicated research programme on recreational fisheries;

ADOPTS in conformity with articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

PART I

General objective, scope and definitions

General objective

1. This recommendation establishes minimum rules to ensure an effective management, control and monitoring of recreational fishing activities in the Mediterranean Sea (geographical subareas [GSAs] 1–27).

Scope

2. This recommendation applies to all recreational fishing activities listed in this recommendation.

Definitions

3. For the purpose of this recommendation, the following definitions shall apply:

- a) “Recreational fishing activities” or “recreational fishing” or “recreational fisheries” means a non-commercial fishing activity exploiting marine living resources for recreation, tourism or sports;
- b) “Angling” means fishing with rod and lines, pole or hand-held lines;
- c) “Fishing licence” means an official document conferring on its holder the right, as determined by national legislation, to fish for one or more aquatic species, using certain fishing gear, during a specified season or all year, eventually with catch limitations and other obligations (e.g. catch reporting);
- d) “Live weight” means the weight of a catch of marine biological resources measured immediately upon catch;

- e) “Illegal, unreported and unregulated fishing” or “IUU fishing” means the activities set out in paragraph 3 of the 2001 FAO International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing and following the provisions of Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application.

PART II
Specific objectives

4. This recommendation shall contribute to the objectives mentioned in Article 2 and the principles listed in Article 5 of the GFCM Agreement.
5. In particular, the recommendation shall aim to:
- a) contribute to managing the impact of recreational fisheries on marine living resources towards their sustainable exploitation, in particular through applying conservation, control and monitoring measures;
 - b) improve the scientific, technical and socioeconomic knowledge of recreational fisheries;
 - c) encourage the participation of recreational fishers in the governance of their activity; and
 - d) deter IUU fishing activities.

PART III
Conservation measures

Prohibitions

6. It shall be prohibited to:
- a) engage in recreational fishing without a valid fishing licence or registration, in accordance with paragraph 10 and from its date of application;
 - b) sell or trade catches from recreational fishing activities;
 - c) retain any specimen pertaining to the species listed in Annex 1;
 - d) retain any specimen smaller than the minimum conservation reference sizes adopted by the GFCM;
 - e) fish in the areas listed in Annex 3;
 - f) fish underwater with a self-contained breathing apparatus;
 - g) fish underwater from sunset until dawn; and
 - h) use simultaneously hand-held spears or spear guns and a self-contained underwater breathing apparatus (aqualung).

Practices and fishing gear allowed in recreational fisheries

7. The following practices and fishing gear shall be allowed:

- a) rods, hand lines and trolling lines, utilized without an electromechanical aid or with an electromechanical aid that does not exceed a power limit of 800 W;
- b) hand-held spears or spear guns;
- c) fishing underwater to catch fish or collect crustaceans and molluscs;
- d) fishing by foot to collect crustaceans and molluscs;
- e) traps and pots, with a maximum of three traps and three pots per permit;
- f) longlines, with a maximum number of hooks to be established in accordance with paragraph 32;
- g) cast nets (or throw nets);
- h) corks and line; and
- i) using artificial light when fishing for cephalopods with rods, hand lines or hand-held spears.

8. Contracting parties and cooperating non-contracting parties (CPCs), on the basis of stock assessment and impact assessment, may limit the number of fishing gear and their accessories (e.g. number of longlines and hooks for each longline, number of traps and pots, lures) authorized per fisher and may define further specific regulation for passive gear.

9. Contracting parties and cooperating non-contracting parties, on the basis of the most recent scientific advice, may adopt additional measures to regulate recreational fisheries, such as landing limits and spatial and temporal closures (e.g. on mapped spawning areas, spawning periods, spawning and juvenile aggregations).

PART IV

Control and monitoring measures

Licences

10. By 1 January 2025, CPCs shall put in place and maintain either a mandatory licensing scheme or a registry scheme covering all recreational fishers. This provision applies to recreational fishers on foot, only after a proper assessment has been completed by the GFCM.

11. Contracting parties and cooperating non-contracting parties may, where relevant, further simplify the application procedure for the licences and registrations referred to in paragraph 10, including for tourists or time-limited licences.

12. Contracting parties and cooperating non-contracting parties may limit the number of licences issued.

13. Contracting parties and cooperating non-contracting parties may launch information campaigns and maintain up-to-date websites to inform the public and recreational fishers on the measures regulating recreational fisheries under this recommendation, as well as national legislation, by involving fishing federations, associations and sectorial shops.

14. Contracting parties and cooperating non-contracting parties may provide the information referred to in paragraph 13 to recreational fishers when granting them a fishing licence or registration.

Catch declaration and reporting

15. Contracting parties and cooperating non-contracting parties may establish a pilot project on catch declaration for recreational fisheries when catch declaration is applicable and on a voluntary basis. Where possible, CPCs may opt for ergonomic digital app-based catch declaration tools. Contracting parties and cooperating non-contracting parties shall ensure that recreational fishers participating in this pilot project declare the following elements, at least for the species listed in Annex 1 and Annex 4:

- a) fishing licence or registration number;
- b) species and estimated live weight per species and fishing trip; and
- c) fishing zone.

Control and enforcement

16. For recreational fishing activity conducted from a vessel, CPCs shall establish and implement a system to control and monitor recreational fishing activities, complementing existing national control plans. Such a system shall be based on risk analysis, taking into account the frequency of recreational fishing activities and the threats they pose to marine living resources, in particular regarding the prohibitions listed in paragraph 6.

17. Contracting parties and cooperating non-contracting parties shall establish and implement an effective sanctioning system against any infringement to the rules set out in this recommendation. The sanctions and penalties applied shall be effective, proportionate and dissuasive and shall take into account the frequency of recreational fishing activities and the threats they pose to marine living resources, in particular regarding the prohibitions listed in paragraph 6.

18. Contracting parties and cooperating non-contracting parties may implement measures on fin-clipping for certain species in order to prevent their illegal sale to fishmongers and restaurants.

PART V Scientific information

Data collection

19. Contracting parties and cooperating non-contracting parties shall sample and survey the recreational fishing activities taking place on their territory and may use for harmonized sampling and surveying the relevant *FAO Handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea*.

Pilot projects and research programme

20. In 2023, the Working Group on Recreational Fisheries shall prepare a concept note for a research programme on recreational fishing activities. The SAC shall review the concept note at its twenty-fourth session in 2023 and provide advice to the GFCM. The forty-sixth session of the GFCM in 2023 shall review the concept note for adoption.

21. The GFCM Secretariat shall launch the research programme in 2024.

Data reporting

22. By 31 January 2024 and then each following year, CPCs shall report to the GFCM Secretariat the elements listed below:

- a) the list of species whose capture is prohibited for recreational fishing under national and/or local legislation;
- b) the fishing methods prohibited for recreational fishing under national and/or local legislation;
- c) the areas specifically prohibited for recreational fishing under national and/or local legislation;
- d) the list of species whose capture is regulated for recreational fishing under national and/or local legislation; and
- e) any other measures regulating recreational fishing activities under national and/or local legislation.

Scientific assessment

23. By 2024, the SAC shall:

- a) provide an overview of recreational fisheries in the GFCM area of application;
- b) provide a socioeconomic assessment of recreational fisheries in the CPCs;
- c) endeavour to assess the status of species caught by recreational fishing activities, including through its regular stocks assessment cycle; and
- d) propose, if necessary, a priority list of species that may require further regulation.

24. Starting in 2024 and then each following year, the SAC shall review the list of species set out in Annex 1 and Annex 4 and formulate advice, on the revision of these lists in view of the GFCM session,.

25. Starting in 2024 and then each following year, the session of the GFCM shall consider the SAC advice referred to in paragraph 24 and amend the lists under Annex 1 and Annex 4 accordingly.

PART VI

Participation to governance and promotion of best practices

26. Contracting parties and cooperating non-contracting parties shall endeavour to involve federations and associations in the management of recreational fishing activities.

27. Contracting parties and cooperating non-contracting parties shall actively encourage federations, associations and individual recreational fishers to:

- a) develop websites to inform their members and the public about compliance with local/national regulations, ecological issues and the impacts of their activity on resources and coastal and marine environment;

- b) participate in sustainability efforts through regular training and dissemination of information; and
- c) behave in an environmentally friendly way, including by:
 - encouraging the recycling of fishing material;
 - discouraging anchoring over sensitive habitats;
 - encouraging the targeting and the destruction of non-indigenous species;
 - promoting alternatives to materials that are potentially hazardous to the environment (lead sinkers, artificial fishing lines, bait containers and lures, barbed hooks, etc.);
 - recovering ghost gear and disposing of it in accordance with national legislation;
 - killing retained fish speedily and responsibly to avoid unnecessary suffering; and
 - promoting best practices for catch and release (“no kill”) fishing.

Catch and release

28. Contracting parties and cooperating non-contracting parties may actively encourage federations, associations and individual recreational fishers to apply and promote catch and release practices.

29. Contracting parties and cooperating non-contracting parties may mandate catch and release practices, in particular for relevant species or areas or during certain periods of the year or day.

PART VII

Implementation plan for developing contracting parties and cooperating non-contracting parties

30. By 31 March 2024 at the latest, developing CPCs may submit an implementation plan to the GFCM. Such a plan shall propose a timeline and supporting evidence justifying the progressive implementation of the applicable provisions set out in this recommendation.

31. In 2024, the SAC shall review such implementation plans and formulate appropriate advice. In 2024, pending possible amendments in line with SAC advice, the forty-sixth session of the GFCM shall review such implementation plans.

PART VIII

Regionalization

32. As of 2023, the GFCM shall adopt specific recommendations based on SAC advice in order to implement the principles of the present recommendation in each of the following subregions:

- a) western Mediterranean;
- b) central Mediterranean;
- c) Adriatic Sea; and
- d) eastern Mediterranean.

33. The SAC advice referred to in paragraph 24 shall take into account the specificities of the recreational fisheries in each subregion listed in paragraph 32.

PART IX
Final provisions

34. The minimum conservation reference sizes established by the CPCs for commercial fishing shall also apply to recreational fishing.

35. Where the SAC advises that certain recreational fishing activities have a substantial impact on stocks or that certain stocks targeted by recreational fisheries have collapsed or are at serious risk of collapsing, the GFCM may adopt appropriate measures.

36. The GFCM shall review this recommendation at its forty-ninth session at the latest or as deemed necessary by SAC advice.

37. The provisions contained in this recommendation shall apply without prejudice to stricter rules enforced by CPCs

Prohibited species
Marine mammals (all species)
Marine birds (all species)
Marine reptiles (all species)
Species listed in Appendices I and II under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
Species listed in Appendices I and II under the Convention on the Conservation of Migratory Species of Wild Animals (CMS)
Species listed in Annex II under the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention),
Marine species protected under CPC legislation
Marine species specifically prohibited for capture by recreational fishing under CPC legislation

Prohibited methods
Toxic, stupefying or corrosive substances
Explosives
Electric current
Methods prohibited under CPC legislation

Prohibited areas
Areas protected by means of and in accordance with GFCM decisions, in particular the sensitive habitats and fisheries restricted areas established to protect essential fish habitats and vulnerable marine ecosystems, in line with the recommendations in force
Areas specifically prohibited to recreational fishing under CPC legislation

List of priority species

GFCM subregions		Western Mediterranea n	Central Mediterranea n	Adriatic Sea	Eastern Mediterranea n
Geographical subareas		1 to 11	12 to 16, 19 to 21	17 and 18	22 to 27
Scientific name	FAO 3- alpha code				
<i>Boops boops</i>	BOG	X	X	X	X
<i>Coryphaena hippurus</i>	DOL		X	X	X
<i>Dentex Dentex</i>	DEC	X	X		
<i>Dicentrarchus labrax</i>	BSS	X	X	X	
<i>Diplodus annularis</i>	ANN		X		
<i>Diplodus sargus</i>	SWA		X		X
<i>Epinephelus marginatus</i>	GPD	X			
<i>Epinephelus spp.</i>	GPX		X		X
<i>Lagocephalus sceleratus</i>	LFZ	X	X	X	X
<i>Loligo spp.</i>	SQC			X	
<i>Mullus barbatus</i>	MUT	X	X	X	X
<i>Mullus surmuletus</i>	MUR	X	X		X
<i>Octopus vulgaris</i>	OCC	X	X	X	X
<i>Pagellus bogaraveo</i>	SBR	X			
<i>Pagellus erythrinus</i>	PAC	X	X	X	X
<i>Pterois miles</i>	UHQ	X	X	X	X
<i>Scomber japonicas</i>	MAS	X			X
<i>Scomber scombrus</i>	MAC	X	X		
<i>Sepia officinalis</i>	CTC	X	X	X	
<i>Seriola dumerili</i>	AMB	X			
<i>Siganus luridus</i>	IGU				X
<i>Siganus rivulatus</i>	SRI				X
<i>Sparus aurata</i>	SBG	X		X	
<i>Sphyraena sphyraena</i>	YRS		X		
<i>Todarodes sagittatus</i>	SQE			X	

<i>Todaropsis eblanae</i>	TDQ			X	
<i>Trachurus mediterraneus</i>	GMM	X			
<i>Trachurus trachurus</i>	HOM	X	X		
Sharks and rays ¹		X	X	X	X
Seabirds, sea turtles, marine mammals ²		X	X	X	X

¹ Any species of sharks and rays caught during recreational fishing activities.

² Vulnerable species included in Annex II (endangered or threatened species) and Annex III (species whose exploitation is regulated) of the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).

Recommendation GFCM/45/2022/13 on the establishment of a GFCM logbook, amending Recommendation GFCM/35/2011/1

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING Rule XVII paragraph 1 b) of the GFCM Rules of Procedure, according to which contracting parties and relevant non-contracting parties have the obligation to provide information on catches and other relevant data to enable the Scientific Advisory Committee on Fisheries (SAC) to carry out its duties;

RECALLING Recommendation GFCM/45/2022/17 on information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application, amending Recommendation GFCM/33/2009/6 and repealing Recommendation GFCM/44/2021/18;

RECALLING Recommendation GFCM/35/2011/1 concerning the establishment of a GFCM logbook, amending Recommendation GFCM/34/2010/1;

NOTING the conclusions of the fifteen session of the Compliance Committee and the Working Group on Illegal, Unreported and Unregulated Fishing, including a session on the clarification process (Cyprus, May 2022);

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/35/2011/1

Paragraph 4 of Recommendation GFCM/35/2011/1 shall be added as follows:

“4. Contracting parties and cooperating non-contracting parties shall ensure that, without prejudice to the minimum specifications and information set out in Annex 1, the masters of fishing vessels over 15 m in length overall authorized to fish in the GFCM area of application and registered in the GFCM record of vessels record the following information separately in their logbook for each reported catch or incidental catch (FAO 3-alpha codes shall be used):

- any event of incidental catch and release of seabirds;
- any event of incidental catch and release of sea turtles;
- any event of incidental catch and release of monk seals;
- any event of incidental catch and release of cetaceans; and
- any event of incidental catch and, where required, release of sharks and rays pertaining to the species listed in Annex II or Annex III of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) of the Convention for the

Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention).”

Recommendation GFCM/45/2022/14 on the regulation of transshipment in the GFCM area of application

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

TAKING ACCOUNT of the need to combat illegal, unregulated and unreported (IUU) fishing activities because they undermine the effectiveness of the conservation and management measures already adopted by the GFCM;

RECALLING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, particularly its Output 2.4 “Coordination to address illegal practices in the fishery sector bolstered”;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING that transshipments at sea escape any proper control by flag or coastal states and represent a common way for operators carrying out IUU fishing to dissimulate the illegal nature of their catches;

NOTING the conclusions of the fifteenth session of the Compliance Committee and the Working Group on illegal, unregulated and unreported fishing, including a session on the clarification process (Cyprus, May 2022);

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

PART I

General principles, scope and definitions

General principles

1. This Recommendation establishes the general principles and procedures regarding transshipment operations in the GFCM area of application.
2. Transshipments at sea shall be prohibited, except in cases of force majeure legally detected by a control authority within the GFCM area of application. They shall be allowed only in authorized ports and be subject to an authorization and to the conditions laid down in this recommendation.
3. Each contracting party and cooperating non-contracting party (CPC) shall, in its capacity as a port state, fully apply Recommendation GFCM/40/2016/1 on a regional scheme on port state measures to combat illegal, unreported and unregulated fishing activities in the GFCM area of application.

4. With reference to paragraph 3, CPCs shall monitor vessels that are not flying their own flags and are seeking access to their ports in order to verify that such vessels have not been engaged in fishing-related activities in contravention with any GFCM conservation measure.

5. Transshipment shall not take place if any of the vessels involved are included in the a list of vessels presumed to have carried out IUU fishing in the GFCM area of application, established in accordance with Recommendation GFCM/44/2021/19 on the establishment of a list of vessels presumed to have carried out illegal, unreported and unregulated fishing, repealing Recommendation GFCM/33/2009/8.

6. Transshipment shall be allowed only in designated ports and landing points or in places close to the shore designated by CPCs in accordance with the provisions of Recommendation GFCM/40/2016/1.

7. Contracting parties and cooperating non-contracting parties shall report to the GFCM Secretariat, by 30 April every year, the list of ports, landing points and places close to the shore where the transshipment operations referred to in paragraph 6 are allowed.

Scope

8. For the purpose of this recommendation, relocation, pair trawling activities and fishing operations involving joint action (joint fishing operations) by two or more fishing vessels from CPCs shall not be considered as transshipment.

9. This recommendation is without prejudice to additional requirements applicable to transshipment at sea or in port found in other GFCM recommendations.

10. The provisions of this recommendation shall not affect more detailed or stricter obligations on transshipment procedures adopted and implemented by CPCs.

Definitions

11. For the purpose of this recommendation, the following definitions shall apply:

- a) "Transshipment" means the transfer from the donor vessel to the receiving vessel of all or any fisheries products.
- b) "Receiving vessel" means any vessel that takes on board catches and/or fisheries products discharged by the donor vessel.
- c) "Donor vessel" means any fishing vessel that discharges its catches and/or fisheries products to another vessel, namely the receiving vessel.
- d) "Carrier vessel" means a vessel used for the transport of fisheries products– this vessel can transport frozen fisheries products (reefer).
- e) "Fisheries products" means products resulting from any fishing activity or products derived therefrom.
- f) "Authorized ports" means ports designated by CPCs according to Recommendation GFCM/40/2016/1, including offshore terminals and other installations for landing, transshipping, packaging, processing, refuelling or resupplying of fishing vessels, where

landings, transshipments, packaging and/or processing operations of fishery products are permitted.

PART II

Transshipment operations at port

12. A transshipment operation shall be allowed only when it is subject to an authorization by both the flag and coastal CPCs.

13. The authorization referred to in paragraph 12 shall be issued when the flag CPC has verified that the activities carried out by the vessels taking part in the transshipment are in line with GFCM management and conservation measures and that the concerned fishing vessels have not been engaged in IUU fishing activities.

14. If the transshipment operation is interrupted, permission may be required from the coastal CPC before the transshipment operation is resumed.

Donor vessel

15. The master of the donor fishing vessel shall notify the port state authorities of the identification of the receiving vessel, as well as the date, time and port where the transshipment will take place, at least 48 hours in advance of the transshipment operation.

16. The identification referred to in paragraph 15 shall contain, at least, the name of the vessel, International Maritime Organization (IMO) number, vessel registration number, external mark, port of registry and flag of the fishing vessel.

17. The authorization referred to in paragraph 12 must be kept on board and made available during an inspection or control procedure.

18. Contracting parties and cooperating non-contracting parties, in order to grant a prior authorization to a fishing vessel flying their flag before transshipping, shall require the master of the donor fishing vessel issuing the request to transmit the following information:

- a) species (FAO 3-alpha identifier) and product form;
- b) catches on board to be transshipped, in kg live-weight, kg processed weight and/or number of individuals when pertinent;
- c) geographic location of the catches (as recorded in the logbook);
- d) place and date where the transshipment is foreseen; and
- e) information regarding the receiving vessel, name, registration number, IMO number and flag.

Receiving vessel

19. The captain of the receiving vessel shall complete and transmit to the port CPC authorities information about the catches and fisheries products on board no later than 24 hours before starting the transshipment. Catches should be reported by indicating species and weight or number of individuals where relevant.

20. The master of the receiving vessel shall, 48 hours before landing, transmit a GFCM transshipment declaration to the competent authorities of the state where the landing is to take place.

PART III

GFCM transshipment declarations

21. Contracting parties and cooperating non-contracting parties shall require that the masters of fishing vessels over 15 m in length overall flying their flags that are involved in a transshipment operation complete a GFCM transshipment declaration in accordance with the annex, indicating specifically all quantities of each species transshipped or received above 50 kg of live-weight equivalent and/or the number of individuals, when relevant.

22. The GFCM transshipment declaration referred to in paragraph 21 shall contain at least:

- a) the external identification number and the name of both the donor and the receiving fishing vessels;
- b) the FAO alpha-3 code of each species and the relevant geographical area in which the catches were taken;
- c) the estimated quantities of each species in kg in product weight, broken down by type of product presentation, or, where appropriate, the number of individuals, including the quantities or individuals below the applicable minimum conservation reference size, as a separate entry;
- d) the port of destination of the receiving fishing vessel; and
- e) the designated port of transshipment.

23. Contracting parties and cooperating non-contracting parties shall require that the masters of both the donor and receiving fishing vessels submit a GFCM transshipment declaration, as soon as possible and no later than 48 hours after transshipment to the following authorities:

- a) their flag CPC; and
- b) if the transshipment has taken place in a port of another CPC, the competent authorities of the port CPC concerned.

24. The GFCM transshipment declarations must be signed by the master of the receiving vessel and the master of the donor vessel.

25. The master of both vessels shall each be responsible for the accuracy of the data recorded in their GFCM transshipment declaration.

26. A copy of the GFCM transshipment declaration shall be retained on board of each vessel until all catches and products have been landed.

PART IV

Monitoring and control measures

27. The permitted margin of tolerance in estimates recorded in GFCM transshipment declarations of the quantities in kg live-weight of fish transshipped or received shall be 10 percent for all species.

28. The port CPC and the landing CPC shall review the information received, including in cooperation with the flag CPC of the fishing vessel as necessary, to determine consistency between the reported catches, transshipments and landings of each vessel. This verification shall be carried out so that the vessel suffers the minimum interference and inconvenience and degradation of the fish is avoided.

29. All donor and receiver vessels authorized to conduct transshipment should be required to have on board and use an operational vessel monitoring system in line with the minimum standards referred to in Recommendation GFCM/33/2009/7 concerning minimum standards for the establishment of a vessel monitoring system in the GFCM area of application.

PART V Reporting

30. Each year, CPCs shall report to the GFCM Secretariat any relevant information about the implementation of this recommendation by 30 April (e.g. number of transshipments authorized, number of vessels involved, quantities of fishery products transshipped).

31. Each year, the GFCM Secretariat shall present a report on the implementation of this recommendation to the Compliance Committee, which shall, *inter alia*, review compliance with this recommendation.

PART VI Final provision

32. The provisions contained in this recommendation shall be applied without prejudice to stricter rules enforced by CPCs.

Information to be included in a GFCM transshipment declaration

Information	Donor vessel	Receiving vessel
1. Vessel name		
2. Flag state		
3. Vessel type (International Standard Statistical Classification of Fishing Vessels)		
4. IMO number, if eligible		
5. External ID, if available		
6. Registration ID, if different from external ID		
7. International radio call sign, if available		
8. Maritime mobile service identity (MMSI) number, if available		
9. Vessel owner/company information		
Name		
Address		
Contact information (email address and phone number)		
10. Vessel contact information		
Name of master		
Nationality		
Phone number		
Email address		
11. Transshipment authorization identifier, if any		
12. Transshipment authorization issuing body		
13. Transshipment authorization period of validity		
14. Time and date of the transshipment		
Start (hour/day/month/year)		
End (hour/day/month/year)		
15. Transshipment location port/position at sea (latitude/longitude)		

Information	Donor vessel	Receiving vessel
16. Quantities onboard prior to transshipment	Donor vessel	Receiving vessel
Catch area(s)		
Species (FAO/ASFIS codes)		
Product form (preservation and presentation type)		
Quantity (weight)		
17. Transshipped fish	Donor vessel	Receiving vessel
Catch area(s)		
Species (FAO/ASFIS codes)		
Product form (preservation and presentation type)		
Quantity (weight)		
18. Signature	Donor vessel	Receiving vessel
Master's signature		

Recommendation GFCM/45/2022/15 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16), amending Recommendation GFCM/41/2017/8 and repealing Recommendation GFCM/42/2018/6

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall foster, as appropriate, a subregional approach to fisheries management and aquaculture development in order to better address the specificities of the Mediterranean and the Black Sea;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

RECALLING Recommendation GFCM/41/2017/8 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily (geographical subareas 12 to 16);

NOTING the adoption of Recommendation GFCM/45/2022/4 on a multiannual management plan for the sustainable exploitation of demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/12 and GFCM/42/2018/5;

NOTING the adoption of Recommendation GFCM/45/2022/5 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Strait of Sicily (geographical subareas 12 to 16), repealing Recommendations GFCM/44/2021/7 and GFCM/43/2019/6;

CONSIDERING that it is appropriate to align the duration of the international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Strait of Sicily to the provisions of Recommendations GFCM/45/2022/4 and Recommendation GFCM/45/2022/5;

CONSIDERING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, in particular its Output 2.3 “Monitoring, control and surveillance centralized at the regional level” and its action plan that foresees agreeing upon common procedures for the exchange of inspectors and inspection reports, and promoting the conclusion of agreements among contracting parties and cooperating non-contracting parties (CPCs) for the deployment of joint surveillance and inspection schemes at the regional and subregional levels;

RECALLING that Resolution GFCM/44/2021/11 on the follow-up of the second GFCM performance review calls for establishing new and implementing current international joint inspection schemes to ensure adequate monitoring;

NOTING the recommendation from the fifteenth session of the Compliance Committee (CoC) and the Working Group on illegal, unreported and unregulated fishing , including a session on the clarification process (Cyprus, May 2022) to further the execution of joint inspection schemes in the context of subregional multiannual management plans;

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

Amendment of Recommendation GFCM/41/2017/8

1. Paragraph 1 of Recommendation GFCM/41/2017/8 shall be modified as follows:

“This recommendation establishes an international joint inspection and surveillance scheme (hereafter “the scheme”), the scope of which is limited to the provisions of Recommendation GFCM/45/2022/4 and Recommendation GFCM/45/2022/5, which cover inspection and surveillance activities outside the waters under national jurisdiction in the Strait of Sicily (GSAs 12 to 16).”

2. Paragraph 14 of Recommendation GFCM/41/2017/8 shall be modified as follows:

“Inspectors shall limit their enquiries to ascertaining the observance of Recommendation GFCM/45/2022/4 and Recommendation GFCM/45/2022/5 in relation to the flag state of the vessel concerned. In completing the inspection, inspectors may ask the master of the fishing vessel for any assistance they may need. Inspectors shall draw up a report of the inspection using the form contained in Annex 4.”

3. Paragraph 18 of Recommendation GFCM/41/2017/8 shall be modified as follows:

“For the purpose of these procedures, an infringement means the following violations observed under the provisions of Recommendation GFCM/45/2022/4 and Recommendation GFCM/45/2022/5:

- a) fishing without a valid license, permit or authorization issued by the flag CPC;
- b) failing to maintain sufficient records of catch and catch-related data in accordance with GFCM data reporting requirements, or significantly misreporting such catch and/or catch-related data;
- c) fishing in a closed area;
- d) fishing during a closed season;
- e) using prohibited fishing gear;
- f) falsifying or intentionally concealing the markings, identity or registration of a fishing vessel;
- g) concealing, tampering with or disposing of evidence relating to the investigation of a violation;
- h) committing multiple violations, which, taken together, constitute a serious disregard of applicable measures;

- i) obstructing, intimidating, interfering with or otherwise preventing authorized inspectors from performing duties; and
- j) interfering with the satellite monitoring system and/or operating without a vessel monitoring system (VMS). ”

4. Paragraph 24 of Recommendation GFCM/41/2017/8 shall be modified as follows:

“The authorities of CPCs shall consider and act on inspection reports (Annex 4), sighting information sheets, as provided in the annex of Recommendation GFCM/44/2021/21, and statements resulting from documentary inspections of foreign inspectors under these arrangements on a similar basis as the reports of national inspectors established in accordance with their national legislation.”

5. Paragraph 26 of Recommendation GFCM/41/2017/8 shall be modified as follows:

“This recommendation shall be implemented at least until the end of 2030.”

5. Annex 5 of Recommendation GFCM/41/2017/8 shall be deleted.

Recommendation GFCM/45/2022/16 on an international joint inspection and surveillance scheme outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21)

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that, in giving effect to the objective of the GFCM Agreement, the GFCM shall adopt recommendations on conservation and management measures aimed at ensuring the long-term sustainability of fishing activities, in order to preserve marine living resources and the economic and social viability of fisheries and that, in adopting such recommendations, the GFCM shall give particular attention to measures to prevent overfishing and minimize discards, as well as to the potential impacts on small-scale fisheries and local communities;

RECALLING that, in giving effect of the objective of the GFCM Agreement, the GFCM shall foster, as appropriate, a subregional approach to fisheries management and aquaculture development in order to better address the specificities of the Mediterranean and the Black Sea;

RECALLING Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

NOTING the recommendation from the fifteenth session of the Compliance Committee (CoC) and the Working Group on illegal, unreported and unregulated fishing, including a session on the clarification process (Cyprus, May 2022) to further the execution of joint inspection schemes in the context of subregional multiannual management plans;

NOTING Recommendation GFCM/45/2022/6 on a multiannual management plan for the sustainable exploitation of giant red shrimp and blue and red shrimp stocks in the Ionian Sea (geographical subareas 19 to 21), repealing Recommendations GFCM/44/2021/8 and GFCM/42/2018/4;

CONSIDERING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, in particular its Output 2.3 “Monitoring, control and surveillance centralized at the regional level” and its action plan that foresees agreeing upon common procedures for the exchange of inspectors and inspection reports, and promoting the conclusion of agreements among contracting parties and cooperating non-contracting parties (CPCs) for the deployment of joint surveillance and inspection schemes at the regional and subregional levels;

RECALLING that Resolution GFCM/44/2021/11 on the follow-up of the second GFCM performance review calls for establishing new and implementing current international joint inspection schemes to ensure adequate monitoring;

ADOPTS, in conformity with Articles 5 b), 8 b) and 13 of the GFCM Agreement, the following recommendation:

PART I
Scope and general principles

1. This recommendation establishes an international joint inspection and surveillance scheme (hereafter “the scheme”), the scope of which is limited to the provisions of Recommendation GFCM/45/2022/6, which cover inspection and surveillance activities outside the waters under national jurisdiction in the Ionian Sea (geographical subareas 19 to 21).
2. Each CPC decides to participate in inspections on a voluntary basis. Inspections shall be carried out by inspectors designated by the CPCs. Each CPC shall, no later than 1 December of each year, report to the GFCM Secretariat the list of the names of inspectors authorized to perform inspection and surveillance in the GFCM area of application. The full list of inspectors shall be published and maintained by the GFCM Secretariat on its secured and password-protected online portal.
3. Inspectors shall carry appropriate identity documentation issued by the authorities of the flag state, which shall follow the template provided in Annex 1.
4. The names of the vessels and aircrafts used for inspection and surveillance shall be reported by participating CPCs to the GFCM Secretariat by 15 December of the previous year or as soon as possible before the commencement of inspection activities. The GFCM Secretariat shall make available to all CPCs information related to designated inspection vessels and aircrafts, including by posting it on a password-protected online portal.
5. Vessels carrying out boarding and inspection duties in accordance with the scheme shall fly a special flag or pennant, as described in Annex 2, approved by the GFCM and issued by the GFCM Secretariat.
6. The GFCM Secretariat shall ensure that the information referred to above is automatically made available to all CPCs.
7. A CPC may, by mutual agreement with another CPC, deploy inspectors it has assigned to the scheme to an inspection platform of this other CPC. It shall notify the GFCM Secretariat in advance of such deployment.
8. Each CPC shall ensure that every inspection platform entitled to fly its flag operating in the GFCM area of application maintains secure contact, in a daily manner where possible, with every other inspection platform operating in the GFCM area of application, in order to exchange information necessary to coordinate their activities.
9. Each CPC with an inspection presence in the GFCM area of application shall seek to ensure that its inspectors treat vessels operating in the GFCM area of application on an equal footing by avoiding a disproportionate number of inspections of vessels entitled to fly the flag of any other CPC.
10. Each CPC with an inspection or surveillance presence in the GFCM area of application shall provide to each inspection platform, upon its entry into the GFCM area of application, a list of sightings, boardings and inspections it has conducted over the previous ten-day period, including dates, coordinates and any other relevant information.

PART II
Conduct of inspections

11. Each CPC with an inspection presence shall ensure that its inspectors:

- a) notify the fishing vessel, prior to boarding, of the name of the inspection vessel;
- b) display on the inspection vessel and boarding vessel the pennant described in Annex 2;
- c) ensure that, during boarding, the inspection vessel remains at a safe distance from fishing vessels;
- d) do not require the fishing vessel to stop or manoeuvre when towing, shooting or hauling fishing gear; and
- e) limit each inspection team to a maximum of three inspectors.

12. Upon boarding the vessel, inspectors shall produce the identity card as described in Annex 1 to the master of the fishing vessel. Inspections shall be conducted in one of the official languages of the GFCM and, where possible, in the language spoken by the master of the fishing vessel.

13. Inspectors shall conduct inspections in accordance with international regulations, procedures and practices relating to the safety of the vessel being inspected and its crew, minimize interference with fishing activities or stowage of products and, to the extent practicable, avoid actions that would adversely affect the quality of the catch on board.

14. Inspectors shall limit their enquiries to ascertaining the observance of Recommendation GFCM/45/2022/6 in relation to the flag state of the vessel concerned. In conducting the inspection, inspectors may ask the master of the fishing vessel for any assistance they may need. Inspectors shall draw up a report of the inspection using the form provided in Annex 4.

15. Inspectors shall sign the inspection report in the presence of the master of the vessel, who shall sign the report too and shall be entitled to add any observations to it which he or she may think suitable.

16. Copies of the report shall be given to the master of the vessel and to the government of the inspection party, which shall transmit copies to the appropriate authorities of the flag state of the inspected vessel and to the GFCM Secretariat.

17. The size of the inspection party and the duration of the inspection shall be determined by the commanding officer of the inspection vessel, taking into account relevant circumstances. In general, the inspection party should complete its tasks in the shortest possible time.

18. For the purpose of these procedures, an infringement means the following violations observed under the provisions of Recommendation GFCM/45/2022/6:

- a) fishing without a valid licence, permit or authorization issued by the flag CPC;
- b) failing to maintain sufficient records of catch and catch-related data in accordance with GFCM data reporting requirements, or significantly misreporting such catch and/or catch-related data;
- c) fishing in a closed area;
- d) fishing during a closed season;
- e) using prohibited fishing gear;

- f) falsifying or intentionally concealing the markings, identity or registration of a fishing vessel;
- g) concealing, tampering with or disposing of evidence relating to the investigation of a violation;
- h) committing multiple violations, which, taken together, constitute a serious disregard of applicable measures;
- i) obstructing, intimidating, interfering with or otherwise preventing authorized inspectors from performing duties; and
- j) interfering with the satellite monitoring system and/or operating without a vessel monitoring system (VMS).

19. In the case of any boarding and inspection of a fishing vessel during which the inspectors observe an activity or condition that would constitute a violation, as defined above, the authorities of the flag state of the inspection vessel shall immediately notify the flag state of the fishing vessel directly, as well as through the GFCM Secretariat. In such a situation, the inspector should also inform any inspection ship of the flag state of the fishing vessel known to be in the vicinity.

20. GFCM inspectors shall register the inspections conducted and infringements detected (if any) in the fishing vessel logbook.

21. The inspected flag state CPC shall ensure that, following the inspection referred to above, the fishing vessel concerned ceases all fishing activities. The flag state CPC shall require the fishing vessel to proceed within 72 hours to a port it has designated, where an investigation shall be initiated.

22. In the case where an inspection has detected an activity or condition that would constitute a violation, the actions and follow-up taken by the flag CPC shall be notified to its national authorities, as well as the GFCM Secretariat, to be reviewed by the CoC.

23. Resistance to inspectors or failure to comply with their directions shall be treated by the flag state of the inspected vessel in a manner similar to resistance to a national inspector or failure to comply with his or her directions.

24. The authorities of CPCs shall consider and act on inspection reports as provided in Annex 4, sighting information sheets, as provided in the annex of Recommendation GFCM/44/2021/21, and statements resulting from documentary inspections of foreign inspectors under these arrangements on a similar basis as reports of national inspectors in accordance with their national legislation.

PART III

Obligations of the vessel master during inspections

25. The master of a fishing vessel being inspected shall:



- a) facilitate safe and effective boarding of officials, in accordance with good seamanship, when the appropriate signal of the International Code of Signals is given or when the intention to board is established through radiocommunication by a vessel or helicopter carrying an official;
- b) provide a boarding ladder meeting the requirements of Annex 3 to facilitate safe and convenient access to any vessel which requires a climb of 1.5 m or more;
- c) facilitate the inspectors' inspection duties, providing assistance when requested in a reasonable way;

- d) permit inspectors to communicate with the authorities of the flag state, the coastal state and the inspecting state;
- e) alert inspectors to particular safety hazards on board fishing vessels;
- f) provide officials access to all areas of the vessel, all processed or unprocessed catches, all fishing gear and all relevant information and documents;
- g) facilitate safe disembarkation by inspectors on completion of the inspection;
- h) upon request from the inspector, remove any part of fishing gear which does not seem to be in compliance with GFCM recommendations in place; and
- i) where the inspector has made any entries in the logbooks, provide the inspector with a copy of each page where such entries appear and, upon request by the inspector, sign each page to confirm that it is a true copy.

PART IV
Final provisions

26. This recommendation shall be implemented in 2023, in accordance with the capacity of CPCs, and shall be fully implemented by all CPCs concerned in 2024.
27. This recommendation shall be implemented until at least the end of 2030.
28. The CoC shall monitor and report to the GFCM at its forty-sixth session on the implementation of the present scheme. The GFCM shall examine any recommendation for improving the implementation of the scheme.

Template of identity card for GFCM inspectors

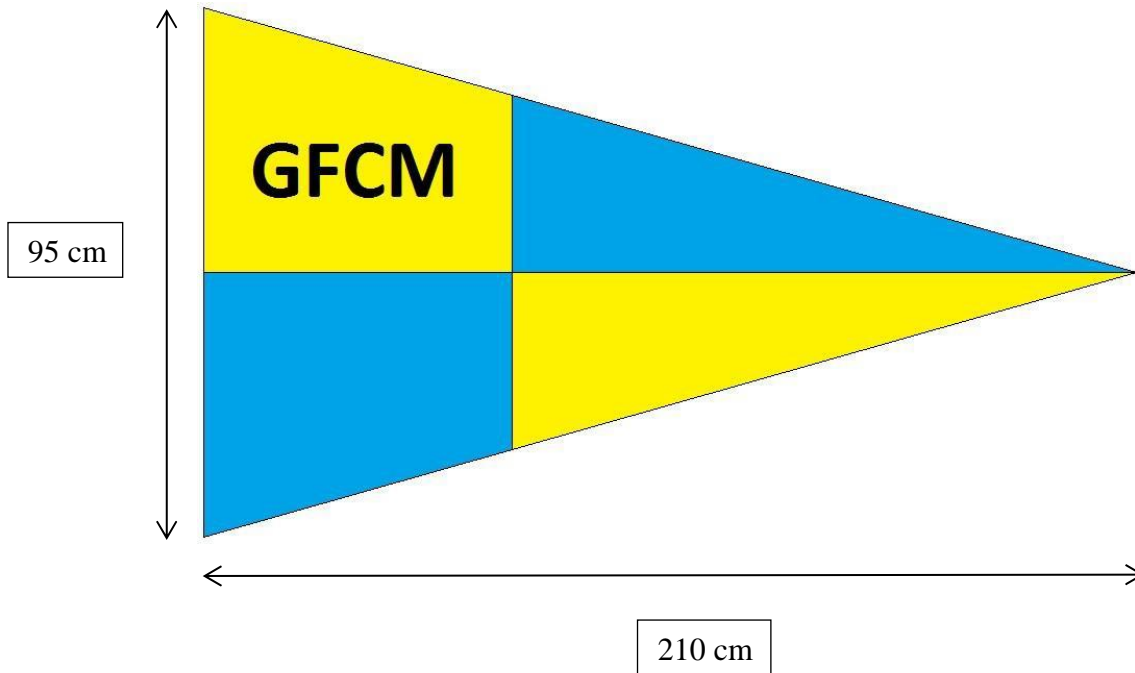
General Fisheries Commission for the Mediterranean (GFCM)			GFCM	
		GFCM		
INSPECTOR IDENTITY CARD		The holder of this inspector identity card is a GFCM inspector duly appointed under the terms of the GFCM Joint Inspection and Surveillance Scheme and has the power to act under the provisions of GFCM rules.		
Photograph	Contracting party			
	Inspector's name			
	Card n°	Issui ng authority Inspector
	Issue date:	Valid for five years		

Front

Back

Dimensions: 10 cm width, 7 cm height.

Model of GFCM inspection pennant



Pennants to be displayed by a GFCM inspection vessel. A boarding vessel shall display one pennant, which may be half-size.

Construction and use of boarding ladders

1. The provisions of this annex shall apply to ensure safe and convenient access to fishing vessels that require a climb of 1.5 m or more.
2. A boarding ladder shall be provided that shall be efficient for the purpose of enabling inspectors to embark and disembark safely at sea. The boarding ladder shall be kept clean and in good order.
3. The ladder shall be positioned and secured so that:
 - a) it is clear of any possible discharges from the vessel;
 - b) it is clear of the finer lines and, as far as practicable, in the mid-length of the vessel; and
 - c) each step rests firmly against the vessel's side.
4. The steps of the boarding ladder shall:
 - a) be of hardwood or other material of equivalent properties, made in one piece free of knots; the four lowest steps may be made of rubber of sufficient strength and stiffness or of another suitable material of equivalent characteristics;
 - b) have an efficient non-slip surface;
 - c) be no less than 480 mm long, 115 mm wide, and 23 mm in thickness, excluding any non-slip device or grooving;
 - d) be equally spaced no less than 300 mm nor more than 380 mm apart; and
 - e) be secured in such a manner that they will remain horizontal.
5. No boarding ladder shall have more than two replacement steps, which are secured in position by a method different from that used in the original construction of the ladder, and any steps so secured shall be replaced, as soon as reasonably practicable, by steps secured in position by the method used in the original construction of the ladder. When any replacement step is secured to the side ropes of the boarding ladder by means of grooves in the side of the step, such grooves shall be positioned in the longer sides of the steps.
6. The side ropes of the ladder shall consist of two uncovered manila or equivalent ropes no less than 60 mm in circumference on each side; each rope shall be left uncovered by any other material and be continuous with no joints below the top step; two main ropes, properly secured to the vessel and no less than 65 mm in circumference and a safety line shall be kept at hand, ready for use if required.
7. Battens made of hardwood or another material of equivalent properties, in one piece, free of knots and between 1.8 and 2 m long, shall be provided at such intervals as will prevent the boarding ladder from twisting. The lowest batten shall be on the fifth step from the bottom of the ladder, and the interval between any batten and the next shall not exceed nine steps.

8. Means shall be provided to ensure safe and convenient passage for inspectors embarking on or disembarking from the vessel between the head of the boarding ladder or of any accommodation ladder or other appliance provided. Where such passage is by means of a gateway in the rails or bulwark, adequate handholds shall be provided. Where such passage is by means of a bulwark ladder, such a ladder shall be securely attached to the bulwark rail or platform and two handhold stanchions shall be fitted at the point of boarding or disembarking from the vessel no less than 0.70 m nor more than 0,80 m apart. Each stanchion shall be rigidly secured to the vessel's structure at or near its base and also at a higher point, shall be no less than 40 mm in diameter and shall extend no less than 1.20 m above the top of the bulwark.
9. Lighting shall be provided at night so that both the boarding ladder and the position where the inspector boards the vessel are adequately lit. A lifebuoy equipped with a self-illuminating light shall be kept at hand, ready for use. A heaving line shall also be kept at hand, ready for use if required.
10. Means shall be provided to enable the boarding ladder to be used on either side of the vessel. The inspector in charge may indicate on which side he would like the boarding ladder to be deployed.
11. The rigging of the ladder and the embarkation and disembarkation of inspector(s) shall be supervised by a responsible officer of the vessel. The responsible officer shall be in radio contact with the bridge.
12. In the case that on a vessel, constructional features such as rubbing bands would prevent the fulfilment of any of these provisions, special arrangements shall be made to ensure that inspector(s) are able to embark and disembark safely.

GFCM inspection report

1. INSPECTOR(S)

Name Contracting party GFCM identity card number

Name Contracting party GFCM identity card number

Name Contracting party GFCM identity card number

2. VESSEL CARRYING THE INSPECTOR(S)

2.1 Name and registration

2.2 Flag

3. INFORMATION ON VESSEL INSPECTED

3.1 Name and registration

3.2 Flag

3.3 Captain (name and address)

3.4 Ship owner (name and address)

3.5 GFCM record number

3.6 Type of vessel

4. POSITION

4.1 Position as determined by inspecting vessel’s master at ... UTC; Latitude..... Longitude.....

4.2 Position as determined by fishing vessel’s master at UTC; Latitude..... Longitude.....

5. DATE AND TIMES OF INSPECTION’S COMMENCEMENT AND COMPLETION

5.1 Date Time arrived on board UTC; Time of departureUTC

6. TYPE OF FISHING GEAR ON BOARD

Bottom otter trawl – OTB	
Mid-water otter trawl – OTM	
Shrimp trawls – TBS	
Purse seine – PS	
Gillnets anchored (set) – GNS	
Set longlines – LLS	
Recreational gear – RG	
Other (specify)	

7. MESH MEASUREMENT (IN MILLIMETRES)

7.1 Legal mesh size to be used:..... mm

7.2 Result of the average mesh size measurement mm

7.3 Infringement: YES – NO – In case of YES, legal reference:

8. INSPECTION OF CATCHES ON BOARD

8.1 Results of the inspection of the fish on board

SPECIES (FAO tri alpha ode)						
Total (kg)						
Presentation						
Sample inspected						
Percentage of undersize fish						

8.2 Infringement: YES – NO – In case of YES, legal reference:

9. INSPECTION OF DOCUMENTS ON BOARD AND VMS

- 9.1 Fishing logbook: YES – NO
- 9.2 Infringement: YES – NO – In case of YES, legal reference:
- 9.3 Fishing licence: YES – NO
- 9.4 Infringement: YES – NO – In case of YES, legal reference
- 9.5 Specific authorization: YES – NO
- 9.6 Infringement: YES – NO – In case of YES, legal reference:
- 9.7 VMS: YES – NO – functioning: YES – NO
- 9.8 Infringement: YES – NO – In case of YES, legal reference:

10. LIST OF VIOLATIONS

- Fishing without a licence, permit or authorization issued by the flag CPC – legal reference:.....
- Failure to maintain sufficient records of catch and catch-related data in accordance with GFCM reporting requirements or significant misreporting of such catch and/or catch-related data – legal reference:
- Fishing in a closed area – legal reference:
- Fishing during a closed season – legal reference:
- Use of prohibited fishing gear – legal reference:
- Falsification or intentional concealment of the markings, identity or registration of a fishing vessel – legal reference:
- Concealment, tampering with or disposing of evidence relating to the investigation of a violation – legal reference:
- Multiple violations, which, taken together, constitute a serious disregard of measures in force pursuant to the GFCM– legal reference: Assault, resistance, intimidation, sexual harassment, interference with or undue obstruction or delay of an authorized inspector– legal reference:
- Interference with the satellite monitoring system and/or operates without VMS system – legal reference:

11. LIST OF DOCUMENTS COPIED ON BOARD

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

12. COMMENTS AND SIGNATURE OF THE MASTER OF THE VESSEL

.....
.....
.....
.....
.....
.....
.....

Signature of master:

13. COMMENTS AND SIGNATURE OF THE INSPECTOR(S)

.....
.....
.....
.....
.....
.....
.....
.....

Signature of inspector(s):

Recommendation GFCM/45/2022/17 on information contained in the GFCM record of authorized vessels over 15 metres in the GFCM area of application, amending Recommendation GFCM/33/2009/6 and repealing Recommendation GFCM/44/2021/18

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, in particular its Output 2.1 “Full compliance with GFCM recommendations achieved”;

RECALLING the provisions of Recommendation GFCM/33/2009/6 concerning the establishment of a GFCM record of vessels over 15 metres authorized to operate in the GFCM area of application, amending Recommendation GFCM/29/2005/2;

RECALLING the provisions of Recommendation GFCM/41/2017/7 on a regional plan of action to combat illegal, unreported and unregulated fishing in the GFCM area of application;

CONSIDERING the commitments of the 2017 Malta MedFish4Ever Ministerial Declaration and of the 2018 Sofia Ministerial Declaration on Black Sea fisheries and aquaculture;

NOTING the conclusions of the fifteen session of the Compliance Committee (Cyprus, May 2022);

ADOPTS, in conformity with Articles 5 b), 8 b), and 13 of the GFCM Agreement, the following recommendation:

1. The annex of Recommendation GFCM/33/2009/6 shall be repealed and replaced as follows:

The below list encompasses all the compulsory data fields on fishing vessels in the GFCM record of fishing vessels larger than 15 metres in length overall authorized to fish in the GFCM area of application (GFCM-AVL) to be reported to the GFCM following the guidance provided by relevant GFCM subsidiary bodies through the technical manual of the GFCM Data Collection Reference Framework. These variables are a subset of the GFCM regional fleet register, which shall be considered as a reference for the field description and any optional data applicable to the GFCM-AVL. In line with GFCM data confidentiality policies and procedures, the data confidentiality status identifies the access-level criteria for the sake of data dissemination: public (P), semi-private (S) or private (R).

DATA FIELDS	DATA CONFIDENTIALITY STATUS
Country	P
Reference year	P
Registration authority	P
Vessel name in Latin characters	P

DATA FIELDS	DATA CONFIDENTIALITY STATUS
Previous vessel name (if any)	P
National registration number	P
Vessel registration number	P
International radio call sign (IRCS) (if applicable)	P
Maritime mobile service identity (MMSI) (if applicable)	P
International Maritime Organization (IMO) number (if applicable)	P
Operational status (activity indicator)	P
Port of registration	P
Year of entry into fishing activity (if any)	P
Authorization to fish (license indicator)	P
Geographical subarea (GSA) (main GSA)	P
Secondary fishing statistical area (GSA) (if any)	P
Tertiary fishing statistical area (GSA) (if any)	P
Type of vessel (e.g. trawler, longliner)	P
Main fishing gear	P
Subsidiary fishing gear	P
Third fishing gear (if any)	P
Length overall (LOA)	P
Gross tonnage (GT)	P
Construction year	P
Power of the main engine (kW)	P
Owner (name and address)	R
Operator (name and address) (if different from owner)	R
Minimum number of crew members	R
Maximum number of crew members	R
Vessel monitoring system (VMS) indicator (presence/absence)	P
Authorization to fish in a fisheries restricted area (FRA), name of the FRA (as adopted by the GFCM)	P

2. This recommendation repeals and replaces Recommendation GFCM/44/2021/18.

Resolution GFCM/45/2022/1 on empowering women in the aquaculture sector

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources, as well as the sustainable development of aquaculture in the GFCM area of application;

RECOGNIZING the important contribution of women working in aquaculture and the sector's essential role in economic development and as a source of food and income for coastal communities of contracting parties and cooperating non-contracting parties (CPCs);

CONSISTENT WITH the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO), in particular its Article 9, which, *inter alia*, requires states to develop and regularly update strategies and plans, as required, with a view to ensuring that the development of aquaculture is environmentally sustainable and to enabling the rational use of shared resources between aquaculture and other activities;

RECALLING the outcome document, *The Future We Want*, of the Rio+20 United Nations Conference on Sustainable Development (Brazil, June 2012), which reaffirmed the need to promote, enhance and support a more sustainable aquaculture that ensures food security and nutrition, provides for the livelihoods of millions of people and is economically viable, while conserving land, water, plant and animal genetic resources, biodiversity and ecosystems and enhancing resilience to climate change and natural disasters;

CONSIDERING the United Nations Sustainable Development Goals (SDGs), in particular SDG 5 "Achieve gender equality and empower all women and girls" and SDG 14 "Conserve and sustainably use the oceans, seas and marine resources" and Target 14.7 "By 2030, increase the economic benefits to small island developing States and least developed countries from the sustainable use of marine resources, including through sustainable management of fisheries, aquaculture and tourism";

ACKNOWLEDGING the 2017 Malta MedFish4Ever Ministerial Declaration, which commits signatories to implementing actions in support of sustainable aquaculture development to contribute to food security and to strengthen coastal economies, and to implementing, starting from 2017, the GFCM Strategy for the sustainable development of Mediterranean and Black Sea aquaculture supporting, *inter alia*, the sustainable farming of food fish products and enhanced market access and trade environment, thereby creating employment opportunities and reducing the current stress on marine capture fisheries;

RECALLING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea (GFCM 2030 Strategy), in particular its Target 3 "Aquaculture: a sustainable and resilient sector growing to its full potential";

ACKNOWLEDGING the International Year of Artisanal Fisheries and Aquaculture 2022 Global Action Plan, which envisions "a world in which small-scale artisanal fishers, fishfarmers and fishworkers of both genders are fully recognized and empowered to continue their contributions to poverty alleviation, human well-being and resilient and sustainable food systems through the responsible use of fisheries and aquaculture resources and socioeconomic development";

ADOPTS, in conformity with Articles 5 and 8 of the GFCM Agreement, the following resolution:

PART I
Objectives

1. This resolution encourages CPCs to promote and support the empowerment of women in the aquaculture sector through the development of relevant national and/or sectoral strategies and policies, in order to achieve gender equality and equity in marine and inland aquaculture in the Mediterranean and the Black Sea.
2. According to the GFCM 2030 Strategy, CPCs are invited to create the appropriate governance framework and conditions so as to ensure that the sector is fair and inclusive, providing opportunities and actively supporting the empowerment of women.
3. The GFCM will continue to engage in aquaculture capacity building dedicated to women, as well as promote and support public awareness activities on the contributions and potential of women in the sector, improve access to education for women in aquaculture, disseminate information and resources and establish partnerships to promote dialogue and activities on gender issues and women's empowerment.

PART II
Final provisions

4. This resolution shall enter into force at the latest on 1 January 2024.

**Resolution GFCM/45/2022/2 on a research programme on jellyfish in the western Mediterranean
(geographical subareas 1 to 3)**

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration and the GFCM High-level conference on MedFish4Ever initiatives: Advances and renewed commitments, held in Marrakech in 2019, invite Mediterranean countries to strengthen multilateral cooperation and implement actions to improve the sustainability of living marine resources, in particular with regard to data collection, scientific assessment and implementation of a framework for ecosystem-based fisheries management in the Mediterranean Sea;

CONSIDERING that the Mediterranean is a semi-enclosed basin, which makes it particularly sensitive to climate change that favors the emergence of invasive species, and that any effort to preserve the marine environment would contribute to the achievement of the objectives of the GFCM Agreement;

AWARE of the adverse effects of jellyfish proliferation on socioeconomic activities, including tourism and fisheries;

RECOGNIZING the need to collect more data and information and to deepen scientific knowledge on the causes associated with jellyfish blooms, including potential interactions with sea turtles in the western Mediterranean (geographical subareas 1 to 3);

ADOPTS, in accordance with Articles 5 and 8 of the GFCM Agreement, the following resolution:

**PART I
General objectives and scope**

Objectives of the research programme

1. This resolution invites the Scientific Advisory Committee on Fisheries (SAC) to establish a research programme on jellyfish in the western Mediterranean (geographical subareas 1 to 3).
2. The operational objective of this research programme is to improve scientific knowledge about jellyfish and their interactions with other taxa and the marine ecosystem.
3. The SAC at its twenty-fifth session in 2024 should assess the results of the research programme, report to the forty-seventh session of the GFCM in 2024, and present, if necessary, proposals for measures and actions to mitigate jellyfish proliferation.
4. The coordination of the research programme and its scientific evaluation should take place within the framework of the MedSea4fish programme.

Geographical scope

5. The jellyfish research programme established by this resolution applies to geographical subareas 1 to 3.

PART II Specific objectives

6. The specific objectives of the research programme are to collect data on jellyfish and their interactions with other taxa and the marine ecosystem. The purpose of this study is to improve research and scientific knowledge with a view to maintaining the ecological balance and preserving the viability of socioeconomic activities. The research programme also aims to propose mitigation measures to reduce jellyfish blooms.

PART III Regional research programme and scientific monitoring

7. The GFCM Secretariat should develop terms of reference, including costs, services and other guidance to support the implementation of a jellyfish research programme in the western Mediterranean, as described in the annex to this resolution. The research programme will be launched in early 2023.

PART IV Final provisions

8. Contracting Parties and cooperating non-contracting parties may develop conservation and management measures during the implementation of the research programme. These measures may be analysed by the SAC and, where appropriate, by the GFCM Secretariat.

9. Depending on the results of the research programme, the GFCM may propose and adopt measures and actions to be implemented in order to mitigate jellyfish blooms in the western Mediterranean.

Key elements of the jellyfish research programme in the Western Mediterranean

Introduction

Jellyfish are gelatinous species found in all the seas and oceans of the world, from the surface to great depths. They can wash up on shorelines with seasonally variable densities and generally limited in time.

The resurgence of jellyfish, especially the species *Pelagia noctiluca*, in Moroccan Mediterranean waters is a natural phenomenon but has become more and more frequent in recent years, especially during the summer. The years 2021 and 2022 were marked by great abundances of jellyfish and mass strandings. This phenomenon disrupts not only tourist activities but also fishing because it leads to the clogging of nets.

Pelagia noctiluca is an exclusively gelatinous pelagic jellyfish. It is part of the phylum of cnidarians. This cnidarian has a rounded or flattened umbrella, depending on the degree of contraction, measuring 3 to 12 cm in adults. The margin of the umbrella has hollow whitish tentacles, up to 40 cm. The manubrium attached to the subumbrella is extended by four long, scalloped buccal arms, of pinkish color, up to 15 cm in length. The whole body is covered with cnidocytes (stinging nematocyst cells that can cause severe pain in case of contact with the skin. This species feeds on zooplankton (90 percent cladoceran and copepod crustaceans, small jellyfish and small fish).

The reproduction of *Pelagia noctiluca* is sexual and the species is gonochoric (sexes separated). In autumn, male jellyfish release their sperm into open water; fertilization is internal, within the umbral cavity. The female jellyfish then release their eggs as a yellowish cloud that escapes through the mouth.

Each egg yields a ciliated larva, the planula, which develops directly into a tiny jellyfish. There is no fixation of the planula as with other jellyfish. There is therefore a loss of the asexual phase in the reproductive cycle of the species. Since it spends its entire life in plankton (without a fixed phase), the species *Pelagia noctiluca* is called holoplanktonic.

The proliferation of blooms of this species offshore is favored by the small number of its predators, mainly sperm whales and sea turtles, and by the rise in temperature in winter and spring. This factor promotes an increase in abundances of phytoplankton, the main food of jellyfish, thus creating ideal conditions for the proliferation of these invertebrates in the summer.

In the western Mediterranean, large abundances of phytoplankton are generally located along the southern Spanish coast, an area characterized by high primary productivity due to the phenomenon of upwelling. The phytoplankton and jellyfish present in these Spanish waters are subsequently transported to the Moroccan coast through the western gyre of the Alboran Sea.

Situation observed in 2021

Factors favouring the development of jellyfish

Surface temperatures measured in 2021 show a slight increase compared to 2020, especially in March (+0.5 °C) and April (+1 °C) in the southern Spanish zone (Figure 1).

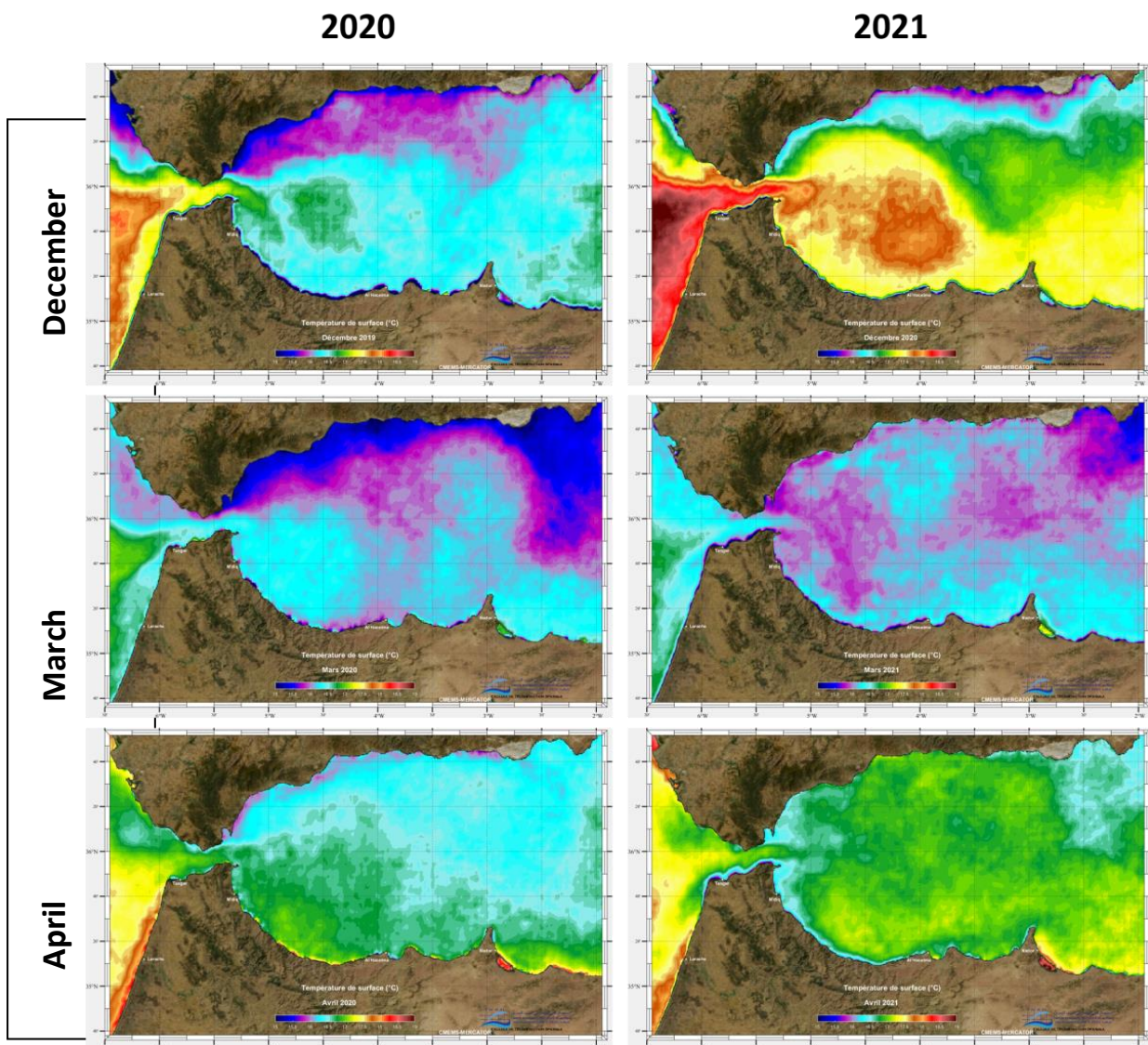


Figure 1. Distribution of surface temperatures during the months of December, March and April 2020 and 2021

In late spring 2021, there was a slight improvement in chlorophyll-a levels (Figure 2), indicating a concentration of phytoplankton in the Spanish upwelling zone. This increase in phytoplankton levels may have favored the development of young jellyfish in this area.

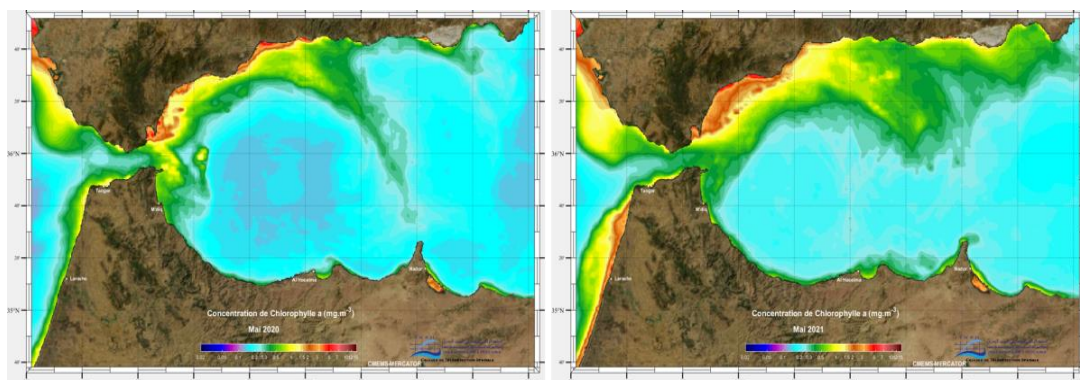


Figure 2. Distribution of chlorophyll-a concentration in May 2020 (left) and May 2021 (right)

Factors favouring the transport of jellyfish to the Moroccan Mediterranean coasts

The young jellyfish are then transported by the western gyre of the Alboran Sea from the southern Spanish zone to the beaches of the Moroccan coast between M'diq and Fnideq. This transport of jellyfish is accentuated in case of strong easterly winds.

Figure 3 shows the prevailing surface current and wind conditions in the western Mediterranean between 13 and 15 July 2021. An intensification of easterly winds is observed around July 15, as well as the presence of a local northwesterly coastal current that carries water masses from the western gyre to the coastal area of Fnideq. These conditions explain the larger strandings of jellyfish in the northern part of the northern zone than in the southern part (Figure 4).

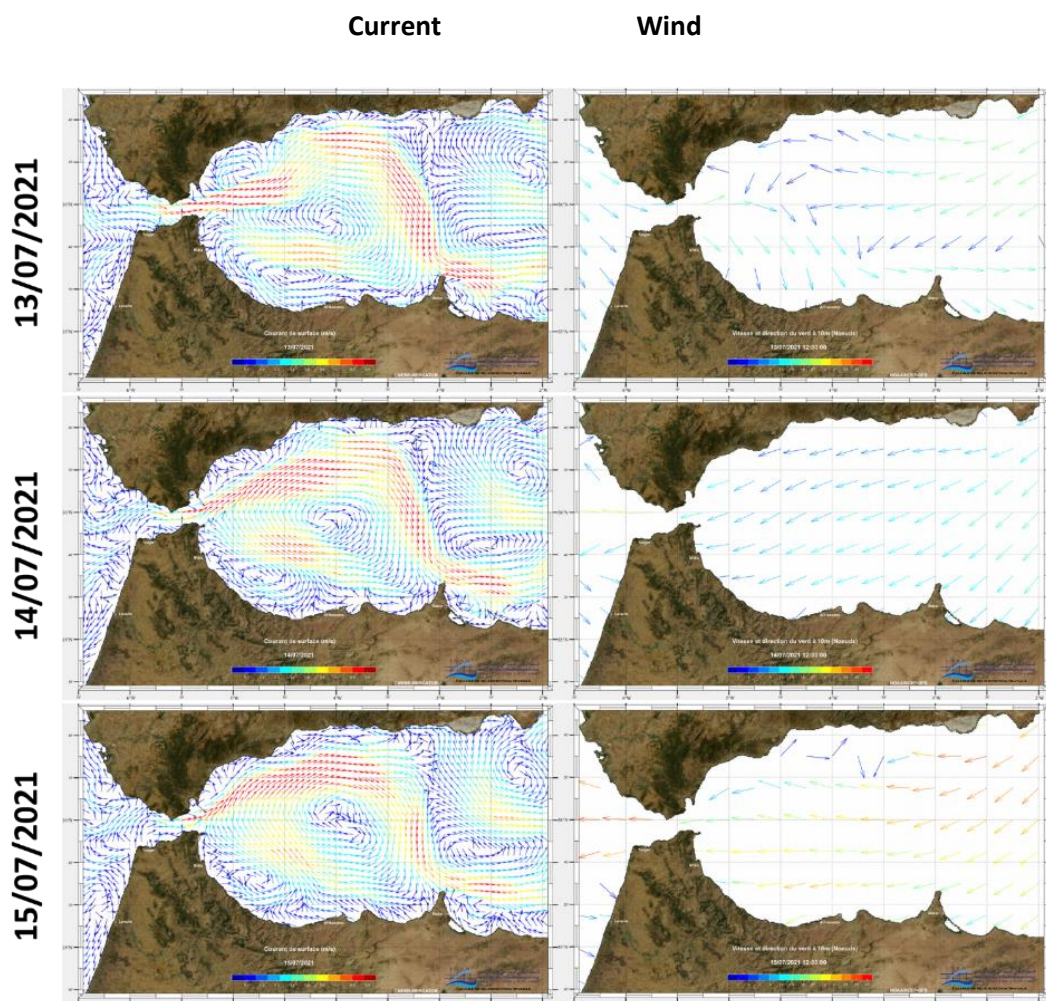


Figure 3. Predominant surface current and wind conditions in the western Mediterranean between 13 and 15 July 2021

Due to several factors that contributed to the proliferation of *Pelagia noctiluca* during the summer of 2021, and following the persistence of adverse weather conditions, some accumulations in the tidal swing zone as well as strandings on beaches with high densities of *Pelagia noctiluca* were observed.

These strandings have been associated with strandings of a brown algae, *Rugulopteryx okamurae*.

From the first appearances of *Pelagia noctiluca*, a scientific team from the National Institute of Fisheries Research (Morocco) decided to carry out regular daily surveys at sea and on land on the beaches in order to track the evolution of the phenomenon in the region.

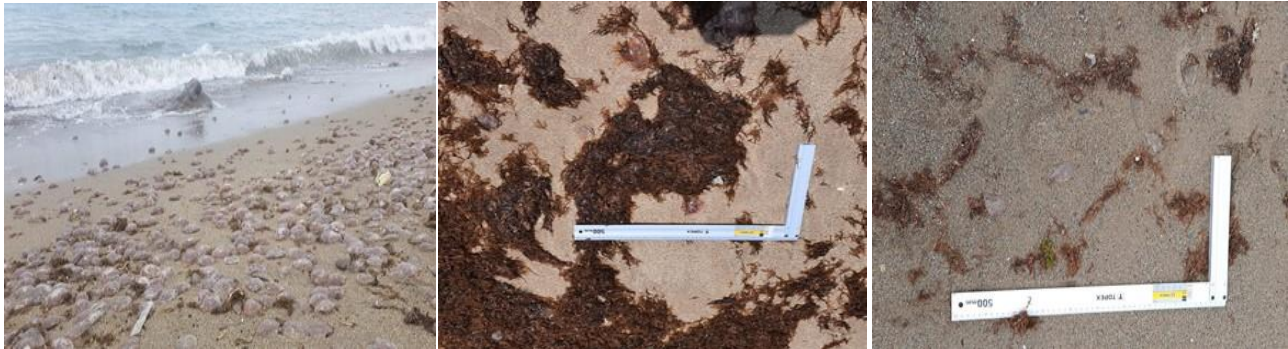


Figure 4. Mass appearance of *Pelagia noctiluca* along the Moroccan Mediterranean coast (July 2021)

In the Alboran Sea (Spanish part), recent research has shown an increase in the frequency of jellyfish (Bellido *et al.*, 2020). Six species are identified: *Aurelia* spp, *Chrysaora hysoscella*, *Cotylorhiza tuberculata*, *Pelagia noctiluca*, *Rhizostoma pulmo* and *Verella vellella*. Other gelatinous blooms are also present in the western Mediterranean, such as Mnemiopsis or the cubozoan *Carybdea marsupialis* (Báez *et al.*, 2022). Jellyfish are considered a source of particular concern because of their negative socioeconomic impact, especially at the local level, on coastal tourism and fishing activities. In addition, some jellyfish species feed on pelagic fish larvae such as the economically important European anchovy (*Engraulis encrasicolus*), which could lead to losses for the local fishing sector. Similarly, some jellyfish species compete at times with fish that feed on the same zooplankton prey (Báez *et al.*, 2022).

Main features of the regional research programme on jellyfish in the western Mediterranean

The main objective of the research programme is to understand the main macroeconomic variables behind jellyfish blooms in the region and to maintain an early warning system and monitoring of swarms in the Alboran Sea.

Other important issues will also be raised, including:

- Are jellyfish blooms predictable?
- Do jellyfish blooms lead to an increase in jellyfish populations in the area or only to their movement?
- What is the actual direct impact of jellyfish blooms on the larvae of the main jellyfish populations in the area?
- What is the movement pattern of the swarm in the Alboran Sea?
- Is there any connectivity between *Pelagia noctiluca* populations in the Alboran Sea and those in the rest of the Mediterranean?
- Does the removal of jellyfish biomass have a negative impact on the ecosystem?

Work Packages

Work Package 1

Analyse the abundance of jellyfish:

- Carry out specific campaigns.
- Use data from oceanographic and fishing campaigns to complement the analyses.

Work Package 2

Sample jellyfish specimens to study the gonadal state and determine the spawning time.

Work Package 3

Monitor beaches during the summer months to estimate the impact of jellyfish blooms on tourism and fishing.

Work Package 4

Involve fishers and other stakeholders in observing the monthly abundance of jellyfish in predefined transects.

Work Package 5

Study the stomach contents of jellyfish to estimate impacts on fish larvae.

Work Package 6

Perform genetic analyses on jellyfish in the Alboran Sea and compare the results with those obtained in other areas of the Mediterranean and Atlantic in order to estimate the degree of connectivity.

Work Package 7

Identify mitigation solutions and measures.

Involve fishers and beach users in the search for solutions.

Implementation of the regional research programme

The General Fisheries Commission for the Mediterranean:

- assesses progress made under the various work packages;
- defines standardized methods (e.g. for age) and research protocols; and
- conducts capacity-building activities.

References

Báez, J.C., Pennino, M.G., Albo-Puigserver, M., Coll, M., Giraldez, A. and Bellido, J.M. 2022. Effects of environmental conditions and jellyfish blooms on small pelagic fish and fisheries from the Western Mediterranean Sea. *Estuarine, Coastal and Shelf Science*, 264: 107699.

Bellido, J.J., Báez, J.C., Souviron-Priego, L., Ferri-Yañez, F., Salas, C., López, J.A. and Real, R. 2020. Atmospheric indices allow anticipating the incidence of jellyfish coastal swarms. *Mediterranean Marine Science*, 21(2): 289–297.

Bosch-Belmar, M., Milisenda, G., Basso, L., Doyle, T.K., Leone, A., & Piraino, S. 2021 Jellyfish Impacts on Marine Aquaculture and Fisheries, *Reviews in Fisheries Science & Aquaculture*, 29:2, 242-259, <https://doi.org/10.1080/23308249.2020.1806201>

Castro-Gutiérrez, J., Gutiérrez-Estrada, J.C., Aroba, J., Pulido-Calvo, I., Peregrín, A., Báez, J.C., Bellido, J.J. and Souviron-Priego, L. 2022. Estimation of jellyfish abundance in the south-eastern Spanish coastline by using an explainable artificial intelligence model based on fuzzy logic. *Estuarine, Coastal and Shelf Science*, 277(31): 108062.

Gueroun, S., Piraino, S., Kéfi-Daly Yahia, O., Daly Yahia, M.N., Jellyfish diversity, trends and patterns in Southwestern Mediterranean Sea: a citizen science and field monitoring alliance, *Journal of Plankton Research*, Volume 44, Issue 6, November/December 2022, Pages 819–837, <https://doi.org/10.1093/plankt/fbac057>

Gutiérrez-Estrada, J.C., I. Pulido-Calvo, I., Peregrín, A., García-Gálvez, A., Báez, J.C., Bellido, J.J., Souviron-Priego, L., Sánchez-Laulhé, J.M. and López, J.A. 2021. Integrating local environmental data and information from non-driven citizen science to estimate jellyfish abundance in Costa del Sol (southern Spain). *Estuarine, Coastal and Shelf Science*, 249: 107112.

Resolution GFCM/45/2022/3 on the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement establishing the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

RECALLING the 2030 Agenda for Sustainable Development adopted in the context of the United Nations Sustainable Development Summit (UN headquarters, New York, September 2015) and the United Nations Sustainable Development Goals (SDGs), in particular SDG 14 “Conserve and sustainably use the oceans, seas and marine resources”, SDG 2 “End hunger, achieve food security and improved nutrition and promote sustainable agriculture”, SDG 6 “Ensure availability and sustainable management of water and sanitation for all”, SDG 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, SDG 12 “Ensure sustainable consumption and production patterns”, SDG 13 “Take urgent action to combat climate change and its impacts”, SDG 15 “Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss” and SDG 17 “Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development”;

RECALLING that the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO) provides that states “should widely apply the precautionary approach to the conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment”, highlighting besides that “the absence of adequate scientific information should not be used as a reason for postponing or failing to take conservation and management measures”;

RECALLING that the 2017 Malta MedFish4Ever Ministerial Declaration and the 2018 Sofia Ministerial Declaration both reflect the strong commitment of the GFCM to ensure the sustainability of Mediterranean and Black Sea fisheries;

REAFFIRMING that the quest for productive, sustainable and responsible fisheries to achieve food security is enshrined in the FAO Strategic Framework 2022–2031 and captured in the four betters (better production, better nutrition, a better environment and a better life);

TAKING INTO ACCOUNT that the 2021 Declaration for Sustainable Fisheries and Aquaculture, endorsed by the FAO Committee on Fisheries, represents a renewed call to action to achieve the sustainable management of aquatic resources;

TAKING INTO ACCOUNT the objectives of the United Nations Decade of Ocean Science for Sustainable Development (2021–2030);

TAKING INTO ACCOUNT the Post-2020 Global Biodiversity Framework of the Convention on Biological Diversity;

TAKING INTO ACCOUNT the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region and the Regional Strategy for marine and coastal protected areas and other effective area-based conservation

measures in the Mediterranean adopted at the twenty-second meeting of the Contracting Parties to the Barcelona Convention and its Protocols in December 2022;

TAKING INTO ACCOUNT Resolution GFCM/44/2021/12 on the implementation of a GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea;

TAKING INTO ACCOUNT that the Regional Plan of Action for Small Scale Fisheries in the Mediterranean and the Black Sea (RPOA-SSF) was signed as a Ministerial Declaration by high-level representatives from 18 Mediterranean and Black Sea countries, as well as the European Union, on 26 September 2018 with an additional country signing in 2021 and took the shape of a concrete commitment to ensure the long-term environmental, economic and social sustainability of small-scale fisheries over the period 2018–2028;

CONSIDERING that in giving effect to the objective of the GFCM Agreement, the GFCM shall foster, as appropriate, a subregional approach to fisheries management and aquaculture development in order to better address the specificities of the Mediterranean and the Black Sea;

CONSIDERING the conclusions of the 2022 Working Group on Small-Scale Fisheries, which recognized the need for concrete and dedicated actions in the GFCM area of application;

NOTING the results of the twenty-third session of the Scientific Advisory Committee on Fisheries (SAC), which acknowledged the socioeconomic importance of the small-scale fisheries (SSF) sector and its impacts on select species at both the regional and subregional levels;

FURTHER RECOGNIZING the conclusions of the SAC, which highlighted the need to strengthen the resilience of the SSF sector and enhance the implementation of the RPOA-SSF;

RECOGNIZING the importance of pursuing the implementation of the Regional Plan of Action to Fight Against Illegal, Unreported and Unregulated Fishing by strengthening compliance and enforcement, as well as by progressing in the field of monitoring, control and surveillance, in a coordinated and transparent way;

RECOGNIZING the need for capacity development and technical support at the national and subregional levels to ensure policy commitments are met;

RECOGNIZING that the overexploitation of scientifically assessed resources in the Mediterranean and the Black Sea and threats to the biodiversity of these two semi-enclosed basins remain a challenge;

ADOPTS, in conformity with Articles 5 and 8 of the GFCM Agreement, the following resolution:

1. The GFCM should ensure, in line with the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, the gradual and efficient implementation of the RPOA-SSF to achieve sustainable small-scale fisheries and the long-term resilience of fisheries-based livelihoods.

2. The RPOA-SSF prescribes concrete and coherent measures to address challenges and reinforce opportunities for SSF, including by giving fishers a voice in the decisions that affect their livelihoods, safeguarding environmentally sustainable fishing practices and providing economic, social and employment benefits, ensuring SSF transformation into a productive and sustainable food production system that contributes to thriving economies and healthy ecosystems. It offers a common vision and guiding principles to achieve sustainable fisheries, federating all efforts to deliver on national, regional and global commitments.

3. Contracting parties and cooperating non-contracting parties (CPCs) should promote actions towards the effective implementation of the different measures foreseen in the RPOA-SSF listed below. Bearing in mind possible national or regional issues that may need to be considered, CPCs should:

- a) submit within the GFCM Data Collection Reference Framework Tasks VI.1, VI.2, VI.3 and VI.4 data for all SSF vessels (based on updated fleet registers) with no quality control issues;
- b) support investments in SSF to, *inter alia*, improve selectivity, preserve biodiversity, minimize bycatch and interactions with vulnerable species and predators, and promote energy efficiency;
- c) ensure that the SSF sector is formally included in existing and new long-term management plans;
- d) ensure that the data collected by small-scale fishers is utilized to assess the effectiveness of long-term management plans 'targets and to adapt the latter accordingly;
- e) have fleet registers that include all SSF vessels and non-vessel-based fishers (gleaners);
- f) evaluate the potential use of access rights and, when possible, adapt them to manage SSF;
- g) consider the solutions in long-term management plans to reduce the impacts of SSF on biodiversity and to reduce bycatch;
- h) encourage SSF to be fully equipped with efficient communication, navigation and onboard catch preservation equipment, in accordance with flag state requirements, as well as develop small-scale fisher training programmes for optimal use of such technologies;
- i) develop monitoring, control and surveillance schemes and the participatory surveillance of SSF fishing within existing or new long-term management plans;
- j) improve market access and profitability of existing SSF producers through market capacity, as well as access to public and private funding;
- k) promote financial investments to consolidate the marketing capacity of small-scale fishers through the use of direct sales, increased hygiene, reduced use of plastic and reduced food waste;
- l) promote consumer awareness of the availability of sustainable SSF seafood products;
- m) formally include participatory processes or co-management as legal/formal tools for the management of SSF in national legislation;
- n) implement formal mechanisms allowing the participation of small-scale fishers in fisheries management in all fisheries restricted areas in the GFCM area of application;
- o) legally ensure the participation of SSF actors in decision-making processes;
- p) encourage solutions to reduce frictions and increase synergies with other marine economies, at least within marine protected areas;

- q) encourage small-scale fishers to associate themselves within fisheries organizations and/or platforms or to connect to international SSF platforms;
 - r) run national capacity-building activities to: i) increase the capacity of small-scale fishers to access public funds to encourage sustainable fishing; ii) encourage livelihood diversification of SSF actors; and iii) reduce the digital divide between small-scale fishers;
 - s) provide adequate social protection to small-scale fishers;
 - t) initiate projects to highlight and include the role of women in SSF management;
 - u) develop emergency plans to support SSF communities in case of adverse effects of climate change; and
 - v) have solutions in place for the marketing of non-indigenous species targeted by SSF.
4. In 2024, a mid-term review of the objectives and outcomes of the RPOA-SSF should assess the progress made in its implementation, review the lessons learned and provide recommendations on possible readjustments and improvements to ensure targets are met efficiently by 2028.
5. The measures laid out in paragraph 3 should be regularly updated by CPCs if necessary. Contracting parties and cooperating non-contracting parties should collect information on the implementation of the RPOA-SSF.
6. This resolution is without prejudice to the implementation of stricter national measures.

Resolution GFCM/45/2022/4 on the launch of a roadmap for the establishment of a fisheries restricted area in the Cabliers coral mounds in the Alboran Sea with a view to adopting adequate protection and management measures

The General Fisheries Commission for the Mediterranean (GFCM),

RECALLING that the objective of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) is to ensure the conservation and sustainable use, at the biological, social, economic and environmental level, of marine living resources in the GFCM area of application;

CONSIDERING that all measures formulated by the GFCM shall be based on the best scientific advice available, taking into account relevant environmental, economic and social factors;

CONSIDERING that the GFCM shall apply the precautionary approach in accordance with the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 August 1995 and the Code of Conduct for Responsible Fisheries of the Food and Agriculture Organization of the United Nations (FAO);

CONSIDERING that the FAO Code of Conduct for Responsible Fisheries provides that States “should apply the precautionary approach widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment, taking account of the best scientific evidence available. The absence of adequate scientific information should not be used as a reason for postponing or failing to take measures to conserve target species, associated or dependent species and non-target species and their environment”;

HAVING REGARD to Article 8 b) ii) of the GFCM Agreement aiming “to minimize the impacts of fishing activities on marine living resources and their ecosystems”;

HAVING REGARD to Article 8 b) iv) of the GFCM Agreement aiming “to establish fisheries restricted areas (FRAs) for the protection of vulnerable marine ecosystems, including but not limited to nursery and spawning areas [...]”;

RECALLING the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea, in particular its Output 1.3 on the identification of new fisheries restricted areas and, once established, the enhancement of their efficiency and monitoring in order to manage the significant adverse impacts of fisheries on vulnerable species, ecosystems and essential fish habitats;

RECALLING the 2017 Malta MedFish4Ever Ministerial Declaration, in particular its paragraph 38;

NOTING the United Nations Sustainable Development Goal (SDG) 14.5, which specifically calls for conserving at least 10 percent of coastal and marine areas, consistent with national and international law;

CONSIDERING that the Scientific Advisory Committee on Fisheries (SAC) recommended in 2021 (paragraphs 29 and 30 of the report of the twenty-second session of the SAC) and in 2022 (paragraph 50 of the report of the twenty-third session of the SAC) creating a network of fisheries restricted areas (FRAs) with minimum standards in the GFCM area of application;

CONSIDERING that in 2022 the SAC (paragraph 28 of the report of the twenty-second session of the SAC) welcomed the work done to launch a roadmap for the implementation of a FRA in the Cabliers coral mound area in the Alboran Sea, taking into account socioeconomic costs and expected benefits from its potential implementation;

ADOPTS, in conformity with Articles 5 and 8 of the GFCM Agreement, the following resolution:

PART I

Subject matter and scope

1. The GFCM contracting parties and cooperating non-contracting parties (CPCs) agree on the principle of the launching of a roadmap for the establishment of a FRA in the Cabliers coral mound area in the Alboran Sea in order to adopt appropriate protection and management measures.
2. The present resolution presents the roadmap to achieve this objective.

PART II

Transitional measures

3. The GFCM Secretariat should coordinate before 1 May 2023 a scientific campaign in order to assess the exact geographical delimitation of the area that will be subject to protection, management and control measures.
4. The GFCM, at its forty-sixth session in 2023, should adopt management and control measures that will be applicable in the study area based on the assessment of the SAC.
5. The CPCs wishing to participate in this scientific campaign shall notify the GFCM Secretariat of the contact points and names of scientists participating in such a scientific campaign before 1 January 2023.

Concept notes for research programmes and pilot projects

Appendix 25/A

Concept note for a research programme on piked dogfish in the Black Sea

Background

Piked dogfish (*Squalus acanthias*) is a migratory shark species of the *Squalidae* family (Figure 1). Concerns for the conservation of some shark species in terms of their susceptibility to overfishing and insufficient monitoring, control and surveillance measures were first recognized and underlined by the Conference of the Parties of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 1994 (Lack, 2006). Piked dogfish was listed in Annex II, which covers species that may become threatened by unregulated international trade. Listing in this Annex means that countries are required to determine whether trade causes a damage to status and survival of spiny dogfish (CITES Animals Committee, 2004). Piked dogfish has recently been listed as 'Endangered' by the IUCN Red List of Threatened Species (Ellis *et al.*, 2015), while the latest assessment for the Black Sea subpopulation reported it as Vulnerable in 2006 (Fordham *et al.*, 2006). The Appendices of the Convention on the Conservation of Migratory Species (CMS) currently list 45 species of sharks and rays, among which piked dogfish (Fowler, 2014; Jorgensen *et al.*, 2022).

Implementing cross-border management measures to effectively protect migratory species can be challenging due to regional market demand, illegal, unreported and unregulated (IUU) fishing, bycatch as well as lack of public enthusiasm (Dell'Apa *et al.*, 2014).

In 2015³, the GFCM adopted a recommendation which foresaw the development of management measures, in line with the precautionary approach, for Black Sea fisheries exploiting piked dogfish and/or having it as significant bycatch. This first recommendation i) foresaw a minimum conservation reference size of 90 cm accompanied by the live release of undersized individuals; ii) reiterated the need to reduce coastal trawl net fishing to enhance the protection of coastal sharks (Recommendation GFCM/36/2012/3⁴) and requested the identification of a minimum target percentage of fishing grounds to be covered by protective measures; and iii) included provisions on monitoring, data collection and research (recording of information on fishing activities, catch data, incidental catch, release and/or discarding events as well as the improvement of data collection). It also requested contracting parties and cooperating non-contracting parties (CPCs) to engage in capacity-building efforts and other cooperative research activities to improve knowledge on piked dogfish biology, including population dynamics, migrations, the identification of spawning and nursery areas, survival ratios, and any other characteristic that could effectively support the implementation of management actions. In the meantime, additional management measures, such as monitoring of catch levels (Bulgaria), mesh-size regulation (Russian Federation), areal closures (Ukraine) and seasonal closures (Romania), have been implemented at national level.

Despite this, piked dogfish has been consistently considered depleted on a precautionary basis and in need of a recovery plan in the Black Sea for the past eight years (GFCM, 2021a). Based on available information highlighting the current knowledge gaps, a step-by-step approach needs to be implemented to adopt adequate management measures to revert the critical state of the piked dogfish population in the Black Sea. The assessment of this species is still fraught with serious

³ Recommendation GFCM/39/2015/4 on management measures for piked dogfish in the Black Sea

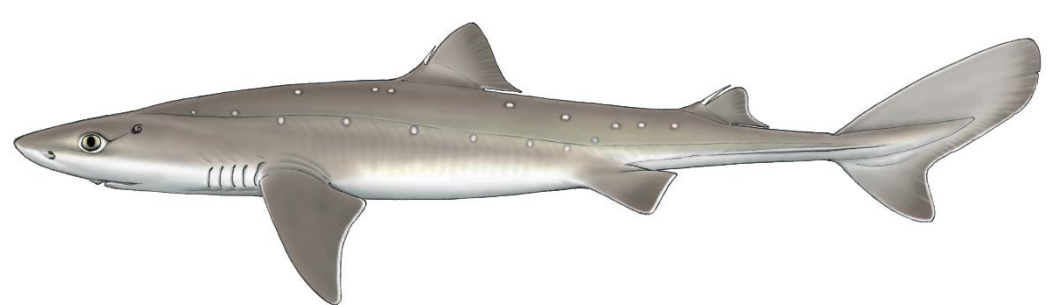
⁴ Recommendation GFCM/36/2012/3 on fisheries management measures for the conservation of sharks and rays in the GFCM area of application

deficiencies in the availability and quality of data, with only Bulgaria officially targeting the species commercially, and little information available on discards from other fisheries. Considering the vulnerability of this species to fishing impacts owing to its longevity and low fecundity, the GFCM has considered this species a priority to be addressed, adopting a second recommendation in 2021⁵ with the objective of establishing transitional management measures to prepare for a future multiannual management plan covering all fishing activities, while reducing the risk that, in the absence of robust scientific advice, the stock reduces further. While reiterating previously foreseen measures, this second recommendation first and foremost establishes, under the umbrella of the BlackSea4Fish project, the development and implementation of a GFCM research programme on piked dogfish in the Black Sea to collect and collate the necessary data to ensure annual scientific monitoring of the status of piked dogfish, as well as providing the basis for i) establishing temporal and spatial closures for piked dogfish fisheries during the reproductive season; ii) considering restocking as a management measure; iii) identifying measures to further reduce and mitigate bycatch; and iv) if needed, reassessing the minimum landing size towards defining a minimum reference conservation size for piked dogfish.

Introduction

Distribution

Piked dogfish is a widely distributed migratory shark species, inhabiting temperate continental shelves in both the northern and southern hemispheres (Compagno, 1984). The combination of a tagging study and demersal research surveys in Canadian waters showed that the prevailing migration pattern is seasonal between shallow waters (summer–autumn) and deep waters (winter–spring) (Campana *et al.*, 2007). Dell’Apa *et al.* (2017) noted that spatial and temporal distribution of adult piked dogfish in coastal waters of the northeastern United States of America was related to depth for both sexes, indicating that abundance of females was higher nearshore in the spring and in the morning, and the abundance of males was greater in the autumn and in the afternoon in the same area. Recent information on the vertical movement of piked dogfish along the east coast of the United States of America showed that there was a discrete diel pattern leading to a reduction in the availability of this species to the benthos and related fishing gear in the night-time (Carlson *et al.*, 2014). In contrast to Carlson *et al.*’s findings, piked dogfish was found to be active vertically during both day and night and not quietly lying on the seafloor (Sulikowski *et al.*, 2010). Trawl survey catchability during daytime was significantly higher than that of night-time for most species, including mature male piked dogfish during autumn, indicating a possible overestimation (41 percent) of absolute abundance (Sagarese *et al.*, 2016).



⁵ Recommendation GFCM/44/2021/10 on management measures for the sustainable piked dogfish fisheries in the Black Sea (geographical subarea 29)

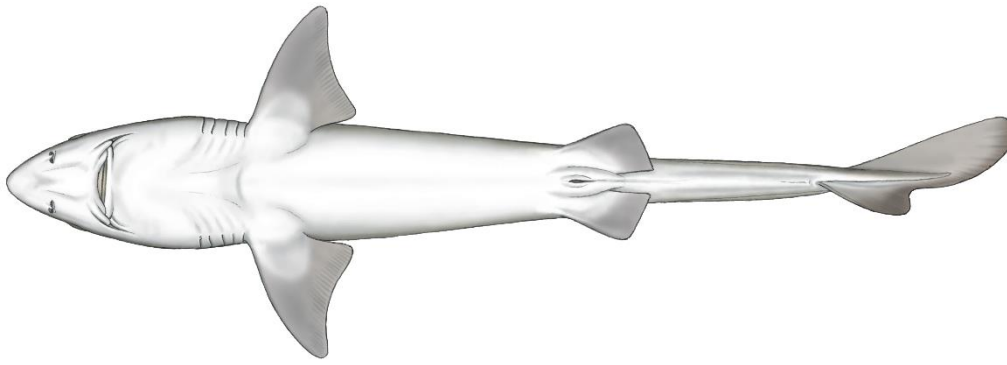


Figure 1. Illustration of piked dogfish (*Squalus acanthias*)
(adopted from Marc Dando, Shark Trust, 2010)

Feeding

Piked dogfish is known as an opportunistic feeder (Ellis *et al.*, 1996), preying in groups on whatever is most available (Demirhan and Seyhan, 2007a). Avsar (2001) noted whiting (*Merlangius merlangus euxinus*) was the most essential prey item in their natural diet, which comprised mainly of teleost fishes and crustaceans (Smith *et al.*, 2014). An earlier study (Demirhan and Seyhan, 2007b) reported similar findings with feeding occurring in all seasons except for winter, reflecting this opportunistic behaviour depending on food availability. Overfishing and discarding of top predators such as piked dogfish in the Black Sea resulted in a disruption of the benthic environment, leading to an increase in abundance of their prey items (Zengin *et al.*, 2014; Demirel *et al.*, 2020). A recent study aiming at revealing the behavioural interaction between piked dogfish and Atlantic horse mackerel (*Trachurus trachurus*) by using baited remote underwater stereo-video systems (BRUVs) indicated a commensal relationship between these two species (Ovegård *et al.*, 2022). Recent findings have shown that piked dogfish feed and assemble in the northwestern Black Sea (Ukrainian and Romanian coasts) while tracking anchovy, whiting, sprat (*Sprattus sprattus*) and horse mackerel in wintertime (Radu, 2016; Maximov *et al.*, 2018). They are also most commonly linked to the large anchovy (*Engraulis encrasicolus*) spawning grounds that exist in the waters off Georgia and Türkiye during the winter (Kirnosova and Lushnicova, 1990). Marine mammals and relatively larger sharks have been found to prey on piked dogfish (Bigelow *et al.*, 1948).

Reproduction

Piked dogfish is an aplacental live-bearing vertebrate (Wourms, 1977), where the embryos and unfertilized oocytes concurrently develop inside the uteri of pregnant specimens that can thus be ready for reproduction straight after birth (Braccini *et al.*, 2006). Females typically give birth between 1 and 32 pups per spawning season following a gestation period which, based on available scientific knowledge, is believed to be one of the longest gestation periods among vertebrates (Delaval *et al.*, 2021). The gestation period of piked dogfish in the Black Sea coast of Türkiye was reported to last around 23–24 months (Demirhan and Seyhan, 2006), while Kirnosova (1989) reported 12 months only. In the Black Sea, age and length at 50 percent maturity were reported as 10.49 years and 87.57 cm for males and 11.99 years and 102.97 cm for females, respectively (Demirhan and Seyhan, 2007a). Another study reported that 50 percent of females were mature at 88 cm and 50 percent of males were mature at 83 cm. The largest piked dogfish was 121 cm for males and 136 cm for females (Avsar, 2001). In the period between November 2014 and May 2017, a total of 63 specimens of piked dogfish were encountered during Bulgarian demersal surveys, having a sexual composition dominated by males in 2014, 2015 and 2016 (IFR, 2017). In one of the most recent trawl surveys conducted in

Bulgarian waters, one female specimen of piked dogfish was reported at 140 cm in length and 12.8 kg in weight.

Before reaching sexual maturity, piked dogfish species tend to segregate by size, with smaller individuals spending more time close to the surface (Wood *et al.*, 1979). In the North Sea, females were observed to stay in pelagic waters, heading to nearshore waters for breeding while the males resided closer to the seafloor becoming distant from the Norwegian coast (Hjertnes, 1980). There is consistency among recent studies (Compagno, 1984; Demirhan and Seyhan, 2006; Radu, 2016; Maximov *et al.*, 2018) conducted in the Black Sea, which all report two different birth periods (in spring and summer–autumn) for piked dogfish in the region (Tserkova *et al.*, 2022). According to the findings of Compagno (1984) piked dogfish in the Black Sea move inshore to mate during April and May. Another study conducted in the Black Sea found that birth occurred in shallow waters (25–60 m) (Demirhan and Seyhan, 2006).

Table 1. Spatio-temporal sex ratio of piked dogfish in the Black Sea basin.

Males:female ratio	Region	Sampling period	References
1:1	Northwestern region	Spring	Svetovidov (1964)
2.5:1	Northwestern region	Autumn	Svetovidov (1964)
1:1	SE Black Sea coast	Seasonal	Kutaygil and Bilecik (1998)
1:1	SE Black Sea coast	September–October	Avsar (1996)
1.9:1 (proportion of males was maximal in late autumn and the opposite in spring)	Bulgarian Black Sea waters	Seasonal	Tserkova <i>et al.</i> (2022)
1:2.1	Eastern Black Sea	November–March	Düzgüneş <i>et al.</i> (2005)
1:1	SE Black Sea coast	Seasonal	Demirhan and Seyhan (2006)
1:0.8	Bulgarian Black Sea waters	November	Tserkova and Petrova (2015)
1:0.3	Northwestern region	Spring and autumn	Radu, (2016)

Fisheries

A quarter of the world's shark and ray species are at risk of extinction and interaction with commercial fisheries is the leading cause of population declines (Dulvy *et al.*, 2014). In addition, sharks and rays appear not to be well-incorporated into most fisheries management actions (Davis and Worm, 2013). In terms of numbers, sharks and rays are the second-largest group of total reported incidental catch

of protected species (FAO, 2020). Large body size, as well as their K-selected life-history strategies, make them vulnerable to overfishing, leading to them being subsequently discarded by static and towed gears (Dapp *et al.*, 2016). Their oil-rich liver was once exploited for use in lubrication and lighting (Ketchen, 1986). On the other hand, owing to their predatory nature, piked dogfish have been regarded as pests in both recreational and commercial fisheries (Beamish *et al.*, 2009). Considering that even the small-sized individuals are much larger than the mesh size, removal by fishing gears could be more drastic than estimated (Fakioğlu *et al.*, 2022). As a result of such anthropogenic threats, shark populations have become a focus of interest for marine conservation worldwide (Fowler, 2012). In an earlier study, Davidson *et al.* (2016) noted that the reason behind the global decline in shark and ray landings was more closely associated with fishing pressure and overexploitation rather than recent enhancement of international or national fisheries management. As with many shark species, population collapse is inevitable for piked dogfish (Jorgensen *et al.*, 2022) since they are unable to recover their stock once depleted due to slow growth, late maturity and high longevity (Gibson *et al.*, 2008).

In the Black Sea, between 1990 and 2000, the largest landings of piked dogfish were recorded in Türkiye in trawl and purse seine operations mainly in the wintering period (Figure 2) (Filiz and Toğulga, 2002; Düzgüneş *et al.*, 2005). Up until the 1990s, the annual average catch of Türkiye was 2 857 tonnes, which dropped to 641 tonnes in following years until 2014, when fishing for this species was banned altogether.

In the waters of Ukraine, most piked dogfish are caught in spring and autumn by target fishing with gillnets of 100 mm mesh-size, longlines, and as bycatch of sprat trawl fisheries (GFCM, 2012). In Ukraine, the maximum annual catches of piked dogfish were observed during the 1989–1995 period, reaching 1 200–1 300 tonnes. In other Black Sea countries, piked dogfish was caught as bycatch, and annual landings are usually lower than in Ukraine. The highest catches were observed in Bulgarian waters during the early 2000s (STECF, 2011). In Romania, piked dogfish is caught mainly as bycatch of the sprat fishery. Catches also decreased because of the decreasing fishing effort (Maximov *et al.*, 2008, 2010; Radu *et al.*, 2010a, 2010b, b; GFCM, 2014) (Figure 2).

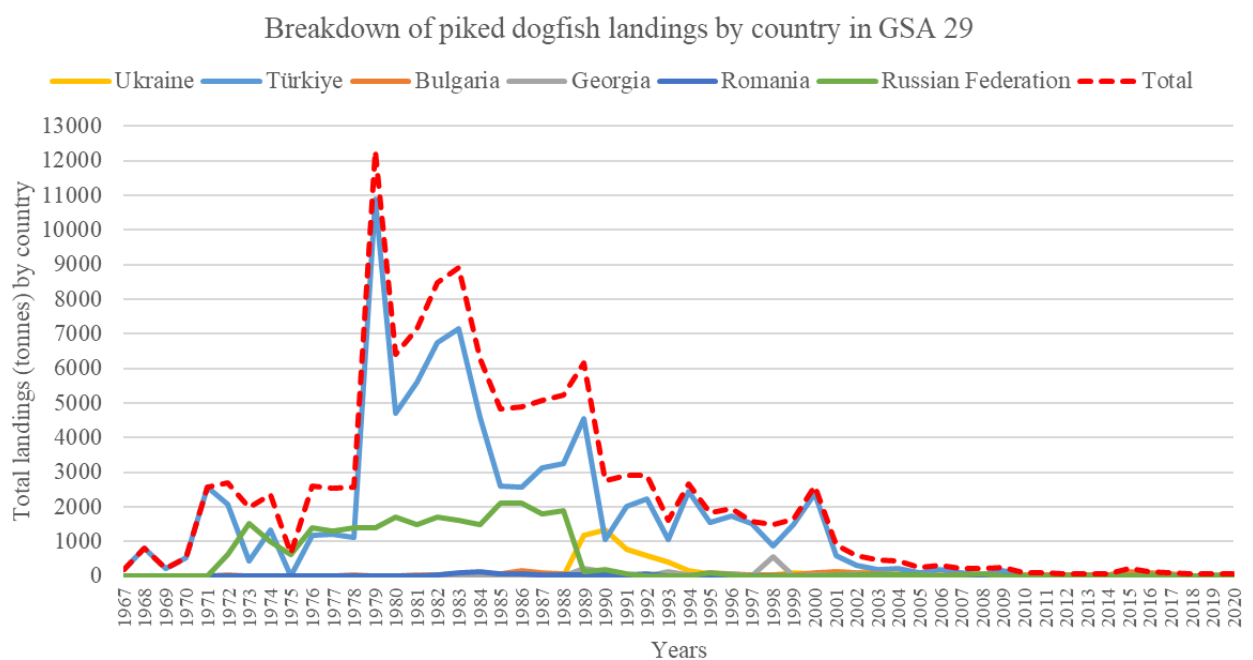


Figure 2. Total landings of piked dogfish reported by country in GSA 29 between 1967 and 2020

Concept of the research programme

In order to address and fill the data gaps towards a more informed assessment of stock status, as well as the identification of targeted and effective management measures, the research programme is composed of six work packages (WPs). The methodology, as well as the outputs and main objectives that are planned to be achieved within each WP, are summarized below.

Work package 1 (WP1ENG): Stakeholder engagement

This is a transversal work package. Its activities are foreseen to feed into other work packages. Active engagement of fishers, other stakeholders and the general public associated with piked dogfish in the Black Sea is urgently needed, including towards fulfilling the requirement for a participatory approach to fisheries management set in Recommendation GFCM/44/2021/10 on management measures for the sustainable piked dogfish fisheries in the Black Sea (geographical subarea 29).

Task 1: Creating networks

Objective: creation of a network of scientific experts and key stakeholders from each participating country, under the coordination of the BlackSea4Fish project and the GFCM Secretariat, to ensure cross-border and long-lasting scientific collaboration in the Black Sea, through the involvement of all concerned parties. This will allow testing and implementing harmonized actions, according to the tasks described in WPs 2, 3, 4 and 5.

Task 2: Awareness-raising

Objective: this task will cover all awareness-raising needs of the research programme through targeted actions on specific needs of the different WPs. In particular, it will address:

- awareness-raising campaigns for fishers to facilitate increased collaboration of fishers while also promoting a decrease in post-release mortality; and
- general public awareness of the conservation issues related to the interaction between piked dogfish and fisheries in the Black Sea.

Task 3: Exploring fisher knowledge

Objective: this task will foresee a Local Ecological Knowledge (LEK) study to gather information from fishers (e.g. on bycatch, distribution, seasonality, release mortality etc.) in order to inform and feed into WPs 2, 3, 4 and 5.

Task 4: Dissemination

Objective: this task will ensure that the objectives, activities and results of the research programme are adequately disseminated from the onset of the programme in order to foster engagement and buy-in of stakeholders and the general public.

Timeline and coordination:

- Duration: 24 months

- Coordination: BlackSea4Fish project

Outputs of WP:

- creation of a lasting network of scientists and stakeholders;
- increased knowledge of stakeholders in terms of the identification of piked dogfish and the challenges associated to its conservation;
- enhanced information on the interactions between piked dogfish and fishing activities emerging from fisher engagement; and
- enhanced awareness of the concept of advocacy and concrete measures that can be taken, including through the dissemination of research programme objectives, activities and outcomes.

Work package 2 (WP2BYC): Bycatch - characterizing the bycatch pattern across the Black Sea basin

Bulgaria, Türkiye and Russia were once the countries that had commercial fisheries targeting piked dogfish until the extensive decline of the 1990s (Finucci *et al.*, 2020). Currently, despite not being targeted across the Black Sea basin (except for Bulgaria), this species is caught as incidental catch (Radu *et al.*, 2010b) in large numbers. In Bulgarian waters, piked dogfish was reported as the primary item caught by gillnets, and as bycatch in the rapa whelk fishery (EAFA, 2020). The highest bycatch estimation of piked dogfish was reported in late autumn for the western Black Sea coast (Tserkova *et al.*, 2022). There are numerous studies indicating that piked dogfish have been found as bycatch in fishing practices such as demersal trawls (Avsar, 2001; Radu, 2012; Yıldız and Karakulak, 2017), gillnets (Düzgüneş *et al.*, 2005; Shlyakhov and Daskalov, 2008; Radu *et al.*, 2010b), longlines (Demirhan and Seyhan, 2007b) and purse seines (Şahin *et al.*, 2015) mainly exploiting turbot (*Scophthalmus maximus*), red mullet (*Mullus barbatus*) and European whiting (*Merlangius merlangus*) (Carpentieri *et al.*, 2021) across the Black Sea. To the best available knowledge, higher interactions with small-scale fishers occur mainly in spring and autumn for piked dogfish in Ukrainian and Romanian waters, since the fishing fleets of these countries mainly comprise the polyvalent segment (CeNoBS, 2021). However, the discards data derived from the sprat midwater trawl fishery showed that the average bycatch of piked dogfish for the years 2018 and 2019 was 6.62 kg per tonne and 10.18 kg per tonne of sprat. Furthermore, the average catch of individuals smaller than 90 cm was 1.56 kg and 5.84 kg per tonne of sprat for the same years, respectively (GFCM, 2021b). Bulgaria is the only country that has a commercial fishery targeting piked dogfish over part of the year (GFCM, 2012). Despite a great number of bycatch reports, accurately quantified information on incidental catch rates and a description of hotspots throughout the Black Sea are rather poor. Thus, this WP aims to build on the GFCM discards monitoring programme and achieve the following two goals:

Objectives:

- quantify bycatch (discards and incidental catch) through the continuation and enhancement of onboard observer programmes (including geographical coverage and gear coverage) to assess the status of the population, better identify and describe the bycatch behaviour and analyse the spatial and temporal distribution of bycatch; and
- identify the hotspots and periods where the bycatch events are most likely to occur.

Activities:

- Task 1: collect information on existing discards monitoring programmes at country level and identify gaps.
- Task 2: enhance existing discards monitoring programmes to fill the gaps identified in Task 1.
- Task 3: perform data analysis.

Timeline and coordination:

- Duration of WP: 24 months (two fishing seasons)
- Partners responsible: to be determined
- Coordinator: to be determined
- Data collected: sex, length, vitality conditions, amount of both landed and discarded fractions in terms of number and weight, proportion in the catch composition and associated fishing practice characteristics (depth, towing time, geolocation etc.)

Outputs:

- review of existing discards monitoring efforts at country level;
- accurate and comprehensive bycatch ratios across the Black Sea basin, by gear;
- Detailed map showing bycatch hotspots; and
- identification of technical mitigation strategies for responding to the bycatch issue.

Work package 3 (WP3BIO): Biological data collection

Adult piked dogfish species appear to have both sex- and size-specific aggregating/segregating behaviour (Shepherd *et al.*, 2002; Dell’Apa *et al.*, 2014), with females migrating in spring, summer and early autumn towards coastal waters where fishing practices are most likely to be performed (Radu, 2016; Țoțoiu *et al.*, 2016; Tserkova *et al.*, 2022). Understanding the sexual habitat preference of piked dogfish and reporting the accurate sex ratio in the catch is fundamental to effectively implement conservation management measures (Campana *et al.*, 2007; Dell’Apa *et al.*, 2017). In addition, stock assessment suffers from important uncertainties related to the age composition of catch. In this regard, this WP is foreseen to be conducted at different times over the two years of the research programme through fishery-independent surveys and through the analysis of previous information on ageing efforts for piked dogfish.

Objectives:

- Provide accurate data on sex and size to be able to redefine sex ratio and sex-specific habitat selection.
- Perform an appraisal of ageing efforts, coupled with an ageing workshop to advance towards more informative age-length keys for stock assessment purposes.

Activities:

- Task 1: perform an all-of-Black Sea demersal survey adequately optimized for catching piked dogfish and analyse emerging data.
- Task 2: perform an appraisal of previous ageing efforts and organize an age-reading workshop.

Timeline and coordination:

- Duration: 24 months
- Partners responsible: to be decided
- Coordinator: to be decided
- Relevant data: sex, length, weight, and associated fishing trip data (depth, towing time, geolocation etc.); age information

Outputs:

- enhanced information on sexual habitat preference to be utilized towards the formulation of advanced management strategies for piked dogfish;
- life-history traits of piked dogfish in the Black Sea; and
- harmonized ageing of piked dogfish based on existing samples.

Work package 4 (WP4SPAT): Spatial dynamics of piked dogfish

The Black Sea is one of the identified areas where a subpopulation of piked dogfish has been studied (Avsar, 2001; Demirhan and Seyhan, 2006; Demirhan *et al.*, 2007; Demirhan and Seyhan, 2007a; Demirhan and Seyhan, 2007b; Shlyakhov and Daskalov, 2008; Radu *et al.*, 2010a; 2010b; Radu *et al.*, 2011; Radu, 2012; Serena *et al.*, 2020; Dağtekin *et al.*, 2022; Tserkova *et al.*, 2022). Many studies investigating the different spatio-temporal distribution of the two sexes (see Table 1) in the region were based on commercial catch data (Düzgüneş *et al.*, 2005; Demirhan and Seyhan, 2006; Maximov *et al.*, 2018; Tserkova *et al.*, 2022) rather than long-term comprehensive tagging studies. Furthermore, movement patterns can be difficult to understand due to the variations and complexity in size and sex structure of this highly migratory top predator (Tserkova *et al.*, 2022). Identifying their habitat preferences in relation to environmental parameters (e.g. temperature) (Sagarese *et al.*, 2014) that appear to be affecting their migrations (Compagno, 1984) and catch per unit efforts (Brodeur *et al.*, 2009) could help towards developing effective fisheries management measures. Recent information provided by studies outside the Black Sea (Carlson *et al.*, 2014; Sagarese *et al.*, 2016) demonstrated that piked dogfish has a vertical utilization of the environment associated with distinct diel patterns, which are considered to affect both the availability of species and the catchability of fishing gear. However, Sulikowski *et al.* (2010) did not agree with the aforementioned studies. Such controversial findings have therefore drawn the attention to a need to redefine the distribution of the species and identify migration paths of piked dogfish specific to the Black Sea basin.

Objectives:

- Identify the spatial ecology and habitat use of piked dogfish.
- Identify potential fishery restricted areas (FRAs).

Activities:

- Task 1: perform a tagging study of piked dogfish.
- Task 2: perform a data analysis to identify spatial aggregations and migration routes.

Timeline and coordination:

- Duration: 24 months with possibility of extension
- Partners responsible: to be decided
- Coordinator: to be decided

Outputs:

- better understanding of stock structure of piked dogfish owing to collected information on distribution, home range (where they live and move), migration pathways and habitat use;
- range of movement of piked dogfish and the determination of how far an individual travels between the point of release of the individual and point of pop/up of the tag; and
- provision of the scientific basis for potential FRAs.

Work package 5 (WP5TGT): Target piked dogfish fisheries**Objectives:**

- Describe the Bulgarian target fishery in detail.

Bulgaria is the only Black Sea country where piked dogfish is a directly targeted species and part of the economic performance of the fishing fleet. According to Bulgarian legislation, targeted piked dogfish fishing is permitted only with longlines (LLD and LLS). In this view, only vessels that have longlines registered in their fishing authorization can catch the species. The minimum conservation reference size is 90 cm in the national legislation, in line with Recommendation GFCM/36/2012/3 on fisheries management measures for the conservation of sharks and rays in the GFCM area of application and Regulation (EU) No 1343/2011 of the European Parliament and of the Council of 13 December 2011 on certain provisions for fishing in the GFCM Agreement area and amending Council Regulation (EC) No 1967/2006 concerning management measures for the sustainable exploitation of fishery resources in the Mediterranean Sea (relevant amendment).

In 2021, no more than 30 fishing vessels out of the 1 814 in the Bulgarian fishing fleet register were granted such fishing authorization and registered catches of piked dogfish with longlines. Bycatch of piked dogfish was reported in fishing operations with trawls (OTM) and gillnets (GNS). The most productive year for the fishing fleet was 2015, when 133 tonnes were landed, while throughout the years, from 2007 to 2021, the landings varied from 24 tonnes in 2007 to 10.1 tonnes, 16.8 tonnes, 47.5 tonnes and 19.7 tonnes, respectively, in 2018, 2019, 2020 and 2021.

- Investigate socio-economic conditions of the Bulgarian fishery exploiting piked dogfish.

Activities:

- Task 1: collect information (landings, effort, vessel characteristics, etc.) on the fishery targeting piked dogfish with longlines in Bulgaria through a census approach.
- Task 2: conduct a socioeconomic study by means of standardized questionnaires rolled out at landing points and over the phone and email.

Timeline and coordination

- Duration: six months
- Implementing party: BlackSea4Fish project

Outputs:

- comprehensive information on the Bulgarian longline fishery for piked dogfish, including socio-economic aspects; and
- science-based results that can guide us assessing the benefits and costs associated with piked dogfish fisheries as well as prioritizing the needs.

Work package 6 (WP6PRM): Post-release mortality

Incidental capture of marine megafauna represents a major threat to their survival (Bonanomi *et al.*, 2017). Although most studies were conducted outside the Black Sea region, there was a general agreement among the researchers on the extent to which these species may be damaged and how they could be affected by factors such as towing/soak time (Saygu and Deval, 2014), catch amount (Saygu and Deval, 2014), stress conditions (Mandelman and Farrington, 2007) and physical contact (Ellis *et al.*, 2017). Due to unknown discard rates in the Black Sea commercial fishery, estimated post-release mortality of incidentally captured piked dogfish is missing, but of great importance to fisheries management. Piked dogfish is a ram-ventilating benthopelagic species that is also capable of staying inactive for short periods, during which individuals rely on buccal pumping instead of ram-ventilation (Kelly *et al.*, 2019). The mean total discard mortality of obligate ram-ventilating elasmobranchs caught in longline, gillnet and trawl gear types was found to be significantly greater than that of stationary-respiring species in terms of combined immediate and post-release mortality (Dapp *et al.*, 2016). The direct capture mortality was previously found to be of 0 percent for trawls with 0.5–1.5 hour tow duration and around 40 percent for gillnets (Rulifson, 2007). On the other hand, the estimated at-vessel mortality of piked dogfish caught by a trawl was reported as 29 percent after 72 hours (Mandelman and Farrington, 2007). Dapp *et al.* (2015) demonstrated that respiratory mode and gear type were two critical factors affecting immediate and post-release mortality of elasmobranchs, confirming prior studies. Despite the abundance of information around the world, absence of post-release mortality studies on Black Sea piked dogfish underlines the important and urgent need of this WP.

Objectives:

- Determine the best methodology to investigate the post-release mortality of piked dogfish collected by commercial trawls and gillnets.

Activities:

- Task 1: perform a pilot study to determine the best methodology to quantify post-release mortality of dogfish using different methodologies such as survival tanks (on board, at-sea, towed) as well as tagging studies and evaluate the possibility of expanding the study once identified.
- Task 2 (to be decided): perform post-release mortality studies employing the methodology identified in Task 1, covering a wider area and different conditions (e.g. depth of capture).

Outputs:

- Determine the best methodology to quantify post-release mortality and, if possible, expand the study, using the best method of choice to analyse the impact of operational components of commercial fishing practices such as towing time/soak time, catch amount and biological aspects, such as sex and length, on piked dogfish’s survival.

Table 1. Workplan timeline of the research programme

			Period (months)																							
			2023/24																							
Codes of WPs	Activity	Partner (s) responsible	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Initiation of RP	Kick off meeting																									
WP1ENG	Task 1: creating networks	BS4F project																								
WP1ENG	Task 2: awareness-raising	BS4F project / GFCM Secretariat																								
WP1ENG	Task 3: exploring fisher knowledge	BS4F project / GFCM Secretariat																								
WP1ENG	Task 4: dissemination	BS4F project / GFCM Secretariat																								
WP2BYC	Tasks 1: information gathering																									

WP2BYC	Task 2: on board observations through the expansion of existing monitoring programmes																						
WP2BYC	Task 3: data analysis																						
WP3BIO	Task 1: collection of relevant biological data from demersal surveys																						
WP3BIO	Task 2: appraisal of previous ageing efforts																						
WP3BIO	Task 2: age reading workshop																						
WP4 SPAT	Task 1: tagging study																						
WP4 SPAT	Task 2: data retrieval and analysis (to be continued beyond the end of the RP)	BS4F project																					
WP5TGT	Task 1: collection of information on the target fishery	BS4F project																					
WP5TGT	Task 2: socioeconomic study	BS4F project																					
WP6PRM	Task 1: trials of different methodologies																						
WP6PRM	Task 2: estimation of post-release mortality in commercial gillnet fishery (TBD)																						
Final report																							

References

- Avsar, D.** 1996. Sex, Age and Growth of the Spurdog (*Squalus acanthias*, L., 1758) in the Southeastern Black Sea. Yugoslav Journal of Operations Research 6 (2), 295- 304.
- Avsar, D.** 2001 Age, growth, reproduction and feeding of the spurdog (*Squalus acanthias* Linnaeus, 1758) in the south-eastern Black Sea. Estuar. Coast. Shelf Sci. 52, 269–278.
- Beamish, R., McFarlane, G., Sweeting, R. & Neville, C.h.** 2009. Keynote address: the sad history of dogfish management. In: Gallucci, *et al.* (Eds.), Biology and Management of Dogfish Sharks. pp. 1–10.
- Bigelow, H.B. & W.C. Schroeder.** 1948. Sharks. In Fishes of the Western North Atlantic Part One. Memoir one, Sears Foundation for Marine Research, Yale University, 576pp.
- Bonanomi S, Colombelli A, Notti E, Pulcinella J & Sala A.** 2017. Fisheries Bycatch of Chondrichthyes. In Chondrichthyes-Multidisciplinary Approach. InTech.
- Braccini, J. M., Gillanders, B. M. & Walker, T. I.** 2006. Determining reproductive parameters for population assessments of chondrichthyan species with asynchronous ovulation and parturition: piked spurdog (*Squalus megalops*) as a case study. Mar. Freshw. Res. 57, 105–119.
- Brodeur R.D., Fleming I.A., Bennett J.M. & Campbell M.A.** 2009. Summer distribution and feeding of spiny dogfish off the Washington and Oregon coasts. In: Gallucci V.F., McFarlane G.A., Bargmann G.G. (eds.), Biology and management of dogfish sharks. Am. Fish. Soc., Bethesda, Maryland, pp. 39-51.
- Campana, S.E., A.J.F. Gibson, L. Marks, W. Joyce, R. Rulifson & M. Dadswell.** 2007. Stock structure, life history, fishery and abundance indices for Spiny Dogfish (*Squalus acanthias*) in Atlantic Canada Canadian Science Advisory Secretariat Research Document 2007/089.
- Carlson, A. E., E. R. Hoffmayer, C. A. Tribuzio & J. A. Sulikowski.** 2014. The use of satellite tags to redefine movement patterns of Spiny Dogfish (*Squalus acanthias*) along the US East Coast: implications for fisheries management. PLoS (Public Library of Science) ONE [online serial] 9(7):e103384.
- Carpentieri, P., Nastasi, A., Sessa, M. & Srour, A., eds.** 2021. Incidental catch of vulnerable species in Mediterranean and Black Sea fisheries – A review. Studies and Reviews No. 101 (General Fisheries Commission for the Mediterranean). Rome, FAO. <https://doi.org/10.4060/cb5405en>
- CeNoBS.** 2021. Detailed Report of the pilot(s) on bycatch monitoring, including recommendations to further develop D1C1 criterion. By Gol'din, P., Vishnyakova, K., Popov, D., Paiu, R.M., Tonay, A.M., Düzgüneş, E., Timofte, C., Meshkova, G., Panayotova, M., Amaha Öztürk, A. CeNoBS Project, Odesa,Ukraine, 52 pages.
- CITES Animals Committee.** 2004. Summary Report of the Twentieth Meeting of the Animals Committee, Johannesburg (South Africa) 29 March – 2 April 2004. <http://www.cites.org/eng/com/AC/20/E20-Sum.pdf>. Viewed 15 October 2006.
- Compagno, L.J.V.** 1984. FAO species catalogue. 4. Sharks of the world. An annotated and illustrated catalogue of shark species known to date. Part 1. Hexanchiformes to lamniformes. FAO Fish Synop. 4 (125), 1

Dağtekin, M., Genç, Y., Kasapoğlu, N., Erik, G., Misir, D. S., İlhan, S., Ok, M., Altuntaş, C., Özsandıkçı, U., Büyükdeveci, F., Kaya, T., Cebeci, A., Saltan, A. N., Haşimoğlu, A., Firidin, Ş. & Özdemir, M. D. 2022. Length-weight relationships of 28 fish species caught from demersal trawl survey in the Middle Black Sea, Turkey. Turkish Journal of Zoology. <https://doi.org/10.3906/zoo-2109-21>

Dapp, DR., Walker, T. I., Huveneers, C. & Reina, R. D. 2016. Respiratory mode and gear type are important determinants of elasmobranch immediate and post-release mortality. Fish Fish 17: 507–524.

Davidson, L. N. K., Krawchuk, M. A. & Dulvy, N. K. 2016. Why have global shark and ray landings declined: improved management or overfishing? Fish Fish. 17, 438–458.

Davis B & Worm B. The international plan of action for sharks: how does national implementation measure up? Mar Policy 2013;38: 312–320.

Dell’Apa, A., Cudney-Burch, J., Kimmel, D.G. & Rulifson, R.A. 2014. Sexual segregation of spiny dogfish in fishery-dependent surveys in cape cod, massachusetts: potential management benefits. Trans. Am. Fish. Soc. 143, 833–844. <http://dx.doi.org/10.1080/00028487.2013.869257>.

Dell’Apa, A., Pennino, Maria G., Bonzek & Christopher F. 2017. Modeling the habitat distribution of spiny dogfish (*Squalus acanthias*), by sex. In: Coastal Waters of the Northeastern United States. VIMS Articles. 545. <https://scholarworks.wm.edu/vimsarticles/545>

Demirel, N., Zengin, M. & Ulman, A. 2020. First Large-Scale Eastern Mediterranean and Black Sea Stock Assessment Reveals a Dramatic Decline. Front. Mar. Sci. 7:103. doi: 10.3389/fmars.2020.00103

Demirhan, S. A. & Seyhan, K. 2006. Seasonality of reproduction and embryonic growth of spiny dogfish (*Squalus acanthias* L., 1758) in the eastern Black Sea. Turkish J. Zool. 30, 433–443.

Demirhan, S.A., K. Seyhan & N. Basuta. 2007. Dietary overlap in spiny dogfish (*Squalus acanthias*) and thornback ray (*Raja clavata*) in the south-eastern Black Sea. Ekoloji 62: 1-8.

Demirhan, S. A. & Seyhan, K. 2007a. Maturity and fecundity of spiny dogfish (*Squalus acanthias* L., 1758) in the Eastern Black Sea. Turkish J. Zool. 31, 301–308.

Demirhan, S. & Seyhan, K. 2007b. Life History of Spiny Dogfish, *Squalus acanthias*. (London, 1758), in the Southern Black Sea, Fish. Res., vol. 85, no. 1, pp. 210–216.

Delaval, A., Wagner, C. I., Schwanck, T., Wood, F. R., Jones, C. S., Hoarau, G., & Noble, L. R. 2021. Endangered Coastal Elasmobranchs of the North-East Atlantic. In Reference Module in Earth Systems and Environmental Sciences Elsevier. <https://doi.org/10.1016/B978-0-12-821139-7.00094-5>

Dulvy, N.K., Fowler, S.L., Musick, J.A., et al. 2014. Extinction risk and conservation of the world’s sharks and rays. eLife 3, e00590–e00624.

Düzgüneş, E., Okumus, I., Feyzioglu, M. & Sivri, N., 2005. Population parameters of picked dogfish, *Squalus acanthias* from the Turkish Black Sea coast and its commercial exploitation in Turkey. In: Basusta, N., Keskin, Ç., Serena, F., Seret, B. (Eds.), Proceedings of the International Workshop on Mediterranean Cartilaginous Fish with Emphasis on Southern and Eastern Mediterranean. Istanbul. pp. 1–9.

EAFA. 2020. Executive Agency for Fisheries and Aquacultures, Republic of Bulgaria. “Bulgarian Annual Report on the efforts in 2019 to achieve a sustainable balance between fishing capacity and fishing opportunities.” 42 pages.

Ellis, J.R., M.G. Pawson, & S.E. Shackley. 1996. The comparative feeding ecology of six species of shark and four species of ray (Elasmobranchii) in the north-east Atlantic. *J. Mar. Biol. Ass. U.K.* 76:89-106.

Ellis, J. R., Soldo, A., Dureuil, M., & Fordham, S. V. 2015. *Squalus acanthias*. The IUCN Red List of Threatened Species 2015.

Ellis, J. R., McCully Phillips, S. R., & Poisson, F. 2017. A review of capture and post-release mortality of elasmobranchs. *Journal of Fish Biology*, 90, 653–722.

Fakioğlu, Y. E., Özbilgin, H., Gökçe, G. & Herrmann, B. 2022. Effect of ground gear modification on bycatch of rays in Mediterranean bottom trawl fishery. *Ocean and Coastal Management*. <https://doi.org/10.1016/j.ocecoaman.2022.106134>

FAO. 2020. The State of Mediterranean and Black Sea Fisheries (2020). General Fisheries Commission for the Mediterranean. Rome. <https://doi.org/10.4060/cb2429en>

Filiz, H. & Togulga, M. 2002. Commercial elasmobranch species in Turkey’s waters, their Fisheries and Management. In: Proceedings of IV. National Conference on Turkey’s Coastal and Marine Areas 2: 5-8 (in Turkish).

Finucci, B., Cheok, J., Chiaramonte, G.E., Cotton, C.F., Dulvy, N.K., Kulka, D.W., Neat, F.C., Pacoureau, N., Rigby, C.L., Tanaka, S. & Walker, T.I. 2020. *Squalus acanthias*. The IUCN Red List of Threatened Species 2020: e.T91209505A124551959. <https://dx.doi.org/10.2305/IUCN.UK.2020-3.RLTS.T91209505A124551959.en>

Fordham S, Fowler SL, Coelho R, Goldman KJ & Francis M. 2006. *Squalus acanthias*. In: IUCN 2009. IUCN Red List of Threatened Species. Version 2009.2. Available from: <http://www.iucnredlist.org>

Fowler, S.L. 2012. First meeting of the signatories to the Memorandum of Understanding on the conservation of migratory sharks. In: Background Paper on the Conservation Status of Migratory Sharks. Bonn, Germany, 24–27 September Agenda Item 7, 26 pp.

Fowler, S. 2014. The Conservation Status of Migratory Sharks UNEP/CMS Secretariat, Bonn, Germany. 30 pages.

GFCM. 2012. General Fisheries Commission for the Mediterranean. Report of the SCSA Working Group on Stock Assessment of Demersal Species Split, Croatia, 5-9 November 2012

GFCM. 2014. Stock Assessment in the Black Sea. In: Report of the Second Meeting of the Subregional Group on Stock Assessment in the Black Sea (SGSABS) Constanta, Romania, 10–12 November 2014.

GFCM. 2021a. General Fisheries Commission for the Mediterranean (GFCM). Stock Assessment in the Black Sea. In: Report of the Seventh Meeting of the Subregional Group on Stock Assessment in the Black Sea (SGSABS) Online, 12–16 July 2021

GFCM. 2021b. General Fisheries Commission for the Mediterranean (GFCM). Working Group on the Black Sea (WGBS). Seventh meeting of the WGBS. Burgas, Bulgaria.

Gibson, C., Valenti, S.V., Fordham, S.V. & Fowler, S.L. 2008. The Conservation of Northeast Atlantic Chondrichthyans: Report of the IUCN Shark Specialist Group Northeast Atlantic Red List Workshop. viii + 76pp

Hjertnes, P. O. 1980. The Spurdog in the North Sea area; the Norwegian fishery and observations on changes in migration pattern. ICES CM Doc, No. 1980/H:60.

IFR. 2017. Institute of Fish Resources (IFR). Report of Bottom Trawl Surveys in The Bulgarian Black Sea Area Spring 2017. Varna, Agricultural Academy p.44

SJ Jorgensen, F Micheli, TD White, KS Van Houtan, J Alfaro-Shigueto, S Andrzejczek, NS Arnoldi, JK Baum, B Block, GL Britten, C Butner, S Caballero, D Cardeñosa, TK Chapple, S Clarke, E Cortés, NK Dulvy, et al. 2022. Emergent research and priorities for shark and ray conservation. *Endangered Species Research*, 47: 171

Ketchen, K.S. 1986. The Spiny Dogfish (*Squalus acanthias*) in the northeast Pacific and a history of its utilization. Canadian Special Publication of Fisheries and Aquatic Sciences. 88, 78 pp.

Kelly ML, Collin SP, Hemmi JM & Lesku JA. 2019. Evidence for sleep in sharks and rays: behavioural, physiological, and evolutionary considerations. *Brain Behav Evol* 94:37-50.

Kirnosova, I.P. 1989. Reproduction of spiny dogfish, *Squalus acanthias*, in the Black Sea. *Journal of Ichthyology*, 29: 21-26.

Kirnosova, I.P., Lushnicova, V.P. 1990. Feeding and food requirements of picked dogfish (*Squalus acanthias* L.). Biological resources of the black sea. Collected papers – USsr, moscow: VNIRO. pp. 45–57, (In Russian).

Kutaygil, N. & Bilecik. N. 1998. Studies on a shark species, picked dogfish (*Squalus acanthias* L.) distributed along the Anatolian littoral zones in the Black Sea TC. Tarım ve Köyişleri Bak. Su Ürünleri Araş. Enst. Yayını, No. 2, Bodrum, 71 p. (in Turkish).

Lack, M. 2006. Conservation of Spiny Dogfish *Squalus acanthias*: A Role for CITES? TRAFFIC Oceania.

Mandelman, J. W. & M. A. Farrington. 2007. The estimated short-term discard mortality of a trawled elasmobranch, the spiny dogfish (*Squalus acanthias*). *Fish. Res.* 83:238–245.

Maximov V., S. Nicolaev, G. Radu & I. Staicu. 2008. Estimation of growing parameters for main demersal fish species in the Romanian Marine Area. *Cercetări marine, (Recherches Marines)*, 37:p. 289-304.

Maximov V., S. Nicolaev, G. Radu, T. Zaharia & G.M. Popescu. 2010. The sustainable management of the turbot *Psetta maxima maeotica* L., resources the Romanian Black Sea littoral; Simposiunul Internațional Protecția și Gestionarea Durabilă a ecosistemului Mării Negre, Imperativ al Mileniului trei, Ediția a IV-a, I.N.C.D.M. "Grigore Antipa", 29-30 octombrie 2009, Constanta, România (in print - Cercetări marine / Recherches Marines, nr. 39).

Maximov, V., Nicolaev, S., Anton, E., Radu, G., Țiganov, G., Danilov, C., Nenciu, M. & Galațchi, M. 2018. Dynamics of fish and marine mammal populations at the Romanian Black Sea coast in the

past 10 years and their evolution trends. *Revista Cercetări Mar. - Revue Recherches Mar. - Mar. Res. J* 48 (1), 26–49.

Ovegård, M., Högvall, J., Ovegård, M., Wikström, A. & Wennhage, H. 2022. Previously undocumented relationship between spiny dogfish *Squalus acanthias* and juvenile Atlantic horse mackerel *Trachurus trachurus* revealed by stereo-BRUV. *Environmental biology of fishes*, 105, 453-458. <https://doi.org/10.1007/s10641-022-01239-3>

Radu G., E. Anton, M. Golumbeanu, V. Raykov, M. Yankova, M. Panayotova, V. Shlyahov & M. Zengin. 2010a. Evolution and state of the main Black Sea commercial fish species correlated with ecological conditions and fishing effort. *Journal of Ecology and Environmental Protection – JEPE*, vol. 12, No. 2, p. 549-558, <http://www.jepe.gr>, ISSN 1311-5065

Radu, G., Anton, E., Raykov, V., Yankova, M. & Panayotova, M. 2010b. Sprat and turbot fisheries in the Bulgarian and Romanian Black Sea areas. *International Multidisciplinary Scientific Geoconference and Expo SGEM*, 20 - 26 June 2010, Albena, Bulgaria.

Radu, G., Maximov, V. & Anton, E. 2011. Research on the status of the dogfish (*Squalus acanthias*) population in the Romanian marine area. Summary data on dogfish at black sea level. In: *FAO/GFCM Workshop on Stock Assessment of Selected Species of Elasmobranchs in the GFCM Area*. Brussels, Belgium, 12-16 December.

Radu, G. 2012. Summary data on the status of the Spiny dogfish (*Squalus acanthias*) population in the Romanian marine area. *CMS/Sharks/MOS1/Inf.5.1*: 12pp.

Radu, G. 2016. Stock assessment form version 1.0, GFCM. p. 64, https://gfcmsitestorage.blob.core.windows.net/documents/SAC/SAFs/DemersalSpecies/2016/DGS_GSA_29_2016_BGR_GEO_ROU_RUS_TUR_UKR.pdf

Rulifson, R. A. 2007. Spiny dogfish mortality induced by gill-net and trawl capture and tag and release. *North Am. J. Fish. Management* 27:279-285.

Sagarese, S. R., M. G. Frisk, T. J. Miller, K. A. Sosebee, J. A. Musick & P. J. Rago. 2014. Influence of environmental, spatial, and ontogenetic variables on habitat selection and management of Spiny Dogfish in the northeast (US) shelf large marine ecosystem. *Canadian Journal of Fisheries and Aquatic Sciences* 71:567–580

Sagarese S. R., Frisk M. G., Cerrato R. M., Sosebee K. A., Musick J. A. & Rago P. J. 2016. Diel variations in survey catch rates and survey catchability of spiny dogfish and their pelagic prey in the Northeast U.S. Continental Shelf Marine Ecosystem. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science*, 8: 244–262.

Saygu, I. & Deval, M.C. 2014. The post-release survival of two skate species discarded by bottom trawl fisheries in Antalya Bay, Eastern Mediterranean. *Turkish Journal of Fisheries and Aquatic Sciences* 14: 947-953.

Serena, F., Abella, A. J., Bargnesi, F., Barone, M., Colloca, F., Ferretti, F., Fiorentino, F., Jenrette & S. Moro, J. 2020. Species diversity, taxonomy and distribution of Chondrichthyes in the Mediterranean and Black Sea, *The European Zoological Journal*, 87:1,497-536, DOI: 10.1080/24750263.2020.1805518

Shark Trust. 2010. *An Illustrated Compendium of Sharks, Skates, Rays and Chimaera*. Chapter 1: The British Isles and Northeast Atlantic. Part 2: Sharks.

Shepherd, T., Page, F. & MacDonald, B. 2002. Length and sex-specific associations between spiny dogfish (*Squalus acanthias*) and hydrographic variables in the Bay of Fundy and Scotian Shelf. *Fisheries Oceanography*, 11: 78-79.

Shlyakhov, V.A. & Daskalov, G.M. 2008. Chapter 9. The state of marine living resources. In T. Oguz, ed. *State of the environment of the Black Sea (2001-2006/7)*, pp. 321–364. Istanbul, Commission on the Protection of the Black Sea Against Pollution (BSC).

Smith C, Papadopoulou N, Sevastou K, Franco A, Teixeira H, Piroddi C, Katsanevakis S, Fürhaupter K, Beauchard O, Cochrane S, Ramsvatn S, et al. 2014. Report on identification of keystone species and processes across regional seas. Deliverable 6.1, DEVOTES Project. 105 pp + 1 Annex.

STECF. 2011. Assessment of Black Sea Stocks. Scientific and Technical Research series STECF-OWP-11-06, Scientific, Technical and Economic Committee for Fisheries (STECF) Luxembourg. 213 p.

Sulikowski, J. A., B. Galuardi, W. Buble, N. B. Furey, W. B. Driggers, G. W. Ingram, & P. C. W. Tsang. 2010. Use of satellite tags to reveal the movements of Spiny Dogfish *Squalus acanthias* in the western North Atlantic Ocean. *Marine Ecology Progress Series* 418:249–254.

Svetovidov, A.N. 1964. Handbook of the Fauna of the USSR, Fish of Black Sea. Izdatel'stvo Nauka, Moscow, p. 550.

Şahin, C., Ceylan, Y., & Kalaycı, F. 2015. Purse Seine Fishery Discards on the Black Sea Coasts of Turkey. *Turkish Journal of Fisheries and Aquatic Sciences*, 15, 81-91. http://doi.org/10.4194/1303-2712-v15_1_09

Toşoiu, A., Galaţchi, M., Radu, G. & Spînu, A.-D. 2016. Characterization of the populations of the main demersal commercial fish species in the Romanian Black Sea Area. *Revista Cercetări Mar. - Revue Recherches Mar. - Mar. Res. J.* 46 (1), 109–127.

Tserkova, F. & Petrova, D. 2015. Population parameters of the picked dogfish (*Squalus acanthias* L.) from Bulgarian black sea coast in 2014 (2015). In: 12th International Conference on the Mediterranean Coastal Environment, MEDCOAST 2015, Vol. 1. pp. 443–450.

Tserkova, F., Mihneva, V., Pavlova, E. & Penchev, P. 2022. Size and sex structure variations of picked dogfish (*Squalus acanthias*, Linnaeus, 1758) (Chondrichthyes - Elasmobranchii) in the Western Black Sea. *Regional Studies in Marine Science*, 102298. <https://doi.org/10.1016/J.RSMA.2022.102298>

Wood, C. C., Ketchen, K. S. & Beamish, R. J. 1979. Population dynamics of spiny dogfish (*Squalus acanthias*) in British Columbia waters. *J. Fish. Res. Board Can.*, 36 (6): 647–656.

Wourms, J.P. 1977. Reproduction and development in chondrichthyan fishes. *American Zoology*, 17: 379- 410. doi: 10.1093/icb/17.2.379.

Yıldız, T., & Karakulak F.S. 2017. Discards in bottom-trawl fishery in the western Black Sea (Turkey). *Journal of Applied Ichthyology*, 33 (4): 689–698. doi: 10.1111/jai.13362

Zengin, M., Gümüş, A., Süer, S., Van, A., Özcan Akpınar, İ, & Dağtekin, M. 2014. “Discard trends of bottom trawl fishery along the Samsun Shelf Area of the Turkish Black Sea coast,” in *Proceedings of the Abstracts Books of ICES Symposium - Effects of Fishing on Benthic Fauna, Habitat and Ecosystem Function*, Tromso.

Concept note for a pilot study on non-indigenous species in the eastern Mediterranean

Background

Stemming from the priorities of the Regional Sea Conventions (RSCs), in 2017 and 2018, the GFCM and UN Environment/MAP Secretariats joint efforts to establish a Sub-Regional Pilot Study for the Eastern Mediterranean on Non-Indigenous Species (NIS) in Relation to Fisheries, to revise available information from all sources and to analyse it in a harmonized way using simple indicators. Following discussions held at the GFCM subregional committees in 2018, where the central and western subregions also expressed an interest in participating in a similar monitoring programme, the GFCM Scientific Advisory Committee for Fisheries (SAC) endorsed the subregional monitoring plan for NIS in relation to fisheries at its twentieth session in 2018, to be applied in all subregions.

To further the work, at its twenty-first session in 2019, the SAC invited countries to share information on ongoing activities related to the monitoring and/or management of NIS towards advancing on the creation of a NIS observatory in the Mediterranean Sea. Acknowledging the growing prevalence of NIS in the Mediterranean, in 2021 the twenty-second SAC agreed on the need to launch an in-depth reflection as well as a dedicated research programme to, *inter alia*, consolidate an observatory with the aim to integrate all available information, foster engagement between relevant actors at the Mediterranean level, improve the understanding of the interactions of NIS with receiving ecosystems, and investigate effective management through fisheries management tools and/or nature-based solutions.

Finally, Target 1 (Fisheries and Ecosystems) of the GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea aims to achieve productive sustainable fisheries and contribute to ensuring healthy ecosystems by tackling the sustainability of fisheries from a broad perspective, integrating social, economic and environmental principles, with the objective to reach exploitation at maximum sustainable yield while addressing the conservation of biodiversity. In the specific case of NIS, the achievement of Target 1 is supported by an expected output (Output 1.4) that seeks to prevent and mitigate the threats to fisheries and the marine environment, including plastic pollution, climate change and the expansion of non-indigenous species. In particular, the first four items of the action plan of Output 1.4 read as follows:

- Continue the work initiated towards the establishment of an integrated monitoring platform and monitoring plan for non-indigenous species (NIS) in the eastern Mediterranean and expand it to other GFCM subregions.
- Collect data on NIS, including through local ecological knowledge (LEK) studies and participatory mapping.
- Starting from the eastern Mediterranean, experiment fisheries management actions, including within marine protected areas, to understand and mitigate the impacts of NIS on receiving ecosystems (including native commercial species), with the aim of maintaining their ecological integrity and resilience.
- Organize dedicated expert meetings to compile and analyse data on NIS.

Additional work in NIS within the GFCM concernsthe research programme on the two NIS species of blue crabs, i.e. *Callinectes sapidus* and *Portunus segnis*, in the Mediterranean Sea, following the adoption of the final Concept Note by the Commission in 2021 in response to Recommendation GFCM/42/2018/7 on a regional research programme on blue crab in the Mediterranean Sea. Eleven

countries have adhered and four Eastern Mediterranean countries, namely Cyprus, Egypt, Greece and Türkiye, were among the partners which nominated focal points. The official launch is planned for 2022. The two research programmes are foreseen to interact and exchange data and information.

Elements

In light of the above elements, and considering both the extensive information collected and foreseen to be collected through the GFCM monitoring activities (e.g. surveys-at-sea, incidental catch of vulnerable species and discards monitoring programmes), as well as the important results emerging from a five-day training course on the application of the LEK-1 protocol (local ecological knowledge to reconstruct historical changes) in the eastern Mediterranean organized by the FAO-Eastmed project in 2021 that foresaw practical field data collection and a one-day session on data exploration, elaboration and visualization, the development of a research programme to advance and complement the work already done is proposed, including the following basic elements:

Work package 1 Coordination, networking, dissemination and sustainability

1.1 The objective of WP1 is to ensure the successful completion of the project goals on time within the limits defined by the budgetary framework and quality standards. WP1 will oversee the administrative management and ensure scientific/technical coordination and monitoring. The dedicated team will oversee:

- administration and coordination of available human and budgetary resources;
- monitoring and control of the workplan;
- preparation of detailed workplans;
- coordination and monitoring of the work among the WP leaders;
- compilation and issuing of reports;
- arrangement of project-level meetings and issuing of the minutes; and
- a clear and swift communication between the research programme and the GFCM Secretariat.

1.2 A network of scientific experts and key stakeholders from each participating country will be created under the coordination of the GFCM Secretariat to ensure cross-border and long-lasting scientific collaboration in the Eastern Mediterranean, through the involvement of all concerned parties. This will allow testing and implementing harmonized actions, aimed at regularly monitoring and managing the issue of NIS, according to the tasks described in WPs 2, 3, 4 and 5. The participation of experts (both scientific and from administrations) in the project network will be formalized and consolidated – at a later stage – within a permanent observatory on NIS in the Eastern Mediterranean, with the potential to be extended to other subregions.

1.3 Dissemination of project outcomes and outputs will be assured within the newly created network, including towards stakeholders and the general public. This will be achieved by:

- presenting the initiatives in concerned fora;
- using GFCM dissemination channels;

- creating a dedicated webpage/portal that will show the results of the WP3 on LEK and report already existing digitalized information (e.g. Marine Mediterranean Invasive Alien Species database [MAMIAS], <http://www.mamias.org/>);
- implementating an analysis to assess the feasibility of a full harmonization and centralization of databases from different sources abiding to the principles of fair and open access, including the evaluation of costs and times needed;
- producing communication materials, including a short video documentary on LEK activities in the eastern Mediterranean, to be used for dissemination activities and stakeholder engagement. This includes the preparation of a script, the production of footage and editing and post-production; and
- organizing restitution meeting(s).

1.4 The sustainability of the project's outcomes will be ensured through the consolidation of the webpage/portal integrating tools and accommodating data, videos and other materials aimed at supporting the use of LEK-2 protocol on interviewing local experts to monitor climate-related changes on a regular basis (see WP3). This platform will facilitate methodological transfer within the network of scientific experts building the basis for the establishment of a permanent observatory on NIS in the Eastern Mediterranean.

Work Package 2 Collation and analysis of available information, and possible implementation of country-based pilot studies

2.1 Collation and analysis of all available information on NIS stemming from monitoring activities in the Eastern Mediterranean, including from:

- grey and key scientific literature;
- expert knowledge on the status of target species, e.g. from GFCM stock assessment working groups;
- surveys-at-sea, e.g. from GFCM and European surveys-at-sea;
- catches and landings;
- DCRF database;
- discards, e.g. from the GFCM discards monitoring programme;
- incidental catch of vulnerable species monitoring programme;
- local ecological knowledge (LEK);
- other sources of information, e.g. documented by citizens; and
- research programme on blue crabs in the Mediterranean, where relevant.

Results of other initiatives, including the study on DNA metabarcoding to investigate biotic aspects of fisheries catches, are to be executed by the GFCM in collaboration with the Dipartimento di Biologia of the Università degli Studi di Roma Tor Vergata. The study on DNA metabarcoding aims at assessing the accuracy of the eDNA metabarcoding approach to reconstruct the composition of catches

obtained from bottom-trawl fishing vessels. 3D-printed hollow perforated spherical probes (called “Metaprobes”) are placed inside the fishing nets, and work as a container for rolls of gauze that capture DNA from the surrounding environment during fishing operations. This study is based on the already demonstrated community composition inferred from eDNA metabarcoding of the dense water draining from the net codend (“Slush”), which largely match those retrieved by visual sorting of the catches, both qualitatively and quantitatively. In light of these promising results, this activity may provide further details on Eastern Mediterranean species assemblages, including NIS, and serve as an early detection system for new species and significant changes in NIS abundance.

2.2 Based on the information collated (WP1), preliminary results of the application of LEK protocols (WP3.1), and national priorities, country-specific case studies could be designed to address specific issues, including fisheries management actions, including within marine protected areas, to understand and mitigate the impacts of NIS on receiving ecosystems (including native commercial species).

Work Package 3 Testing LEK protocols over the span of a whole year in eastern Mediterranean countries to set an effective and long-term participatory strategy on NIS monitoring, in collaboration with local fishers and relevant stakeholders.

3.1 Implementing the LEK-1 protocol to reconstruct historical changes in species distribution and abundance at the local, national and subregional scale

- 3.1.1 Adaptation of the LEK protocol to Eastern Mediterranean specificities, including the definition of the species to be investigated. This will be done in a specific workshop organized by the GFCM Secretariat with all the participating parties.
- 3.1.2 Training: the LEK-1 methodology will be transferred to the network of experts and scientists established and coordinated through the WP1. The training will be accomplished through theoretical and practical sessions (including guided field surveys and assisted data analysis). A complete toolkit with all the training material (LEK-1 booklet, video-tutorials, materials to carry out the interviews, data reporting, and Excel templates for data visualization) will be made available.
- 3.1.3 Implementation of LEK-1 in the eastern Mediterranean: expert scientists will be engaged in the implementation of LEK-1 protocol at the local level, in collaboration with local fishers in each participating country.
- 3.1.4 Data collection: Data will be collected by each team according to a standard procedure to be used at both local/national and subregional scale. Finally, data will be collated in a single collaborative database.
- 3.1.5 Data analysis by country and by subregion: The whole dataset will be employed to provide results to be presented at both the local–national and subregional level. Further uses of the dataset are related to feedbacks to be sent to local stakeholders, according to the dissemination activities described in WP1.2.

3.2 Setting and testing the LEK-2 methodology to monitor climate-related changes on a regular basis, with a particular application on NIS

- Consolidation of the monitoring strategy and protocol; this will be done in a specific workshop organized by the GFCM Secretariat with all the participating parties;
- development and dissemination of training material;

- final training on LEK-2 protocol;
- implementation of LEK-2 in the participating countries, data collection and validation; and
- collation of the collaborative LEK-2 database and data elaboration.

3.3 Consolidating a LEK monitoring strategy in the Eastern Mediterranean.

- Final workshop: the results of both LEK-1 and LEK-2 will be presented by each participating country in a specific workshop organized by the GFCM Secretariat. During the same meeting, the coordination team will present the results obtained at the subregional level. Potential challenges and lessons learned will be discussed among all the partners.

Work Package 4 Data analysis and reporting

The results of WP2 and WP3.1 will be jointly analysed to provide summaries of indicators by species and distribution/hotspot maps over time.

4.1 Use the collated data to develop species distribution and hotspot analysis, for prioritization of actions.

4.2 The results of the LEK activities, along with the feedback of the final workshop, will be summarized in a technical paper on the LEK monitoring strategy for NIS in the eastern Mediterranean.

Work package 5 Proposal of technical recommendations for management by species

5.1 Development of Technical Recommendations for Species Management, with specific highlights for country cases.

5.2 Consolidation and finalization of the final structure of the network of experts (scientific and administration) created by the project into a Mediterranean observatory: the constitution of a permanent observatory will ensure Mediterranean-wide coordination and mutual assistance among the affiliates.

Implementation

The work will be guided by previous work done, notably by the subregional monitoring plan on NIS in relation to fisheries.

Proposed timeline:

- Twenty-third session of the SAC (June 2022): development and endorsement of a more detailed concept note;
- June – November 2022: further development of concept note, definition of a budget and consultations with interested countries;
- November 2022 – February 2023: planning of the work, appointment of a coordinator and establishment of the teams at a country level;
- March 2023 – February 2025: execution of the work;
- April-June 2024: presentation of preliminary results at the SRC-EM and the SAC;

- February – April 2025: finalization of the report; and
- April-June 2025: presentation of final results at the SRC-EM and the SAC.

Provisional Gantt Chart

WP/Task	YEAR 1	YEAR 2	YEAR 3
WP1.1 Administrative	█	█	█
WP1.2 Network	█	█	█
WP1.3 Dissemination	█	█	█
WP1.4 Observatory	█	█	█
WP2.1 Collation and Analysis	█	█	█
WP2.2 LEK Protocol	█	█	█
WP3.1 Long-term Monitoring	█	█	█
WP3.2 LEK 2 Methodology	█	█	█
WP3.3 Consolidating a LEK monitoring strategy	█	█	█
WP4 Data analysis and reporting	█	█	█
WP5 Technical recommendations	█	█	█

Provisional Budget

Cat. No.	Items Description	Unit of measurement	Qty (no. of units)	Unit Cost	Total Cost
1	HUMAN RESOURCE INPUTS (Staff time and consultants...)				
Consultant 1	Activity 1.3	Days	60	300	18 000
Consultant 2	Activity 2.1		60	300	18 000
Ernesto	WP 3		75	350	26 250
Consultant 3	WP 3		75	250	18 750
Consultant 4	WP 3		75	200	15 000
Focal Points	Activity 1.2	Focal person	8	5000	40 000
Subtotal					136 000
2	EXPENDABLE EQUIPMENT ANCILLARY TO SERVICES				
Website hosting					10 000
Communication material					10 000
Others					10 000
Subtotal					30 000
3	TRAVEL (Flights, inland travel...)				
Workshop	Activity 3.1.1	Persons	30	1 000	30 000
Workshop	Activity 3.3	Persons	30	1 000	30 000
Participation to concerned for a	Activity 3.1	Persons	10	1 000	10 000
Visiting 8 countries	WP 3	Persons x countries	2 x 8	1 000	16 000
Subtotal					86 000
4	ACCOMMODATION (board and lodging costs...)				
Workshop	Activity 3.1.1	Persons x days	30 x 5	200	30 000
Workshop	Activity 3.3	persons x days	30 x 3	200	18 000
Participation to concerned for a	Activity 3.1	persons x days	10 x 1	200	2 000
Visiting 8 countries	WP 3	Persons x countries x days	2 x 8 x 3	200	9 600
Subtotal					59 600
GRAND TOTAL					311 600

Concept note for a pilot study on sturgeon in the Black Sea

Background

The order of Acipenseriformes, composed of sturgeons (Acipenseridae) and paddlefishes (Polyodontidae), has been recognized as being highly vulnerable and adversely affected by a variety of threats: wildlife trafficking (Jahrl *et al.*, 2021), blockage on their migration path (Council of Europe 2018), commercial fishery (Eremeev and Zuyev, 2007) through bycatch (Jahrl and Rosenthal, 2017; Kasapoğlu and Düzgüneş, 2014) and illegal, unreported and unregulated (IUU) fishing (Öztürk, 2013; Sandu *et al.*, 2013; Belova, 2015) as well as pollution (Jarić *et al.*, 2011; Roy *et al.*, 2018). Twenty-five out of twenty-seven identified species have been listed by the International Union for the Conservation of Nature (IUCN), indicating that the sturgeons worldwide are one of the most imperilled taxa (Haxton and Cano, 2016). Several species of sturgeon (Acipenseridae) are present in the Black Sea basin (Table 1) and, depending on the species, they are classified as critically endangered, endangered, or vulnerable species by the IUCN. The mitigation of potential impacts of marine fisheries on these species has been long overdue. Sturgeon fishing is no longer permitted in any of the countries bordering the Black Sea. However, sturgeons are still exposed to extensive illegal fishing and poaching, particularly in the Black Sea, due to high demand for black caviar, which is produced from the unfertilized roe of female individuals (Billard and Lecointre, 2001; Pikitch *et al.*, 2005). When considered from an international point of view, one of the measures that have been taken was that the United States of America banned the import of beluga caviar from the six Black Sea riparian countries in 2005. And yet, today, wild-captured sturgeons are still considered worldwide as excellent candidates for aquaculture due to their high commercial value (caviar production and meat).

With this in mind, in 2021, the ninth meeting of the Working Group on the Black Sea (WGBS) in 2021 noted the extremely critical situation of these diadromous species, whose management was significantly complicated by its peculiar life cycle. The WGBS suggested the need for a pilot project to be conducted under the framework of the BlackSea4Fish project, in collaboration with all relevant partners and in line with the conservation needs at national, regional and international level, according to a set of general terms of reference. The proposal was endorsed by the 44th annual session of the GFCM (2021), which adopted Resolution GFCM/44/2021/5 on the mitigation of fisheries impacts for the conservation of sturgeons in the Black Sea (geographical subarea 29) with the aim of considering, if appropriate, the adoption of further measures aiming to mitigate fisheries impacts at the forty-sixth session of the GFCM in 2023, based on the outcomes of the pilot project. This document provides guidelines for the implementation of the project, based on the terms of reference outlined in Resolution GFCM/44/2021/5.

Guidelines for the implementation of the pilot project

The initial proposed list of sturgeon species to be considered in this pilot project are listed and described in Table 1.

Work package 1: Networking and awareness-raising

This WP is a transversal work package whose objectives are to create a network of scientific experts and raise awareness on the conservation status and critical issues related to the marine part of the sturgeon life-cycle.

Task 1: Creating networks

Objective: Creation of a network, under the coordination of the BlackSea4Fish project and the GFCM Secretariat, of scientific experts working on sturgeons on the Black Sea, and in Europe more widely. To ensure cross-border and long-lasting scientific collaboration in the Black Sea and the creation of a database of existing scientific projects and activities related to sturgeons in the Black Sea. This Task will start with a webinar launching the activity.

Task 2: Awareness-raising and fisher engagement

Objective: This task will cover all awareness-raising needs of the pilot project through targeted actions on specific needs. In particular, it will conduct awareness-raising campaigns for fishers to facilitate increased collaboration and awareness towards combating IUU fishing, among others.

Work package 2: Collation of information

The objective of this WP is to collate all information available, including on:

- the biology, ecology and distribution of sturgeon species relevant to the Black Sea;
- the interaction with marine fisheries, including information from each Black Sea riparian country on the fishing gear and methods involved in the bycatch of sturgeons; and
- existing legislation.

Task 1: Collation of existing information

Objective: Collation of existing information from relevant scientific literature, research projects, surveys-at-sea, monitoring programmes and national and international legislation in the Black Sea, in consultation with national authorities and the network of scientific experts created in WP1, Task 1. This task will result in a literature review and the inclusion of the relevant information in the Black Sea scientific database.

Task 2: Exploring fisher knowledge

Objective: This task will foresee a local ecological knowledge (LEK) study to gather complementary information from fishers on issues such as bycatch, distribution, seasonality and perceived IUU.

Work package 3: Analysis and proposed future actions




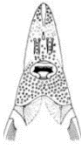




This WP will be devoted to an integrated analysis of all the information gathered under WPs 1 and 2, towards identifying potential management measures for the marine part of the sturgeon life-cycle as well as gaps in knowledge and proposing actions to fill the gaps. The final outcome of this WP will be the formulation of a plan for the future management of these endangered species in the Black Sea. Potential outcomes include:

- developing more selective types of fishing gear equipped with potential bycatch reduction devices by exploiting the species' behaviour patterns to the relevant fishing practices;
- mapping bycatch hotspots; and
- training fishers and fisheries observers on how to identify and release the species safely when encountered.

Proposed timeline

The pilot project will be implemented between December 2022 and July 2023, with intermediate results presented at the WGBS in 2023 and final results presented at the WGBS in 2024 (see the workplan timeline below for details).

Table 1. Summarized description of the sturgeons utilizing marine part of the Black Sea (^Ciolac and Patriche [2005]; ^^ Babushkin *et al.* [1964] cited in Pirogovskii *et al.* [1989]; * Kozhin, [1964]; and **Vasil'eva and Vasil'ev [2021])

Species			Size (m)		Age (y)			Latest science-based proof of occurrence in the BS
Body	Snout	Name	Max	Mean	Max	♀	♂	
		<i>Acipenser gueldenstaedtii</i> Russian sturgeon	2.86 [^]	1.3-1.6	> 50	8-12 [^]	13-15 [^]	Maximov <i>et al.</i> , 2014 (Romania) Zengin <i>et al.</i> , 2013 (Türkiye) EC, 2020 (Bulgaria)
		<i>Acipenser sturio</i> European sturgeon	6	1.5-3	>60	7-9*	8-14*	EMBLAS, 2017 Kolman, 2011 (Georgia)
		<i>Acipenser stellatus</i> Stellate sturgeon	2.9	1.2-1.8	>35	4-7 [^]	8-10 [^]	Maximov <i>et al.</i> , 2014 (Romania) FAO, 2021 (Türkiye) EC, 2020 (Bulgaria)
		<i>Huso huso</i> Beluga sturgeon	6	2.2-3.5	118 [^]	11-14 [^]	16-18 [^]	Maximov <i>et al.</i> , 2014 (Romania) Zengin <i>et al.</i> , 2013 (Türkiye) EC, 2020 (Bulgaria)

* Rioni River (Black Sea: Georgia); ^Danube River (Black Sea: Bulgaria)

Workplan timeline of the pilot project

			Period (months)												
			2023/24												
WPs	Tasks	Partner(s) responsible	1	2	3	4	5	6	7	8	9	10	11	12	13
WP1: Networking and awareness-raising	Task1: Creating networks through a webinar	BlackSea4Fish project and the GFCM Secretariat	1												
	Task2: Awareness-raising and fisher engagement													11	
WP2: Collation of information	Task1: Collation of existing information				3										
	Task2: Exploring fisher knowledge													12	
WP3: Analysis and proposed future actions	Formulate a plan for the future management of sturgeons														2

References

Belova, G. 2015. Illegal Unreported and Unregulated Fishing In The Black Sea. International conference KNOWLEDGE-BASED ORGANIZATION,21(2) 408-412. <https://doi.org/10.1515/kbo-2015-0069>

Billard, R. & Lecointre, G. 2001. Biology and Conservation of the sturgeons and paddlefish. – Rev. Fish Biol. Fish. 10: 355-392.

Ciolac, A. & Patriche, N. 2005. Biological Aspects of Main Marine Migratory Sturgeons in Romanian Danube Rier. Applied Ecology and Environmental Resarch, 3: 101-106

Council of Europe. 2018. Pan-European Action Plan for Sturgeons. T-PVS/Inf (2018)6. Convention on the Conservation of European Wildlife and Natural Habitats. Standing Committee 38th meeting, 27–30 November 2018, Strasbourg

EC. 2020. European Commission (EC). Sustainable protection of lower Danube sturgeons by preventing and counteracting poaching and illegal wildlife trade (LIFE FOR DANUBE STURGEONS) LIFE15 GIE/AT/001004.

EMBLAS. 2017. National Pilot Monitoring studies and Joint open sea survey in Georgia, Russian Federation and Ukraine (Final report). In: Final scientific report in the frame of the EU/UNDP Project: Improving Environmental Monitoring in the Black Sea – Phase II (EMBLAS-II), ENPI/2013/313-169 (eds., Slobodnik, J., Alexandrov, B., Komorin, V., Mikaelyan, A., Guchmanidze, A., Arabidze, M., Korshenko, A., Moncheva, S.), December, 2017. p. 447–472. DG Environment. 2017. Reporting under Article 17 of the Habitats Directive: Explanatory notes and guidelines for the period 2013-2018. Brussels. Pp 188.

Eremeev, V. N. & Zuyev, G. V. 2007, Commercial fishery impact on the modern Black Sea: a review, Turkish Journal of Fisheries and Aquatic Sciences, 7:75-82.

FAO. 2021. Improving Knowledge and Strengthening Scientific Monitoring of Mediterranean and Black Sea Fisheries- MTF/INT/943/MUL Baby 26. Rome, Italy

GFCM. 2021 General Fisheries Commission for the Mediterranean (GFCM). Working Group on the Black Sea (WGBS). In: Report of the Seventh Meeting of the Subregional Group on Stock Assessment in the Black Sea (SGSABS) Burgas, Bulgaria. Online, 12–16 July 2021

Haxton, T.J. & Cano, T.M. 2016. A global perspective of fragmentation on a declining taxon the sturgeon (*Acipenseriformes*). *Endanger. Species Res.* 31 (1), 203–210. <https://doi.org/10.3354/esr00767>.

Jahrl, J. & Rosenthal, H. 2017. Marketing survey on illegal caviar trade in Bulgaria and Romania (A revised and expanded survey report) (p. 52) Norderstedt, Germany: World Sturgeon Conservation Society Special Publication n°8, Books on Demand.

Jahrl, J., Boner, M., Striebel, B. & Ludwig, A. 2021. Evidence for Trafficking of Critically Endangered Sturgeon in the Lower Danube Region. World Wildlife Fund, Final Report. pp 56.

Jjaric, I., Visnjic-Jeftic, Z., Cvijanovic, G., Gacic, Z., Jovanovic, L., Skoric, S. & Lenhardt, M. 2011. Determination of differential heavy metal and trace element accumulation in liver, gills, intestine and muscle of sterlet (*Acipenser ruthenus*) from the Danube River in Serbia by ICP-OES. *Microchem. J.* 98, 77–81.

Kasapoglu N & Duzgunes, E. 2014. Length-weight relationships of marine species caught by five gears from the Black Sea. *Mediterranean Marine Science*, 15 (1): 95-100

Kolman, R. 2011. European Sturgeon, *Acipenser sturio* in Georgia. In: Williot, P., Rochard, E., Desse-Berset, N., Kirschbaum, F., Gessner, J. (eds) *Biology and Conservation of the European Sturgeon Acipenser sturio* L. 1758. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-20611-5_17

Kozhin, NI. 1964. Sturgeon from USSR and their reproduction. *Trudy VNIRO* LII:21–58(in Russian)

V. Maximov, G. Tiganov, M. Paraschiv, M.I. Nenciu & T. Zaharia. 2014. Preliminary Data on the Monitoring of Sturgeon Species in Romanian Marine Waters. *J Environ Prot Ecol*, 15(3): 933-943.

Öztürk, B. 2013. Some remarks of Illegal, Unreported and Unregulated (IUU) fishing in Turkish part of the Black Sea. *Journal of Black Sea / Mediterranean Environment*, 19 (2), 256-267. Retrieved from <https://dergipark.org.tr/en/pub/jbme/issue/9833/121784>

Pikitch EK, Doukakis P, Laucks L, Chakrabarty P & Erickson DL. 2005. Status, trends and management of sturgeon and paddlefish fisheries. *Fish Fish* 6: 233– 265.

Pirogovskii, M.I., Sokolov, L.I. and Vasil'ev, V.P. 1989. *Huso huso* (Linnaeus, 1758). In: Holcık J. (ed). *The Freshwater Fishes of Europe*. Vol. I/II: General Introduction of Fishes. *Acipenseriformes*. Wiesbaden, AULA-Verlag. Pp. 295-344. In: Document Doc. 10.89; Prop. 10.65. 1997. Proposal to list all *Acipenseriformes* in Appendix II. Submitted by Germany and The United States of America.

Roy, N. K., Candelmo, A., DellaTorre, M., Chambers, R. C., Nádas, A., & Wirgin, I. 2018. Characterization of AHR2 and CYP1A expression in Atlantic sturgeon and shortnose sturgeon treated with coplanar PCBs and TCDD. *Aquatic toxicology* (Amsterdam, Netherlands), 197, 19–31.

Sandu, C., Reinartz, R. & Bloesch, J. 2013. “Sturgeon 2020”: A program for the protection and rehabilitation of Danube sturgeons. Danube Sturgeon Task Force (DSTF) & EU Strategy for the Danube River (EUSDR) Priority Area (PA) 6 – Biodiversity.

Vasil’eva, E.D. & Vasil’ev, V.P. 2021. Taxonomic Relations of Russian and Persian Sturgeons (genus *Acipenser*, Acipenseridae): an Updated Synthesis. *J. Ichthyol.* 61, 17–32. <https://doi.org/10.1134/S0032945221010173>

Zengin, M., Gümüş, A., Dağtekin, M. & Firidin, Ş. 2013. Biological data derived from sturgeon (*Acipenser stellatus*, *Acipenser gueldenstaedtii* and *Huso huso*) by-catch along the coasts of the Southern Black Sea (Turkey). *Turk. J. Fish. Aquat. Sci.* 13, 745–752.

Terms of reference and roadmaps for select activities

Appendix 26/A

Revised terms of reference for the Working Group on Small Scale Fisheries

The main objective of the Working Group on Small Scale Fisheries (WGSSF) is to support the implementation of the Regional Plan of Action for Small-Scale Fisheries in the Mediterranean and the Black Sea (RPOA-SSF) and relevant outputs of the GFCM 2030 Strategy for Sustainable Fisheries and Aquaculture in the Mediterranean and the Black Sea (GFCM 2030 Strategy) by coordinating technical, scientific and socioeconomic activities relating to SSF in order to fill the main data gaps relating to this sector, to produce advice for consideration and validation by the Scientific Advisory Committee on Fisheries (SAC) and the Working Group on the Black Sea (WGBS), and to support the sustainable management and development of small-scale fisheries within a Blue Transformation perspective. To this end, the WGSSF shall:

- Provide advice on the implementation of technical outputs of the RPOA-SSF and the GFCM 2030 Strategy, as well as support the implementation of relevant FAO instruments, such as the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) in the GFCM area of application.
- Provide guidance to the implementation of concrete and dedicated actions in the GFCM area of application, according to the priorities of the sector and in line with the main RPOA-SSF topics.
- Support efforts to better consider the SSF sector, particularly the RPOA-SSF objectives, within other technical work of the GFCM (e.g. work on recreational fisheries, climate change, interactions with vulnerable species, non-indigenous species, species-specific research programmes, etc.) as relevant.
- In particular, in line with the endorsed RPOA-SSF monitoring framework and priority actions, support the production of advice on:
 - the characterization of SSF;
 - improving data collection and stock assessment for priority species for SSF;
 - interactions between SSF and the marine environment, including the mitigation of the incidental catch of vulnerable species by SSF and the impacts of climate change on SSF;
 - best practices for participatory processes, including participatory data collection and participatory monitoring, control and surveillance;
 - enhancing SSF value chains, including minimum criteria for SSF landing sites; and
 - improving access for SSF to adequate social protection programmes.

**Terms of reference for an expert meeting on the management of small pelagics
in the Alboran Sea**

Taking into account the importance of small pelagic fisheries (mainly sardine across all the Alboran Sea and anchovy in the northern part of the region) both in terms of volume of catches and socioeconomic importance, and building on advances made both in the adoption of national management measures and in the scientific knowledge of this fisheries, an expert meeting on the management of small pelagics in the Alboran Sea shall take place in 2023 to analyze the state of the art of these fisheries and discuss management priorities and potential way forward towards enhanced sustainability of these fisheries.

The proposed terms of reference for this meeting include:

- collation of all the national management measures in place;
- collation of scientific information related to:
 - spatial distribution of spawning and nursery areas;
 - life history traits of the species;
 - stock definition, including from the results of the Transboran project;
 - issues related to climate change, interactions with large pelagics and food chain issues was proposed;
- identification of management priorities for these fisheries, potential for harmonization across countries and geographical scope for the implementation of subregional management measures; and
- elaboration of a roadmap towards the implementation of the proposals.

Roadmap towards a Regional Plan of Action for Vulnerable Species in the Mediterranean and the Black Sea

Last quarter 2022

- Zero draft of the Regional Plan of Action for Vulnerable Species in the Mediterranean and the Black Sea (RPOA-VUL) prepared by the GFCM Secretariat, based on elements, principles and inputs from different fora (WGFIT session on vulnerable species, Medbycatch events, etc.)

First semester 2023

- Preparation meeting with relevant stakeholders held to review and revise the zero draft of the RPOA-VUL, towards a complete first draft
- First draft of the RPOA-VUL circulated for further comments and integrations; discussions on operationalization and monitoring of results
- Final draft consolidated and presented to GFCM Scientific Advisory Committee on Fisheries (SAC) and discussion on potential way forward towards adoption of the RPOA-VUL

Roadmap for future work on Black Sea anchovy

1. Work on data

- Solve the problem of the mixture of different anchovy populations displaying different growth rates at the Black Sea level.
- Organize a workshop with the participation of regional experts to develop a common methodology to identify different forms of anchovy based on otolith morphology.

2. Assessment

- As a supplement to the SAM model, assess the stock with two additional models:
 - o statistical catch at age (a4a); and
 - o production model (SPICT).

3. Estimation of biological reference points within the context of ecological perturbations experienced in the Black Sea ecosystem

- Review the events resulted in significant changes in the behaviour of the Black Sea anchovy (spawning, migrating, and overwintering).
- Try different BRP estimation scenarios.

4. Acoustic survey

- Investigate the effect of sampling location (offshore vs coastal) on the perception of the stock provided by the Turkish acoustic survey.
- Work towards a standardized acoustic survey covering the main area of the fishery (at least Türkiye and Georgia) and beyond – facilitated by BlackSea4Fish project.
- Ensure there are no gaps in the future time series.

5. Finalization of the benchmark

6. Other activities

Transfer of knowledge

Continue training the trainers' approach for assessment and modelling.

Roadmap for the finalization of the benchmark assessment of European sprat in the Black Sea

Suggested date for final session of the benchmark: 2022/2023 before the Subregional Group on Stock Assessment in the Black Sea (SGSABS) in 2023, in the presence of an external reviewer.

Imminent work towards the finalization of the benchmark

- Inclusion of standardized CPUE for Türkiye in the current assessment;
- improvement and enhancement of SAM model diagnostics;
- comparative trials with SPiCT; and
- estimate reference points for European sprat using EQSim.

Future work to improve data quality and quantity

Data issues

Age reading

Work should advance on determining a protocol for age reading and interpretation of otoliths in different seasons and months, starting from efforts already made by the BlackSea4Fish project. To be done in a stepwise manner:

- Based on the online session to determine the main issues to be addressed carried out in 2021, face-to-face meeting as soon as possible to work on otoliths, finalize a protocol and understand next steps.

Standardization of CPUE indices

- Ukraine: to be facilitated by GFCM Secretariat and Black Sea4Fish project;
- Russian Federation: to be facilitated by Black Sea4Fish project and Georgi Daskalov; and
- Bulgaria: depending on funding.

Modeling issues

- Perform capacity-building and transfer knowledge on the current SAM model.
- Explore additional models more suitable to the currently available data.
- Organize a workshop on the use of SAM for assessing small pelagic species for the entire GFCM area of application.

Roadmap for the assessment of piked dogfish in the Black Sea

1. Improvement of data

- Better understand the biological parameters.
- Harmonize data collection for biological data, in particular collect length and sex information of all individuals caught, also those below the landing size as there seem to be a bias towards adult individuals within the data collection process.
- Optimize (in time and space) bottom trawl surveys to better describe the species.
- Organize a workshop on ageing techniques of piked dogfish in order to create training opportunities and increase knowledge exchange between countries.
- Quantify bycatch.
- Use longer time series of landings data, preferably extending to the low exploitation period.
- Unify workflow among countries to reach and update the catch-at-age by country to ensure the consistency between catch data and catch-at-age matrix.
- Explore standardization method/tools accounting for abrupt temporal and spatial variability often observed in the biomass/abundance index due to clumped distribution displayed by the species.

2. Modelling approaches to be trialed instead of XSA

- Given that the age composition of the catch is available only for the Production models (SPiCT and JABBA).

**Roadmap for the improvement of input data for the assessment of horse mackerel
in the Black Sea**

The Subregional Group on Stock Assessment in the Black Sea (SGSABS) agreed to address the following aspects related to the input data of the horse mackerel assessment in advance of the 2023 meeting of the SGSABS:

- further data exploration and improvement of data quality for all countries;
- possible inclusion of information on discards within the assessment;
- exploration of the possibilities of incorporating the biomass index estimated through the hydroacoustic surveys conducted in Türkiye; and
- close inspection of the slight patterns observed in the retrospective analysis in future assessments.

In order to fulfill the above objectives, all available data by country should be put on the table for analysis towards optimizing their use and increasing the quality of advice, with particular reference to:

- available data on length frequency distributions of catch and surveys;
- available data on surveys, in particular, acoustic surveys that have been collected but not analysed yet as well as new ones; and
- available data on discards.

Amended Rules of Procedure of the General Fisheries Commission for the Mediterranean

Rule I – Definitions

1. For the purpose of these Rules, the terms shall have the same meaning as those used in the Agreement, and in addition the following definitions apply:

- Agreement: The Agreement for the establishment of the General Fisheries Commission for the Mediterranean;
- Bureau: The Bureau established in accordance with Article 7 of the Agreement;
- Commission: The General Fisheries Commission for the Mediterranean;
- Chairperson: The Chairperson of the Commission;
- Conference: The Conference of the Organization;
- Council: The Council of the Organization;
- Delegate: The representative of a Contracting Party as specified in Article 6 of the Agreement;
- Delegation: The delegate and his/her alternate, experts and advisers;
- Director-General: The Director-General of the Organization;
- Executive Secretary: The Executive Secretary of the Commission appointed in accordance with Article 10 of the Agreement;
- Headquarters: The headquarters of the Commission under Article 2 of the Agreement;
- Observer: any Member Nation of the Organization which is not a Contracting Party and any international governmental organization or non-governmental organization attending sessions of the Commission or its subsidiary bodies in accordance with Article 15 of the Agreement;
- Organization: the Food and Agriculture Organization of the United Nations;
- Vice-Chairpersons: The Vice-Chairpersons of the Commission.

Rule II – Sessions of the Commission and its subsidiary bodies

1. The Commission shall, at each regular session, decide the time and place of the next session in accordance with the requirements of the Commission's programmes and the terms of the invitation of the Contracting Party in which the session is to be held, as appropriate, and in consultation with the Director-General.

2. The Chairperson may convene an extraordinary session of the Commission:

- a) upon request of the Commission; or
- b) upon request of the Bureau with the approval of the majority of the Contracting Parties;

- c) upon request of a Contracting Party, with the approval of the majority of the Contracting Parties.
3. Sessions of the Commission may be held at the headquarters of the Commission, of the Organization or at an agreed location in a country which is a Contracting Party.
4. Invitations to a regular session of the Commission shall be issued by the Executive Secretary on behalf of the Chairperson and sent to Contracting Parties, Cooperating-non Contracting Parties and observers, not less than sixty days in advance of the date fixed for the opening of the session. Invitations to extraordinary sessions shall be issued not less than forty days in advance of the date fixed for the opening of the session. In the invitations, specific reference shall be made to the provisions in paragraph 6, as appropriate.
5. The same provisions in the Agreement and in these Rules governing the sessions of the Commission shall govern, *mutatis mutandis*, the sessions of the established subsidiary bodies.
6. For a session of the Commission or any of its subsidiary bodies to be held in a given country, said country must:
- a) have ratified without reservation the “Convention on the Privileges and Immunities of the Specialized Agencies of the United Nations”, in view of facilitating the issuance of visas to all delegates, representatives, experts, observers or other persons entitled to attend said session, or
 - b) have given the assurance that all delegates, representatives, experts, observers, or other persons entitled to attend said session in accordance with the terms of the Agreement or these Rules, will enjoy the privileges and immunities necessary for the independent exercise of their functions in connection with the session. In this case an agreement between the Organization and the hosting country shall be entered into.

In both cases the Executive Secretary shall have the mandate to define all logistics and related technical aspects that are instrumental to the organization of the session with the hosting country.

Rule III – Registrations and credentials

1. The Executive Secretary shall make arrangements for the registration of delegates and observers, including by establishing a standard format to that effect. The Executive Secretary shall report to the Commission on the registration of delegates and observers, as may be required.
2. At each session, the Executive Secretary shall receive the credentials of delegations and observers. Such credentials shall conform to the standard form set by the Executive Secretary. Upon examination thereof, the Executive Secretary shall report to the Commission at the beginning of the session.

Rule IV – Agenda of the regular session of the Commission

1. The agenda for each regular session of the Commission shall be drawn up by the Executive Secretary and sent to the Contracting Parties and Cooperating non-Contracting Parties following the approval of the Chairperson. The agenda will also be sent to the observers that attended the previous regular session of the Commission or those that requested to attend the next session, unless the Commission expressly determines otherwise. It shall be sent not less than sixty days before the opening date of the session, together with the reports and documents available in connection therewith.

2. The agenda for each regular session shall include, at a minimum, the following items:
 - a) election of the Chairperson and of two Vice-Chairpersons in accordance with Article 7 of the Agreement, as appropriate;
 - b) adoption of the agenda;
 - c) a report by the Executive Secretary on the financial and administrative affairs of the Commission and a report by the Chairperson or the Executive Secretary on the activities of the Commission;
 - d) consideration of the proposed budget;
 - e) reports on intersessional activities and recommendations of the subsidiary bodies;
 - f) proposals for the adoption of recommendations pursuant to Article 8(b) of the Agreement;
 - g) review of the proposed programme of work for the Commission;
 - h) consideration of the time and place of the next session;
 - i) applications for membership in accordance with the Agreement;
 - j) amendments proposed to the Agreement, if any, in accordance with Article 22 of the Agreement;
 - k) any item referred to the Commission by the Conference, the Council or the Director-General;
 - l) items approved at the previous session;
 - m) items proposed by any subsidiary body;
 - n) items proposed by a Contracting Party, as presented to the Secretariat before the agenda is sent out.
3. Should new items be brought to the attention of the Commission, revised versions of the agenda shall be drawn up, as appropriate, by the Executive Secretary after the agenda has been sent out and transmitted to Contracting Parties, Cooperating non-Contracting Parties and observers before the opening date of the session.
4. The agenda of an extraordinary session shall consist only of the items relating to the purpose for which the session was called.

Rule V – The Secretariat and the Executive Secretary

1. The Secretariat shall consist of the Executive Secretary and the staff under his/her responsibility as may be appointed in accordance with the Agreement, Article 10 in particular, and other relevant rules and procedures, as appropriate.
2. The Executive Secretary shall be appointed by the Director-General following the approval of the Commission in accordance with Article 10 of the Agreement and the procedures set out in Annex 2 of these Rules.

3. The Executive Secretary shall be appointed for a period of five years and may be reselected for a further consecutive term of five years. At the third regular session following the regular session of the Commission during which the Executive Secretary was selected, or at the fourth regular session following the selection of the Executive Secretary (in the case that selection took place at an extraordinary session of the Commission), selection of the next Executive Secretary should be placed on the Commission's agenda.

4. The Executive Secretary shall be responsible for the implementation of the policies and activities of the Commission and shall report thereon to the Commission. He/She shall transmit to the Director-General, after each session, a report embodying his/her views, recommendations and decisions, and shall make other reports to the Director-General, including regarding his/her duties as defined in paragraph 4, as may seem necessary or desirable.

5. The duties of the Executive Secretary shall include the following:

- a) receive and transmit the Commission's official communications;
- b) maintain contacts with appropriate government officials, fishery institutions and international organizations concerned with the development, conservation, rational management and utilization of fisheries, as well as the sustainable development of aquaculture in the area of application, to facilitate consultation and cooperation on all matters pertaining to the objectives of the Commission,
- c) maintain an active and effective network of national focal points for routine communication on progress and results of the activities of the Commission;
- d) prepare and implement work programmes, prepare budgets and ensure timely reporting to the Commission;
- e) authorize disbursement of funds in accordance with the Commission's autonomous budget and account for the funds of the Commission's autonomous budget;
- f) participate in the formulation of proposals regarding the budget and programme of work or other activities of the Commission financed by the regular budget of the Organization;
- g) stimulate interest among Contracting Parties, Cooperating non-Contracting Parties, non-Contracting Parties and potential donors in the activities of the Commission and in possible financing or in implementing cooperative projects and complementary activities;
- h) promote, facilitate and monitor the development of databases for fisheries assessment and monitoring, as well as the development of technical, biological and socio-economic research, in order to provide a sound basis for fisheries management and aquaculture development;
- i) coordinate the research programmes of Contracting Parties, when required;
- j) participate, as appropriate, in the oversight of activities of projects carried out under the general framework of the Commission or its subsidiary bodies;
- k) organize sessions of the Commission and its subsidiary bodies and other related ad hoc meetings;
- l) prepare, or arrange for the preparation of, background documents and papers and a report on the Commission's activities and the programme of work for the submission to the

Commission at its regular sessions, and arrange for the subsequent publication of the report and the proceedings of the Commission as well as its subsidiary bodies and related ad hoc meetings

- m) take such appropriate steps as may be required to ensure coordination between the activities of the Commission and those carried out by the Organization through its Fisheries and Aquaculture Department, with particular reference to all matters having policy, financial or programme implications;
- n) perform any other function, as may be required by the Commission.

6. Copies of all communications concerning the affairs of the Commission shall be sent to the Executive Secretary for purposes of information and record.

Rule VI – Participation in the sessions of the Commission

1. In accordance with Article 15 of the Agreement, sessions of the Commission and its subsidiary bodies shall be open to observers unless otherwise decided by the Commission during the session, upon request of the Chairperson or the Executive Secretary or one or more of the Contracting Parties. When the Commission decides to hold a private meeting, it shall at the same time, as appropriate, determine conditions and procedures for the attendance by observers.

Rule VII – Election of Chairperson and Vice-Chairperson

The Commission shall elect, from among delegates or alternates attending the regular session at which they are elected, the Chairperson and the first and second Vice-Chairpersons of the Commission, who shall assume office immediately following the regular session at which they were elected and who shall be elected for two regular sessions. The Chairperson and the Vice-Chairpersons shall be eligible for re-election for a further two sessions.

Rule VIII –Terms of reference of the Bureau

1. The Chairperson shall exercise the functions conferred on him or her elsewhere in these Rules and, in particular, shall:

- a) declare the opening and closing of each session of the Commission;
- b) direct the discussions at such sessions and ensure observance of these Rules, accord the right to speak, put questions and announce decisions;
- c) rule on points of order;
- d) have complete control over the proceedings of the session, subject to these Rules;
- e) appoint committees of the session, as the Commission may direct;
- f) call for votes and announce the results of votes; and
- g) perform any other function that may be decided by the Commission, including those specified in Regulation IV.2 of the Financial Regulations.

2. In the absence of the Chairperson, or at his/her request, his/her functions shall be exercised by the first Vice-Chairperson or, in the absence of the latter, by the second Vice-Chairperson.

3. The Chairperson, or the Vice-Chairpersons when acting as Chairpersons, shall not vote and another member of their delegation shall represent the relevant Contracting Party.
4. The Executive Secretary shall temporarily exercise the functions of the Chairperson in the event that the Chairperson and the Vice-Chairpersons are unable to serve.
5. The Commission may adopt rules, consistent with the present Rules, clarifying the functions of the Bureau, with particular reference to any functions performed during the intersession period.
6. In the intersession period of the Commission, the Bureau, shall exercise its functions in accordance with these Rules.

Rule IX –Voting arrangements and procedures

1. Except as otherwise provided in paragraph 4 of this Rule, voting in plenary meetings shall be by show of hands, unless a Contracting Party requests that the vote be taken by roll call or secret ballot, and such request is seconded.
2. A vote by roll call shall be conducted by calling upon the names of the Contracting Parties entitled to vote in the English alphabetical order. The name of the first Contracting Party to be called shall be designated by lot drawn by the Chairperson.
3. The record of any roll call vote shall show the votes cast by each delegate and any abstention.
4. Unless the Commission decides otherwise, voting shall be by secret ballot on matters relating to individuals, including the election of the Bureau of the Commission and its subsidiary bodies.
5. When no nominee for an office obtains a majority of the votes cast on the first ballot, a second ballot shall be taken, which shall be confined to the two candidates obtaining the largest number of votes. If, on the second ballot, the votes are equally divided, as many ballots as necessary shall be held in order to determine the elected candidate.
6. Votes cast shall mean “affirmative” and “negative” votes, and shall not include abstentions or defective ballots.
7. If the Commission is equally divided when a vote is taken on a question other than an election, a second and third vote may be taken at the current session. If the Commission then remains equally divided, the proposal shall not be considered further at the current session.
8. Voting arrangements and other related matters not specifically provided for by the Agreement, or by these Rules, shall be governed mutatis mutandis by the General Rules of the Organization.

Rule X – Subsidiary bodies of the Commission

1. Each subsidiary body established pursuant to Article 9 of the Agreement may establish sub-committees and working groups and shall ensure their coordination.
2. The relationship between the Commission and its subsidiary bodies, which shall have an advisory nature, will be defined on the decision of the Commission within a reference framework, reproduced in Annex 1 of these Rules, and will be revised when appropriate.

3. Any subsidiary body established in accordance with Article 9 of the Agreement shall be convened by the Chairperson of the Commission at such times and places as are determined by the Chairperson in consultation with the Director-General of the Organization, as appropriate.
4. Any subsidiary body established in accordance with Article 9 of the Agreement shall act under the auspices of the Commission and shall be governed, *mutatis mutandis*, by the Rules, as well as by such other supplementary procedures as may be established by the Commission.
5. Each subsidiary body described in Annex 1 shall have a Chairperson and two Vice-Chairpersons who shall be elected from among delegates or alternates of the Contracting Parties in the session of these bodies. Rule VII of the Rules of Procedure shall apply, *mutatis mutandis*, to the election of the Chairperson and Vice-Chairpersons of each subsidiary bodies. They shall assume office subsequent to the endorsement of their appointment by the Commission at the regular session following the session of the subsidiary body at which they were elected.
6. For the functions of the bureau of each subsidiary body, Rule VIII will apply *mutatis mutandis*. In addition, in case of functions to be performed by the bureau of each subsidiary body in support of their functioning, there will be close coordination with and reporting to the Executive Secretary.
7. Each subsidiary body will define its priority actions, advice and work programme that shall be submitted to the Commission for adoption at the regular session.

Rule XI – Specific mechanisms for the Black Sea region

1. In order to ensure the adequate implementation of the specific mechanisms referred to in Article 9.1 of the Agreement, a subregional Working Group for the Black Sea region shall be established. The Working Group shall endeavour to ensure the participation of all Black Sea States in decisions related to fisheries management. In particular, it shall:
 - a) examine fisheries and aquaculture related issues of relevance for the Black Sea region, including the status and trends of living marine resources, and, on the basis of the guidance provided by the Scientific Advisory Committee on Fisheries and the Advisory Committee on Aquaculture, accordingly formulate advice on these issues.
 - b) facilitate exchange of scientific data and information between Contracting Parties, Cooperating non-Contracting Parties and relevant non-Contracting Parties and promote cooperation in the fight against illegal, unreported, and unregulated (IUU) fishing in the Black Sea region;
 - c) undertake any other functions or responsibilities as may be conferred by the Commission.
2. The activities of the Working Group of the Black Sea will be reviewed at the regular session of the Commission.

Rule XII – Budget and finance

1. Any estimates of expenditures to be covered by the general budget of the Organization shall be submitted by the Executive Secretary to the Commission for approval. Once approved as part of the general budget of the Organization and without prejudice to the relevant rules of the Organization and the decisions of its Governing Bodies, they will constitute the limits within which funds may be committed for purposes approved by the Conference.

2. The Commission shall determine the extent to which travel expenditures incurred by the Chairperson, the Vice-Chairpersons of the Commission and of any subsidiary bodies, in connection with their functions, may be covered by the autonomous budget of the Commission.

3. Subject to Article 11 of the Agreement, any budgetary or financial matters relative to the autonomous budget of the Commission shall be dealt with in accordance with the Financial Regulations.

Rule XIII – Observers

1. The Director-General or a representative of his/her designation, shall have the right to participate without vote in all sessions of the Commission and any of the subsidiary bodies of the Commission.

2. International governmental organizations and non-governmental organizations having special competence in the field of activity of the Commission that wish to attend any regular session of the Commission or its subsidiary bodies, as observers, shall give advance notification to the Executive Secretary, at a time as may be specified by the Executive Secretary or the Commission, of their wish to be invited.

3. Unless the Commission expressly determines otherwise, observers may attend the sessions of the Commission and its subsidiary bodies. Observers may be invited to submit memoranda and deliver oral statements but in no case will they be entitled to vote.

4. The Commission may invite consultants or experts, in their individual capacity, to attend the regular sessions or participate in the work of the Commission, and its subsidiary bodies.

Rule XIV – Criteria for attaining the status of Cooperating non-Contracting Party

1. Any such non-Contracting Party that seeks to be accorded the status of a cooperating non-Contracting Party in accordance with Article 18 of the Agreement shall apply to the Executive Secretary no later than ninety days in advance of the regular session of the Commission where the application shall be considered.

2. Non-Contracting Parties requesting the status of a Cooperating non-Contracting Party shall provide the following information in order to have this status considered by the Commission:

- a) where available, data on its historical fishing activities in the Area of Application;
- b) all the data that Contracting Parties have to submit based on recommendations adopted in accordance with Article 8(b) of the Agreement, where applicable; and
- c) information on any research programmes they may have conducted in the Area of Application and the information and the results of their researches.

3. An applicant for Cooperating non-Contracting Party status shall also confirm its commitment to comply with recommendations adopted in accordance with Article 8(b) of the Agreement and shall inform the Commission of the actions it takes to ensure such compliance.

4. Cooperating non-Contracting Party status shall be annually reviewed and renewed, unless revoked by the Commission due to non-compliance with recommendations adopted in accordance with Article 8(b) of the Agreement. In reviewing the Cooperating non-Contracting Party status, the

Commission shall also indicate whether it considers full membership, instead of Cooperating non-Contracting Party status, to be advisable.

Rule XV – Reports, recommendations, resolutions and decisions

1. At each session, the Commission shall approve a report embodying its views, recommendations, resolutions and decisions, including, when requested, a statement of minority views. The report shall be made available on the website of the Commission.
2. Recommendations, resolutions and decisions adopted by the Commission having programme or financial implications for the Organization shall be brought by the Director-General to the attention of the Conference through the Council for action.
3. Subject to the provisions of Article 13 of the Agreement, the recommendations, resolutions and decisions adopted by the Commission shall be transmitted to the Director-General at the end of the session. The Executive Secretary shall, on behalf of the Chairperson, circulate them to Contracting Parties, Cooperating non-Contracting Parties, relevant non-Contracting Parties, and observers, including those that were represented at the session, and such others as the Commission may direct from time to time.

Rule XVI – Review Panel

The Commission may, as necessary, convene on an ad hoc basis a Review Panel, set up in accordance with Article 9 of the Agreement, to support the decision-making process. In particular, this panel shall review the advice provided by any subsidiary body and draw its conclusions. The Commission, when deciding to convene the review panel, shall define its composition and methods of work.

Rule XVII – Data collection, processing and exchange

1. To enhance the information base for the conservation and management of living marine resources, as well as non-target and associated or dependent species and the protection of the marine ecosystems in which these resources occur, the Commission shall develop standards, rules and procedures for, *inter alia*:
 - a) the collection and timely reporting to the Commission of all relevant data by Contracting Parties and relevant non-Contracting Parties;
 - b) the provision of information on catches and other data relevant to the functions of the Commission in such a way as to enable it to fulfil its responsibilities under this paragraph;
 - c) the processing of accurate and complete data by the subsidiary bodies of the Commission in order to facilitate effective stock assessment and ensure that the provision of the best scientific advice is enabled;
 - d) the security of access to and dissemination of data while maintaining confidentiality;
 - e) the exchange of data concerning vessels engaged in IUU fishing and, as appropriate, concerning the beneficial ownership of such vessels, among Contracting Parties and Cooperating non-Contracting Parties to the Commission, among other regional fisheries management organizations and among other relevant organizations, with a view to consolidating such information; and

- f) the regular assessment through the Compliance Committee of the compliance by Contracting Parties with data collection and exchange requirements and the mechanisms for addressing any non-compliance identified in such audits.

2. The Commission shall identify and use, through the Secretariat, suitable data communication protocols, Information Technology standards, tools, licensing schemes and systems that will be employed in support of the abovementioned activities, in line with the need to enhance communication, flexibility, cost-efficiency, visibility and dissemination of its work.

Rule XVIII – Procedures for the Committee for the Settlement of Disputes

1. In accordance with Article 19.2 of the Agreement, a committee shall be established when a Contracting Party notifies, through the Executive Secretary, another Contracting Party of its intention to refer a matter concerning the interpretation or application of the Agreement for the settlement of a dispute. The notification shall be accompanied by a full description of the matter as well as the grounds relied upon.

2. The other Contracting Party shall, within fifteen days, decide whether to accept or disagree to submit the dispute to the committee. In the event that the other Contracting Party accepts, the decision shall be communicated to the Contracting Party that notified its intention and to the Executive Secretary.

3. The Executive Secretary shall inform all Contracting Parties of the establishment of the committee and promptly transmit a copy of the notification with the documents attached to it.

4. Each party to the dispute shall appoint one representative and inform the Executive Secretary of that appointment no later than fifteen days after the communication of the establishment of the committee by the Executive Secretary. The representatives appointed by the parties to the dispute shall be experts with competence in legal, scientific or technical aspects concerning the Agreement, and with relevant qualifications and experience.

5. As soon as the representatives are nominated, the Executive Secretary shall record the constitution of the committee and inform all Contracting Parties accordingly.

6. Any other Contracting Party, having the same interests as one of the parties to the dispute, may become a party to the dispute by a notification to the parties involved and to the Executive Secretary within fifteen days after receiving the notification pursuant to paragraph 3 of this Rule, and provided that the other parties already involved and having the same interests agree.

7. In the event that two or more Contracting Parties jointly make a notification pursuant to paragraph 1 of this Rule or one or more Contracting Parties become parties to the dispute pursuant to paragraph 6 of this Rule, the parties shall each designate one delegate for the official contacts during the work of the committee.

8. The committee may adopt such rules of procedures as it deems necessary for effective and expeditious proceedings, including decisions on dates and venues of hearings and on the methods of work it will follow, and shall inform the Executive Secretary accordingly. Any Contracting Party may, upon notification to the committee, attend any hearings, and make written or oral submissions.

9. Unless the parties to the dispute agree on a later date, the committee shall deliver its findings within ninety days from the date of its constitution. The committee shall seek to resolve the dispute by consensus. If this is not possible, the committee shall agree by a majority vote of its members, none of whom may abstain from voting.

10. The findings of the committee shall be confined to the subject matter of the dispute and set out the reasons on which they are based. The Executive Secretary shall promptly communicate these findings to all Contracting Parties.

11. The costs of the committee shall be borne by the parties to the dispute in equal parts.

Rule XIX – Measures to resolve situations of non-compliance

1. If the Commission determines through the Compliance Committee that a Contracting Party or a Cooperating non-Contracting Party has been in prolonged and unjustified non-compliance with recommendations adopted in accordance with Article 8(b) of the Agreement, to the extent that it undermines their effectiveness, or that a non-Contracting Party has systematically engaged in activities which undermine the effectiveness of such recommendations and adversely affect the objective of the Agreement, it may take the following measures to resolve the situation of non-compliance:

- a) appropriate corrective measures towards the fulfilment by Contracting Parties or Cooperating non-Contracting Parties of the implementation of recommendations adopted in accordance with Article 8(b) of the Agreement, pursuant to Article 14 of the Agreement, as stated below:
 - technical assistance and capacity building programmes to address the main problems of the relevant Contracting Party or Cooperating non-Contracting Party;
 - derogations to the implementation of given recommendations, subject to the adoption of a multiannual process that shall identify remedies to non-compliance applying to relevant Contracting Parties and Cooperating non Contracting Parties to ensure its full implementation;
- b) non-discriminatory market-related measures against Cooperating non-Contracting Parties and non-Contracting Parties, consistent with international law, to monitor transshipment, landings and trade with a view of preventing, deterring and eliminating illegal, unreported and unregulated fishing including, where appropriate, catch documentation schemes.

Rule XX – Amendments to the Agreement

1. Proposals for the amendment of the Agreement pursuant to Article 22 may be made acting on the proposal by the Commission at a regular or extraordinary session or by any Contracting Party in a communication addressed to the Executive Secretary. The Executive Secretary shall transmit to all Contracting Parties and to the Director-General a copy of such proposals for amendment immediately upon their receipt.

2. No action on a proposal for the amendment of the Agreement shall be taken by the Commission at any session, unless it has been included in the provisional agenda of the session.

Rule XXI – Suspension and amendment of the Rules

1. Subject to the provisions of the Agreement, any of the foregoing Rules, other than Rules IV, V, XI, XII, XX.2, and XXII, may be suspended on the motion of any delegation by a majority of the votes cast at any regular session of the Commission, provided that an announcement is made at a regular session of the Commission and copies of the proposal for suspension have been distributed to the delegations not less than forty-eight hours before the session at which action is to be taken.

2. Amendments of, or additions to, these Rules may be adopted on the motion of any delegation by a two-thirds majority of the Contracting Parties, at sessions of the Commission, provided an announcement is made at that session and copies of the proposal for the amendment or addition have

been distributed to delegations not less than twenty-four hours before the session at which action is to be taken.

3. Any amendments to Rule XXII which may be adopted in accordance with the provisions of paragraph 2 of this Rule shall not become effective until the next session of the Commission.

4. Any new rule adopted by the Organization which may require a timely amendment of these Rules will be brought to the attention of the Commission.

Rule XXII – Languages of the Commission

1. The official languages of the Commission shall be Arabic, English, French and Spanish. These languages shall all be used at the regular and extraordinary sessions of the Commission.

2. At the sessions of technical subsidiary bodies of the Commission and for their reports and communications more flexible and cost-effective arrangements could be foreseen in relation to the use of the languages of the Commission.

3. Interpretation in one or more of the official languages during meetings will be ensured by the Secretariat and funded through the autonomous budget or extra-budgetary funds.

4. Reports and communications shall be in the languages agreed by the Commission.

Reference framework for the subsidiary bodies

The Scientific Advisory Committee on Fisheries

1. There shall be established a Scientific Advisory Committee on Fisheries which shall be responsible for providing scientific, social and economic advice relating to the work of the Commission, as well as for supporting the implementation of multiannual management plans, taking into account a subregional approach.
2. The Committee shall:
 - a) Collect and assess information provided by all parties, relevant organizations, institutions or programmes on catches, fishing effort, fleet capacity and other data relevant to the conservation and management of fisheries;
 - b) Assess the status and trends of relevant populations of living marine resources, ecosystems and fisheries-related human components, using the appropriate indicators and in relation to agreed biological and/or management reference points;
 - c) Provide independent advice on a technical and scientific basis to facilitate the adoption of recommendations concerning the sustainable management of fisheries and ecosystems at the regional and subregional levels, including on relevant biological, environmental, social and economic aspects, as well as on issues associated with the ecosystem approach to fisheries, the impact of IUU fishing on populations and ecosystems, and the assessment of biological and ecological implications under different management scenarios;
 - d) If required, submit advice and reports to the Review Panel established pursuant to the Rules of Procedure of the GFCM;
 - e) Keep abreast of cooperative scientific and technical research projects and programmes of interest to the Committee;
 - f) Undertake any other functions or responsibilities as may be conferred on it by the Commission.

The Scientific Advisory Committee on Aquaculture

1. There shall be established Scientific Advisory Committee on Aquaculture which shall be responsible for providing technical advice related to the work of the Commission and to promote the sustainable development and responsible management of marine, brackish and inland aquaculture in the area of application in a way that is consistent with an ecosystem approach to aquaculture and that takes into account the specific regional, subregional and local characteristics.
2. The Committee shall, in particular:
 - a) monitor sustainable aquaculture development, following its progress and trends including through the identification, use and regular update of environmental, economic and social indicators;
 - b) collect and assess information and data with regard to production statistics, market data, post harvesting, culture systems, technologies used, farmed species, environmental and aquatic

animal health issues, as well as any additional information considered by the Commission to be relevant and useful. Such data and information shall be provided by all parties, relevant aquaculture actors, the aquaculture multi-stakeholder platform and other programmes, and shall be maintained in related databases;

- c) provide independent advice on a technical and scientific basis to facilitate the adoption of recommendations pursuant to Article 8(b) of the GFCM Agreement concerning the sustainable development of aquaculture with regard to biological, environmental, social and economic issues;
- d) submit advice and reports to the Review Panel, established pursuant to the Rules of Procedure of the GFCM, if required;
- e) identify and promote the development and implementation of cooperative scientific and technical research projects and programmes; and
- f) carry out any other functions or responsibilities as may be conferred on it by the Commission.

The Compliance Committee

1. There shall be established a Compliance Committee which shall, in particular:
 - a) assess, on the basis of all available information, compliance by Contracting Parties, Cooperating non-Contracting Parties and relevant non-Contracting Parties with recommendations adopted by the Commission in accordance with Article 8(b) of the Agreement;
 - b) request clarifications and express concern to Contracting Parties, Cooperating non-Contracting Parties and non-Contracting Parties in cases of non-compliance, *prima facie*, with recommendations adopted by the Commission in accordance with Article 8(b) of the Agreement;
 - c) submit to the attention of the Commission cases in which Contracting Parties or Cooperating non-Contracting Parties are not compliant with recommendations adopted by the Commission in accordance with Article 8(b) of the Agreement, or cases in which activities by non-Contracting Parties undermine the effectiveness of such recommendations and adversely affecting the objective of the Agreement, in order to facilitate their identification as foreseen by the applicable recommendation concerning the identification of non-compliance ;
 - d) provide additional information, as it considers appropriate or as may be requested by the Commission, relating to the implementation and compliance with recommendations adopted by the Commission in accordance with Article 8(b) of the Agreement, as well as with the provisions of the Agreement;
 - e) provide independent advice on an institutional and legal basis and submit reports to the Commission to facilitate the adoption of recommendations in accordance with Article 8(b) of the Agreement, including in connection with aspects related to monitoring, control and surveillance, and technical assistance and capacity building activities to support these aspects;
 - f) undertake other functions or responsibilities as may be conferred on it by the Commission.

The Committee on Administration and Finance

1. There shall be established a Committee on Administration and Finance which shall, in particular:

- a) review administrative matters relating to the Executive Secretary and his/her staff and make appropriate recommendations to the Commission;
- b) oversee the correct application of the Rules and the Financial Regulations;
- c) review the implementation of the annual programme of work and the budget of the Commission, as adopted at its previous session;
- d) analyse and make recommendations to the Commission on the draft programme of work and budget as proposed for adoption at the session of the Commission;
- e) submit to the Commission proposals concerning the need, as appropriate, for the amendment of the Rules and the Financial Regulations; and
- f) undertake other functions or responsibilities as may be conferred on it by the Commission.

Selection and appointment of the Executive Secretary

1. A vacancy announcement is drafted by technical departments with support of the Human Resources Division (“CSH”) as is done for all senior (D1 and above) staff positions. The draft vacancy announcement is shared with the Chairperson of the Commission who is invited to provide views thereon.
2. The vacancy announcement is issued and posted for 30 days.
3. A first review and screening of candidates is undertaken by CSH based on the minimum criteria and qualifications set out in the Vacancy Announcement.
4. A second review is undertaken by the offices of the relevant Deputy Director-General and the relevant Director (D2) and three representatives of the Members of the Commission to establish a shortlist of candidates for interview. The interview shortlist must contain at least seven candidates including at least one female candidate. If there is no female candidate in the shortlist, the Panel Report must contain a justification. If the interview shortlist does not contain seven candidates, the Report must contain a justification.
5. An interview panel is established, which is composed of:
 - a) the relevant Deputy Director-General or Director (D2);
 - b) two Senior FAO officers;
 - c) three representatives of the Members of the Commission;
 - d) one external member, to be selected by other interview panelists from among three candidates proposed by CSH; and
 - e) one representative of CSH, without the right to participate in decision-making. The role of the CSH representative is to offer administrative support to the panel. He/she will not be involved in interviewing or assessing the candidates.
6. Interviews of shortlisted candidates are conducted by the interview panel, which will prepare a report. The panel report will identify a minimum of three and a maximum of five qualified candidates. If no female candidate is selected at this stage, the panel report must contain a justification.
7. Both the shortlist of candidates for interview as well as the three to five candidates submitted to the Director-General is compiled with due regard to gender and geographic balance in line with the policy of the Organization. If this balance is not achieved, the panel report must contain a justification for this. All efforts should be made to reach a decision by consensus.
8. Reference checks are undertaken by CSH.
9. The panel report is submitted for consideration by the Director-General.
10. The Director-General identifies for appointment one candidate, from the proposed candidates identified in the panel report, whose name and curriculum vitae are referred to the Commission for approval in accordance with Article 10 of the Agreement. The name and curriculum vitae, and a

written statement that reference checks have been conducted, will be transmitted to the Commission's Chairperson, who will keep the information confidential, within ten weeks of the closure of the Vacancy Announcement.

11. Upon approval of the Commission, an offer is issued to the candidate. Should there be non-approval, the Director-General will propose to the Commission another candidate, identified in the panel report, recommended for appointment. In case none of the candidates identified in the panel report are approved by the Commission, the vacancy shall be reissued.

12. Upon acceptance, the Director-General appoints the candidate.

Autonomous budget of the General Fisheries Commission for the Mediterranean for 2023–2025

Appendix 28/A

General Fisheries Commission for the Mediterranean autonomous budget for 2023⁶

		US (\$)	Share of total %
STAFF	Professional staff	1 017 250	44.39
	Administrative staff	583 000	25.44
	TOTAL STAFF	1 600 250	69.83
FUNCTIONING	Temporary human resources and overtime, consultants, travel, expendable and non-expendable procurement, GOE, internal/external services	446 546	
	TOTAL FUNCTIONING	446 546	19.48
SUBTOTAL 1 (staff + functioning)		2 046 796	
ANCILLARY	Hospitality and miscellaneous (1 %)	20 468	
	Participation fund (2.5 %)	51 682	
	SUBTOTAL 2	2 118 946	
	FAO support costs (4.5% of subtotal 2)	95 353	
	SUBTOTAL 3	2 214 298	
	GFCM working capital fund (3.5% of subtotal 3)	77 500	
AUTONOMOUS BUDGET (US dollars)		2 291 799	

⁶ Agreed on an exceptional basis for the 2023 autonomous budget only.

General Fisheries Commission for the Mediterranean autonomous budget for 2024

		US (\$)	Share of total %
STAFF	Professional staff	1 111 000	45.12
	Administrative staff	591 000	24.00
	TOTAL STAFF	1 702 000	69.12
FUNCTIONING	Temporary human resources and overtime, consultants, travel, expendable and non-expendable procurement, GOE, internal/external services	497 000	
	TOTAL FUNCTIONING	496 999	20.19
SUBTOTAL 1 (staff + functioning)		2 199 000	
ANCILLARY	Hospitality and miscellaneous (1 %)	21 990	
	Participation fund (2.5 %)	55 525	
	SUBTOTAL 2	2 276 515	
	FAO support costs (4.5% of subtotal 2)	102 443	
	SUBTOTAL 3	2 378 958	
	GFCM working capital fund (3.5% of subtotal 3)	83 264	
AUTONOMOUS BUDGET (US dollars)		2 462 221	

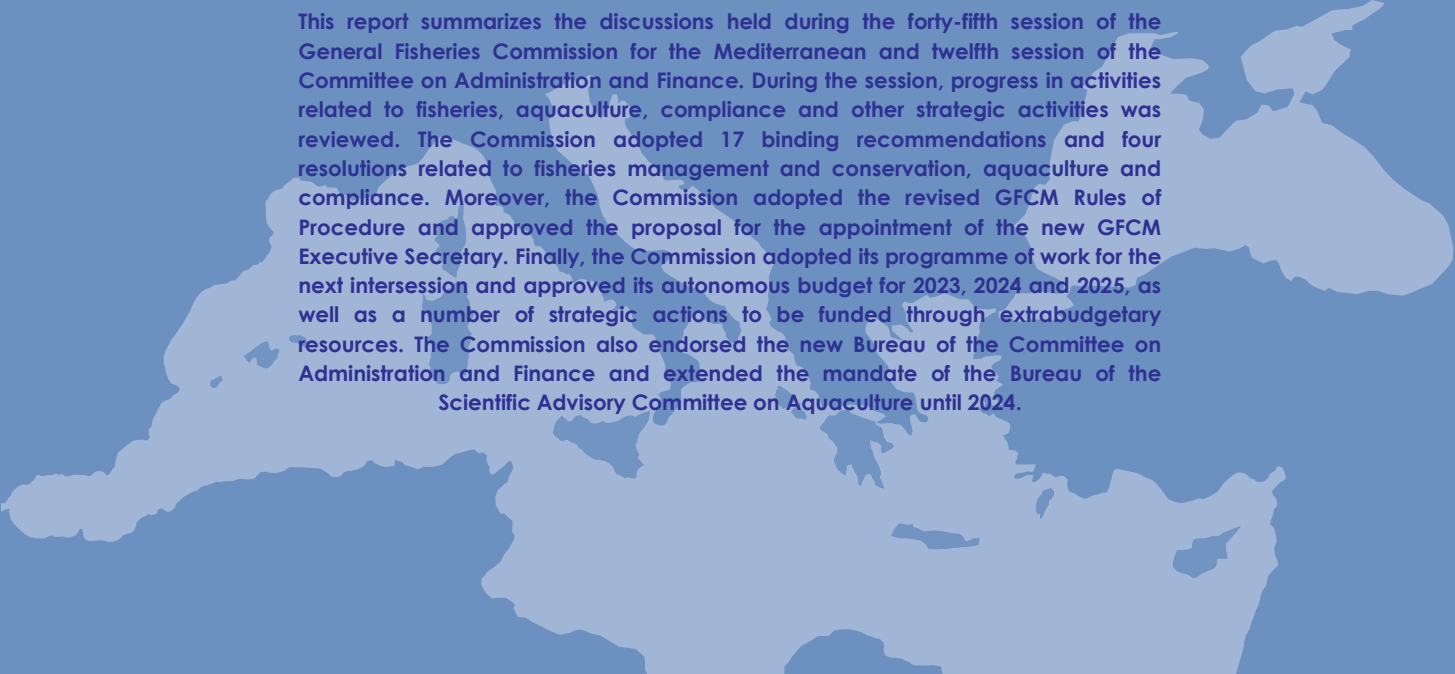
General Fisheries Commission for the Mediterranean autonomous budget for 2025

		US (\$)	Share of total %
STAFF	Professional staff	1 129 000	45.85
	Administrative staff	671 000	27.25
	TOTAL STAFF	1 800 000	73.10
FUNCTIONING	Temporary human resources and overtime, consultants, travel, expendable and non-expendable procurement, GOE, internal/external services	399 000	
	TOTAL FUNCTIONING	399 000	16.20
SUBTOTAL 1 (staff + functioning)		2 199 000	
ANCILLARY	Hospitality and miscellaneous (1 %)	21 990	
	Participation fund (2.5 %)	55 525	
	SUBTOTAL 2	2 276 515	
	FAO support costs (4.5% of subtotal 2)	102 443	
	SUBTOTAL 3	2 378 958	
	GFCM working capital fund (3.5% of subtotal 3)	83 264	
AUTONOMOUS BUDGET (US dollars)		2 462 221	

Contributions to the General Fisheries Commission for the Mediterranean budget for 2023⁷
(based on 2018–2020 averages)

Contracting Party	Total		Basic Fee	GDP Component		Catch Component	
	USD	%	USD	Index	USD	Weighted Total	USD
Albania	26 597	1.16	11 192	1	6 578	39 086	8 827
Algeria	61 378	2.68	11 192	1	6 578	193 092	43 607
Bulgaria	17 770	0.78	11 192	1	6 578		
Croatia	76 977	3.36	11 192	10	65 785		
Cyprus	76 977	3.36	11 192	10	65 785		
Egypt	151 863	6.63	11 192	1	6 578	510 823	134 092
France	142 761	6.23	11 192	20	131 569		
Greece	76 977	3.36	11 192	10	65 785		
Israel							
Italy	142 761	6.23	11 192	20	131 569		
Lebanon	19 454	0.85	11 192	1	6 578	7 458	1 684
Libya	40 742	1.78	11 192	1	6 578	101 717	22 971
Malta	142 761	6.23	11 192	20	131 569		
Monaco	11 192	0.49	11 192				
Montenegro	18 621	0.81	11 192	1	6 578	3 766	851
Morocco	31 434	1.37	11 192	1	6 578	60 504	13 664
Romania	76 977	3.36	11 192	10	65 785		
Slovenia	76 977	3.36	11 192	10	65 785		
Spain	76 977	3.36	11 192	10	65 785		
Syrian Arab Republic	18 837	0.82	11 192	1	6 578	4 726	1 067
Tunisia	102 366	4.47	11 192	1	6 578	374 586	84 595
Türkiye	351 572	15.34	11 192	1	6 578	1 478 065	333 802
EC	549 828	23.99	11 192			2 385 063	538 636
		100		131		5 158 885	
	2 291 799		246 222		861 777		1 183 799

⁷ Agreed on an exceptional basis for the 2023 autonomous budget only.



This report summarizes the discussions held during the forty-fifth session of the General Fisheries Commission for the Mediterranean and twelfth session of the Committee on Administration and Finance. During the session, progress in activities related to fisheries, aquaculture, compliance and other strategic activities was reviewed. The Commission adopted 17 binding recommendations and four resolutions related to fisheries management and conservation, aquaculture and compliance. Moreover, the Commission adopted the revised GFCM Rules of Procedure and approved the proposal for the appointment of the new GFCM Executive Secretary. Finally, the Commission adopted its programme of work for the next intersession and approved its autonomous budget for 2023, 2024 and 2025, as well as a number of strategic actions to be funded through extrabudgetary resources. The Commission also endorsed the new Bureau of the Committee on Administration and Finance and extended the mandate of the Bureau of the Scientific Advisory Committee on Aquaculture until 2024.

ISBN 978-92-5-137924-0 ISSN 1020-7236



9 789251 379240

CC6375EN/1/06.23