FIPI/R1154(Bi)

FAO
Fisheries and
Aquaculture Report

Rapport sur les
pêches et l'aquaculture

ISSN 2070-6987

Food and Agriculture Organization
of the United Nations

Organisation des Nations Unies
pour l'alimentation et l'agriculture

GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN
COMMISSION GÉNÉRALE DES PÊCHES POUR LA MÉDITERRANÉE

Report of the eighteenth session of the

SCIENTIFIC ADVISORY COMMITTEE ON FISHERIES

Nicosia, Cyprus, 21–23 March 2016

Rapport de la dix-huitième session du

COMITÉ SCIENTIFIQUE CONSULTATIF DES PÊCHES

Nicosie, Chypre, 21-23 mars 2016

General Fisheries Commission
for the Mediterranean
Commission générale des pêches
pour la Méditerranée

FAO Fisheries and Aquaculture Report No. 1154
FAO, Rapport sur les pêches et l'aquaculture nº1154 FIPI/R1154 (Bi)

GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

COMMISSION GÉNÉRALE DES PÊCHES POUR LA MÉDITERRANÉE

Report of the eighteenth session of the SCIENTIFIC ADVISORY COMMITTEE ON FISHERIES

Nicosia, Cyprus, 21–23 March 2016

Rapport de la dix-huitième session du COMITE SCIENTIFIQUE CONSULTATIF DES PECHES

Nicosie, Chypre, 21-23 mars 2016

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE
Rome, 2016

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.
The views expressed in this information product are those of the author(s) and do not necessarily reflect the views or policies of FAO.
Les appellations employées dans ce produit d'information et la présentation des données qui y figurent n'impliquent de la part de l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO) aucune prise de position quant au statut juridique ou au stade de développement des pays, territoires, villes ou zones ou de leurs autorités, ni quant au tracé de leurs frontières ou limites. La mention de sociétés déterminées ou de produits de fabricants, qu'ils soient ou non brevetés, n'entraîne, de la part de la FAO, aucune approbation ou recommandation desdits produits de préférence à d'autres de nature analogue qui ne sont pas cités.
Les opinions exprimées dans ce produit d'information sont celles du/des auteur(s) et ne reflètent pas nécessairement les vues ou les politiques de la FAO.

ISBN 978-92-5-009225-6

© FAO, 2016

FAO encourages the use, reproduction and dissemination of material in this information product. Except where otherwise indicated, material may be copied, downloaded and printed for private study, research and teaching purposes, or for use in non-commercial products or services, provided that appropriate acknowledgement of FAO as the source and copyright holder is given and that FAO's endorsement of users' views, products or services is not implied in any way.
All requests for translation and adaptation rights, and for resale and other commercial use rights should be made via www.fao.org/contact-us/licence-request or addressed to copyright@fao.org.
FAO information products are available on the FAO website (www.fao.org/publications) and can be purchased through publications-sales@fao.org.
La FAO encourage l'utilisation, la reproduction et la diffusion des informations figurant dans ce produit d'information. Sauf indication contraire, le contenu peut être copié, téléchargé et imprimé aux fins d'étude privée, de recherches ou d'enseignement, ainsi que pour utilisation dans des produits ou services non commerciaux, sous réserve que la FAO soit correctement mentionnée comme source et comme titulaire du droit d'auteur et à condition qu'il ne soit sous-entendu en aucune manière que la FAO approuverait les opinions, produits ou services des utilisateurs.
Toute demande relative aux droits de traduction ou d'adaptation, à la revente ou à d'autres droits d'utilisation commerciale doit être présentée au moyen du formulaire en ligne disponible à www.fao.org/contact-us/licence-request ou adressée par courriel à copyright@fao.org.
Les produits d'information de la FAO sont disponibles sur le site web de la FAO (www.fao.org/publications) et peuvent être achetés par courriel adressé à publications-sales@fao.org

PREPARATION OF THIS DOCUMENT

This is the final report approved by the participants in the eighteenth session of the Scientific Advisory Committee on Fisheries of the General Fisheries Commission for the Mediterranean held in Nicosia, Cyprus, from 21 to 23 March 2016.

PRÉPARATION DE CE DOCUMENT

Le présent document est le rapport final adopté par les participants de la dix-huitième session du Comité scientifique consultatif des pêches de la Commission générale des pêches pour la Méditerranée tenue à Nicosie, Chypre, du 21 au 23 mars 2016.

FAO. 2016.
General Fisheries Commission for the Mediterranean. Report of the eighteenth session of the Scientific Advisory Committee on Fisheries. Nicosia, Cyprus, 21–23 March 2016.
Commission générale des pêches pour la Méditerranée. Rapport de la dix-huitième session du Comité scientifique consultatif des pêches. Nicosie, Chypre, 21-23 mars 2016.
FAO Fisheries and Aquaculture Report/FAO Rapport sur les pêches et l'aquaculture No. 1154. Rome, Italy/Italie.

ABSTRACT

The Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its eighteenth session in Nicosia, Cyprus, from 21 to 23 March 2016. The session was attended by delegates from 20 contracting parties, 7 representatives of observers, representatives of the FAO, including its regional projects, and the GFCM Secretariat. The Committee reviewed the work carried out during the 2015–2016 intersession, including within its newly established subregional subsidiary bodies, two of which had met for the first time in 2016 (Subregional Committee for the Adriatic Sea and Subregional Committee for the Central Mediterranean). On the occasion of the publication on *The State of Mediterranean and Black Sea Fisheries* (SoMFi) 2016, the Committee examined the main highlights of the report, including key characteristics of Mediterranean fleet and catches, socio-economic, and bycatch, highlighting its importance as a a flagship publication aimed at regularly disseminating information on fisheries in the GFCM area of application. The Committee formulated advice on the following aspects: i) marine environment and ecosystems, including vulnerable marine ecosystems, marine spatial protection measures and bycatch; ii) statistics and information, including the implementation of the Data Collection Reference Framework (DCRF); iii) status of Mediterranean stocks and associated scientific advice, including at the subregional level. At the Mediterranean level, the Committee discussed in particular the specific cases of red seabream (*Pagellus bogaraevo*) in the Strait of Gibraltar and of European eel (*Anguilla anguilla*), recognizing the importance of collecting and analysing accurate data towards the development of a Mediterranean adaptive regional management plan for this species. At the subregional level, specific conclusions included: i) detailed scientific advice to improve existing management plans for small pelagic fisheries in the Adriatic Sea and to develop a new management plan for demersal fisheries in the Strait of Sicily, and ii) new mechanisms aimed at facilitating the adoption of management measures, especially for stocks requiring urgent action, and concentrating efforts on a number of priority species by subregion. In addition, the Committee discussed a number of key issues of regional relevance in connection with the management of red coral populations (*Corallium rubrum*, L.) and of European eel, as well as work on indicators to monitor good environmental status (GES). Moreover, a concept note for a bycatch monitoring programme towards a strategy to mitigate biological and socio-economic impacts in the Mediterranean and the Black Sea was endorsed. In relation to small-scale fisheries, the Committee welcomed the outcomes of the Regional Conference held in March 2016 as well as the creation of a new working group, suggesting to include recreational fisheries to its mandate. In recognizing the increasing demand for scientific and technical expertise on fisheries in the region, the Committee also endorsed a proposal to organize a GFCM Forum on Fisheries Science (GFCM FishForum). Finally, the Committee agreed upon its work plan for 2016–2017 and elected its new Bureau, paying tribute to the work done by the immediate past members of the Bureau.

RÉSUMÉ

Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa dix-huitième session à Nicosie, Chypre, du 21 au 23 mars 2016. Ont participé à la session les délégués de vingt parties contractantes, sept représentants des observateurs, ainsi que des représentants de la FAO, y compris ses projets régionaux, et du Secrétariat de la CGPM. Le Comité a passé en revue les travaux réalisés pendant la période intersessions 2015-2016, notamment dans le cadre de ses quatre nouveaux organes subsidiaires, deux d'entre eux ayant tenu leur première réunion en 2016 (le Comité sous-régional de la mer Adriatique et le Comité sous-régional de la Méditerranée centrale). À l'occasion de l'édition 2016 du rapport de la CGPM sur la situation des pêches en Méditerranée et en mer Noire (*The State of Mediterranean and Black Sea Fisheries* [SoMFi]), le Comité a examiné les points saillants du rapport, notamment les principales caractéristiques de la flotte et des captures en Méditerranée ainsi que les aspects socio-économiques et ceux liés aux captures accidentelles, soulignant son importance en tant que publication phare visant à diffuser régulièrement des informations relatives aux pêches dans la zone d'application de la CGPM. Le Comité a formulé des avis portant sur les aspects suivants: i) environnement et écosystèmes marins, y compris les écosystèmes marins vulnérables; ii) statistiques et informations, notamment la mise en œuvre du cadre de référence pour la collecte de données (DCRF); iii) état des stocks méditerranéens et avis scientifiques connexes, y compris à l'échelon sous-régional. À l'échelon de la Méditerranée, le Comité a examiné notamment le cas spécifique de la dorade rose (*Pagellus bogaraevo*) dans le détroit de Gibraltar ainsi que celui de l'anguille européenne (*Anguilla anguilla*), reconnaissant qu'il était important de collecter et d'analyser des données précises en vue de l'élaboration d'un plan de gestion régional adaptatif en Méditerranée pour cette espèce. À l'échelon sous-régional, les conclusions spécifiques portaient notamment sur: i) des avis scientifiques détaillés visant à améliorer les plans de gestion existants pour les pêcheries de petits pélagiques en mer Adriatique et à élaborer un nouveau plan de gestion pour les pêcheries démersales dans le canal de Sicile, et ii) de nouveaux mécanismes visant à faciliter l'adoption de mesures de gestion, notamment pour les stocks nécessitant une intervention urgente, et à cibler les efforts sur un certain nombres d'espèces prioritaires par sous-région. En outre, le Comité a abordé plusieurs questions essentielles d'envergure régionale relatives à la gestion des populations de corail rouge (*Corallium rubrum*, L.) et à l'anguille européenne ainsi qu'aux travaux portant sur les indicateurs de suivi du bon état écologique. Par ailleurs, une note conceptuelle concernant un programme de suivi des captures accidentelles en vue de l'élaboration d'une stratégie visant à en atténuer les impacts biologiques et socio-économiques en Méditerranée et en mer Noire a été approuvée. S'agissant de la pêche artisanale, le Comité s'est félicité des résultats de la Conférence régionale tenue en mars 2016 ainsi que de la création d'un nouveau groupe de travail et a suggéré d'inclure la pêche récréative dans le mandat de ce nouveau groupe. Au vu de la demande croissante d'expertise technique et scientifique en matière de pêches dans la région, le Comité a fait sienne la proposition d'organiser un forum CGPM sur les sciences halieutiques (FishForum CGPM). Enfin, le Comité est convenu de son programme de travail pour 2016-2017 et a élu son nouveau Bureau, après avoir rendu hommage au travail réalisé par les membres du Bureau sortant.

TABLE OF CONTENTS

OPENING AND ARRANGEMENTS FOR THE SESSION 1

ADOPTION OF THE AGENDA 1

INTERSESSIONAL ACTIVITIES 1

Review of relevant decisions by the thirty-ninth session of the Commission 1

Overview of SAC achievements during the intersession 2

National reports to the SAC by contracting parties 2

Cooperation on fisheries issues 3

Major activities of the FAO regional projects 3

SALIENT ISSUES FROM THE GFCM REPORT *THE STATE OF MEDITERRANEAN AND BLACK SEA FISHERIES* 4

FORMULATION OF ADVICE IN THE FIELD OF FISHERY MANAGEMENT AND RESEARCH 4

Marine environment and ecosystems, including vulnerable marine ecosystems, fisheries restricted areas and bycatch 4

Statistics and information, including in relation to the implementation of the Data Collection Reference Framework (DCRF) 5

Overall status of the stocks in the Mediterranean Sea 6

Specific conclusions at the subregional level 7

FOLLOW-UP ON SELECTED ISSUES 10

Other activities of relevance to the SAC 12

REVIEW OF THE SAC PRELIMINARY WORK PLAN 12

Regional issues 12

Subregional issues 13

ELECTION OF SAC BUREAU 16

HOLDING OF THE NEXT SESSION AND CLOSURE OF THE MEETING 16

ANY OTHER MATTER 16

ADOPTION OF THE REPORT 16

OUVERTURE ET ORGANISATION DE LA SESSION 17

ADOPTION DE L'ORDRE DU JOUR 17

TABLE DES MATIÈRES

ACTIVITÉS INTERSESSIONS 17

Examen des décisions pertinentes prises par la CGPM à sa trente-neuvième session 17

Vue d'ensemble des réalisations du CSC pendant la période intersessions 18

Rapport nationaux établis par les parties contractantes à l'intention du CSC 18

Coopération sur les questions relatives à la pêche 19

Principales activités menées dans le cadre des projets régionaux de la FAO 20

PRINCIPALES QUESTIONS DÉCOULANT DU RAPPORT DE LA CGPM SUR L'ÉTAT DES PÊCHES EN MÉDITERRANÉE ET EN MER NOIRE 20

FORMULATION D'AVIS DANS LE DOMAINE DE LA GESTION ET DE LA RECHERCHE HALIEUTIQUES 21

Environnement et écosystèmes marins, y compris les écosystèmes marins vulnérables, les zones de pêche à accès réglementé et les captures accessoires 21

Statistiques et informations, notamment au sujet de la mise en œuvre du Cadre de référence pour la collecte de données (DCRF) 22

Vue d'ensemble de l'état des stocks en mer Méditerranée 23

Conclusions spécifiques au niveau sous-régional 24

SUIVI CONCERNANT DES QUESTIONS DIVERSES 27

Autres activités pertinentes pour le CSC 29

EXAMEN DU PROGRAMME DE TRAVAIL PRÉLIMINAIRE DU COMITÉ SCIENTIFIQUE CONSULTATIF DES PÊCHES 30

Questions régionales 30

Questions sous-régionales 31

ÉLECTION DU BUREAU DU CSC 33

TENUE DE LA PROCHAINE SESSION ET CLÔTURE DE LA RÉUNION 33

QUESTIONS DIVERSES 34

ADOPTION DU RAPPORT 34

APPENDICES/ANNEXES

Appendix 1.	Agenda	35
Annexe 1.	Ordre du jour	36
Appendix 2.	List of participants/Liste des participants	37
Appendix 3.	List of documents	46
Annexe 3.	Liste des documents	47
Appendix 4.	Status of Mediterranean stocks	48
Appendix 5(a).	Technical advice on the management of the small pelagic fishery in the Adriatic Sea	56
Appendix 5(b).	Technical advice on the management of the demersal fishery in the Strait of Sicily	58
Appendix 6.	Proposal for a new data submission framework in line with the GFCM Data Collection Reference Framework (DCRF)	60
Appendix 7.	Bycatch monitoring programme in the Mediterranean and Black Sea. Draft concept note	73
Appendix 8.	Outline of the concept note for the GFCM Forum on Fisheries Science (GFCM FishForum)	75
Appendix 9.	Conclusions of the Regional Conference on small-scale fisheries	77
Annexe 9.	Conclusions de la Conférence régionale sur la pêche artisanale	84
Appendix 10.	Terms of reference for selected meetings	91
Appendix 11(a).	Summary tables of national reports	93
Appendix 11(b).	National reports/Rapports nationaux	127

OPENING AND ARRANGEMENTS FOR THE SESSION

1. The eighteenth session of the Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) was held in Nicosia, Cyprus, from 21 to 23 March 2016. The session was attended by delegates from 20 contracting parties, 7 representatives of observers, representatives of the FAO, including its regional projects, the GFCM Secretariat and several invited experts. The list of participants is provided in Appendix 2.

2. His Excellency Nicos Kouyialis, Minister of Agriculture, Rural Development and Environment of Cyprus addressed the audience recalling the strong support and active involvement of his country in GFCM activities. He insisted on the need to strengthen cooperation with a view to achieving common goals, expressing hopes for continuing efforts towards sustainable fisheries and a level playing field in the region. In praising the work achieved by the SAC, he stressed the importance of scientific advice in addressing current challenges, and he finally extended a warm welcome to participants.

3. The session was called to order by Mr Othman Jarboui, SAC Chairperson, who also welcomed participants and thanked the hosting country for its great hospitality. In his speech, he made specific reference to the stronger role to be played by the SAC following the modernization of its reference framework and the implementation of the subregional approach. After a brief review of the most salient activities, he concluded by urging the Committee to identify and work on priority issues and critical matters for fisheries in the region as well as constructively advise the Commission.

4. In underlining important achievements made in several fields, Mr Abdellah Srour, GFCM Executive Secretary, recalled the many challenges ahead. He stressed the need to enhance knowledge and scientific expertise made available to the SAC for the formulation of its advice, calling for a new momentum to identify ways of ensuring more efficient fisheries management in order to revert the current alarming situation of Mediterranean stocks, where more than 85 percent of assessed stocks are outside safe biological limits.

ADOPTION OF THE AGENDA

5. After having introduced delegates and observers, the SAC Chairperson gave the floor to the GFCM Secretariat who informed the meeting about organizational arrangements.

6. The representative of the European Union (EU) requested to add to the agenda a discussion on how to provide advice for the Commission on technical aspects related to Black Sea fisheries included in Recommendations GFCM/39/2015/3 and GFCM/39/2015/4. The Committee adopted the agenda with minor amendments as attached under Appendix 1. The list of documents is reproduced in Appendix 3.

INTERSESSIONAL ACTIVITIES

Review of relevant decisions by the thirty-ninth session of the Commission

7. The GFCM Secretariat recalled the main objectives of the four decisions adopted at the thirty-ninth session of the Commission, namely: i) Recommendation GFCM/39/2015/1 establishing further precautionary and emergency measures in 2016 for small pelagic stocks in the Adriatic Sea (GSA 17 and GSA 18); ii) 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; iii) Recommendation GFCM/39/2015/3 on the establishment of a set of measures to prevent, deter and eliminate illegal, unreported and unregulated (IUU) fishing in turbot fisheries in the Black Sea and iv) Recommendation GFCM/39/2015/4 on management measures for piked dogfish in the Black Sea. Reference was also made to the pending recommendation on the establishment of a closing season in

the GFCM GSA 14, which had been tabled by Tunisia and would be re-examined at the next session of the Commission.

8. It was recalled that, following the amendment of the Agreement for the establishment of the General Fisheries Commission for the Mediterranean (GFCM Agreement) and the consequent modernisation of SAC functioning, a two-year feasibility study was ongoing to test a shift from a thematic to a subregional approach to fisheries management. The creation of four subregional committees (for the western, central and eastern Mediterranean and the Adriatic Sea) and appointment of moderators for each subregion allowed to launch specific activities to support the SAC in providing relevant advice in response to recommendations adopted by the Commission.

9. The Committee agreed to place under the GFCM Working Group on the Black Sea (WGBS) the discussions related to the recommendations adopted for turbot and piked dogfish, considering that the WGBS had been established to specifically review activities and formulate advice on the assessment and management of Black Sea fisheries and that it could count on the participation of all Black Sea riparian States.

Overview of SAC achievements during the intersession

10. On the basis of document GFCM:SAC18/2016/2, the Chairperson presented the activities undertaken during the intersession, highlighting that all technical meetings foreseen had been convened to address SAC regional priorities in the fields of marine environment and ecosystems, statistics and information and in relation to stock assessment. He also informed that the first activities had been conducted by the newly established subregional committees, with a specific focus on the management of small pelagic species in the Adriatic Sea and of demersal species in the Strait of Sicily.

11. He made specific reference to the progress made in regional and subregional activities – including the improvements reached in the assessment of European eel (*Anguilla anguilla*) in the Mediterranean and to the fruitful outcomes of the second meeting of the GFCM Working Group on Marine Protected areas (WGMPA) – and to the provision of field technical assistance to countries on the GFCM Data Collection Reference Framework (DCRF) and on stock assessment.

12. Finally, he pointed to the important results obtained by the Regional conference “Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea” successfully held in Algeria at the beginning of March 2016 (conclusions available in Appendix 9).

National reports to the SAC by contracting parties

13. The GFCM Secretariat presented, on the basis of document GFCM:SAC18/2016/Inf.5, a synthesis of the information contained in 15 national reports sent by Mediterranean countries (as provided in Appendices 11(a) and (b) respectively). Information from national reports outlined that: i) the number of fishing vessels and value of landings did not show relevant changes compared to the previous year; ii) the number of stock assessments performed by countries in recent years remained relatively high (around 60), and iii) studies addressing the identification of stock units, fisheries management, discards, stock assessment indicators and reference points as well as socioeconomic analysis were becoming frequent in many countries.

14. The GFCM Secretariat referred to recurrent gaps in the information provided through national reports, which undermined the possibility of performing effective comparative analysis, recalling that an electronic tool had been developed for this purpose to facilitate the submission and compilation of information. It was recognized that data submitted electronically not only were more complete and coherent, but also provided, for the first time, information that was in line with recommendations in force (e.g. on incidental catches of vulnerable species including date, GSA, fleet segment, gear and state of caught animals).

15. The delegate of Morocco stressed the usefulness of national reports in enabling the SAC to obtain, among other things, relevant information on national measures in place in the countries to support the effective implementation of management provisions contained in GFCM recommendations.

16. After having received feedback on the e-tool by countries having accessed it, the Committee welcomed its use for the submission of national reports inviting all countries to test it and submit relevant comments to the GFCM Secretariat so that this instrument could be improved in view of its systematic use in the coming years.

17. Noting that some countries had not submitted their national report or had submitted it late, the GFCM Executive Secretary reminded contracting parties that such submission was compulsory and that efforts in timely providing the most recent, accurate and quality data in the required format were instrumental in allowing the SAC to provide the Commission with an assessment of the national measures implemented in response to adopted recommendations. In this respect, he clarified that the deadline for submission was 30 days before the SAC session and that an additional extension of three weeks after the session – and in any case no later than the publication of the final SAC report – could be granted to countries that had not submitted their national report yet.

Cooperation on fisheries issues

18. The GFCM Secretariat reported on progress made in cooperation with partner organizations, in particular in the context of 12 memoranda of understanding (MoU), underlining the importance of their continued implementation. Participants were informed that, acting upon the request of the Commission, two MoU to step-up in the fight against IUU fishing and to boost ongoing initiatives on marine protected areas (MPAs) and fisheries restricted areas (FRAs) had been signed with the Ministerial Conference on Fisheries Cooperation Among African States Bordering the Atlantic (ATLAFCO) and the Network of Marine Protected Areas managers in the Mediterranean (MedPAN) respectively, while one with OceanCare on conservation issues was pending signature.

19. Other cooperation initiatives were introduced, including the Joint Strategy between the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contigous Atlantic Area (ACCOBAMS), the GFCM, the Mediterranean Action Plan of the United Nations Environment Programme (UNEP/MAP) – Regional Activity Centre for Specially Protected Areas (RAC/SPA), the International Union for Conservation of Nature (IUCN) and in collaboration with MedPAN for the spatial conservation and sustainable use of marine environment in the Mediterranean. Moreover, reference was made to universities and scientific institutions the GFCM had entered into an agreement with in order to benefit from exchanges of expertise and findings from research projects.

20. The Committee praised the continued efforts undertaken to foster cooperation with partners on the priorities outlined in the MoU and expressed satisfaction for the achievements emanating from the work jointly undertaken with partner organizations. The representative of ACCOBAMS took the floor to warmly thank the GFCM and other partners for the excellent collaboration established in the frame of joint projects and hoped that final results of the ACCOBAMS-GFCM project on mitigating interactions between endangered marine species and fishing activities could be presented to the next SAC session.

Major activities of the FAO regional projects

21. The activities carried out by the FAO regional projects (AdriaMed, CopeMed II, EastMed, MedSudMed as well as the MedLME project on Mediterranean Large Marine Ecosystems) during the intersession were presented, including scientific cooperation, research activities, training programmes, workshops and working groups as well as technical assistance to countries and to SAC activities. The delegates were reminded that detailed information on the activities and outputs of the projects could

be found in the annual report of the coordination committees of the different projects and in document GFCM:SAC18/2016/Inf.14.

22. The Committee acknowledged the extensive work carried out by the FAO regional projects and welcomed efforts towards increased subregional cooperation in support to its activities.

23. Delegations of countries benefiting from the support of regional projects – namely Egypt, Lebanon, Morocco and Tunisia – took the floor to commend the significant contribution of the projects in fostering the discussion on fisheries management and gathering fisheries-related data.

24. In stressing the key role played by the regional projects, the GFCM Executive Secretary reiterated the need to make joint efforts to align to new challenges and address the current status of stocks in the Mediterranean. In light of the new SAC framework and the establishment of its subregional committees, he insisted on the need to properly identify national and regional priorities to be addressed within the current cooperative framework between GFCM and the FAO regional projects, as well as to ensure continuous coordination at the national level.

25. On another note, the delegate of the EU, in referring to the positive experience of the Mediterranean regional projects, hoped the concept could be mirrored in the Black Sea and called for the setting up, under the umbrella of the GFCM, of a similar technical cooperation project to interact with and support the WGBS as well as other ongoing initiatives in the area.

SALIENT ISSUES FROM THE GFCM REPORT *THE STATE OF MEDITERRANEAN AND BLACK SEA FISHERIES*

26. The GFCM Secretariat presented highlights from *The State of Mediterranean and Black Sea Fisherie*s (SoMFi) 2016, including key characteristics of Mediterranean fleet and catches, socio-economic aspects and bycatch. It was underlined that SoMFi, considered as a flagship GFCM publication aimed at regularly disseminating information on fisheries in the Mediterranean and the Black Sea, should be used as a tool to support decision-making on issues of relevance to the GFCM.

27. The Committee praised the outstanding efforts made in producing such an important and exhaustive publication, stressing the need to provide a solid regional synthesis based on timely, recent and high quality data on all aspects covered by GFCM activities. In this respect, it was agreed that, in view of the next report, the GFCM Secretariat would send a synthesis of the data to be used (e.g. most recent submission, data sets, type of aggregation) so that each country could examine their completeness and quality and provide updates, if available.

28. Following remarks raised by Algeria and the EU on the western-eastern unbalance of stock status knowledge as emerged from the SoMFi analysis, it was highlighted that the subregional committees would be instrumental in filling information gaps on aspects such as stock assessment, small-scale fisheries, data collection and alien species, therefore facilitating the establishment of a level playing field across Mediterranean subregions.

FORMULATION OF ADVICE IN THE FIELD OF FISHERY MANAGEMENT AND RESEARCH

Marine environment and ecosystems, including vulnerable marine ecosystems, fisheries restricted areas and bycatch

29. The SAC Chairperson presented – based on documents GFCM:SAC18/2016/2 and GFCM:SAC18/2015/Inf.13 – the main area-based management measures proposed by the second meeting of the WGMPA.

30. In the ensuing discussion, the Committee welcomed these proposals, in particular with reference to encounter protocols, considering that similar measures were already adopted by other regional fisheries management organizations (RFMO) to minimize and mitigate the impact of fishing activities on vulnerable marine ecosystems (VMEs).

31. The representative of Oceana placed emphasis on the lack of regional measures to minimise the impacts of fishing on sensitive and fragile deep-sea habitats. She also noted the urgent need to implement a set of measures aimed at reducing fishing impacts on VMEs as required under relevant United Nations General Assembly resolutions[1], and identified key initial steps such as defining a list of VME indicator species and improving data collection on VME occurrence.

32. The Committee agreed to continue working towards adopting encounter protocols in the near future, by elaborating a specific list of VMEs to be discussed at technical meetings and presented for validation to the Commission.

33. The EU delegate stressed the importance of preparing such a list, noting that the decision on adopting presence-absence or abundance-based protocols should be made on a case-by-case basis, taking into account the abundance, distribution and vulnerability of the species or ecosystems to be protected.

34. In light of the conclusions of the WGMPA, the Committee agreed to carry out the following actions during the intersessional period:

- Elaborate a list of Mediterranean vulnerable marine ecosystems (VME) – i.e. rare coral and sponge biocenosis – and adopt encounter protocols, including precautionary thresholds and associated "move-on" rules, to protect them from adverse impacts of fishing activities;

- Define mechanisms to ensure control and enforcement of future GFCM fisheries FRAs, through vessel monitoring system (VMS), automatic identification systems (AIS) or remote control systems, as well as identify criteria for the regular evaluation of the status of FRAs;

- Request contracting parties to designate MPAs or FRAs in those areas which fall within national waters and overlap with the GFCM trawl-protected area deeper than 1 000 meters.

Statistics and information, including in relation to the implementation of the Data Collection Reference Framework (DCRF)

35. The SAC Chairperson presented the conclusions and recommendations of activities carried out in the field of statistics and information, especially in relation to the pilot study on data submission in line with DCRF provisions and the field technical assistance carried out in support to requesting countries, on the basis of documents GFCM:SAC18/2016/2 and GFCM:SAC18/2015/Dma.1.

36. He recalled that the DCRF had been endorsed at the thirty-ninth session of the Commission. He also introduced the draft proposal on data submission for the GFCM area of application, to replace the current recommendations on this issue.

[1] Resolutions 58/14, 59/25, 61/105 and 64/72 on sustainable fisheries, including through the 1995 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, and related instruments.

37. The delegate of the EU commended the important steps made towards the development of the DCRF, allowing the GFCM to collect information in a standardized way and consequently facilitating the provision by SAC of quality advice for decision making. He reaffirmed the support of the EU regarding the DCRF, and it was recalled that should technical problems be encountered during its implementation, the Committee should duly discuss them in order to provide feedback and advice for the Commission.

38. The Committee acknowledged the urgent need to modernize the current data collection and endorsed the proposal with some changes (as attached in Appendix 6) requesting the GFCM Secretariat to submit it to the Commission for discussion and possible adoption.

39. Moreover, the need to ensure quality and timeliness of data submitted by countries through the DCRF was stressed. In this respect, the GFCM Secretariat recalled that quality control procedures were currently being developed and were expected to be discussed in relevant technical DCRF meetings once the recommendation would be adopted.

40. The SAC Chairperson commended the efforts deployed by the GFCM Secretariat and thanked all members for their involvement throughout the process and their support culminating in the elaboration of the draft recommendation. The Committee strongly advised the Commission to adopt the draft recommendation and recalled that SAC should regularly assess the technical contents of the DCRF.

Overall status of the stocks in the Mediterranean Sea

41. The SAC Chairperson presented an overview of the overall status of stocks in the Mediterranean Sea (as reproduced in Appendix 4), based on the conclusions of the Working Group on Stock Assessment of Demersal Species (WGSAD), the Working Group on Stock Assessment of Small Pelagic Species (WGSASP), and the EIFAAC/ICES/GFCM Working Group on European Eel (WGEEL).

42. In relation to demersal stocks, a total of 24 stock assessments were attempted and advice was provided for 23 of them: 22 stocks were found outside safe biological limits, and only one stock (deep-water rose shrimp [*Parapenaeus longirostris*] in GSA 09) was considered as sustainably exploited. Furthermore, an overview of the status of hake (*Merluccius merluccius*) and mullet (*Mullus barbatus* and *M. surmuletus*) revealed high overexploitation indices for hake in all the Mediterranean (fishing mortality between 4 and 12 times higher than the reference point) while both mullet species showed lower overexploitation indices (with fishing mortality between 1.1 and 3.4 times higher than the reference point).

43. In relation to small pelagic stocks, 13 stock assessments were attempted and advice was provided for 8 of them, which were all considered to be outside safe biological limits. The SAC Chairperson recalled the need to improve environmental studies and to adopt urgent measures for the stock of sardine in GSA 06, as well as in GSA 07 since, over the last two years, the first one had been considered depleted and the latter ecologically unbalanced.

44. For the case of European eel (*Anguilla anguilla*), the following recommendations were provided: i) reduce to – or maintain – as close to zero as possible anthropogenic mortality affecting production and escapement of silver eels; ii) ensure that contracting parties collect and analyse accurate data on European eel within the GFCM DCRF, towards the development of a Mediterranean adaptive regional management plan for this species.

45. The Committee expressed its appreciation for the work carried out, the increased quality of assessments and the improved coverage of stocks, and endorsed the scientific advice on the status of stocks as provided by the different working groups.

46. The specific case of the assessment of the red seabream stock (*Pagellus bogaraveo*) in the Strait of Gibraltar was noted, highlighting that it was distributed both in the Mediterranean Sea (covered by GFCM) and in the Atlantic (covered by the International Council for the Exploration of the Sea [ICES] and the Fishery Committee for the Eastern Central Atlantic [CECAF]) and connecting waters. In this respect, the delegate of the EU stressed that cooperation between the different partners involved in the evaluation of this fishery would be necessary in order to carry out a correct assessment incorporating all information available.

47. The Committee recognized that although all demersal stocks were found in overexploitation, there were no clear signs of depletion and few stocks presented a low biomass level. On the other hand, the situation of small pelagic stocks was quite different from that of demersal stocks since, although overexploitation indices were generally lower, the majority of stocks showed low biomass. This situation called for different management approaches, including improving selectivity for demersal stocks and implementing recovery plans for pelagic stocks considered to be depleted.

48. Finally, the need to strengthen coordination and collaboration between the EU Scientific, Technical and Economic Committee for Fisheries (STECF) and the GFCM as well as to avoid duplication of activities was recalled. In this sense, the Committee called the Secretariats of GFCM and STECF to further investigate and proceed to formalize the cooperation through the appropriate framework. The EU delegation informed that internal consultations would be conducted on how to follow up on this matter and that it would inform the GFCM Secretariat.

Specific conclusions at the subregional level

Management of small pelagic fisheries in the Adriatic Sea

49. Mr Stylianos Somarakis, moderator of the Subregional Committee for the Adriatic Sea (SRC-AS), presented the most salient issues related to the management of small pelagic fisheries in the Adriatic Sea.

50. He highlighted that a complete revision of the input data and stock assessment models had been carried out and a joint assessment for both sardine and anchovy in GSAs 17 and 18 had been done, including the estimation of new reference points for both biomass and fishing mortality. Results indicated that fishing mortality was higher than F_{MSY} while biomass was lower than the one considered as precautionary (B_{pa}); therefore anchovy and sardine stocks in GSAs 17 and 18 were found to be overexploited and in overexploitation.

51. The SRC-AS moderator then detailed the outcomes of simulations of alternative scenarios performed by the Workshop on bioeconomic assessment of management measures (WKMSE), noting that, under current fishing mortality, both anchovy and sardine continued to be outside safe biological limits and, in some of the tested scenarios, collapsed. Moreover, he noted that when the emergency measures foreseen in Recommendation GFCM/38/2014/1 were simulated, the stock did not manage to recover to safe biological limits. On the other hand, when different variations to the existing management plan foreseen in Recommendation GFCM/37/2013/1 were simulated using the new reference points, the stock recovered back to safe biological limits.

52. The EU delegate commended the technical work done during the intersession by the SRC-AS.

53. The delegate of Montenegro, supported by the delegates of Croatia and Slovenia, recalled the conclusions of the SRC-AS indicating that the implementation of management measures should take into consideration the characteristics of the different fleets. He therefore noted that the Committee should take into account the small size of the Montenegrin fleet so that future management measures for this fishery are in proportion with the expected impact of the different fleets on the stocks.

54. The Committee acknowledged the work done, highlighting that it followed the approach discussed by the SAC to provide a comprehensive and detailed advice useful for the Commission. The Committee invited the Commission to proceed with the revision of the technical contents, including the proposed harvest control rules, of the management plan as detailed by Recommendations GFCM/37/2013/1 and GFCM/39/2015/1, based on the new stock assessments, reference points, and conclusions arising from the simulations of alternative management scenarios detailed in Appendix 5(a).

Management of demersal fisheries in the Strait of Sicily

55. Ms Andreina Fenech-Farrugia, moderator of the Subregional Committee for the Central Mediterranean (SRC-CM), presented the main issues related to the management of demersal fisheries in the Strait of Sicily. She referred to the work done by the WGSAD and the WKMSE in addressing the requirements included in Recommendation GFCM/39/2015/2 for a technical advice towards the implementation of management plans.

56. The SRC-CM moderator highlighted that hake (*Merluccius merluccius*) and deep-water rose shrimp (*Parapeneus longirostris*), in GSAs 12 to 16 (Strait of Sicily), were considered to be outside safe biological limits, with fishing mortality between 4 to 6 times higher than $F_{0.1,}$ for hake, and 1.2 to 1.4 higher than $F_{0.1,}$ for shrimp. She noted that the WKMSE performed a medium-term forecast under a number of fishing mortality scenarios and highlighted that a 20 percent reduction of fishing mortality (equivalent to reducing F to $F_{0.1}$ for shrimps) allowed both stocks to increase in biomass and that, when concentrated on early life stages of hake, the increase in hake biomass was faster. She then explained that alternative measures to reduce fishing mortality had been discussed in detail during the SRC-CM, including: i) the establishment of FRAs for trawlers targeting these stocks; ii) the temporary closure of part of Gulf of Gabès and iii) a reduction in the overall fishing effort.

57. She concluded noting that the SRC-CM had advised to develop a management plan to address trawling fisheries operating in the Strait of Sicily and targeting hake and deep-water rose shrimp, and to implement an initial 20 percent reduction of the current fishing mortality, focusing on the reduction of mortality for juvenile hake, through a combination of effort reduction and spatial protection measures. The SRC-CM also concluded that the FRAs presented to the seventeenth session of the SAC should target bottom trawlers only, for a testing period of two years. These FRAs were expected to help bring the status of demersal stocks subject to the management plan to safe biological limits.

58. The SAC Chairperson congratulated the experts participating in the revision of this technical measure. The Committee commended the work done and invited the Commission to take into consideration the detailed advice as provided in the new proposal reproduced in Appendix 5(b), with a view to developing a management plan for trawling fisheries operating in the Strait of Sicily and targeting hake and deep-water rose shrimp.

59. Technical advice related to the pending recommendation on the temporal closure of the Gulf of Gabès was also presented and the importance of this recommendation was recognized. The delegate of Tunisia expressed concern since vessels from other countries had been spotted operating in the area during the temporal closure. Furthermore, it was noted that the proposed closure would be effective on stocks present on the shelf but that further studies were required to identify effects in offshore and deep-water resources and fisheries.

60. The representative of Oceana welcomed the constructive work carried by all the parties in defining a clear advice based on the best available scientific information for demersal fisheries in the Strait of Sicily. However, in line with the precautionary approach embedded in the GFCM Agreement, such an advice should also include, beside deep-water rose shrimp, measures to ensure the recovery of hake stocks to sustainable levels.

Considerations on the functioning of the SAC

61. Given the observed overfishing status for most Mediterranean stocks, the Committee recognized the pressing need to move forward so that recommendations to reduce fishing mortality be followed by concrete management measures, especially for those stocks requiring urgent action. Acknowledging the need to follow a precautionary approach, it stressed the importance of providing advice towards the adoption of measures on those species or areas in which stock assessment was not yet available. In this respect, the Committee reflected on solutions to provide more precise advice in support of management measures, both for stocks for which a validated assessment existed and those for which information or assessment was either lacking or not made available to the SAC.

62. The Committee extensively discussed the different scenarios described above, with the objective to address shortcomings that could compromise the quality and extent of the advice provided by the SAC. Particular reference was made to the review mechanism foreseen in the GFCM Agreement, highlighting that the SAC could propose the Commission to activate such mechanism in order to facilitate the translation of SAC advice into proposals for recommendations, should urgent management measures be needed.

63. Taking into consideration such major concerns, the Committee proposed a clear plan of action for two different situations:

a) <u>When information or assessment was either lacking or not made available to the SAC</u>

- Efforts to collect information and perform stock assessments should be immediately initiated. Moreover, assessment methods for data-limited stocks should be used to attempt a first advice on their status, including, when possible, based on the biological and ecological properties of other stocks of the same species that are subject to fisheries with similar exploitation patterns.
- International surveys within the framework of FAO should be promoted as a way to collect information on a large number of species in a wide area.
- Following the principles of the precautionary approach to fisheries management, the Committee should consider proposing general recommendations on issues expected to benefit the overall status of stocks (e.g. adjustments on fishing capacity, selectivity, etc.), such as the ten percent reduction in fishing capacity proposed in Resolution GFCM/37/2013/2.

b) <u>When a validated stock assessment exist and a scientific advice is provided (e.g. reduce fishing mortality or implement a management plan)</u>

- A comparative assessment of the biological and socio-economic impact of alternative management scenarios should be done.
- To this end, the working groups on stock assessment should perform, when possible, short, medium or long-term forecasts based on adopted assessment models while the subregional committees should identify potential management scenarios and perform a management strategy evaluation (MSE).
- Management scenarios to be tested should be designed taking into account the views of experts from national administrations and relevant stakeholders, and should include at least: i) a status quo scenario (maintaining current effort/fishing mortality); ii) a scenario where fishing mortality at maximum sustainable yield (FMSY) is achieved in 2020, or at an alternative date in the medium term and iii) any other scenario requested by the Commission.

64. The Committee recognized that, in many cases, the assessments were fragmented and only covering specific stocks for which information was provided, thus preventing the adoption of relevant decisions covering the whole region. As a consequence, it decided – while continuing routine

monitoring of the other species – to concentrate its efforts, over the next two years, on a number of priority species by subregion, as follows:

	Western Mediterranean	**Central Mediterranean**	**Adriatic Sea**
Small pelagic	*Engraulis encrasicolus*	*Engraulis encrasicolus*	*Engraulis encrasicolus*
	Sardina pilchardus	*Sardina pilchardus*	*Sardina pilchardus*
Demersal	*Parapenaeus longirostris*	*Parapenaeus longirostris*	*Mullus barbatus*
	Merluccius merluccius	*Merluccius merluccius*	*Merluccius merluccius*
	Eastern Mediterranean		
Small pelagic	*Engraulis encrasicolus*		*Sardinella aurita*
Demersal	*Mullus barbatus*	*Mullus barbatus*	*Mullus barbatus*
		Spicara smaris	

65. The delegate of Bulgaria noted that priorities for the assessment of Black Sea stocks should be discussed in the upcoming fifth session of the WGBS.

66. Finally, the progress in the implementation of the subregional approach was briefly reported. The Committee praised the results obtained by the SRC-AS and SRC-CM, recognizing that they had proven more efficient than the thematic subcommittees in addressing the requests of the Commission in relation to subregional management plans.

67. The Committee also validated the proposed steps to initiate the work of the subregional committees for the western and eastern Mediterranean; this included the preparation of a concept note defining priorities for the subregion and a call for experts to participate in the work of the subregional committees.

68. In reply to the representative of RAC/SPA, who was concerned that the new approach might not allow to attach the required attention to transversal issues such as marine environment and ecosystems, it was recalled that the subregional approach had been designed to be flexible and that the SAC had the possibility to establish ad hoc expert groups or workshops at regional or subregional level to address specific priorities of relevance for its mandate.

FOLLOW-UP ON SELECTED ISSUES

69. The Committee decided to discuss in further detail selected topics of regional relevance, namely the: i) management of red coral populations (*Corallium rubrum,* L.) and of European eel, ii) work on good environmental status (GES), iii) work on bycatch and iv) progress on small-scale and recreational fisheries.

70. In relation to red coral, the Committee was reminded that the authorization to use remotely operated vehicles (ROV) for research purposes had expired in 2015, and that the development of the regional management plan for red coral was still pending. The Italian delegation also informed on the results of a project carried out in Italian waters, which revealed the importance of carrying on the monitoring of this species through ROV.

71. Several delegations – Egypt, Morocco and Tunisia in particular – underlined the importance of undertaking research in support of the sustainable exploitation of red coral and stressed the need for

technical assistance in red coral assessment methodologies. The Committee noted that such requests reflected the priorities identified during relevant meetings on the subject.

72. In light of the information provided by the delegate of Italy, the delegate of Algeria supported the request to extend the deadline for the use of ROV for scientific purposes.

73. In this respect, the Committee agreed that addressing pending issues and replying to the requests raised by countries was a priority and therefore proposed to convene a workshop during the next intersession with the objectives to: i) analyse the outcomes of research programmes on red coral, including on the use of ROV for scientific purposes; ii) review available data and identify possible stock assessment methods applicable; iii) attempt stock assessment; iv) identify research needs, with a view to updating the regional research programme on red coral, and v) formulate scientific advice on red coral management measures, including in relation to the existing proposal for a regional red coral management plan.

74. In relation to European eel, the Committee welcomed the advances made and supported the need to continue collaborating in the context of the WGEEL towards the management of eel in the Mediterranean area.

75. In relation to GES, it was recalled that a set of common indicators to monitor fisheries resources in the Mediterranean had already been selected and included in the DCRF. The Committee stressed that technical work was still needed for the estimation of the proposed indicators (including biodiversity, vulnerable marine ecosystems and incidental catches), for the assessment of their performance and for their aggregation at the regional and subregional levels. It was suggested that the work on the estimation and monitoring of indicators could be integrated in the activities of the working groups on stock assessment and that the outcomes of this work be used to facilitate the adoption of a multidimensional approach to fisheries management.

76. As a reply to the concerns raised by some delegations about the high rates of bycatch (discards and incidental catches of vulnerable species) reported in SoMFi 2016, the GFCM Secretariat presented the outline of a bycatch monitoring programme aimed at performing a comprehensive quantitative assessment and adopting a strategy to mitigate the biological and socio-economic impacts of bycatch.

77. The representative of ACCOBAMS, in reminding that incidental catches were recognized as one of the main threats to cetacean conservation, expressed full support to this bycatch monitoring programme and proposed to contribute to this effort wherever possible.

78. The initiative was praised by the Committee, which agreed to submit a concept note for the consideration of the Commission (draft available in Appendix 7).

79. The delegates of Morocco and Tunisia also welcomed the fruitful work and collaboration with ACCOBAMS.

80. With regard to small-scale fisheries, the Committee acknowledged the successful outcomes of the regional conference and its importance in the promotion of concerted efforts for such an essential sector in the region. The creation of a permanent working group on small-scale fisheries, under the auspices of the GFCM, and the concerted action plan that stemmed from the Conference were particularly welcomed. Among the issues to address, the delegate of Morocco suggested to launch a reflection on the resources targeted by small-scale fisheries and to find links between socio-economic aspects and methods to assess the impacts of small-scale fisheries and other fleets on the fisheries resources.

81. The representative of WWF expressed strong satisfaction for the fruitful collaboration as a conference partner and stressed the importance of co-management to support small-scale fisheries in

light of the United Nations Sustainable Development Goals, reiterating the interest of his organization to keep working on this issue in close cooperation with the GFCM.

82. Finally, the Committee agreed to include recreational fisheries in the mandate of the new working group proposed by the Conference. In this respect, the delegates of Egypt and the EU, supported by other delegations, suggested looking into the assessment of recreational fisheries and their potential impacts on marine resources, due to the relevant share of the catch they represent in some countries. The representative of the EU suggested that, once the estimation of catches by recreational fisheries is made, it should be included in relevant stock assessments.

Other activities of relevance to the SAC

83. The representative of RAC/SPA presented progress made on the Joint Strategy between ACCOBAMS, GFCM, UNEP/MAP-RAC/SPA, IUCN and in collaboration with MedPAN for the spatial conservation and sustainable use of the marine environment in the Mediterranean. He underlined in particular the potential of this initiative for joining efforts and expertise to harmonize processes for the implementation of marine protected measures as well as for finding synergies in the definition of priorities for the establishment of marine protected areas, especially in the open seas.

84. The representative of ACCOBAMS expressed support to this initiative, which would contribute to optimizing efforts and strengthening synergies between partner organizations. Moreover, she provided the Committee with a follow-up of the development on the ACCOBAMS Survey Initiative, aimed at establishing an integrated and coordinated monitoring programme for cetaceans and proposed to keep the GFCM informed about the project.

85. The representative of the FAO Fisheries Statistics and Information Team provided insights on GFCM's partnership within the Fisheries and Resources Monitoring System (FIRMS) and on perspectives to renew collaboration within this knowledge mechanism. He highlighted, among other issues related to reporting on fishery data, the relevance of SoMFi as a valuable source of information.

86. The Committee welcomed the fruitful partnerships established on issues of common interest and expressed willingness to keep working towards enhancing such synergies, including in the context of the FIRMS initiative. The GFCM Secretariat was invited to explore the feasibility of such cooperative initiatives.

REVIEW OF THE SAC PRELIMINARY WORK PLAN

87. The SAC Chairperson introduced the preliminary work plan for the SAC in 2016–2017 on the basis of documents GFCM:SAC18/2016/2 and GFCM:SAC18/2016/Inf.6 to Inf.13. After discussing priorities for the next intersession, the Committee endorsed its 2016–2017 work plan as follows:

Regional issues

Marine environment and ecosystems

- Complete the dataset on national spatial restrictions to fisheries in the GFCM area of application.
- Continue the execution of the six pilot studies foreseen in the first phase of the ACCOBAMS-GFCM joint project on interactions between endangered species and fishing activities.
- Define a specific list of VMEs to be protected by encounter protocols.
- Develop a medium-term bycatch strategy allowing to monitor the volume and characteristics of discards and incidental catches of vulnerable species at a regional scale as well as to design adequate mitigation measures (as described in the draft concept note in Appendix 7).

Statistics and information

- Complete the DCRF pilot study in order to finalize the development of the online platform in view of data submission potentially starting from 2017.
- Define data quality control procedures.
- Provide technical assistance to countries on the collection and submission of data, in line with DCRF requirements.

Stock assessment

- Develop a programme, including the preparation of a concept note, on the execution of scientific surveys at sea for the collection of information on distribution, abundance and biological parameters of main commercial species and species of conservation interest.
- Improve overall advice on the status of stocks, providing training on stock assessment methods and holding dedicated benchmark assessment sessions to identify assessment methods and estimate reference points for selected demersal and small pelagic species.
- Provide assistance to GFCM eel national focal points in the compilation of the GFCM country reports on eel to be presented to the WGEEL.
- Prepare a document detailing the current state of European eel and associated fisheries in the Mediterranean Sea.

Subregional issues

The following activities are proposed to be carried out in each subregion:

- Compile existing information on recreational fisheries and their interactions with small-scale fisheries, in order to assess their importance and potential impacts on the marine resources and ecosystems.
- Compile information on fishing operations by fleet and GSA, including fishing gear, main target species, discards etc., towards a descriptive catalogue of Mediterranean métiers.
- Finalize guidelines on a common methodology for socio-economic analysis, in coordination with the FAO regional projects.

Adriatic Sea

- Conduct training activities towards capacity building in quantitative assessments of management scenarios.
- Extend the assessments of alternative management measures to demersal stocks, especially hake, including options to increase the minimum conservation reference size and impose spatio-temporal closures or FRAs.
- In preparation of the working groups on stock assessment in 2016: i) prepare input data and attempt tentative joint assessments of red mullet, hake, and deep-water rose shrimp in GSAs 17 and 18, ii) compile the existing information on nursery and spawning areas of the assessed stocks to investigate the possibility of establishing new spatio-temporal closures and FRAs, and iii) assess the status of additional demersal species which are important for the subregion, such as the Norway lobster (*Nephrops norvegicus*), common sole (*Solea solea*) and mantis shrimp (*Squilla mantis*).

Central Mediterranean

- Conduct training activities towards capacity building in quantitative assessments of management scenarios.
- Consolidate bioeconomic assessments of the potential impact of management measures on deep-water rose shrimp and hake trawling fisheries, incorporating better socio-economic information and simulating a wide variety of scenarios.
- Identify the main nursery areas for hake and deep-water rose shrimp, in addition to those already identified in GSAs 15 and 16.
- Assess the impact of the proposed temporary closure in GSA 14 on offshore trawl fisheries targeting deep-water crustaceans.
- Improve knowledge on the abundance, distribution and population dynamics of demersal elasmobranch species occurring in the whole central Mediterranean, also building upon the work done in the Strait of Sicily.

Western Mediterranean

- Conduct training activities towards capacity building in quantitative assessments of management scenarios.
- Provide capacity building on aspects related to data collection and stock assessments.
- Compile and analyse information for the identification of stock boundaries.

Eastern Mediterranean

- Provide capacity-building on aspects related to data collection and stock assessments.
- Compile and analyse information towards the identification of stock boundaries.
- Compile available information on alien species and their interaction with fisheries.

88. The Committee agreed to further discuss, with relevant experts, subregional priorities as well as the implementation of the actions included in the work plan for the next three years.

89. The Committee agreed on the list of meetings provided below. The terms of reference for selected meetings are available in Appendix 10.

Meeting	Place/Date
SRC-WM training on stock assessment	Tanger, Morocco July 2016 (TBC)
EIFAAC/ICES/GFCM Working Group on Eel (WGEEL)	Córdoba, Spain 15–22 September
Working Group on stock assessment of Demersal Species [5 days including a benchmark assessment for selected species]	Rome, TBC October – November 2016
Working Group on stock assessment of Small Pelagic Species [5 days, including a benchmark assessment for selected species]	Rome, TBC October – November 2016
SRCs joint meeting on the use of simulation and forecast bioeconomic models for the assessment of management measures [5 days]	TBD
SRC-WM/SRC-CM workshop on red coral	TBD
Meetings of the Subregional Committees	TBD
Nineteenth session of SAC	TBD March – April 2017
Workshop towards the implementation of a Mediterranean management plan for European eel [3 days]	TBD 2017

90. The Committee was reminded that the DCRF workshop initially planned in February 2016 had been postponed to September/October 2016 in order to take stock of the results of the DCRF pilot study and incorporate the comments of the Commission.

91. The FAO workshop on VMEs in the Mediterranean Sea (summer 2016), to be organized in collaboration with the GFCM, was regarded as an important occasion to address SAC recommendations on VMEs and progress on related actions in this field. It was agreed that the considerations of the Committee, including a proposal by Oceana on specific issues to be addressed, would be taken into account in the preparation and organization of the workshop.

GFCM Forum on Fisheries Science

92. In recognizing the increasing demand for more scientific and technical advice as well as the existing know-how on fisheries issues in the region, the Committee discussed the proposal of the GFCM Secretariat to organize a GFCM Forum on Fisheries Science (GFCM FishForum). The aim would be to: i) provide an open and collaborative platform to share experiences, information and outcomes of ongoing initiatives in relevant areas of fisheries science; ii) promote ideas and future projects and iii) integrate all available information to support scientific knowledge and advice by the GFCM.

93. The Committee discussed the rationale and potential themes/clusters of the forum, which was considered as an opportunity to maximise the role of the SAC as a hub for the collection and processing of scientific and technical advice on fisheries, including within the framework of Sustainable Development Goal 14.

94. Several delegations praised the initiative and highly valued the possibility of attracting a large community of experts on different fisheries-related issues. The representative of ACCOBAMS stressed the readiness of her organization to be an active partner in the GFCM FishForum.

95. The outline of a concept note to the attention of the Commission summarizing the main objectives, contents and course of action is attached in Appendix 8.

ELECTION OF SAC BUREAU

96. The Committee expressed great satisfaction for the work done by the SAC under the efficient stewardship of the present Bureau.

97. The Executive Secretary informed that the mandate of the SAC Bureau had expired and referred to Rule VII of the GFCM rules of procedure related to the election of the Bureau, whereby members of the Bureau could serve a two-year term, renewable once.

98. Upon the proposal of the delegates of Egypt, the European Union, France, Morocco and Tunisia, the Committee unanimously agreed to reconduct the current Bureau for another two-year term. The SAC Bureau, as extended, would be composed of Mr Othman Jarboui (Tunisia), as Chairperson, Mr Ali Cemal Gücü (Turkey), as first Vice-Chairperson, and Ms Claire Saraux (France), as second Vice-Chairperson in replacement of Ms Capucine Mellon, who was warmly thanked for her excellent contribution.

HOLDING OF THE NEXT SESSION AND CLOSURE OF THE MEETING

99. The Committee agreed that its nineteenth session would be tentatively held in March/April 2017 and took note of the kind invitation made by the delegation of Slovenia to host the session, subject to official confirmation by the competent authorities.

100. The Committee extended its appreciation to Cyprus for hosting the session, thanking in particular the Ministry of Agriculture, Rural Development and Environment, for the dedication of its staff and the excellent organization of the meeting. The warm hospitality and excellent working conditions were highly appreciated.

101. The SAC Chairperson and delegates congratulated the GFCM Secretariat for the excellent work done in the preparation and organization of the session as well as during the intersession. Delegates were also thanked for their contribution towards the success of SAC intersessional activities.

ANY OTHER MATTER

102. Ms Margaux Favret, Marine Stewardship Council (MSC), presented the work carried out by her organization and its partners within the framework of the Medfish project. The Committee praised the efforts made towards better sustainability in the Mediterranean.

ADOPTION OF THE REPORT

103. The report, including its appendices, was adopted on Wednesday 23 March 2016.

OUVERTURE ET ORGANISATION DE LA SESSION

1. Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa dix-huitième session à Nicosie (Chypre) du 21 au 23 mars 2016. Ont participé à la session des délégués de vingt parties contractantes, sept représentants des observateurs, des représentants de la FAO, y compris des projets régionaux de l'Organisation, et du Secrétariat de la CGPM, ainsi que plusieurs experts invités. On trouvera la liste des participants à l'annexe 2.

2. M. Nicos Kouyialis, Ministre chypriote de l'agriculture, du développement rural et de l'environnement, a rappelé aux participants que son pays appuyait fermement les activités de la CGPM et y participait activement. Il a insisté sur la nécessité de renforcer la coopération afin d'atteindre les objectifs communs et a dit espérer que les efforts consentis en faveur de la durabilité de la pêche et de conditions équitables dans la région seraient poursuivis. Saluant les travaux accomplis par le CSC, il a souligné que les avis scientifiques étaient importants pour permettre de relever les défis actuels et, pour terminer, a souhaité une chaleureuse bienvenue aux participants.

3. La session a été ouverte par M. Othman Jarboui, Président du CSC, qui a souhaité à son tour la bienvenue aux participants et a remercié le pays hôte de sa grande hospitalité. Dans son discours, il a insisté sur le rôle plus important que le CSC devrait jouer après la modernisation de son cadre de référence et la mise en œuvre de l'approche sous-régionale. Après un bref aperçu des activités les plus importantes, il a conclu son discours en demandant instamment au Comité de recenser des questions prioritaires et des questions cruciales relatives aux pêches dans la région, de s'y consacrer et de donner des avis de manière constructive à la Commission.

4. Tout en soulignant les importants résultats obtenus dans divers domaines, M. Abdellah Srour, Secrétaire exécutif de la CGPM, a rappelé les nombreux défis à relever. Il a insisté sur la nécessité d'améliorer les connaissances et les compétences scientifiques mises à la disposition du CSC en vue de la formulation d'avis, appelant de ses vœux une nouvelle dynamique qui permette de trouver des modalités de gestion plus efficace des pêches, afin d'inverser la tendance alarmante des stocks en Méditerranée, où plus de 85 pour cent des stocks évalués sont en dehors des limites biologiques de sécurité.

ADOPTION DE L'ORDRE DU JOUR

5. Après avoir présenté les participants et les observateurs, le Président du CSC a donné la parole au Secrétariat de la CGPM, qui a informé les participants des modalités d'organisation de la session.

6. Le représentant de l'Union européenne (UE) a demandé d'ajouter à l'ordre du jour une discussion sur les aspects techniques relatifs aux pêches en mer Noire inclus dans les Recommandations CGPM/39/2015/3 et CGPM/39/2015/4. L'ordre du jour a été adopté par le Comité avec de légères modifications et figure à l'annexe 1. On trouvera la liste des documents à l'annexe 3.

ACTIVITÉS INTERSESSIONS

Examen des décisions pertinentes prises par la CGPM à sa trente-neuvième session

7. Le Secrétaire de la CGPM a rappelé les principaux objectifs des quatre recommandations adoptées à la trente-neuvième session de la Commission, à savoir: i) la Recommandation CGPM/39/2015/1 établissant des mesures de précaution et d'urgence supplémentaires en 2016 pour les stocks de petits pélagiques en mer Adriatique (sous-régions géographiques 17 et 18); ii) la Recommandation CGPM/39/2015/2 sur la mise en place d'un ensemble de normes minimales pour la pêche au chalut de fond visant les stocks d'espèces démersales dans le canal de Sicile, dans l'attente de l'élaboration et de l'adoption d'un plan de gestion pluriannuel; iii) la Recommandation

CGPM/39/2015/3 sur la mise en place d'un ensemble de mesures visant à prévenir, contrecarrer et éliminer la pêche au turbot illicite, non déclarée et non réglementée (pêche INDNR) en mer Noire; et iv) la Recommandation CGPM/39/2015/4 sur des mesures de gestion applicables à l'aiguillat commun en mer Noire. Il a également été fait mention d'une proposition de la Tunisie en vue d'une recommandation relative à l'établissement d'une saison de fermeture dans la sous-région géographique 14, qui serait à nouveau examiné lors de la prochaine session de la Commission.

8. Il a été rappelé que, conformément aux dispositions modifiées de l'Accord portant création de la Commission générale des pêches pour la Méditerranée (l'Accord de la CGPM) et après la modernisation du fonctionnement du CSC qui en a découlé, une étude de faisabilité de deux ans était en cours afin de tester le passage d'une approche thématique à une approche sous-régionale de la gestion des pêches. La création de quatre comités sous-régionaux (Méditerranée occidentale, Méditerranée centrale, Méditerranée orientale et mer Adriatique) et la désignation de modérateurs pour chaque sous-région ont permis de lancer des activités spécifiques pour appuyer le CSC dans la formulation d'avis pertinents en réponse aux recommandations adoptées par la Commission.

9. Le Comité est convenu de charger le Groupe de travail sur la mer Noire de la CGPM (WGBS) de l'examen des recommandations adoptées en ce qui concerne le turbot et l'aiguillat commun, compte tenu du fait que celui-ci avait été créé pour examiner spécifiquement les activités portant sur l'évaluation et la gestion des pêches en mer Noire et formuler des avis en la matière et qu'il pouvait compter sur la participation de tous les États riverains de la mer Noire.

Vue d'ensemble des réalisations du CSC pendant la période intersessions

10. En s'appuyant sur le document GFCM:SAC18/2016/2, le Président a présenté les activités menées par le CSC entre les sessions. Il a souligné que toutes les réunions techniques prévues avaient été organisées afin de traiter les priorités régionales du CSC dans les domaines de l'environnement et des écosystèmes marins, des statistiques et de l'information, ainsi qu'en ce qui concerne l'évaluation des stocks. Il a aussi informé les participants que les nouveaux comités sous-régionaux avaient mené leurs premières activités et s'étaient plus particulièrement concentrés sur la gestion des petits pélagiques en mer Adriatique et sur la gestion des espèces démersales dans le canal de Sicile.

11. Il a en particulier fait référence aux progrès réalisés dans le cadre des activités régionales et sous-régionales des comités sous-régionaux – y compris les améliorations obtenues dans l'évaluation de la situation de l'anguille européenne (*Anguilla anguilla*) en Méditerranée et les résultats fructueux de la deuxième réunion du Groupe de travail sur les aires marines protégées de la CPGM – ainsi qu'à l'assistance technique sur le terrain qui a été prêtée aux pays en ce qui concerne le Cadre de référence pour la collecte des données (DCRF) de la CGPM et les évaluations des stocks.

12. Enfin, il a appelé l'attention sur les importants résultats obtenus par la Conférence régionale « Construire un avenir pour une pêche artisanale durable en Méditerranée et en mer Noire», organisée avec succès en Algérie au début du mois de mars 2016 (conclusions disponibles à l'annexe 9).

Rapport nationaux établis par les parties contractantes à l'intention du CSC

13. Le Secrétariat de la CGPM a présenté, en s'appuyant sur le document GFCM:SAC18/2016/Inf.5, une synthèse des informations figurant dans quinze rapports nationaux envoyés par les pays méditerranéens (respectivement aux annexes 11(a) et (b)). Les grandes lignes des informations contenues dans les rapports nationaux sont les suivantes: i) le nombre de navires de pêche et la valeur des débarquements ne présentaient pas de changements notables par rapport à l'année précédente; ii) le nombre d'évaluations des stocks menées par les pays ces dernières années s'était maintenu à un niveau relativement élevé (une soixantaine); et iii) des études portant sur la délimitation des unités de stocks, la gestion des pêches, les rejets en mer, les indicateurs et points de référence pour l'évaluation des stocks et des analyses socioéconomiques étaient de plus en plus fréquemment réalisées dans de nombreux pays.

14. Le Secrétariat de la CGPM a évoqué les lacunes récurrentes qui subsistaient dans les informations communiquées au moyen des rapports nationaux et compromettaient la possibilité de mener des analyses comparatives efficaces. À cet égard, il a rappelé qu'un outil électronique avait été mis au point afin de faciliter la communication et la compilation des informations. Il a été reconnu que les données communiquées par voie électronique étaient non seulement plus complètes et plus cohérentes, mais aussi que, pour la première fois, les informations ainsi fournies étaient conformes aux recommandations en vigueur (par exemple sur les captures accidentelles d'espèces vulnérables mentionnant leur date, les sous-régions géographiques, les segments de flotte, les engins et l'état des animaux capturés).

15. Le délégué du Maroc a souligné que les rapports nationaux étaient utiles car ils permettaient au CSC d'obtenir, entre autres, des informations pertinentes sur les mesures prises au niveau national à l'appui de la mise en œuvre efficace des dispositions de gestion figurant dans les recommandations de la CGPM.

16. Après le retour d'information des pays ayant eu accès à l'outil électronique, le Comité s'est félicité de son utilisation pour la communication des rapports nationaux et a invité tous les pays à le tester et à communiquer leurs observations au Secrétariat de la CGPM, pour qu'il puisse être amélioré et utilisé de manière systématique au cours des prochaines années.

17. Remarquant que certains pays n'avaient pas transmis leur rapport national ou l'avait transmis en retard, le Secrétaire exécutif de la CGPM a rappelé aux parties contractantes que cette communication avait un caractère obligatoire et que les efforts consentis en vue de fournir, selon le format demandé et en temps opportun, les données les plus récentes, les plus précises et de la meilleure qualité étaient fondamentaux car ils permettaient au CSC de fournir à la Commission une évaluation des mesures nationales mises en œuvre pour donner suite aux recommandations adoptées. À cet égard, il a précisé que l'échéance pour la transmission des rapports était de 30 jours avant la tenue de la session du CSC et qu'un report supplémentaire de trois semaines après la session – et quoi qu'il en soit avant la publication du rapport final du CSC – pourrait être accordé aux pays qui n'avaient pas encore transmis leur rapport national.

Coopération sur les questions relatives à la pêche

18. Le Secrétariat de la CGPM a fait rapport sur les progrès accomplis en coopération avec les organisations partenaires, en particulier dans le cadre de 12 protocoles d'accord, en soulignant combien il était important d'en poursuivre la mise en œuvre. Il a informé les participants du fait que, à la demande de la CGPM, deux protocoles d'accord visant à intensifier la lutte contre la pêche INDNR et à stimuler les initiatives actuelles sur les aires marines protégées (AMP) et les zones de pêche à accès réglementé avaient été conclus respectivement avec la Conférence ministérielle sur la coopération halieutique entre les États africains riverains de l'océan Atlantique (COMHAFAT) et le Réseau des gestionnaires d'aires marines protégées en Méditerranée (MedPAN) tandis qu'un troisième, portant sur la conservation, était en cours de signature avec OceanCare.

19. Le Secrétariat de la CGPM a aussi présenté d'autres initiatives de coopération, notamment la stratégie conjointe unissant l'Accord sur la conservation des cétacés de la mer Noire, de la Méditerranée et de la zone atlantique adjacente (ACCOBAMS), la CGPM, le Centre d'activités régionales pour les aires spécialement protégées (CAR/ASP) relevant du Plan d'action pour la Méditerranée du Programme des Nations Unies pour l'environnement (PNUE/PAM) et l'Union internationale pour la conservation de la nature (UICN), en collaboration avec MedPAN, dans le domaine de la conservation spatiale et de l'utilisation durable de l'environnement marin en Méditerranée. En outre, il a fait référence aux universités et institutions scientifiques avec lesquelles la CGPM avait passé un accord afin de tirer parti de l'échange des connaissances spécialisées et des constatations découlant des projets de recherche.

20. Le Comité s'est félicité des efforts déployés continuellement afin d'encourager la coopération avec les partenaires sur les priorités établies dans les protocoles d'accord et s'est déclaré satisfait des résultats des travaux menés conjointement avec les organisations partenaires. La représentante de l'ACCOBAMS a remercié vivement la CGPM et les autres partenaires pour l'excellente collaboration mise en œuvre dans le cadre de projets conjoints et a dit espérer que les résultats du projet mixte de l'ACCOBAMS et de la CGPM sur l'atténuation des interactions négatives entre les espèces marines en danger et les activités de pêche pourraient être présentés à la prochaine session du Comité.

Principales activités menées dans le cadre des projets régionaux de la FAO

21. Les activités réalisées durant la période intersessions dans le cadre des projets régionaux de la FAO (AdriaMed, CopeMed II, EastMed, MedSudMed, ainsi que le projet MedLME sur les grands écosystèmes marins méditerranéens) ont été présentées, notamment la coopération scientifique, les activités de recherche, les programmes de formation, les ateliers et les groupes de travail, ainsi que l'assistance technique apportée aux pays et aux activités du Comité. Il a été rappelé aux délégués qu'ils trouveraient des informations détaillées sur les activités et les produits des projets dans le rapport annuel des comités de coordination des différents projets et dans le document GFCM:SAC18/2016/Inf.14.

22. Le Comité a pris acte du travail d'envergure qui avait été accompli dans le cadre des projets régionaux de la FAO et s'est réjoui des efforts déployés en vue d'accroître la coopération sous-régionale à l'appui de ses activités.

23. Les délégations des pays bénéficiant d'un appui au titre des projets régionaux – à savoir l'Égypte, le Liban, le Maroc et la Tunisie – ont pris la parole pour saluer la contribution remarquable faite par ces projets pour favoriser le dialogue en matière de gestion des pêche et collecter des données relatives aux pêches.

24. Le Secrétaire exécutif de la CGPM a souligné le rôle essentiel des projets régionaux, en rappelant qu'il était indispensable de conjuguer les efforts afin de s'adapter aux nouveaux enjeux et de gérer la situation actuelle des stocks en Méditerranée. À la lumière du nouveau cadre du CSC et de la création de ses comités sous-régionaux, il a insisté sur la nécessité de bien établir les priorités nationales et régionales au titre du cadre de coopération entre la CGPM et les projets régionaux de la FAO, ainsi que de veiller à une coordination continue au niveau national.

25. Se référant aux résultats positifs des projets régionaux menés en Méditerranée, le délégué de l'UE a dit espérer que le concept soit repris dans le cas de la mer Noire et a demandé de mettre en place, sous l'égide de la CGPM, un projet de coopération du même type afin d'interagir avec le Groupe de travail sur la mer Noire et d'autres initiatives en cours et de leur prêter un appui.

PRINCIPALES QUESTIONS DÉCOULANT DU RAPPORT DE LA CGPM SUR L'ÉTAT DES PÊCHES EN MÉDITERRANÉE ET EN MER NOIRE

26. Le Secrétariat de la CGPM a présenté les éléments saillants du rapport sur l'état des pêches en Méditerranée et en mer Noire de 2016 (*The State of Mediterranean and Black Sea Fisheries* [SoMFi]), y compris les caractéristiques principales de la flottille de pêche et des captures, les aspects socioéconomiques et ceux concernant les captures accidentelles. Il a souligné le fait que le rapport SoMFi, en tant que publication phare de la CGPM visant à diffuser de façon régulière des informations sur la pêche en Méditerranée et en mer Noire, devait étayer la prise de décision sur les questions intéressant la CGPM.

27. Le Comité s'est félicité des efforts considérables ayant abouti à la production d'un document aussi important et exhaustif, en soulignant combien il était nécessaire de fournir une synthèse régionale fiable qui se fonde sur des données ponctuelles, récentes et de grande qualité concernant tous les aspects couverts par les activités de la CGPM. À cet égard, il a été convenu que, en vue du

prochain rapport, le Secrétariat de la CGPM transmettrait une synthèse des données à utiliser (par exemple, renseignements les plus récents, ensembles de données, type d'agrégation) afin que chaque pays puisse en évaluer l'exhaustivité et la qualité et communiquer des mises à jour, le cas échéant.

28. Suite aux remarques formulées par l'Algérie et l'UE au sujet du déséquilibre est-ouest des connaissances sur l'état des stocks, tel qu'il est ressorti de l'analyse présentée dans le rapport SoMFi, il a été indiqué que les comités sous-régionaux joueraient un rôle crucial en ce qu'ils contribueraient à rassembler les informations manquantes sur des aspects comme l'évaluation des stocks, la pêche artisanale, la collecte de données et les espèces exotiques, et ainsi à placer toutes les sous-régions méditerranéennes sur un pied d'égalité.

FORMULATION D'AVIS DANS LE DOMAINE DE LA GESTION ET DE LA RECHERCHE HALIEUTIQUES

Environnement et écosystèmes marins, y compris les écosystèmes marins vulnérables, les zones de pêche à accès réglementé et les captures accessoires

29. Le Président du CSC a présenté, en s'appuyant sur les documents GFCM:SAC18/2016/2 et GFCM:SAC18/2015/Inf.13, les principales mesures de gestion spatiale que le Groupe de travail sur les aires marines protégées avait proposées à sa deuxième réunion.

30. Au cours de la discussion qui a suivi, le Comité a accueilli favorablement ces propositions, et en particulier l'adoption des protocoles visant à interdire la pêche dans les écosystèmes marins vulnérables, étant donné que d'autres organisations régionales de gestion des pêches (ORGP) avaient déjà adopté des mesures similaires pour réduire autant que possible et atténuer l'impact des activités de pêche sur les écosystèmes marins vulnérables.

31. La représentante d'Oceana a insisté sur le manque de mesures régionales visant à réduire autant que possible les incidences de la pêche sur les habitats des eaux profondes sensibles et fragiles. Elle a aussi souligné qu'il était urgent de mettre en œuvre une série de mesures en vue de réduire les incidences de la pêche sur les écosystèmes marins vulnérables, comme exigé dans les résolutions pertinentes de l'Assemblée générale des Nations Unies[2] et a mentionné les principales étapes initiales telles que la définition d'une liste d'indicateurs d'écosystèmes marins vulnérables et l'amélioration de la collecte de données sur la présence d'écosystèmes marins vulnérables.

32. Le Comité est convenu de continuer à travailler en vue de l'adoption des protocoles visant à interdire la pêche dans les écosystèmes marins vulnérables dans un proche avenir, en établissant une liste d'écosystèmes marins vulnérables à étudier lors de réunions techniques et qui serait présentée à la Commission pour validation.

33. Le délégué de l'UE a souligné qu'il était important d'établir cette liste, et a noté que le choix entre protocoles de type présence/absence et protocoles fondés sur l'abondance devait se faire au cas par cas, en tenant compte de l'abondance, de la répartition et de la vulnérabilité des espèces ou écosystèmes à protéger.

34. Au regard des conclusions du Groupe de travail sur les aires marines protégées, le Comité est convenu de mener les actions suivantes durant la période intersessions:

- Élaborer une liste des écosystèmes marins vulnérables (biocénose des coraux rares et des éponges) et adopter des protocoles visant à interdire la pêche dans les écosystèmes marins

[2] Résolutions 58/14, 59/25, 61/105 et 64/72 sur la viabilité des pêches, notamment grâce à l'Accord de 1995 aux fins de l'application des dispositions de la Convention des Nations Unies sur le droit de la mer du 10 décembre 1982 relatives à la conservation et à la gestion des stocks de poissons dont les déplacements s'effectuent tant à l'intérieur qu'au-delà de zones économiques exclusives (stocks chevauchants) et des stocks de poissons grands migrateurs, et à des instruments connexes.

vulnérables afin de les protéger des effets néfastes des activités de pêche, en particulier pour fixer des seuils de précaution et définir les règles connexes imposant l'obligation de s'éloigner d'une certaine distance des sites sur lesquels des écosystèmes marins vulnérables sont détectés pendant les activités de pêche.

o Définir des mécanismes permettant d'assurer le contrôle des futures zones de pêche à accès réglementé de la CGPM, ainsi que l'application des règlements correspondants, en misant sur des systèmes de surveillance des navires par satellite, d'identification automatique ou de contrôle à distance et identifier des critères pour l'évaluation régulière de l'état des zones de pêche à accès réglementé.

o Demander aux parties contractantes de créer des AMP ou des zones de pêche à accès réglementé dans les eaux situées à l'intérieur de leurs limites territoriales qui coïncident avec la zone interdite au chalutage à plus de 1 000 mètres de profondeur de la CGPM.

Statistiques et informations, notamment au sujet de la mise en œuvre du Cadre de référence pour la collecte de données (DCRF)

35. Le Président du CSC a présenté les conclusions et recommandations concernant les activités menées en matière de statistiques et d'informations, s'agissant en particulier de l'étude pilote relative à la communication de données conformément aux dispositions du DCRF et de l'assistance technique fournie aux pays qui en avaient fait la demande, en s'appuyant sur les documents GFCM:SAC18/2016/2 et GFCM:SAC18/2015/Dma.1.

36. Il a rappelé que le DCRF avait été approuvé par la Commission à sa trente-neuvième session. Il a en outre présenté le projet de proposition sur la collecte de données pour la zone d'application de la CGPM, en remplacement de l'actuelle recommandation à ce sujet.

37. Le délégué de l'UE s'est félicité des progrès importants accomplis dans la mise au point du DCRF, ce qui permettait à la CGPM de recueillir des informations de façon normalisée et facilitait dès lors la formulation d'avis de qualité par le CSC à l'appui de la prise de décisions. Il a réaffirmé le soutien de l'UE au DCRF et il a été rappelé que, si des problèmes techniques étaient rencontrés durant sa mise en œuvre, ceux-ci seraient dûment examinés par le Comité afin de fournir un retour d'information et un avis à la Commission.

38. Le Comité a reconnu qu'il était urgent de moderniser l'actuelle collecte de données et a approuvé, avec quelques changements, la proposition telle que figurant à l'annexe 6, en demandant au Secrétariat de la CGPM de la présenter à la Commission pour examen et éventuelle adoption.

39. Par ailleurs, les participants ont insisté sur la nécessité de garantir la qualité et l'actualité des données fournies par les pays par l'intermédiaire du DCRF. À cet égard, le Secrétariat de la CGPM a rappelé que des procédures de contrôle de la qualité étaient en cours de mise au point et devraient être examinées au cours des réunions techniques pertinentes du DCRF une fois la recommandation adoptée.

40. Le Président du CSC a salué les efforts déployés par le Secrétariat de la CGPM et a remercié tous les membres pour leur engagement tout au long du processus ainsi que pour leur soutien, qui avait débouché sur l'élaboration du projet de recommandation. Le Comité a instamment conseillé à la Commission d'adopter le projet de recommandation et a rappelé qu'il était censé évaluer et mettre à jour régulièrement le DCRF.

Vue d'ensemble de l'état des stocks en mer Méditerranée

41. Le Président du CSC a présenté une vue d'ensemble de l'état des stocks en mer Méditerranée (reproduite à l'Annexe 4), sur la base des conclusions du Groupe de travail sur l'évaluation des stocks d'espèces démersales (WGSAD), du Groupe de travail sur l'évaluation des stocks de petits pélagiques (WGSAP) et du Groupe de travail CECPAI/CIEM/CGPM sur l'anguille européenne (WGEEL).

42. En ce qui concerne les stocks démersaux, l'évaluation de 24 stocks au total a été tentée et un avis a été donné pour 23 d'entre eux: 22 stocks ont été considérés comme se trouvant en dehors des limites biologiques de sécurité, et un seul stock (crevette rose du large [*Parapenaeus longirostris*] dans la sous-région géographique 09) a été considéré comme exploité de façon durable. Par ailleurs, une analyse d'ensemble de l'état des stocks de merlu européen (*Merluccius merluccius*) et de rouget (*Mullus barbatus* et *M. surmuletus*) a révélé des indices élevés de surexploitation pour le merlu dans l'ensemble de la Méditerranée (mortalité par pêche 4 à 12 fois plus élevée que le point de référence) et des indices de surexploitation plus faibles pour les deux espèces de rouget (mortalité par pêche entre 1,1 et 3,4 fois plus élevée que le point de référence).

43. En ce qui concerne les stocks de petits pélagiques, l'évaluation de 13 stocks au total a été tentée et un avis a été donné pour 8 d'entre eux, qui ont tous été considérés comme se trouvant en dehors des limites biologiques de sécurité. Le Président du CSC a rappelé qu'il était nécessaire d'améliorer les études environnementales et de prendre des mesures urgentes pour le stock de sardine dans la sous-régions géographique 06 ainsi que dans la sous-région géographique 07 étant donné que, sur les deux dernières années, le premier a été considéré comme épuisé et le deuxième comme étant en déséquilibre écologique.

44. S'agissant de l'anguille européenne (*Anguilla anguilla*), les recommandations étaient les suivantes: i) réduire – ou maintenir – à un niveau aussi proche de zéro que possible, la mortalité d'origine anthropique dont se ressentent la production et l'échappement des anguilles argentées; ii) veiller à ce que les parties contractantes recueillent et analysent des données précises sur l'anguille européenne, conformément au DCRF de la CGPM, qui permettront d'étayer l'élaboration d'un plan de gestion régional adaptatif pour cette espèce en mer Méditerranée.

45. Le Comité s'est félicité du travail accompli, de la qualité accrue des évaluations et de l'amélioration de la couverture des stocks, et il a approuvé les avis scientifiques sur l'état des stocks donnés par les différents groupes de travail.

46. Le cas spécifique de l'évaluation du stock de dorade rose (*Pagellus bogaraveo*) dans le détroit de Gibraltar a été noté, et il a été souligné que cette espèce se trouvait à la fois en Méditerranée (relevant de la compétence de la CGPM) et dans l'Atlantique (relevant de la compétence du Conseil international pour l'exploration de la mer [CIEM] et du Comité des pêches pour l'Atlantique centre-est [COPACE]) et les eaux intermédiaires. À cet égard, le délégué de l'UE a souligné que les différents partenaires impliqués dans l'évaluation de ce stock devraient coopérer afin de réaliser une évaluation correcte prenant en compte toutes les informations disponibles.

47. Le Comité a reconnu que même si tous les stocks d'espèces démersales avaient été considérés comme surexploités, il n'y avait aucun signe clair d'épuisement et peu de stocks présentaient un niveau de biomasse faible. En revanche, la situation des stocks de petits pélagiques se révélait très différente de celle des stocks démersaux; en effet, la majorité de ces stocks présentaient un faible niveau de biomasse alors que les indices de surexploitation étaient généralement plus faibles. Cette situation exigeait la mise en place d'approches différentes pour la gestion, et notamment l'amélioration de la sélectivité pour les stocks d'espèces démersales et la mise en œuvre de plans de reconstitution des stocks de pélagiques considérés comme épuisés.

48. Enfin, les participants ont rappelé qu'il était nécessaire de renforcer la coordination et la collaboration entre le Comité scientifique, technique et économique de la pêche (CSTEP) de l'UE et

la CGPM, et aussi d'éviter les doubles emplois. Le Comité a ainsi appelé les Secrétariats de la CGPM et du CSTEP à continuer à étudier les pistes et à aller dans ce sens afin de formaliser la coopération au sein d'un cadre approprié. La délégation de l'UE a indiqué que des consultations internes seraient menées pour trouver des modalités permettant de donner suite à cette question, et qu'elle informerait le Secrétariat de la CGPM à cet égard.

Conclusions spécifiques au niveau sous-régional

Gestion des pêches de petits pélagiques en mer Adriatique

49. M. Stylianos Somarakis, modérateur du Comité sous-régional pour la mer Adriatique (SRC-AS), a présenté les questions les plus importantes en ce qui concerne la gestion des pêches de petits pélagiques en mer Adriatique.

50. Il a souligné qu'une révision complète des données de départ et des modèles d'évaluation des stocks avait été menée et qu'une évaluation de la situation de la sardine et de l'anchois dans les sous-régions géographiques 17 et 18 avait été réalisée, y compris l'estimation de nouveaux points de référence en ce qui concerne la biomasse et la mortalité par pêche. Les résultats indiquaient que la mortalité due à la pêche était supérieure à la production maximale équilibrée (F_{MSY}) et que la biomasse était inférieure au niveau garantissant la reproduction du stock (B_{pa}). Les stocks d'anchois et de sardine avaient par conséquent été considérés surexploités et en état de surexploitation dans les sous-régions géographiques 17 et 18.

51. Le modérateur du Comité sous-régional a ensuite présenté de manière détaillée les résultats d'une simulation de différentes situations possibles effectuée pendant l'Atelier sur l'évaluation bioéconomique des mesures de gestion (WKMSE) et a noté que, en considérant le taux actuel de mortalité par pêche, les stocks d'anchois et de sardine restaient en dehors des limites biologiques de sécurité et que, dans certains des scénarios simulés, ils s'effondraient. Il a en outre noté que, d'après les simulations effectuées, les mesures d'urgence proposées aux termes de la Recommandation CGPM/38/2014/1 ne permettraient pas de revenir dans les limites biologiques de sécurité, mais que ce serait le cas en revanche avec différentes formules basées sur les mesures de gestion indiquées dans la Résolution CGPM/37/2013/1, en utilisant les nouveaux points de référence.

52. Le délégué de l'UE a salué le travail technique accompli pendant la période intersession par le SRC-AS.

53. Le délégué du Monténégro, appuyé par les délégués de la Croatie et de la Slovénie, a rappelé les conclusions du SRC-AS indiquant que la mise en œuvre de mesures de gestion devrait prendre en compte les caractéristiques des différentes flottes. Il a par conséquent fait remarquer que le Comité devrait prendre en compte la petite taille de la flotte monténégrine de façon à ce que les futures mesures de gestion pour cette pêcherie soient en proportion avec l'effet attendu des différentes flottes sur les stocks.

54. Le Comité a pris note des travaux réalisés, en soulignant que ceux-ci étaient conformes à l'approche envisagée par le CSC en vue de communiquer des avis complets et détaillés qui seraient utiles à la Commission. Le Comité a invité la Commission à entamer la révision des contenus techniques, y compris les règles de contrôle des captures, des plans de gestion prévu par les Recommandations CGPM/37/2013/1 et CGPM/39/2015/1, sur la base des nouvelles évaluations des stocks, des nouveaux points de référence et des conclusions issues des différents scénarios de gestion examinés, au sujet desquels on trouvera des précisions à l'annexe 5(a).

Gestion des pêcheries d'espèces démersales dans le canal de Sicile

55. Mme Andreina Fenech-Farrugia, modératrice du Comité sous-régional pour la Méditerranée centrale (SRC-CM), a présenté les principaux problèmes liés à la gestion des pêcheries d'espèces

démersales dans le canal de Sicile. Elle a fait référence aux travaux du Groupe de travail sur l'évaluation des stocks d'espèces démersales et aux activités menées lors de l'Atelier sur l'évaluation bioéconomique des mesures de gestion, en vue de donner suite aux dispositions figurant dans la Recommandation CGPM/39/2015/2 et de formuler un avis technique pour la mise en œuvre des plans de gestion.

56. La modératrice a souligné que les stocks de merlu (*Merluccius merluccius*) et de crevette rose du large (*Parapenaeus longirostris*) étaient considérés comme en dehors des limites biologiques de sécurité dans les sous-régions géographiques 12 à 16 (canal de Sicile), avec une mortalité par pêche de 4 à 6 fois supérieure à $F_{0.1}$ en ce qui concerne le merlu et de 1,2 à 1,4 supérieure à $F_{0.1}$ pour la crevette. Elle a noté que l'Atelier sur l'évaluation bioéconomique des mesures de gestion avait réalisé une prévision à moyen terme à l'aide de plusieurs scénarios de mortalité par pêche. Elle a souligné qu'une réduction de 20 pour cent du taux de mortalité par pêche (ce qui équivaut à réduire F au niveau de $F_{0.1}$ pour la crevette) permettait aux deux stocks d'augmenter en termes de biomasse et que, si on s'en tenait aux premiers stades de vie de merlu, l'augmentation de biomasse était plus rapide. Elle a ensuite expliqué que des mesures alternatives visant à réduire la mortalité par pêche avaient été examinées en détail pendant la réunion du SRC-CM, y compris: i) la création de zones de pêche à accès réglementé en ce qui concerne la pêche au chalut des stocks de merlu et de crevette rose du large; ii) l'établissement d'une période d'interdiction temporaire de la pêche dans une partie du golfe de Gabès; et iii) une réduction de l'effort de pêche global.

57. Elle a conclu en notant que le SRC-CM avait conseillé de mettre au point un plan de gestion portant sur la pêche au chalut des stocks de merlu et de crevette rose du large dans le canal de Sicile et de mettre en place une réduction initiale de 20 pour cent du taux actuel de mortalité par pêche, en mettant l'accent sur la réduction de la mortalité des juvéniles de merlu, et ce en combinant réduction de l'effort et mesures de protection spatiales. Le SRC-CM avait également conclu que les zones de pêche à accès réglementé présentées à la dix-septième session du CSC devraient concerner les chaluts de fond uniquement, sur une période d'essai de deux ans. Ces zones de pêche à accès réglementé devraient contribuer à ce que les stocks d'espèces démersales visées par le plan de gestion rentrent dans les limites biologiques de sécurité.

58. Le Président du Comité a félicité les experts qui avaient participé à la révision de cette mesure technique. Le Comité s'est félicité des travaux accomplis et a invité la Commission à tenir compte de l'avis détaillé dans la nouvelle proposition figurant à l'annexe 5(b), en vue de l'élaboration d'un plan de gestion pour la pêche au chalut de fond visant les stocks de merlu et de crevette rose du large dans le canal de Sicile.

59. Un avis technique relatif à la recommandation en suspens concernant l'établissement d'une période d'interdiction temporaire de la pêche dans le golfe de Gabès a aussi été présenté et les participants ont reconnu l'importance de cette recommandation. Le délégué de la Tunisie s'est dit préoccupé par le fait que des navires de pêche d'autres pays avaient été signalés comme actifs dans cette zone pendant la période d'interdiction temporaire. Par ailleurs, il a été noté que la période d'interdiction proposée serait efficace pour les stocks déjà présents sur le plateau, mais qu'il était nécessaire de poursuivre le recensement des effets sur les ressources et les pêches en haute mer et dans les eaux profondes.

60. La représentante d'Oceana a salué le travail constructif mené par l'ensemble des parties pour formuler un avis clair, à partir des meilleures informations scientifiques, sur les pêcheries démersales dans le canal de Sicile. Cependant, conformément à l'approche de précaution prévue dans l'Accord portant création de la CGPM, cet avis devrait porter non seulement sur la crevette rose du large mais aussi sur des mesures visant à assurer la reconstitution des stocks de merlu jusqu'à un niveau de durabilité.

Remarques sur le fonctionnement du CSC

61. Au vu de l'état de surexploitation observé de la plupart des stocks en Méditerranée, le Comité a reconnu le besoin urgent d'avancer afin que les recommandations visant à réduire la mortalité par pêche soient suivies de mesures de gestion concrètes, en particulier pour les stocks qui nécessitent une intervention urgente. Reconnaissant qu'il était nécessaire d'adopter une approche de précaution, il a souligné qu'il était important de donner des avis en vue de l'adoption de mesures concernant les espèces ou les zones pour lesquelles on ne dispose pas encore d'évaluation des stocks. À cet égard, le Comité a réfléchi à des solutions qui permettraient de fournir un avis plus précis à l'appui des mesures de gestion, tant pour les stocks pour lesquels il existe une évaluation validée que pour ceux pour lesquels il n'existe pas d'informations ou d'évaluation ou celles-ci n'ont pas été mises à la disposition du CSC.

62. Le Comité a longuement examiné les différents scénarios décrits ci-dessus, en vue de remédier aux problèmes susceptibles de compromettre la qualité et l'étendue des avis fournis par le CSC. Une mention particulière a été faite au mécanisme d'examen prévu dans le cadre de l'Accord portant création de la CGPM en soulignant le fait que le CSC pouvait proposer à la Commission d'activer ce mécanisme afin de faciliter la transposition des avis du CSC en propositions de recommandations, dans le cas où des mesures de gestion seraient nécessaires.

63. Compte tenu de ces préoccupations importantes, le Comité a proposé un plan d'action précis applicable à deux cas de figure:

a) <u>Lorsque les informations sur les évaluations sont manquantes ou non accessibles au CSC:</u>

- prendre immédiatement les mesures visant à recueillir des informations et à procéder aux évaluations des stocks. Il faut en outre utiliser des méthodes d'évaluation des stocks pour lesquels on dispose de données limitées pour tenter de donner un premier avis sur ces stocks, notamment, lorsque cela est possible, en s'appuyant sur les propriétés biologiques et écologiques d'autres stocks de la même espèce qui font l'objet d'une exploitation aux caractéristiques similaires.
- promouvoir la réalisation de prospections internationales dans le cadre de la FAO en vue de recueillir des informations sur un grand nombre d'espèces dans une zone étendue.
- compte tenu des principes de l'approche de précaution pour la gestion des pêches, le Comité devrait envisager de proposer des recommandations générales sur des aspects qui devraient améliorer l'état général des stocks (ajustement de la capacité de pêche ou sélectivité, par exemple), tels que la réduction de dix pour cent de la capacité de pêche préconisée dans la Résolution CGPM/37/2013/2.

b) <u>Lorsqu'une évaluation des stocks validée existe et un avis scientifique est donné (par exemple, réduire la mortalité par pêche ou mettre en place un plan de gestion)</u>

- effectuer une évaluation comparative des incidences biologiques et socioéconomiques des autres scénarios de gestion.
- à cette fin, les groupes de travail sur l'évaluation des stocks devraient faire, lorsque cela est possible, des prévisions à court, moyen ou long terme sur la base des modèles d'évaluation adoptés, et les comités sous-régionaux devraient définir les scénarios de gestion potentiels et procéder à une évaluation de la stratégie de gestion.
- des scénarios de gestion à tester devraient être conçus compte tenu des points de vue des experts des administrations nationales et des parties prenantes pertinentes lors de la conception, et devraient comprendre au moins: i) un scénario de statu quo (maintien de l'effort actuel / la mortalité par pêche actuelle), ii) un scénario où l'on atteint la mortalité par pêche à un niveau de production maximale durable en 2020, ou à une autre date à moyen terme, et iii) tout autre scénario demandé par la Commission.

64. Le Comité a reconnu que, dans de nombreux cas, les évaluations étaient fragmentées et ne couvraient que des stocks spécifiques pour lesquels des informations étaient disponibles, ce qui empêchait l'adoption de décisions pertinentes applicables à l'ensemble de la région. Par conséquent, il a décidé – tout en continuant d'effectuer un suivi de routine des autres espèces – de concentrer ses efforts au cours des deux prochaines années sur un certain nombre d'espèces prioritaires par sous-région, tel qu'indiqué ci-après:

	Méditerranée occidentale	**Méditerranée centrale**	**Mer Adriatique**
Petits pélagiques	*Engraulis encrasicolus*	*Engraulis encrasicolus*	*Engraulis encrasicolus*
	Sardina pilchardus	*Sardina pilchardus*	*Sardina pilchardus*
Espèces démersales	*Parapenaeus longirostris*	*Parapenaeus longirostris*	*Mullus barbatus*
	Merluccius merluccius	*Merluccius merluccius*	*Merluccius merluccius*
	Méditerranée orientale		
Petits pélagiques	*Engraulis encrasicolus*		*Sardinella aurita*
Espèces démersales	*Mullus barbatus*	*Mullus barbatus*	*Mullus barbatus*
		Spicara smaris	

65. Le délégué de la Bulgarie a fait observer que les priorités concernant l'évaluation des stocks en mer Noire devaient être examinées lors de la cinquième session du Groupe de travail sur la mer Noire.

66. Enfin, un bref aperçu des progrès accomplis dans la mise en œuvre de l'approche sous-régionale a été porté à l'attention des participants. Le Comité a salué les résultats obtenus par les comités sous-régionaux pour la mer Adriatique et pour la Méditerranée centrale (SRC-AS et SRC-CM), respectivement, reconnaissant qu'ils s'étaient avérés plus efficaces que les sous-comités thématiques s'agissant de donner suite aux demandes de la Commission concernant les plans de gestion sous-régionaux.

67. Par ailleurs, le Comité a validé les étapes proposées pour lancer les travaux des comités sous-régionaux pour la Méditerranée occidentale et pour la Méditerranée orientale, à savoir notamment l'élaboration d'un document de réflexion définissant les priorités sous-régionales et un appel à candidatures en vue de la participation d'experts aux travaux des sous-comités.

68. Répondant au représentant du CAR/ASP, qui s'était dit préoccupé à l'idée que la nouvelle approche ne permette pas de prêter toute l'attention voulue aux questions transversales telles que l'environnement et les écosystèmes marins, le Comité a rappelé que l'approche sous-régionale avait été conçue pour être souple et que le CSC aurait la possibilité de mettre en place des groupes d'experts *ad hoc* ou des ateliers spéciaux au niveau régional ou sous-régional pour le traitement de certaines questions prioritaires spécifiques relevant de son mandat.

SUIVI CONCERNANT DES QUESTIONS DIVERSES

69. Le Comité est convenu d'examiner plus en détail un certain nombre de questions d'intérêt régional, à savoir: i) la gestion des populations de corail rouge (*Corallium rubrum*, L.) et de l'anguille européenne; ii) les activités relatives au bon état écologique; iii) les activités relatives aux captures accessoires; et iv) les progrès accomplis s'agissant de la pêche artisanale et des pêches de loisir.

70. En ce qui concerne le corail rouge, il a été rappelé au Comité que l'autorisation d'utiliser des véhicules commandés à distance à des fins de recherche avait pris fin en 2015 et que les travaux d'élaboration d'un plan de gestion régional pour cette espèce étaient encore en suspens. La délégation italienne a également informé le Comité des résultats obtenus dans le cadre d'un projet concernant l'utilisation de véhicules commandés à distance, qui avait été mené à bien dans les eaux italiennes, et qui avait révélé qu'il était important de poursuivre les activités de surveillance du corail rouge par ce moyen.

71. Plusieurs délégations – de l'Égypte, du Maroc et de la Tunisie en particulier – ont souligné qu'il était important d'entamer des recherches à l'appui de l'exploitation durable du corail rouge et ont insisté sur la nécessité de bénéficier d'une assistance technique concernant les méthodologies d'évaluation du corail rouge. Le Comité a noté que cette demande correspondait aux priorités établies lors de réunions pertinentes sur ce sujet.

72. Au vu des informations fournies par le délégué de l'Italie, le délégué de l'Algérie a exprimé son appui à la demande de prorogation de l'échéance relative à l'utilisation de véhicules commandés à distance à des fins scientifiques.

73. À cet égard, le Comité a reconnu qu'il était prioritaire de régler les questions restées en suspens et de répondre aux demandes présentées par les pays. Il a proposé par conséquent d'organiser, au cours de la prochaine intersession, un atelier ayant pour objectifs de: i) procéder à l'analyse des résultats de programmes de recherche sur le corail rouge, notamment sur l'utilisation à des fins scientifiques de véhicules commandés à distance; ii) étudier les données disponibles et établir des méthodes possibles applicables à l'évaluation des stocks; iii) s'efforcer de procéder à une évaluation des stocks; iv) déterminer les besoins en matière de recherche, en vue de mettre à jour le programme de recherche sur le corail rouge et v) formuler un avis scientifique sur les mesures de gestion du corail rouge, y compris concernant la proposition existante relative à un plan de gestion régional du corail rouge.

74. En ce qui concerne l'anguille européenne, le Comité s'est félicité des progrès réalisés et a exprimé son appui à la poursuite de la collaboration dans le cadre du WGEEL en vue de la gestion de l'anguille dans la région méditerranéenne.

75. S'agissant du bon état de l'environnement, il a été rappelé qu'un ensemble d'indicateurs communs pour le suivi des ressources halieutiques en Méditerranée avaient déjà été choisi et inclus dans le DCRF. Le Comité a souligné qu'il fallait poursuivre les travaux techniques sur l'estimation des indicateurs proposés (notamment la biodiversité, les écosystèmes marins vulnérables et les captures accidentelles), l'évaluation de leur performance et leur regroupement aux niveaux régional et sous-régional. Il a été suggéré que les travaux sur l'estimation et le suivi des indicateurs pourraient être intégrés dans les activités des groupes de travail sur l'évaluation des stocks et que les résultats de ces travaux soient utilisés pour faciliter l'adoption d'une approche pluridimensionnelle de la gestion des pêches.

76. En réponse aux préoccupations exprimées par certaines délégations s'agissant des taux élevés de captures accidentelles (rejets et de captures accidentelles d'espèces vulnérables), dont il est fait état dans l'édition 2016 du rapport SoMFi, le Secrétariat de la CGPM a présenté les grandes lignes d'un programme de suivi des captures accidentelles visant à réaliser une évaluation quantitative complète et à adopter une stratégie pour atténuer les incidences biologiques et socioéconomiques des captures accidentelles.

77. La représentante de l'ACCOBAMS, rappelant que les captures accidentelles sont reconnues comme l'une des principales menaces pesant sur la conservation des cétacés, a affirmé que l'Accord soutenait pleinement ce programme de suivi des captures accidentelles et proposait de contribuer à cette initiative chaque fois que possible.

78. Le Comité s'est félicité de cette initiative et a décidé de transmettre un document de réflexion à la Commission pour examen (voir le projet à l'annexe 7).

79. Les délégués du Maroc et de la Tunisie ont en outre salué le travail fructueux ainsi que la collaboration avec l'ACCOBAMS.

80. En ce qui concerne la pêche artisanale, le Comité a pris acte du succès de la conférence régionale sur la pêche artisanale durable et de son importance pour promouvoir un effort concerté en faveur de ce secteur, essentiel dans la région. La création d'un groupe de travail permanent sur la pêche artisanale sous l'égide de la CGPM et le plan d'action concerté issu de la conférence ont été particulièrement bien accueillis. S'agissant des questions à régler, le délégué du Maroc a proposé de lancer une réflexion sur les ressources visées par la pêche artisanale et d'étudier les liens entre les aspects socioéconomiques et les méthodes d'évaluation des incidences que la pêche artisanale et les autres flottes ont sur les ressources halieutiques.

81. Le représentant du WWF s'est dit très satisfait de sa collaboration fructueuse en tant que partenaire de la conférence et a souligné combien la cogestion était importante pour soutenir la pêche artisanale, au regard des objectifs de développement durable des Nations Unies. Il a rappelé que son organisation souhaitait continuer de travailler sur la question, en étroite collaboration avec la CGPM.

82. Enfin, le Comité est convenu d'inscrire la pêche récréative dans le mandat du nouveau groupe de travail proposé par la conférence. À cet égard, les délégués de l'Égypte et de l'UE, appuyés par d'autres délégations, ont suggéré que l'on évalue la pêche récréative et les incidences potentielles de celle-ci sur les ressources marines, compte tenu de la part importante des captures que cette pêche représente dans certains pays. Le représentant de l'UE a suggéré d'inclure l'estimation des captures de la pêche récréative, une fois celle-ci réalisée, dans les évaluations des stocks pertinents.

Autres activités pertinentes pour le CSC

83. Le représentant du CAR/ASP a présenté les progrès de la stratégie commune entre ACCOBAMS, la CGPM, le PNUE/PAM-CAR/ASP et l'UICN, en collaboration avec MedPAN, pour la conservation spatiale et l'exploitation durable de l'environnement marin en Méditerranée. Il a plus particulièrement insisté sur les possibilités que cette initiative pouvait offrir s'agissant de la mise en commun des efforts et de l'expertise en vue d'harmoniser les processus de mise en œuvre des mesures de protection de l'environnement marin ainsi que des synergies à trouver dans la définition des priorités pour la mise en place d'aires marines protégées, surtout en haute mer.

84. La représentante de l'ACCOBAMS s'est déclarée favorable à cette initiative, qui contribuera à optimiser les efforts et à renforcer les synergies entre les organisations partenaires. Elle a fait le point de l'initiative de prospection décidée dans le cadre d'ACCOBAMS (ACCOBAMS Survey Initiative) visant à mettre en place un programme intégré et coordonné de surveillance des cétacés, et a proposé e tenir la CGPM informée du projet.

85. Le représentant de l'équipe des statistiques et de l'information de la FAO a donné des informations sur le partenariat avec la CGPM dans le cadre du Système de suivi des ressources halieutiques et des pêcheries (FIRMS) et sur les possibilités de renouveler la collaboration en ce qui concerne ce mécanisme d'acquisition de connaissances. Il a souligné, entre autres questions relatives à la communication de données sur la pêche, que le rapport SoMFi constituait une source d'information précieuse.

86. Le Comité s'est félicité des partenariats fructueux qui s'étaient établis sur les questions d'intérêt commun et s'est déclaré disposé à continuer de travailler pour renforcer ces synergies, y compris dans le cadre de l'initiative FIRMS. Le Secrétariat de la CGPM a été invité à étudier la faisabilité de ces initiatives de coopération.

EXAMEN DU PROGRAMME DE TRAVAIL PRÉLIMINAIRE DU COMITÉ SCIENTIFIQUE CONSULTATIF DES PÊCHES

87. Le Président du Comité a présenté le programme de travail préliminaire du CSC pour 2016-2017 en s'appuyant sur les documents GFCM:SAC18/2016/2 et GFCM:SAC18/2016/Inf.6 à GFCM:SAC18/2016/Inf.13. Après avoir débattu des priorités concernant la prochaine période intersessions, le CSC a approuvé son programme de travail pour 2016-2017 tel qu'il figure ci-après:

Questions régionales

Environnement et écosystèmes marins

- finir de constituer l'ensemble de données sur les restrictions spatiales de la pêche au niveau national dans la zone d'application de la CGPM.
- poursuivre la réalisation des six études pilotes prévues dans la première phase du projet conjoint ACCOBAMS-CGPM sur les interactions entre les espèces en danger et les activités de pêche;
- dresser la liste des écosystèmes marins vulnérables qu'il convient de protéger par un protocole applicable en cas de capture accidentelle d'une espèce de référence;
- élaborer une stratégie à moyen terme relative aux captures accessoires qui permette de suivre le volume et les caractéristiques des rejets et des captures accidentelles d'espèces vulnérables à l'échelon régional et mettre au point des mesures d'atténuation adéquates (tel qu'indiqué dans le projet de document de réflexion figurant à l'annexe 7).

Statistiques et informations

- achever l'étude pilote du DCRF afin de mettre la dernière main à la plateforme en ligne, où la transmission de données devrait pouvoir débuter en 2017;
- définir des procédures de contrôle de la qualité des données;
- fournir une assistance technique aux pays afin qu'ils puissent collecter et transmettre les données conformément au DCRF.

Évaluation des stocks

- élaborer un programme comprenant la préparation d'un document de réflexion sur la réalisation d'études scientifiques en mer visant à recueillir des informations sur la répartition, l'abondance et les paramètres biologiques des principales espèces à potentiel commercial et des espèces présentant un intérêt du point de vue de la conservation;
- améliorer les avis généraux sur l'état des stocks, en dispensant des formations sur les méthodes d'évaluation des stocks et en organisant des sessions d'évaluation des données de référence afin de déterminer des méthodes d'évaluation et d'estimer les points de référence pour certaines espèces démersales et de petits pélagiques;
- aider les points focaux nationaux de la CGPM chargés des anguilles à colliger les rapports de pays de la CGPM sur les espèces concernées, qui doivent être présentés au WGEEL;
- élaborer un document décrivant dans le détail la situation actuelle de l'anguille européenne et des activités de pêche y afférentes en Méditerranée.

Questions sous-régionales

Il est proposé de mener les activités ci-dessous dans chaque sous-région:

- réunir les informations existantes sur les pêches de loisirs et leurs interactions avec la pêche artisanale afin d'évaluer l'importance et les répercussions éventuelles de cette activité sur les ressources et écosystèmes marins;
- réunir des informations sur les activités de pêche par flottille et par sous-région géographique, y compris les engins de pêche, les principales espèces cibles et les rejets, entre autres en vue de l'élaboration d'un catalogue descriptif des métiers méditerranéens;
- mettre la dernière main aux directives sur une méthode commune d'analyse socioéconomique, en coordination avec les projets régionaux de la FAO.

Mer Adriatique

- dispenser des formations à l'appui du renforcement des capacités dans le domaine des évaluations quantitatives de différents scénarios de gestion;
- étendre les évaluations des mesures de gestion non conventionnelles aux stocks d'espèces démersales, en particulier le merlu, en étudiant notamment la possibilité d'accroître la taille minimale de référence aux fins de la conservation et d'instaurer des restrictions géographiques temporaires ou des zones de pêche à accès réglementé;
- en prévision des réunions des groupes de travail sur l'évaluation des stocks qui se tiendront en 2016: i) préparer des données de base et tenter de réaliser conjointement des évaluations provisoires des stocks de rouget, de merlu et de crevette rose du large dans les sous-régions géographiques 17 et 18; ii) réunir les informations existantes sur les zones de reproduction et de frai des stocks évalués afin d'étudier la possibilité d'instaurer de nouvelles restrictions géographiques temporaires et zones de pêche à accès réglementé et iii) évaluer l'état d'autres espèces démersales qui revêtent une importance pour la sous-région, comme la langoustine (*Nephrops norvegicus*), la sole commune (*Solea solea*) et la squille ocellée (*Squilla mantis*).

Méditerranée centrale

- dispenser des formations à l'appui du renforcement des capacités dans le domaine des évaluations quantitatives de différents scénarios de gestion;
- consolider les évaluations bioéconomiques des effets potentiels des mesures de gestion sur la pêche au chalut des stocks de crevette rose du large et de merlu, en intégrant des informations socioéconomiques de meilleure qualité et en simulant un large éventail de scénarios;
- déterminer les principales zones de reproduction du merlu et de la crevette rose du large, outre celles déjà repérées dans les sous-régions géographiques 15 et 16;
- évaluer les effets des restrictions temporaires proposées dans la sous-région géographique 14 pour le chalutage au large ciblant les crustacés de profondeur;
- approfondir les connaissances sur l'abondance, la répartition et la dynamique des populations d'élasmobranches démersaux vivant en Méditerranée centrale, notamment en s'appuyant sur les travaux réalisés dans le canal de Sicile.

Méditerranée occidentale

- mener des activités de formation pour le renforcement des capacités en matière d'évaluation quantitative des scénarios de gestion;
- renforcer les capacités concernant tous les aspects relatifs à la collecte de données et à l'évaluation des stocks;
- réunir et analyser des informations afin de repérer les limites géographiques des stocks;

Méditerranée orientale

- renforcer les capacités concernant tous les aspects relatifs à la collecte de données et à l'évaluation des stocks;
- réunir et analyser des informations afin de repérer les limites géographiques des stocks;
- réunir les informations disponibles sur les espèces exotiques et leurs interactions avec les activités de pêche.

88. Le Comité est convenu d'examiner plus en détail, avec les experts concernés, les priorités sous-régionales et la mise en œuvre des actions prévues dans le programme de travail pour les trois années à venir.

89. Le Comité est convenu de la liste des réunions prévues figurant ci-dessous. Le mandat de certaines de ces réunions est indiqué à l'annexe 10.

Réunion	**Lieu/date**
Formation SRC-WM sur l'évaluation des stocks, en collaboration avec les projets régionaux de la FAO.	Tanger, Maroc juillet 2016 (à confirmer)
Groupe de travail CECPAI/CIEM/CGPM sur l'anguille (WGEEL)	Cordoue, Espagne 15-22 septembre
Groupe de travail sur l'évaluation des stocks d'espèces démersales [5 jours, y compris une évaluation de référence concernant une sélection d'espèces]	Rome (à confirmer) octobre-novembre 2016
Groupe de travail sur l'évaluation des stocks de petits pélagiques [5 jours, y compris une évaluation de référence concernant une sélection d'espèces]	Rome (à confirmer) octobre-novembre 2016
Réunion conjointe des comités sous-régionaux sur l'utilisation de modèles de simulation et de prévision bioéconomiques pour l'évaluation des mesures de gestion [5 jours]	à déterminer
Atelier SRC-WM/SRC-CM sur le corail rouge	à déterminer
Réunions des comités sous-régionaux	à déterminer
Dix-neuvième session du CSC	à déterminer mars-avril 2017
Atelier visant à faciliter la mise en œuvre d'un plan de gestion pour l'anguille européenne en mer Méditerranée [3 jours]	à déterminer 2017

90. Il a été rappelé au Comité que l'atelier consacré au DCRF prévu initialement pour février 2016 avait été reporté à septembre/octobre 2016 afin d'être en mesure de tirer parti des résultats de l'étude pilote du Cadre de référence et de prendre en compte les observations de la Commission.

91. La tenue, au cours de l'été 2016, de l'atelier de la FAO sur les écosystèmes marins vulnérables en Méditerranée, en collaboration avec la CGPM, a été considérée comme une occasion importante pour donner suite aux recommandations du CSC sur ces écosystèmes et avancer sur les actions correspondantes menées dans ce domaine. Il a été convenu que les conclusions du Comité,

notamment une proposition d'Oceana sur des questions spécifiques à aborder, seraient prises en compte lors de la préparation et de l'organisation de l'atelier.

Forum CGPM sur les sciences halieutiques

92. Conscient de la demande croissante d'avis scientifiques et techniques ainsi que du savoir-faire existant en matière de pêche dans la région, le Comité a examiné la proposition du Secrétariat de la CGPM relative à l'organisation d'un Forum CGPM sur les sciences halieutiques (FishForum CGPM). Il s'agirait : i) d'offrir une plateforme de collaboration ouverte permettant de mettre en commun les expériences, les informations et les résultats des initiatives en cours dans des domaines pertinents des sciences halieutiques, ii) de promouvoir des idées et des projets futurs et iii) d'intégrer toutes les informations disponibles afin de soutenir les connaissances et les avis scientifiques de la CGPM.

93. Le Comité a débattu le principe ainsi que les thèmes et modules potentiels du forum, qui a été considéré comme un moyen d'optimiser le rôle du CSC en tant que centre de collecte et de traitement des avis scientifiques et techniques sur les pêches, y compris dans le cadre de l'Objectif de développement durable 14.

94. Plusieurs délégations se sont félicitées de l'initiative et ont considéré que la possibilité d'attirer une vaste communauté d'experts dans différents domaines liés aux pêches était extrêmement appréciable. La représentante de l'ACCOBAMS a souligné la volonté de son organisation d'être un partenaire actif au sein du FishForum de la CGPM.

95. Un projet de note de réflexion résumant les objectifs, les contenus et les moyens d'action principaux soumis à l'attention de la Commission est fourni à l'Annexe 8.

ÉLECTION DU BUREAU DU CSC

96. Le Comité s'est déclaré très satisfait du travail accompli par le CSC sous la direction efficace du Bureau en exercice.

97. Le Secrétaire exécutif a fait savoir que le mandat du Bureau du CSC était arrivé à échéance et a rappelé l'article VII du Règlement intérieur de la CGPM concernant l'élection du Bureau, qui dispose que les membres du Bureau peuvent siéger pendant un mandat de deux ans, renouvelable une fois.

98. Sur proposition des délégués de l'Egypte, de l'UE, de la France, du Maroc et de la Tunisie, le Comité est convenu à l'unanimité de reconduire le Bureau actuel pour un nouveau mandat de deux ans. Le Bureau du CSC, tel que reconduit, se composera des membres suivants: M. Othman Jarboui (Tunisie), Président du CSC, M. Ali Cemal Gücü (Turquie), premier Vice-Président, et Mme Claire Saraux (France), deuxième Vice-Présidente, en remplacement de Mme Capucine Mellon, qui a été remerciée chaleureusement.

TENUE DE LA PROCHAINE SESSION ET CLÔTURE DE LA RÉUNION

99. Le Comité est convenu que sa dix-neuvième session se tiendrait en principe en mars-avril 2017 et a pris note de l'aimable proposition de la délégation de la Slovénie d'accueillir la session, sous réserve de confirmation officielle des autorités compétentes.

100. Le Comité a remercié Chypre d'avoir accueilli la session, et en particulier le Ministère de l'agriculture, du développement rural et de l'environnement pour le dévouement des membres de son personnel et l'excellente organisation de la réunion. La chaleureuse hospitalité et les excellentes conditions de travail ont été extrêmement appréciées.

101. Le Président du CSC et les délégués ont félicité le Secrétariat de la CGPM pour l'excellent travail accompli pour la préparation et l'organisation de la session ainsi qu'entre les sessions. Les délégués ont également été remerciés pour leur contribution au succès des activités intersessions du CSC.

QUESTIONS DIVERSES

102. Mme Margaux Favret, du Conseil d'intendance des mers (Marine Stewardship Council – MSC), a présenté les travaux de son organisation et ses partenaires dans le cadre du projet Medfish. Le Comité a salué les efforts accomplis en vue d'une meilleure durabilité en Méditerranée.

ADOPTION DU RAPPORT

103. Le rapport, y compris ses annexes, a été adopté le mercredi 23 mars 2016.

Appendix 1

Agenda

1. **Opening and arrangements for the session**
2. **Adoption of the agenda**
3. **Intersessional activities**
   - Review of relevant decisions by the thirty-ninth session of the Commission, including progress on the implementation of the subregional approach
   - Overview of SAC achievements during the intersession
   - National reports to the SAC by contracting parties
   - Cooperation with partner organizations on fisheries issues
   - Major activities of the FAO regional projects
4. **Salient issues from the GFCM report The State of Mediterranean and Black Sea Fisheries**
5. **Formulation of advice in the field of fishery management and research**
   - Marine environment and ecosystems, including vulnerable marine ecosystems, fisheries restricted areas and bycatch
   - Statistics and information, including in relation to the implementation of the Data Collection Reference Framework (DCRF)
   - Overall status of the stocks in the Mediterranean Sea
   - **Specific conclusions at the subregional level**
   - Management of small pelagic fisheries in the Adriatic Sea
   - Management of demersal fisheries in the Strait of Sicily
   - Other aspects in relation to the implementation of subregional approach, including in the western and eastern Mediterranean subregions
6. **Follow up on:**
   - Management of red coral fisheries
   - Management of European eel
   - Work towards monitoring good environmental status
   - Small-scale fisheries, including the outcomes of the Regional Conference (Algiers, March 2016), and recreational fisheries
   - Selectivity of fishing gear and bycatch
   - Other activities of relevance to the SAC
7. **SAC work plan for 2016–2017, including by subregion**
8. **Any other matters**
9. **Election of SAC Bureau**
10. **Date and place of the next session**
11. **Adoption of the report**

Annexe 1

Ordre du jour

1. **Ouverture et organisation de la session**
2. **Adoption de l'ordre du jour**
3. **Activités intersessions**
   - Examen des décisions pertinentes prises par la Commission à sa trentre-neuvième session, y compris les progrès concernant la mise en œuvre de l'approche sous-régionale
   - Vue d'ensemble des réalisations du CSC pendant la période intersessions
   - Rapports nationaux au CSC par les Parties contractantes
   - Coopération en matière de pêche avec les organisations partenaires
   - Activités principales menées dans le cadre des projets régionaux de la FAO
4. **Principaux aspects du rapport de la CGPM sur l'état des pêches en Méditerranée et en mer Noire**
5. **Formulation d'avis dans le domaine de la gestion et de la recherche halieutiques**
   - Environnement et écosystèmes marins, y compris les écosystèmes marins vulnérables, les zones de pêche à accès règlementé et les captures accessoires
   - Statistiques et informations, notamment au sujet de la mise en place du Cadre de référence pour la collecte de données (DCRF)
   - Vue d'ensemble de l'état des stocks en mer Méditerranée
   - **Conclusions spécifiques à l'échelle sous-régionale**
     - Gestion des pêches de petits pélagiques en mer Adriatique
     - Gestion des pêches démersale dans le canal de Sicile
     - Autres questions relatives à la mise en œuvre de l'approche sous-régionale, notamment dans les sous-régions de la Méditerranée occidentale et orientale
6. **Suivi concernant:**
   - La gestion du corail rouge
   - La gestion de l'anguille européenne
   - Les travaux en vue du suivi du bon état écologique
   - La pêche artisanale, y compris les résultats de la Conférence régionale (Alger, mars 2016), et la pêche recréative
   - La sélectivité des engins de pêche et les captures accessoires
   - D'autres activités pertinentes pour le CSC
7. **Plan de travail préliminaire du CSC pour 2016-2017, y compris par sous-région**
8. **Autres questions**
9. **Élection du Bureau du CSC**
10. **Date et lieu de la prochaine session**
11. **Adoption du rapport**

Appendix 2

List of participants/Liste des participants

MEMBERS OF GFCM / MEMBRES DE LA CGPM

ALBANIA/ALBANIE

Jerina KOLITARI
Coordinator
Aquaculture and Fishery Laboratory
Agricultural University of Tirana
Lagjia 4, Rruga "Skenderbeg' Durres
Albania
E-mail: j.kolitari@gmail.com

ALGERIA/ALGÉRIE

Nadia BOUHAFS
Inspectrice
Ministère de l'Agriculture, du Développement Rural et de la Pêche
Rue des quatre canons
16 000 Alger, Algeria
E-mail: nabouhafs@yahoo.fr

Larbi NEGHLI
Chef de recherche
Centre National de Recherche et de Développement de la Pêche et de l'Aquaculture (CNRDPA)
Ministère de l'Agriculture, du Développement Rural et de la Pêche
11, bd du colonnel Amirouche, Bou-Ismail
Tipasa, Algeria
E-mail: nelasof@gmail.com

BULGARIA/BULGARIE

Galin NIKOLOV
Deputy Executive Director
Executive Agency for Fisheries and Aquaculture (EAFA)
1 Knyaz Aleksandar Batenberg Str.,
Burgas, Bulgaria
E-mail: galin.nikolov@iara.government.bg

Tanya HUBENOVA
Director
Institute of Fisheries and Aquaculture
Plovdiv, 4003, St. "Vasil Levski", 248
Bulgaria
E-mail: thubenova@yahoo.com

Elitsa PETROVA
Deputy Director
Institute of Fish Resources
Blvd. "Primorski",4
Varna, Bulgaria
E-mail: elitssa@yahoo.com

Violin RAYKOV
Associate Professor, Deputy Director
Institute of Oceanology - BAS
40 Parvi Mai str
Varna, Bulgaria
E-mail: vio_raykov@abv.bg

CROATIA/CROATIE

Josip MARKOVIĆ
Head of Sector
Sector for Resources Management and Aquaculture
Directorate of Fisheries
Ministry of Agriculture, Planinska 2a
10000 Zagreb
Tel.: + 385 16443189
E-mail: josip.markovic@mps.hr

Vjekoslav TIČINA
Scientific adviser
Institute of Oceanography and Fisheries
Šet. I. Meštrovića 63
21000 Split
Croatia
E-mail: ticina@izor.hr

CYPRUS/CHYPRE

H. E. Nicos KOUYIALIS
Minister of Agriculture, Rural Development and Environment
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus

Olympia STYLIANOU
Permanent Secretary
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus

Marina ARGYROU
Director
Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus
E-mail: margyrou@dfmr.moa.gov.cy

Spyridon ELLINAS
Agricultural Attaché
Alternate Permanent Representative of the Republic of Cyprus
Permanent Representation of Cyprus to the UN Agencies in Rome
Piazza Farnese 44
00186 Rome, Italy
Tel.: +39 06 6865758
Fax: +39 06 6868038
E-mail: saellinas@hotmail.com; faoprcyp@tin.it

Lavrentions VASILIADES
Fisheries Officer
Fisheries Licenses and Statistics
Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus
Tel.: +357 99478348
Fax: +357 22775955
E-mail: lvasiliades@dfmr.moa.gov.cy

Myrto IOANNOU
Senior Fisheries Officer
Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus
E-mail: mioannou@dfmr.moa.gov.cy

Charis CHARILAOU
Fisheries Officer
Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus
E-mail: ccharilaou@dfmr.moa.gov.cy

Ioannis THASITIS
Fisheries Officer
Department of Fisheries and Marine Research
Ministry of Agriculture, Rural Development and Environment
6 Amfipoleos Street
2025 Nicosia, Cyprus
E-mail: ithasitis@dfmr.moa.gov.cy

EGYPT/ÉGYPTE

Atif Salah MEGAHED
General Director of Fisheries
General Authority for Fish Resources Development (GAFRD)
4, Tayaran st., Nasr City
Cairo, Egypt
E-mail: atif_gafrd@yahoo.com

Nabila ELNAGDY
General Manager of Technical Office
General Authority for Fish Resources Development (GAFRD)
4, Tayaran st., Nasr City
Cairo, Egypt
E-mail: nabilaelnagdy.gafrd@gmail.com

Huda HOSNY
General Manager of Information Center
General Authority for Fish Resources Development (GAFRD)
4, Tayaran st., Nasr City
Cairo
E-mail: huda.hosny@gafrd.cloud.gov.eg

Alaa Eldin ELHAWEET
Dean
College of Fisheries Technology and Aquaculture
Arab Academy for Science, Technology & Maritime transport
15 Sabry Bash, San Stefano
Alexandria
E-mail: aelhaweet@gmail.com
el_haweet@yahoo.com

EUROPEAN UNION/UNION EUROPÉENNE

Valérie LAINÉ
Head of Unit D2
Fisheries Conservation and Control in the Mediterranean and Black Sea
Directorate General for Maritime Affairs and Fisheries
European Commission of the European Union
200 rue de la Loi - J 99
1049 Brussels, Belgium
E-mail: Valerie.Laine@ec.europa.eu

Francisco Javier VAZQUEZ ALVAREZ
Senior Expert Fisheries science
Fisheries Conservation and Control in the Mediterranean and Black Sea
Directorate General for Maritime Affairs and Fisheries
European Commission of the European Union
200 rue de la Loi - J 99
1049 Brussels, Belgium
E-mail: Francisco-Javier.VAZQUEZ-ALVAREZ@ec.europa.eu

FRANCE

Benoit ARCHAMBAULT
Chargé de mission
Bureau des affaires européennes et internationales
Direction des pêches maritimes et de l'aquaculture (DPMA)
Ministère de l'environnement, de l'énergie et de la mer
Tour séquoia, 1 place Carpeaux.
96055 La Défense Cedex, France
E-mail: benoit.archambault@developpement-durable.gouv.fr

Capucine MELLON
Directrice
Laboratoire méditerranéen des pêches
Laboratoire de Ressources Halieutiques
Ifremer
Bd Jean Monnet, B.P. 171
34203 Sète Cedex, France
E-mail: cmellon@ifremer.fr

GREECE/GRÈCE

Dimitra SAVVOPOULOU
Director
Directorate for Fisheries Policy and Fishery Resources
Directorate General for Sustainable Fisheries
Ministry of Rural Development and Food
150 Sygrou Avenue
176 71 Athens, Greece
E-mail: syg022@minagric.gr

ISRAEL/ISRAËL

ITALY/ITALIE

Mauro BERTELLETTI
Policy Officer
Directorate General of Maritime Fisheries and Aquaculture
Ministero delle Politiche Agricole, Alimentari e Forestali (MiPAAF)
Viale dell'Arte 16
00144 Roma, Italy
E-mail: mbertelletti@politicheagricole.gov.it

Fabio FIORENTINO
Researcher
Consiglio Nazionale delle Ricerche, Istituto per l'Ambiente Marino Costiero (CNR-IAMC)
Via L. Vaccara, 61
91026 Mazara del Vallo, Italy
E-mail: fabio.fiorentino@iamc.cnr.it

Piera CARPI
Fisheries Scientist
Consiglio Nazionale delle Ricerche (CNR-ISMAR)
Largo Fiera della Pesca 2,
60125 Ancona, Italy
E-mail: piera.carpi@an.ismar.cnr.it

JAPAN/JAPON

LEBANON/LIBAN

Samir MAJDALANI
Head
Department of Fisheries and Wildlife
Ministry of Agriculture
Embassies Street,
Bir Hassan, Beirut, Lebanon
E-mail: sem@cyberia.net.lb

LIBYA/LIBYE

Nureddin Abdussalam ETBENI
Director
Information and Documentation Office
General Authority for Marine Wealth
Dahra / Behir El Ebrahimi Street
Tripoli, Libya
E-mail: nurabdala@live.co.uk

MALTA/MALTE

Andreina FENECH FARRUGIA
Director General
Department of Fisheries and Aquaculture
Ministry for Sustainable Development, Environment and Climate Change (MSDEC)
Ghammieri, Ngiered Road
Marsa MRS 3303, Malta
E-mail: andreina.fenech-farrugia@gov.mt

Reno MICALLEF
Department of Fisheries and Aquaculture
Ministry for Sustainable Development, Environment and Climate Change (MSDEC)
Ghammieri, Ngiered Road
Marsa MRS 3303, Malta
E-mail: reno.micallef@gov.mt

MONACO

Jean Philippe BERTANI
Conseiller
Représentant Permanent de la Principauté de Monaco près la FAO
Ambassade de Monaco
Via A. Bertoloni 36
Rome, Italie
E-mail: jpbertani@ambasciatamonaco.it

MONTENEGRO/MONTÉNÉGRO

Deniz FRLJUCKIC
Adviser for fishery
Ministry of Agriculture and Rural Development
Vojvode Mase Djurovica L3-2 st.35/5
Podgorica, Montenegro
E-mail: deniz.frljuckic@mpr.gov.me

Aleksandar JOKSIMOVIC
Head
Laboratory for marine fisheries
Institute of Marine Biology
University of Montenegro
Dobrota
85330 Kotor, Montenegro
Tel.: +282 32 344 569
E-mail: acojo@ac.me

MOROCCO/MAROC

Mohamed Idrissi MALOULI
Chef de Département
Département des Ressources Halieutiques
Institut national de recherche halieutique (INRH)
Casablanca, Morocco
Tél/Fax : +212 39325139
E-mail : malouliinrh@yahoo.fr

Abdelhakim MESFIOUI
Chef de Centre Régional
Institut national de recherche halieutique (INRH)
13, Boulevard Zertouni, CP 62000, BP 493
Nador , Morocco
E-mail: mesfioui@inrh.ma

ROMANIA/ROUMANIE

Ancuta KAZIMIROVICZ
Public manager
National Agency for Fishery and Aquaculture (NAFA)
Str. transilvaniei nr 2 et 4
Bucharest, Romania
E-mail: ancuta.kazimirovicz@gmail.com

SLOVENIA/SLOVÉNIE

Roman ČIČMIRKO
Senior Adviser
Forestry, Hunting and Fisheries Directorate
Hunting and Fisheries Division
Ministry of Agriculture, Forestry and Food
Dunajska cesta 22
1000 Ljubljana , Slovenia
T: +386 (0) 1 478 9187
E-mail: roman.cicmirko@gov.si

SPAIN/ESPAGNE

Alberto GARCÍA
Chief
Mediterranean Program
Instituto Español de Oceanografia (IEO)
Puerto Pesquero s/n
Fuengirola, Malaga, Spain
E-mail: agarcia@ma.ieo.es

TUNISIA/TUNISIE

Hachemi MISSAOUI
Directeur Général
Institut National des Sciences et Technologies de la Mer (INSTM)
Centre de Sfax - BP 1035
3018 Sfax, Tunisie
Tel.:+216 71 892253
Fax:+216 71 799401
E-mail: Hechmi.Missaoui@instm.rnrt.tn

TURKEY/TURQUIE

OBSERVERS/OBSERVATEURS

PALESTINE

Yaser SHTAYA
Fisheries Manager
Ministry of Agriculture
Albalu street
Ramallah, Palestine
E-mail: yaser1971@hotmail.co.uk

PARTNER ORGANIZATIONS/ ORGANISATIONS PARTENAIRES

ACCOBAMS

Celia LE RAVALLEC
Project Officer
ACCOBAMS Secretariat
Jardin de l'UNESCO
Terrasses de Fontvieille
98000 Monaco, Principauté de Monaco
E-mail: cleravallec@accobams.net

MARINE STEWARDSHIP COUNCIL

Margaux FAVRET
Fisheries Outreach Manager for France
Marine Stewardship Council (MSC)
La ruche, 84 quai de Jemmapes,
75010 Paris, France
E-mail: margaux.favret@msc.org

OCEANA

Pilar MARIN
Marine Scientist
OCEANA
Gran Vía, 59-9º
28013 Madrid, Spain
E-mail: pmarin@oceana.org

Marta CARRERAS
Marine Scientist
OCEANA
Gran Vía, 59-9º
28013 Madrid, Spain

UNEP-MAP / RAC-SPA

Daniel CEBRIAN
SAP BIO Coordinator
UNEP/MAP-RAC/SPA
Boulevard du Leader Yasser Arafat - B.P. 337
1080 Tunis Cedex, Tunisia
E-mail: daniel.cebrian@rac-spa.org

WWF

Giorgos PAXIMADIS
Marine Programme Officer
WWF
21, Lempessi str.
11743, Athens, Greece
E-mail: g.paximadis@wwf.gr

INVITED EXPERTS / EXPERTS INVITÉS

Bojan MARČETA
Head
Marine Fishery Department
Fisheries Research Institute of Slovenia
Sp. Gameljne 61a
1211 Ljubljana-Šmartno, Slovenia
E-mail: bojan.marceta@zzrs.si

Irena LIKAR
Researcher
Fisheries Research Institute of Slovenia
Sp. Gameljne 61a
1211 Ljubljana-Šmartno, Slovenia
E-mail: irena.likar@zzrs.si

FAO

FAO REGIONAL PROJECTS / PROJETS RÉGIONAUX DE LA FAO

CopeMed/EastMed

Marcelo VASCONCELLOS
Fishery Resources Officer
Project Coordinator
Fisheries and Aquaculture Resources Use and Conservation Division (FIRF)
FAO Fisheries and Aquaculture Department
Viale delle Terme di Caracalla, 1
00153 Rome, Italy
E-mail: marcelo.vasconcellos@fao.org

AdriaMed/MedSudMed

Enrico ARNERI
Project Coordinator
Fisheries and Aquaculture Resources Use and Conservation Division (FIRF)
FAO Fisheries and Aquaculture Department
Viale delle Terme di Caracalla, 1
00153 Rome, Italy
Tel.:+ 39 06 57056092
Fax:+ 39 06 570 53020
E-mail: enrico.arneri@fao.org

Luca CERIOLA
MedSudMed
Fisheries and Aquaculture Resources Use and Conservation Division (FIRF)
FAO Fisheries and Aquaculture Department
Viale delle Terme di Caracalla, 1
00153 Rome, Italy
Tel.: + 39 06 570 54492
E-mail: luca.ceriola@fao.org

Nicoletta MILONE
AdriaMed
Fisheries and Aquaculture Resources Use and Conservation Division (FIRF)
FAO Fisheries and Aquaculture Department
Viale delle Terme di Caracalla, 1
00153 Rome, Italy
Tel.:+ 39 06 570 55467
Fax:+ 39 06 570 53020
E-mail: nicoletta.milone@fao.org

STATISTICS AND INFORMATION BRANCH (FIPS) / SOUS-DIVISION DES STATISTIQUES ET DE L'INFORMATION

Aureliano GENTILE
Information Management
Statistics and Information Team (FIASD)
FAO Fisheries and Aquaculture Department
Viale delle Terme di Caracalla,
00153 Rome, Italy
Tel: + 39 06 570 53754
E-mail: aureliano.gentile@fao.org

Bureau of the Scientific Advisory Committee on Fisheries (SAC) / Bureau du Comité Scientifique Consultatif des pêches (CSC)

Othman JARBOUI
Chairperson / Président
Directeur du laboratoire Sciences Halieutiques
Institut National des Sciences et Technologies de la Mer (INSTM)
Centre de Sfax - BP 1035
3018 Sfax, Tunisie
Tel.: + 216 74 497117
Fax: + 216 497989
E-mail: othman.jarboui@instm.rnrt.tn

Capucine MELLON
Vice-chairperson / vice-présidente
Directrice
Laboratoire méditerranéen des pêches
Laboratoire de Ressources Halieutiques
Ifremer
Bd Jean Monnet, B.P. 171
34203 Sète Cedex, France
E-mail: cmellon@ifremer.fr

Subregional Committees moderators / Modérateurs des comités sous-régionaux

Sadok BEN MERIEM
SRC-WM moderator / Modérateur du Comité sous-régional de la Méditerranée occidentale
Chercheur
Institut National des Sciences et Technologies de la Mer (INSTM)
Port de pêche
2060 La Goulette
Tunisie
E-mail: sadokbm@yahoo.fr

Andreina FENECH-FARRUGIA
SRC-CM moderator / Modératrice du Comité sous-régional de la Méditerranée centrale
Director General
Department of Fisheries and Aquaculture
Ministry for Sustainable Development, Environment and Climate Change (MSDEC)
Ghammieri, Ngiered Road
Marsa MRS 3303, Malta
E-mail: andreina.fenech-farrugia@gov.mt

Giuseppe SCARCELLA
SRC-EM moderator / Modérateur du Comité sous-régional de la Méditerranée orientale
Researcher
National Research Council
Institute of Marine Sciences
L.go fiera della pesca SNC - 60125 Ancona,
E-mail: Giuseppe.Scarcella@gfcmonline.org; giuseppe.scarcella@an.ismar.cnr.it

Stylianos (Stelios) SOMARAKIS
SRC-AS moderator / Modérateur du Comité sous-régional de la mer Adriatique
Research Director
Institute of Marine Biological Resources and Inland Waters (IMBRIW)
Hellenic Centre for Marine Research (HCMR)
Thalassocosmos Gournes, P.O. Box 2214,
Heraklion 71003, Crete, Greece
E-mail: Stelios.Somarakis@gfcmonline.org; somarak@hcmr.gr

Coordinator of the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) / Coordinatrice du Groupe de travail sur l'évaluation des stocks de petits pélagiques

Claire SARAUX
Chercheur
Laboratoire de Ressources Halieutiques
Ifremer
Bd Jean Monnet, B.P. 171
34203 Sète Cedex, France
E-mail: claire.saraux@ifremer.fr

GFCM SECRETARIAT/SECRÉTARIAT DE LA CGPM

Abdellah SROUR
Executive Secretary
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
Tel.: +39 06 57055730
Fax: +39 06 57055827
E-mail: abdellah.srour@fao.org

Miguel BERNAL
Fishery Resources Officer
SAC backstopping Officer
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
Tel.: +39 06 57056537
E-mail: miguel.bernal@fao.org

Dominique BOURDENET
Scientific Editor/Translator
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
Tel.: +39 06 57056557
E-mail: dominique.bourdenet@fao.org

Margherita SESSA
Liaison Officer
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
Tel.: +39 06 57052827
Fax: +39 06 57055827
E-mail: margherita.sessa@fao.org

Claudia ESCUTIA
Programme Associate
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
Tel.: +39 06 57054055
E-mail: claudia.escutia@fao.org

Paolo CARPENTIERI
Consultant for data collection
General Fisheries Commission for the Mediterranean
Fisheries and Aquaculture Department
Food and Agriculture Organisation of the United Nations
E-mail: paolo.carpentieri@fao.org

Appendix 3

List of documents

GFCM:SAC18/2016/1	Provisional agenda and timetable
GFCM:SAC18/2016/2	Executive report of SAC intersessional activities, recommendations and work plan
GFCM:SAC18/2016/Inf.1	List of documents
GFCM:SAC18/2016/Inf.2	Provisional list of participants
GFCM:SAC18/2016/Inf.3	Report of the thirty-ninth session of the General Fisheries Commission for the Mediterranean (GFCM) (Italy, 25–29 May 2015)
GFCM:SAC18/2016/Inf.4	Report of the seventeenth session of the Scientific Advisory Committee on fisheries (SAC) (FAO headquarters, 24–27 March 2015) (bilingual)
GFCM:SAC18/2016/Inf.5	National reports to the SAC by member countries
GFCM:SAC18/2016/Inf.6	Conclusions of the Regional Conference on Small-Scale Fisheries in the Mediterranean and Black Sea (Algeria, 7–10 March 2016) (Available in English and French)
GFCM:SAC18/2016/Inf.7	Report of the Subregional Committee for the Central Mediterranean (SRC-CM): meeting on management plans for demersal fisheries (GFCM headquarters, 1–5 February 2016) (Available in English only)
GFCM:SAC18/2016/Inf.8	Report of the Subregional Committee for the Adriatic Sea (SRC-AS): meeting on management plans for small pelagic fisheries (GFCM headquarters, 1–5 February 2016) (Available in English only)
GFCM:SAC18/2016/Inf.9	Report of the Workshop on bioeconomic assessment of management measures (GFCM headquarters, 1–5 February 2016) (Available in English only)
GFCM:SAC18/2016/Inf.10	Report of the EIFAAC/ICES/GFCM Working Group on Eels (Turkey, 24 November – 2 December 2015) (Available in English only)
GFCM:SAC18/2016/Inf.11	Report of the Working Group on Stock Assessment of Demersal Species (GFCM headquarters, 23–28 November 2015) (Available in English only)
GFCM:SAC18/2016/Inf.12	Report of the Working Group on Stock Assessment of Small Pelagic Species (GFCM headquarters, 23–28 November 2015) (Available in English only)
GFCM:SAC18/2016/Inf.13	Report of the Working Group on Marine Protected Areas (Gammarth, Tunisia, 9–12 June 2015) (Available in English only)
GFCM:SAC18/2016/Inf.14	Major activities of the FAO regional projects (Available in English only)
GFCM:SAC18/2016/Dma.1	GFCM Data Collection Reference Framework (DCRF)
GFCM:SAC18/2016/Dma.2	The State of Mediterranean and Black Sea Fisheries (SoMFi 2016)

Annexe 3

Liste des documents

GFCM:SAC18/2016/1	Ordre du jour annoté et calendrier provisoires
GFCM:SAC18/2016/2	Rapport exécutif sur les activités intersessions, les avis et le plan de travail
GFCM:SAC18/2016/Inf.1	Liste des documents
GFCM:SAC18/2016/Inf.2	Liste des participants provisoire
GFCM:SAC18/2016/Inf.3	Rapport de la trente-neuvième session de la Commission générale des pêches pour la Méditerranée (CGPM) (Italie, 25-29 mai 2015)
GFCM:SAC18/2016/Inf.4	Rapport de la dix-septième session du Comité scientifique consultatif des pêches (CSC) (siège de la FAO, 24-27 mars 2015) (bilingue)
GFCM:SAC18/2016/Inf.5	Rapports nationaux des États membres au CSC
GFCM:SAC18/2016/Inf.6	Conclusions de la conférence régionale sur la pêche artisanale durable en Méditerranée et en mer Noire (Algérie, 7-10 mars 2016) (en anglais et en français)
GFCM:SAC18/2016/Inf.7	Rapport du Comité sous-régional pour la Méditerranée centrale: réunion sur les plans de gestion pour les pêcheries démersales (siège de la CGPM, 1-5 février 2016) (en anglais uniquement)
GFCM:SAC18/2016/Inf.8	Rapport du Comité sous-régional pour la mer Adriatique: réunion sur les plans de gestion pour les pêcheries de petits pélagiques (siège de la CGPM, 1-5 février 2016) (en anglais uniquement)
GFCM:SAC18/2016/Inf.9	Rapport de l'atelier sur l'évaluation bioéconomique des mesures de gestion (siège de la CGPM, 1-5 février 2016) (en anglais uniquement)
GFCM:SAC18/2016/Inf.10	Rapport du groupe de travail CIEM/CECPAI/CGPM sur l'anguille (Turquie, 24 novembre-2 décembre 2015) (en anglais uniquement)
GFCM:SAC18/2016/Inf.11	Rapport du Groupe de travail sur l'évaluation des stocks des espèces démersales (siège de la CGPM, 23-28 novembre 2015) (en anglais uniquement)
GFCM:SAC18/2016/Inf.12	Rapport du Groupe de travail sur l'évaluation des stocks des petits pélagiques (siège de la CGPM, 23-28 novembre 2015) (en anglais uniquement)
GFCM:SAC18/2016/Inf.13	Rapport du Groupe de travail sur les aires marines protégées (Gammarth, Tunisie, 9-12 juin 2015) (en anglais uniquement)
GFCM:SAC18/2016/Inf.14	Rapport sur les principales activités des projets régionaux de la FAO (en anglais uniquement)
GFCM:SAC18/2016/Dma.1	Cadre de référence de la CGPM pour la collecte de données (DCRF)
GFCM:SAC18/2016/Dma.2	Rapport sur la situation des pêches en Méditerranée et en mer Noire (*The State of Mediterranean and Black Sea Fisheries*, SoMFi 2016)

Appendix 4

Status of Mediterranean stocks

a) Scientific advice on the status of demersal stocks

GSA	Species	Methodology used	Current values	Reference points	$F_{curr}/F_{0.1}$	Stock status	Scientific advice
Western Mediterranean							
01 (Northern Alboran Sea)	European hake *Merluccius merluccius*	XSA, Y/R	$F_{(2012-2014)}$= 1.40	$F_{0.1(2014)}$= 0.22	6.4	In overexploitation with relative low biomass	Reduce fishing mortality
05 (Balearic Islands)	European hake *Merluccius merluccius*	XSA, Y/R, short-term forecast	$F_{(2012-2014)}$= 1.06	$F_{0.1(2013)}$= 0.18	5.9	In overexploitation with relative intermediate biomass	Reduce fishing mortality
07 (Gulf of Lion)	European hake *Merluccius merluccius*	XSA, Y/R, short-term forecast	$F_{(2012-2014)}$= 1.75	$F_{0.1(2013)}$= 0.15	11.7	In overexploitation with relative intermediate biomass	Reduce fishing mortality
09 (Ligurian Sea and Northern Tyrrhenian Sea)	European hake *Merluccius merluccius*	XSA, Y/R, short-term forecast	$F_{(2012-2014)}$= 0.96	$F_{0.1}$= 0.23	4.2	In overexploitation with relative intermediate biomass	Reduce fishing mortality
01 and 03 (Alboran Sea)	Red mullet *Mullus barbatus*	XSA, Y/R, BioDyn, LCA, short-term forecast	F_{cur}= 0.89	$F_{0.1}$= 0.26	3.4	In overexploitation with relative intermediate biomass	Reduce fishing mortality
07 (Gulf of Lion)	Red mullet *Mullus barbatus*	XSA, Y/R, short-term forecast	$F_{(2012-2014)}$= 0.34	$F_{0.1(2012)}$= 0.14	2.4	In overexploitation with relative high biomass	Reduce fishing mortality

GSA	Species	Methodology used	Current values	Reference points	$F_{curr}/F_{0.1}$	Stock status	Scientific advice
05 (Balearic Islands)	Striped red mullet *Mullus surmuletus*	XSA, Y/R, short term forecast	$F_{(2012-2014)}$= 0.48	$F_{0.1\ (2014)}$= 0.17	2.8	In overexploitation with relative low biomass	Reduce fishing mortality
05 (Balearic Islands)	Red shrimp *Aristeus antennatus*	XSA, Y/R, short term forecast	$F_{(2012-2014)}$= 0.77	$F_{0.1}$= 0.14	5.5	In overexploitation with relative low biomass	Reduce fishing mortality
06 (Northern Spain)	Deep-water rose shrimp *Parapenaeus longirostris*	XSA, Y/R	$F_{(2012-2014)}$= 1.4	$F_{0.1}$= 0.5	2.8	In overexploitation with relative intermediate biomass	Reduce fishing mortality
09 (Ligurian Sea and Northern Tyrrhenian Sea)	Deep-water rose shrimp *Parapenaeus longirostris*	XSA, Y/R	$F_{(2012-2014)}$= 0.67	$F_{0.1}$= 0.67	1	Sustainably exploited	Not to increase fishing mortality
Ionian Sea							
12, 13, 14, 15 and 16 (Strait of Sicily)	European hake *Merluccius merluccius*	XSA, g	$F_{(2012-2014)}$= 0.71	$F_{0.1}$= 0.12– 0.18	5.9–3.9	In overexploitation with relative high biomass	Reduce fishing mortality
19 (Western Ionian Sea)	European hake *Merluccius merluccius*	XSA, Y/R	$F_{(2012-2014)}$= 0.95	$F_{0.1}$= 0.18	5.3	In overexploitation with relative intermediate biomass	Reduce fishing mortality
12, 13, 14, 15 and 16 (Strait of Sicily)	Deep-water rose shrimp *Parapenaeus longirostris*	XSA	$F_{(2012-2014)}$= 1.14	$F_{0.1}$= 0.84–0.93	1.36–1.22	In overexploitation with relative intermediate biomass	Reduce fishing mortality

GSA	Species	Methodology used	Current values	Reference points	$F_{curr}/F_{0.1}$	Stock status	Scientific advice
Adriatic Sea							
18 (Southern Adriatic Sea)	European hake *Merluccius merluccius*	XSA, ALADYM, MSE, Y/R	$F_{(2012-2014)}$= 0.85	$F_{0.1}$= 0.18	4.8	In overexploitation with relative intermediate biomass	Reduce fishing mortality
17 (Northern Adriatic Sea)	Red mullet *Mullus barbatus*	XSA, SCAA	$F_{(2012-2014)}$= 1.3	$F_{0.1}$= 0.52	2.5	In overexploitation with relative high biomass	Reduce fishing mortality
18 (Southern Adriatic Sea)	Red mullet *Mullus barbatus*	XSA, ALADYM	$F_{(2012-2014)}$= 0.47	$F_{0.1}$= 0.42	1.1	In overexploitation with relative high biomass	Reduce fishing mortality
17 (Northern Adriatic Sea)	Common sole *Solea solea*	SS3, Y/R, short-term forecast	F_{2014} = 0.62	$F_{0.1}$ = 0.26	2.4	In overexploitation with relative low biomass	Reduce fishing mortality
18 (Southern Adriatic Sea)	Deep-water rose shrimp *Parapenaeus longirostris*	XSA, Aladym	$F_{(2012-2014)}$= 1.46	$F_{0.1}$= 0.76	1.9	In overexploitation with relative intermediate biomass	Reduce fishing mortality

GSA	Species	Methodology used	Current values	Reference points	$F_{curr}/F_{0.1}$	Stock status	Scientific advice
Eastern Mediterranean							
25 (Cyprus)	Red mullet *Mullus barbatus*	XSA, Y/R, short term forecast	$F_{(2012-2014)}$= 0.54	$F_{0.1}$= 0.22	2.4	In overexploitation with relative high biomass	Reduce fishing mortality
26 (South Levant Sea)	Striped red mullet *Mullus surmuletus*	LCA, VPA, Y/R (VIT)	$F_{(2012-2014)}$= 0.54	$F_{0.1}$= 0.20	2.7	In overexploitation	Reduce fishing mortality
25 (Cyprus)	Bogue *Boops boops*	XSA, SCAA (SS3)	$F_{(2012-2014)}$= 0.48	$F_{0.1}$= 0.13	3.8	In overexploitation with relative high biomass	Reduce fishing mortality
26 (South Levant Sea)	Brush tooth lizard fish *Saurida undosquamis*	LCA,VPA, Y/R	$F_{(2011-2014)}$= 0.57	$F_{0.1}$= 0.22	2.63	In overexploitation	Reduce fishing mortality
26 (South Levant Sea)	Peregrine shrimp *Metapenaeus stebbingi*	LCA, Y/R	$F_{(2012-2014)}$= 1.91	$F_{0.1}$= 0.75	2.6	In overexploitation	Reduce fishing mortality

b) Scientific advice on the status of small pelagic stocks

GSA	Species	Methodology used	F/F_{MSY} $^{*}(E/E=0.4)$	B/B_{MSY} $^{*}B/B_{pa}$ $^{**}B/B_{lim}$	Stock status	Scientific advice
Western Mediterranean						
03 (Southern Alboran Sea)	Sardine *Sardina pilchardus*	Indirect methods (BioDyn and VIT)	0.82 (VIT) 0.78 (BioDyn)	0.91	Overexploited with a low fishing mortality	Reduce fishing mortality
06 (Northern Spain)	Anchovy *Engraulis encrasicolus*	Direct acoustic estimate	--	--	Uncertain, but no sign of overexploitation	Not to increase fishing mortality
06 (Northern Spain)	Sardine *Sardina pilchardus*	Direct acoustic estimate	--	--	Depleted	Reduce fishing mortality and implement a recovery plan
07 (Gulf of Lion)	Sardine *Sardina pilchardus*	Direct acoustic estimate and indirect method (2-stage biomass model)	*0.05	--	Ecologically unbalanced Very low fishing mortality	Fishing mortality should not be allowed to increase
07 (Gulf of Lion)	Anchovy *Engraulis encrasicolus*	Direct estimate from acoustics	--	*0.91 **1.83	Low biomass	Reduce fishing mortality

Ionian Sea						
16 (Southern Sicily)	Sardine *Sardina pilchardus*	Indirect methods (2-stage biomass model, bioDyn)	0.51 *0.32	0.69	Overexploited with low fishing mortality	Reduce fishing mortality
Adriatic Sea						
17-18 (Adriatic Sea)	Sardine *Sardina pilchardus*	Indirect method (SAM)	1.52	*0.83 **1.66	Overexploited and in overexploitation	Reduce fishing mortality
17-18 (Adriatic Sea)	Anchovy *Engraulis encrasicolus*	Indirect method (SAM)	1.79	*0.97 **1.95	Overexploited and in overexploitation	Reduce fishing mortality

d) Overview on the status of European hake and red mullets in the GFCM area of application

Merluccius merluccius							
Subregion	**GSA**	**Group**	**Landings 2014 (t)**	**Methods in the assessment**	**$F_{current}$ (average 2012–2014) includes ages**	**$F_{0.1}$ (Reference year)**	**Overexploitation index (F/F0.1)**
W	1	GFCM	313	XSA	1.4	0.2 (2015)	7
W	5	GFCM	123.8	XSA	1.06	0.18 (2015)	5.9
W	6	STECF	2230	XSA	1.39	0.26 (2015)	5.3
W	7	GFCM	1932 (catches 1983)	XSA	$F_{(0-2)=}$ 1.75	0.15 (2013)	11.7
W	9	GFCM	1263	XSA	0.96	0.23 (2015)	4.2
W	10	STECF	1271	XSA	0.92	0.198 (2015)	4.6
W	11	STECF	45	XSA	1.53	0.17 (2015)	9
	12	GFCM	4051	XSA and Y/R	0.71	0.12–0.18 (2015)	3.9–5.9
	13						
	14						
	15						
	16						
A	18	GFCM	2114	XSA	0.85	0.18 (2015)	4.7
C	19	GFCM	740	XSA	0.95	0.18 (2015)	5.3

Mullus spp.								
Subregion	**GSA**	**Species**	**Group**	**Landings 2014 (t)**	**Methods in the assessment**	**$F_{current}$ (average 2012-2014) Includes ages**	**$F_{0.1}$ (reference year)**	**Overexploitation index (F/F0.1)**
	1–3	*M. barbatus*		103 (GSA 01) + 283 (GSA 03) (average 2012–2014)	XSA, Y/R, BioDyn, LCA	$F_{(1-2)}$=0.89	$F_{0.1(2014)=}$0.26	3.4
W	5	*M. surmuletus*	GFCM	60.8	XSA	$F_{(0-2)}$= 0.48	$F_{0.1(2015)=}$ 0.17	2.8
W	7	*M. barbatus*	GFCM	363	XSA, Y/R	$F_{(0-2)}$=0.34	$F_{0.1(2012)}$= 0.14	2.4
C	17	*M. barbatus*	GFCM	3546.2	XSA – SCAA (SS3), Y/R	$F_{(0-3)}$ =1.3	$F_{0.1(02015)}$ = 0.52	2.5
C	18	*M. barbatus*	GFCM	1684	Combined (XSA, a4aSCA, ALADYM)	$F_{(0-5)}$ = 0.48	$F_{0.1\ (2015)}$= 0.42	1.1
E	25	*M. barbatus*	GFCM	19.9	XSA, Y/R, short-term forecast	$F_{(1-2)}$ =0.54	$F_{0.1\ (2015)}$= 0.22	2.5
E	26	*M. surmuletus*	GFCM	779	VPA pseudocohort analysis, Y/R analysis	$F_{(2014)}$= 0.55	$F_{0.1\ (2014)}$ = 0.23	2.4

Appendix 5(a)

Technical advice on the management of the small pelagic fishery in the Adriatic Sea

Current status of stocks and reference points

Anchovy and sardine stocks in GSA 17–18 were considered outside safe biological limits, using the revised reference points estimated during the dedicated benchmark assessments carried out by the WGSASP.

	Biomass (SSB, t)			**Fishing mortality (F)**	
	B_{lim}	**B_{pa}**	**B_{2014}**	**F_{MSY}**	**F_{2014}**
Sardina pilchardus GSAs 17 and 18	125 318	250 636	208 604	0.72	1.087
Engraulis encrasicolus GSAs 17 and 18	45 936	91 872	89 501	0.55	0.99

Advice on management measures

Simulations were carried out with two alternative methods; BEMTOOL and a management strategy evaluation based on FLR (MSE-FLR). The full report is available as Appendix C of the Workshop on bioeconomic assessment of management measures report.

Management scenarios tested

- a status quo scenario, in which current fishing mortality was kept constant during the simulation years,
- emergency measures taken in 2014 (Rec. GFCM38/2014/1)
- variations of the existing management plan (Rec.GFCM37/2013/1) using the new reference points

Results

The quantitative simulations carried out showed that, under the current fishing mortality, stocks will continue to be outside safe biological limits. However, if management measures are applied, stocks will move into safe biomass levels.

The following results were obtained with the MSE-FLR approach:

1. the measure that minimizes the risk of stock collapse is the one aiming to an increase in spawning stock biomass above B_{pa} by 2018 and a reduction of F towards F_{MSY} by 2020;

2. the emergency measures taken by the countries in 2014 are not sufficient to bring the stocks back above safe biological limits;

3. the harvest control rule foreseen in the GFCM recommendation and its variants (i.e. linear reduction of F below B_{pa}) accomplish the objective of recovery of the stocks with low probability that the spawning stock biomass will drop below B_{lim};

4. both the limit and the target reference points set for small pelagics in the Adriatic are effective if used together and if action is taken immediately;

5. more investigations are needed concerning the stock-recruitment relationship.

Implementation of the management plan

With regard to the revision of the management plan, the following recommendations were provided:

- The implementation of management measures should take into consideration the characteristics of the different fleet segments, including their share in fishing mortality
- Further work is required in order to obtain a comprehensive evaluation of the effect of different management measures in terms of stock conservation targets and socio-economic impacts

Appendix 5(b)

Technical advice on the management of the demersal fishery in the Strait of Sicily

Scope

The management plan should mainly address the trawling fishery of hake and deep-water rose shrimp, also incorporating the objective of protecting the biodiversity and decreasing bycatch (especially of incidental catches of vulnerable species) and increasing the profitability of fisheries. Coastal trawlers, on the other hand, could be subject to a different management plan at a later stage.

Current status of stocks

GSA	Species	Current values	Reference points	F_{bar}/F0.1	Stock status	Scientific advice
12–16	*M.merluccius*	F(2012–2014) = 0.71	F0.1 = 0.12–0.18	5.9–3.9	In overexploitation with relative high biomass	Reduce Fishing mortality
12–16	*P.longirostris*	F(2012–2014) = 1.14	F0.1 = 0.84–0.93	1.36–1.22	In overexploitation with relative intermediate biomass	

Management measures

The management plan should include a first implementation period (about four years) during which an initial reduction of 20 percent of current fishing mortality would be implemented (i.e. F_{MSY} for shrimps should be stablished as a target fishing mortality during this first phase), concentrated as much as possible on reducing fishing mortality for hake juveniles (e.g. using spatial protection on hake nursery areas or reducing the effort of those parts of the fleet that have higher catches of small hake individuals) in order to maximize the potential positive effect on hake stocks. The effectiveness of this reduction should then be assessed and additional measures could be proposed if needed.

Management measures that could help to achieve these targets include:

- spatial protection on hake nursery areas
- reducing fishing effort on hake juveniles

Furthermore, the management plan should also include minimum and/or maximum landing sizes for elasmobranchs, as well as measures to mitigate incidental catches of such species.

In relation to the implementation of FRAs, including those previously proposed (Appendix 7 of the report of the seventeenth session of the SAC; see coordinates in Table 1 hereunder) in the northern part of the Strait of Sicily, the following elements are expected to contribute towards moving the status of demersal stocks assessed to safe biological limits:

- The fleet segment affected by the FRAs should be **bottom trawlers**
- FRAs could be established for an **initial testing phase of 2 years**, with periodic scientific studies assessing the effectiveness of the measure
- More studies should be carried out to identify nursery areas of hake in GSAs other than 15 and 16, in order to evaluate the possibility of proposing additional FRAs to protect nursery areas throughout the subregion.

Revision of the plan

The status of hake stocks in the area shall be evaluated annually maintaining as much as possible the same methodology and relative settings, and a benchmark assessment revising stock assessment methods and input data shall be done each three years. For shrimps, current stock assessment models were still under active development and the model was therefore still expected to be subject to modifications in the yearly assessment.

Table 1: Coordinates of the FRAs as proposed to the seventeenth session of the SAC

Latitude	**Longitude**
East of Adventure Bank - Essential Fish Habitat for European hake:	
37º 23,850’ N	12º 30,072’ E
37º 23,884’ N	12º 48,282’ E
37º 11,567’ N	12º 48,305’ E
37º 11,532’ N	12º 30,095’ E
West of Gela Basin - Essential Fish Habitat for deep-water rose shrimp:	
37º 12,040’ N	13º 17,925’ E
37º 12,047’ N	13º 36,170’ E
36º 59,725’ N	13º 36,175’ E
36º 59,717’ N	13º 17,930’ E
East of Malta Bank - Essential Fish Habitat for European hake:	
36º 12,621’ N	15º 13,338’ E
36º 12,621’ N	15º 26,062’ E
35º 59,344’ N	15º 26,062’ E
35º 59,344’ N	15º 13,338’ E

Appendix 6

Proposal for a new data submission framework in line with the GFCM Data Collection Reference Framework (DCRF)

The General Fisheries Commission for the Mediterranean (GFCM),

CONSIDERING that rational management for sustainable fisheries is dependent on the scientific utilization of relevant data on fishing fleet capacity, on the fishing activities carried out, on the status of exploited biological resources and on the social and economic situation of fisheries;

RECALLING the subregional approach to fisheries management as enshrined in the GFCM agreement with a view to better address the specificities in the Mediterranean and the Black Sea region;

NOTING the importance of multidisciplinary data and information required to monitor and assess fisheries and fisheries resources and to ensure their sustainable exploitation;

RECOGNIZING the need to develop a GFCM database, on the basis of the information received from Contracting Parties and Cooperating non-Contracting Parties (CPCs) according to a standardized format;

FURTHER RECOGNIZING the Data Collection Reference Framework (DCRF) as an instrument supporting the identification of fisheries-related data necessary to formulate sound scientific advice;

CONSIDERING that timely and complete submission of data and analysis of the status of fisheries and exploited resources is of paramount importance for the effectiveness and credibility of GFCM management measures;

TAKING into account the importance of the classification of priority species group as identified by the Scientific Advisory Committee on Fisheries (SAC), the use of the GFCM fleet segmentation for the sake of collection of the economic and biological data, as well as the use of standard nominal fishing effort measurement;

NOTING that relevant data on fishing fleet, red coral and dolphin fish as identified by the SAC through the DCRF are already requested by existing GFCM decisions [FINAL REFERENCES TO BE ADDED];

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

1. CPCs shall submit to the GFCM Secretariat national data on catch, incidental catch of vulnerable species, fishing effort, socio-economics and biological information (as specified in Annex 1) for the first time in 2017, and subsequently on each calendar year. Such transmission shall be done in accordance with appropriate data submission standards, procedures and protocols set and put at disposal online by the GFCM Secretariat. Data shall be compiled following the specification of the GFCM fleet segmentation (Annex 2) as well as of nominal fishing effort measurement (Annex 3) for the biological information.

2. In addition to the data mentioned above, CPCs shall submit to the GFCM Secretariat for the first time in 2017, and subsequently on each calendar year, information needed to assess the status of those stocks considered priority by the Commission. Such transmission shall be done through the Stock Assessment Form (SAF) put at disposal online by the GFCM Secretariat under the guidance of the SAC and following the data structure as specified in Annex 5.

3. CPCs shall submit the data referred to in paragraphs 1 and 2 on the basis of the transmission specifications (reporting schedule, reference year and frequency) as defined in Annex 4. With a view to ensure the consistency of the time series in GFCM database, populated by data submitted in line with the Recommendation GFCM/33/2009/3 up to the 2014 reference year,

the first data transmission in 2017 shall also address the time frame of two years preceding the submission, thus covering the years 2015 and 2016.

4. The quality of the submitted data pursuant to this Recommendation shall be regularly assessed with a view to ensure the provision of scientific advice by the SAC to the Commission.

5. The SAC can draw the attention of the Commission to the need for any revisions of Appendices 1-5 to this Recommendation to ensure the effectiveness of data collection and analysis.

6. Recommendation GFCM/33/2009/3 is hereby repealed starting from 1st January 2017.

GFCM DATA FIELDS (DCRF TASKS)

The data variables listed below are those that are to be submitted to the GFCM Secretariat following the guidance defined by the SAC through the DCRF document, including field definitions, list of species (group 1, 2 and 3 by GFCM subregions), fishing gears, vulnerable species and shared stocks. In line with the GFCM data confidentiality policy and procedures, the data confidentiality status identifies the access-level criteria for the sake of data dissemination: public (P), semi-private (S), private (R).

DATA FIELDS (DCRF tasks and subtasks)			**MANDATORY (M) / OPTIONAL (O)**	**DATA CONFIDENTIALITY STATUS**
Global figures of national fisheries		Number of vessels	M	P
		Total landing	M	P
		Total capacity (GT)	M	P
		Total engine power (kW)	M	P
Catch	**Total landing** (by GSA and fleet segment)	Number of vessels	M	P
		Total landing	M	P
	Catch per species (by GSA and fleet segment)	Species	M	P
		Total landing per species	M	P
		Total discards per species (if any)	M	S
		Total catch per species	M	P

DATA FIELDS (DCRF tasks and subtasks)			MANDATORY (M) / OPTIONAL (O)	DATA CONFIDENTIALITY STATUS
Incidental catch of vulnerable species (by GSA and fleet segment)[1]		Date	M	P
		Source of data	M	S
		Fishing gear (if available)	M	P
		Group of vulnerable species[1]	M	P
		Family (if available)	M	P
		Species (if available)	M	P
		Total number of individuals caught	M	P
		Total weight of individuals caught (if available)	M	P
		Number of individuals released alive (if available)	M	S
		Number of dead individuals (if available)	M	S
		Number of individuals released in unknown status (if available)	M	S
Effort	**Fleet segment** (by GSA and fleet segment)	Fishing days	M	S
		Capacity	M	P
		Nominal effort	M	S
		Number of vessels	M	P
	Fishing gear (by GSA)	Fishing gear	M	S
		Fishing days (by fishing gear)	M	S
	CPUE (by GSA)[2]	Fishing gear	M	P
		Species[2]	M	P
		Nominal effort	M	S
		CPUE	M	S

[1] Mandatory for the GFCM vulnerable species
[2] Mandatory for the species of group 1 and group 2

Socio-economics	**Economic and social data** (by GSA and fleet segment)	Capacity (gross tonnage)	M	P
		Capacity (engine power)	M	P
		Number of vessels	M	P
		Total landing value	M	S
		Total days at sea	M	S
	Operating costs (by GSA and fleet segment)	Number of vessels	M	P
		Personnel costs	M	R
		Fuel consumption (if available)	M	R
		Fuel price (if available)	M	R
		Total fuel cost (if available)	M	R
		Repair and maintenance costs	M	R
		Commercial costs	M	R
		Other variable costs	M	R
		Capital costs	M	R
		Value of physical capital	M	R
		Fixed costs	M	R
		Employment	M	R
		Currency	M	S
	Species value (by GSA and fleet segment)[3]	Number of vessels	M	P
		Species[3]	M	P
		Total landing volume	M	P
		Total landing value	M	S
		Prices by commercial species	M	S
		Currency	M	S

[3] Mandatory for the species of group 1 and 2

	Other economic aspects (by GSA and fleet segment)	Operating subsidies	O	R
		Investments in physical capital	O	R
		Other income	O	R
		Full-time equivalent (FTE)	O	S
		Number of persons in the crew < 25 years-old	O	S
		Number of persons in the crew 25-40 years-old	O	S
		Number of persons in the crew > 40 years-old	O	S
		Currency	O	S
Biological information	**Length data** (by GSA)[4]	Source of data	M	S
		Name of the scientific survey (if any)	M	S
		Fleet segment (only if from fishery-dependent data)	M	S
		Species[4]	M	S
		Length	M	S
		Number of individuals sampled (per length classes)	M	S
		Weight of individuals sampled (per length classes)	M	S
		Number of individuals expanded (per length classes)	M	S
	Size at first maturity *(by GSA)*[5]	Species[5]	M	P
		Sex	M	S
		L_{50}	M	S
		Reference (if any)	M	S

[4] Mandatory for the species of group 1, 2 and 3
[5] Mandatory for the species of group 1

	Maturity data (by GSA)[5]	Source of data	M	S
		Name of the scientific survey (if any)	M	P
		Fleet segment (only if from fishery-dependent data)	M	P
		Species[5]	M	P
		Length	M	S
		Sex	M	S
		Maturity[6]	M	S
		Number of individuals sampled (per length class, sex and maturity stage)	M	S
		Weight of individuals sampled (per length class, sex and maturity stage)	M	S
		Number of individuals expanded (per length class, sex and maturity stage)	M	S
	European eel	Habitat	M	P
		Site	M	P
		Gear types	M	P
		Mesh size (if any)	M	S
		Number of fishermen	M	S
		Fishing days	M	S
		Average number of "gear units" per day per fisherman (if any)	M	S
		Total catch of silver eel (if any)	M	P
		Total catch of yellow eel (if any)	M	P
		Total catch of glass eel (if any)	M	P

[6] Following the scale of maturity stages (DCRF document)

GFCM fleet segmentation
(Combination of vessel groups and length classes)

<table>
<tr><th colspan="3" rowspan="2">VESSEL GROUPS</th><th colspan="4">LENGTH CLASSES (LOA)</th></tr>
<tr><th>< 6 m</th><th>6 - 12 m</th><th>12-24 m</th><th>> 24 m</th></tr>
<tr><td rowspan="4">Polyvalent</td><td rowspan="4">P</td><td rowspan="2">Small-scale vessels without engine using passive gears</td><td>P-01</td><td>P-02</td><td rowspan="2">P-03</td><td rowspan="2">P-04</td></tr>
<tr><td colspan="2">P-13</td></tr>
<tr><td>Small-scale vessels with engine using passive gears</td><td>P-05</td><td>P-06</td><td>P-07</td><td>P-08</td></tr>
<tr><td>Polyvalent vessels</td><td rowspan="2">P-09</td><td rowspan="2">P-10</td><td>P-11</td><td>P-12</td></tr>
<tr><td colspan="2">P-14</td></tr>
<tr><td rowspan="4">Seiners</td><td rowspan="4">S</td><td rowspan="2">Purse seiners</td><td rowspan="2">S-01</td><td rowspan="2">S-02</td><td>S-03</td><td>S-04</td></tr>
<tr><td colspan="2">S-09</td></tr>
<tr><td rowspan="2">Tuna seiners</td><td rowspan="2">S-05</td><td rowspan="2">S-06</td><td>S-07</td><td>S-08</td></tr>
<tr><td colspan="2">S-10</td></tr>
<tr><td>Dredgers</td><td>D</td><td>Dredgers</td><td>D-01</td><td>D-02</td><td>D-03</td><td>D-04</td></tr>
<tr><td></td><td></td><td></td><td></td><td colspan="2">D-05</td><td></td></tr>
<tr><td rowspan="3">Trawlers</td><td rowspan="3">T</td><td>Beam trawlers</td><td>T-01</td><td>T-02</td><td>T-03</td><td>T-04</td></tr>
<tr><td rowspan="2">Pelagic trawlers</td><td rowspan="2">T-05</td><td>T-06</td><td>T-07</td><td>T-08</td></tr>
<tr><td colspan="3">T-13</td></tr>
<tr><td>Trawlers</td><td>T-09</td><td>T-10</td><td>T-11</td><td>T-12</td></tr>
<tr><td rowspan="2">Longliners</td><td rowspan="2">L</td><td rowspan="2">Longliners</td><td rowspan="2">L-01</td><td>L-02</td><td>L-03</td><td>L-04</td></tr>
<tr><td colspan="3">L-05</td></tr>
</table>

Note

- "Vessel" is assigned to a group on the basis of the dominant gear used in terms of percentage of time: "more than 50%, of the time at sea using the same fishing gear during the year".
- Polyvalent vessels are defined as "all the vessels using more than one gear, with a combination of passive and active gears, none of which exceeding more than 50 percent of the time at sea during the year".
- A vessel is considered active "when it executes at least one fishing operation during the reference year in the GFCM area".
- The "yellow cells" contain the codes of reported fleet segments which should be included in the data transmission to GFCM. If necessary, fleet segments as identified in the "orange cells" can be used: P-13 (P-01 + P-02), P-14 (P-11 + P-12), S-09 (S-03 + S-04), S-10 (S-07 + S-08), D-05 (D-02 + D-03), T-13 (T-06 + T-07 + T-08) and L-05 (L-02 + L-03 + L-04). Any proposal for different aggregation of the fleet segments should be brought to the attention of the SAC, together the rationale and corresponding references (e.g. existing scientific studies), which in turn should confirm the similarity/homogeneity of the combined cells.

Table on fishing effort measurement

Effort measurements by fleet segment

Fleet segments			Effort measurements		
Vessel groups		**Length classes (LOA)**	**Unit of capacity**	**Unit of activity**	**Nominal effort**
P	Small-scale vessels without engine using passive gears Small-scale vessels with engine using passive gears Polyvalent vessels	All	Net length [1]	Fishing days	Net length * Fishing days
			Number of traps/pots [1]	Fishing days	Number of traps/pots * Fishing days
			Number of lines [1]	Fishing days	Number of lines * Fishing days
S	Purse seiners Tuna seiners	All	GT	Number of fishing sets [2]	GT * Number of fishing sets
D	Dredgers	All	GT	Fishing days	GT * Fishing days
T	Beam trawlers Pelagic trawlers Trawlers	All	GT	Fishing days	GT * Fishing days
L	Longliners	All	Number of hooks	Fishing days	Number of hooks * Fishing days

[1] Should this information not be available, "GT" may be used as capacity unit upon approval by the SAC on a case by case basis

[2] Should this information not be available, "fishing days" may be used as activity unit upon approval by the SAC on a case by case basis

Effort measurements by fishing gear

Fishing gear		Gear code	Unit of capacity	Unit of activity	Nominal effort
Surrounding nets	With purse lines (purse seines)	PS	GT	Number of fishing sets [1]	GT * Number of fishing sets
	One boat operated purse seines	PS1			
	Two boats operated purse seines	PS2			
	Without purse lines (lampara)	LA			
Seine nets	Beach seines	SB	Net length [2]	Fishing days	Net length * Fishing days
	Boat or vessel seines	SV			
	Danish seines	SDN			
	Scottish seines	SSC			
	Pair seines	SPR			
	Seine nets (not specified)	SX			
Trawls	Bottom trawls	TB	GT	Fishing days	GT * Fishing days
	Bottom beam trawls	TBB			
	Bottom otter trawls	OTB			
	Bottom pair trawls	PTB			
	Bottom nephrops trawls	TBN			
	Bottom shrimp trawls	TBS			
	Midwater trawls	TM			
	Midwater otter trawls	OTM			
	Midwater pair trawls	PTM			
	Midwater shrimp trawls	TMS			

[1] Should this information not be available, “fishing days” may be used as activity unit upon approval by the SAC on a case by case basis

[2] Should this information not be available, “GT” may be used as capacity unit upon approval by the SAC on a case by case basis

Fishing gear		Gear code	Unit of capacity	Unit of activity	Nominal effort
	Otter twin trawls	OTT			
	Otter trawls (not specified)	OT			
	Pair trawls (not specified)	PT			
	Other trawls (not specified)	TX			
Dredges	Boat dredges	DRB	GT	Fishing days	GT * Fishing days
	Mechanised dredges	HMD			
	Hand dredges	DRH			
Gillnets and Entangling nets	Set gillnets (anchored)	GNS	Net length [2]	Fishing days	Net length * Fishing days
	Driftnets	GND			
	Encircling gillnets	GNC			
	Fixed gillnets (on stakes)	GNF			
	Trammel nets	GTR			
	Combined gillnets-trammel nets	GTN			
	Gillnets and entantling nets (not specified)	GEN			
	Gillnets (not specified)	GN			
Traps	Stationary uncovered pound nets	FPN	Number of traps/pots [2]	Fishing days	Number of traps/pots * Fishing days
	Pots	FPO			
	Fyke nets	FYK			
	Stow nets	FSN			
	Barrier, fences, weirs, etc	FWR			
	Aerial traps	FAR			
	Traps (not specified)	FIX			
Hooks and Lines	Handlines and pole-lines (hand operated)	LHP	Number of lines [2]	Fishing days	Number of lines *

Fishing gear		Gear code	Unit of capacity	Unit of activity	Nominal effort
	Handlines and pole-lines (mechanised)	LHM			Fishing days
	Trolling lines	LTL			
	Set longlines	LLS	Number of hooks	Fishing days	Number of hooks * Fishing days
	Drifting longlines	LLD			
	Longlines (not specified)	LL			
	Hooks and lines (not specified)	LX			

Data submission calendar

Each calendar year (n), the requested data, as specified in Annex 3, and pertaining to the year before the transmission (n-1), shall be submitted to the GFCM Secretariat on the basis of the following schedule:

- May
  - Global figures of national fisheries
  - Socio-economics - Species value[13]
  - Socio-economics - Other economic aspects[1]
  - Socio-economics - Operating costs[1]

- June
  - Catch - Landing data
  - Catch - Catch data per species
  - Effort - Fleet segment
  - Effort - Fishing gear
  - Effort - CPUE

- July
  - Incidental catch of vulnerable species
  - Biological information - Length data
  - Biological information - Size at first maturity
  - Biological information - Maturity data

- September
  - Biological information - Stock assessment form[14]
  - Biological information - European eel

- November
  - Socio-economics - Economic and social data

[13] Data should refer to the reference year n-2 and their submission should only take place on biennial basis only for those countries that do not have annual economic surveys in place. Countries collecting these data on a yearly basis are requested to submit them annually (keeping reference year n-2).

[14] The date of data submission is linked to the scheduling of the GFCM stock assessment working groups and therefore may differ from year to year

Appendix 7

Bycatch monitoring programme in the Mediterranean and Black Sea. Draft concept note

Introduction

Bycatch is considered one of the most important threats to the profitability and sustainability of fisheries, and as such has been recently attracting the attention of most regional fisheries management organizations (RFMOs) and other fisheries management bodies.

As highlighted in the GFCM report *The State of Mediterranean and Black Sea fisheries* (FAO, 2016), there are important gaps of knowledge in relation to bycatch (discards and incidental catches of vulnerable species[15]) in the region: existing studies do not cover all fisheries and fishing gears, countries and/or subregions and have limited temporal and small spatial scope. This gap of knowledge highlights the need to expand bycatch surveys and standardize practices in order to compare results among fisheries, test survey methods and, eventually, test fishery tools aiming to bycatch mitigation.

It is therefore urgent for the GFCM to undertake specific actions to obtaining robust and coherent data on bycatch at the regional level on the long-term period and aiming at improving fisheries management in the GFCM area of application. In this frame, the compilation of existing information, the standardization of approaches, the establishment or the expansion of well-designed monitoring schemes and the cooperation among countries and organizations interested in the issue are essential steps for a holistic approach of the bycatch issue.

Objectives

The aim of the GFCM bycatch long-term monitoring programme shall be to collect data on bycatch in the Mediterranean and Black Sea fisheries, in order to perform a comprehensive quantitative assessment and to take the necessary measures to mitigate its biological and socio-economic impact.

The proposed strategy will be developed and supported through extra funds made available by interested donors and it will build upon existing efforts and synergies of partner organizations with the objective of collectively and co-ordinately obtain the information towards a regional assessment of bycatch in the Mediterranean and Black Sea.

Methodology

The programme shall first initiate consultations with partner organizations to invite them to take part in the initiative. In parallel, a complete concept note and a background technical document to support the programme will be prepared, covering the following aspects:

- identification of fleet segments with high bycatch rates as well as the main group of species affected by bycatch (both discarded species and vulnerable species), per GFCM subregion, countries and GSA, building upon the findings of the GFCM report on *The State of Mediterranean and Black Sea Fisheries*;
- identification of ongoing initiatives collecting data and information on bycatch for specific groups of species/fleet segments and
- design of a bycatch monitoring plan covering the fleet segments and the main group of species subject to different kinds of bycatch, as identified above, and taking into account existing initiatives.

Bycatch monitoring is expected to be carried out through a combination of methods, including: i) with observers on board of commercial vessels (direct observations), ii) with fishers to sample their own

[15] i.e. seabirds, marine mammals, sharks and rays, seaturtles.

discards and incidental catches of vulnerable species (self-sampling) and iii) with dialogues with fishers at landing sites (questionnaires). A short description of the different methods is detailed below:

Observers on board

The survey should be designed taking into account the spatial (GSA) and temporal (quarterly) variability of the fishing activity, in order to detect seasonal differences in the volume and demographic structure of the discards, to evaluate the volume and the composition of the landings for the different fleet segments and to monitor the impact of different fishing activities on vulnerable species.

Self-sampling

The fisher self-sampling study is a method for fishers to sample their own fishing trips in order to collect opportunistic/additional data on both discards and incidental catches of vulnerable species. At-sea sampling of commercial fishery catches by observers could result in a relatively expensive exercise, in terms of costs and human resources. From this perspective, sampling by fishers (self-sampling) may offer the opportunity to sample larger number of trips at a lower cost.

Questionnaires

Information could also be gathered by individual questionnaire-based interviews following a standardized sampling protocol with fishers from different ports/landing places. The questionnaire will be designed to collect information relating to vessels, fishing gears, fishing practices, location of main fishing grounds, main target species, estimation of catches, species composition of discards and impact of vulnerable species.

Final remarks

The bycatch monitoring programme briefly described in this concept note is expected to collect data on both discards and incidental catches of vulnerable species. While the methodology for these two components could be conceptually similar, the bycatch rates and the fleet segments for the discards and the incidental catches of vulnerable species are different, and therefore a programme trying to encompass both these two bycatch components is expected to face important challenges, including an adequate coverage of fleet segments, areas and seasons. The programme is expected to overcome these difficulties by attracting a wide range of interested organizations that could complement each other, as well as attracting the required level of extra funds to secure a minimum sampling coverage.

The purpose of this draft concept note is to present this initiative to the eighteenth session of the SAC, with the objective to discuss its potential benefits and the *modus operandi* towards establishing a monitoring programme on bycatch in the Mediterranean and Black Sea.

Appendix 8

Outline of the concept note for the GFCM Forum on Fisheries Science (GFCM FishForum)

Introduction

- The SAC currently acts as the hub for the collection and processing of scientific and technical advice on fisheries, which is a key component of the UN Sustainable Development Goal 14, "conserve and sustainably use the oceans, seas and marine resources".
- There is an increasing demand for more scientific and technical advice, while there is a lack of expertise and critical mass on several aspects of fisheries science, as well as a difference in available knowledge and advice across subregions.
- There are many potential sources of valuable knowledge in the area of fisheries science, which could be more actively involved in the work of the SAC:
    - research and technical institutes
    - universities/PhD students
    - individual researchers
    - regional/subregional platforms and projects/intiatives

Objective

- To provide an open and collaborative platform to share experience, information and outcomes of ongoing initiatives on relevant areas of fisheries science, promote ideas and future projects and integrate all available information to support scientific knowledge and advice by the GFCM.

Contents/Clusters

- Stock assessment, including methodologies, identification of stock boundaries, biological parameters, etc.
- Socio-economic aspects of fisheries, including impact assessment and analysis to support fisheries management
- Small-scale and recreational fisheries
- Fisheries and climate change
- Assessment of bycatch and discards
- IUU fishing and its impact
- Fisheries technology, including selectivity aspects
- Interactions between fisheries and marine ecosystems
- Stakeholders and regional/subregional platforms

Tentative timeframe

The forum is foreseen to be held on the last trimester of 2017. Logistical aspects listed above, including initial announcements, should start no later than June/July 2016.

Information on funding

- The forum will be organized thanks to extra-budgetary contributions
- A call for voluntary contributions to potential donors and partner organizations will be launched

- Financial support is foreseen for the attendance of selected experts and students

Roadmap

- Finalisation of the concept note for the consideration of the Commission (April 2016)
- Review and endorsement by the Commission (May 2016)
- Meeting with identified partners (June/July 2016) to define:
    - Steering Committee and its *modus operandi*
    - Organization of the Forum
- Finalisation and dissemination of communication material (brochure, website, etc.) (September 2016)
- First announcement/call for interest (September/October 2016)
- GFCM FishForum 2017 (fourth trimester 2017)

Appendix 9

Conclusions of the Regional Conference on small-scale fisheries

7–9 March 2016 – Algiers, Algeria

Preamble

The Regional Conference on "Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea" (7–9 March 2016, Algiers, Algeria) enjoyed the robust attendance of over 200 participants, which included policy-makers, scientists, practitioners, fishers representatives, fish workers, civil society organizations, NGOs, research institutions, international organizations and more. The conference was organized by the General Fisheries Commission for the Mediterranean (GFCM) and the Fisheries and Aquaculture Department of the Food and Agriculture Organization of the United Nations (FAO), including its Mediterranean regional projects, in collaboration with the Algerian Ministry for Agriculture, Rural Development and Fisheries and in partnership with CIHEAM-Bari, MedPAN, and WWF.

In 2013, on the occasion of the First Regional Symposium on Sustainable Small-Scale Fisheries in the Mediterranean and the Black Sea (27–30 November 2013, Malta), the main challenges and opportunities for the sustainable development of the small-scale fishery sector in this region were brought to the forefront. Since then, such issues have continued to gain prominence in discussions on small-scale fishery management in the context of the Blue Growth Initiative in the Mediterranean and the Black Sea.

This Regional Conference was conceived as a practical response to the outcomes of the Symposium in Malta, seeking to capitalize on the momentum already generated in order to offer a tangible strategy for the future sustainable development of this sector. Concrete case studies were carried out, which further explored key themes identified through the Symposium, and their results were presented in a format which deliberately sought to promote discussions, express opinions and share experiences in order to better grasp priorities and opportunities for this sector.

There is no doubt that small-scale fisheries in the Mediterranean and the Black Sea play a significant social and economic role. These fisheries constitute over 80 percent of the fishing fleet, employ at least 60 percent of total on-vessel fishing labour and account for approximately 25 percent of the total landing value from capture fisheries in the region. At their best, small-scale fisheries exemplify sustainable resource use: exploiting living marine resources in a way that minimizes environmental degradation while maximizing economic and social benefits. Yet concerted effort is needed to ensure that best practices become standard practice.

In recognition of this need for a concerted action for the sustainable development of the small-scale fishery sector, the Algerian Ministry for Agriculture, Rural Development and Fisheries graciously offered to host the Regional Conference with a view to mobilizing such an effort. This event perfectly aligned with the "Aquapêche 2020" strategy, recently launched by Algeria as a result of a nation-wide consultation process with all stakeholders and with the support of the United Nations Development Programme (UNDP) and the FAO. Consistent with Blue Growth principles, this strategy is also expected to provide a decisive contribution towards the promotion of sustainable small-scale fisheries, both at the national and regional level.

The following conclusions have been developed based on the outcomes of the Regional Conference. The conclusions are put forth to urge actions in support of sustainable small-scale fisheries in the Mediterranean and the Black Sea and they are grouped, first, under a cluster of general and transversal proposals and, next, under five clusters relating to the specific thematic sessions of the conference.

GENERAL CONCLUSIONS

In light of the UN Sustainable Development Goals which, among other issues, stress the importance of providing access for small-scale artisanal fisheries to marine resources and markets, the importance of the Regional Conference on "Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea" was acknowledged. Widespread support was expressed by conference participants for the conference objectives to raise awareness, share knowledge, and devise future strategy to promote this crucial fishing sector.

In particular, the following general proposals were made:

- Tailor implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) to the Mediterranean and Black Sea context and provide support to GFCM contracting parties in the implementation of these guidelines.
- Launch a comprehensive and region-wide survey to develop accurate, timely and complete baseline data on the value and economic impact of small-scale fisheries, with a view to ultimately informing policy interventions.
- Launch wide-ranging consultations, including a mechanism for the sustainable development of the small-scale fishing sector and specific actions to develop coordinated policy to support this sector. To this end, implement a joint regional strategy which builds on existing regional networks and platforms and promotes a level playing field throughout the Mediterranean and the Black Sea.
- Develop a regional programme aiming to provide support and technical assistance, in particular to developing countries, in order to build capacity in the field of small-scale fisheries. Carry out at the national level, where necessary, an analysis of legislation and institutional mechanisms which ensure the full participation of small-scale fishers in all activities regarding the sustainable development of the sector (development of alternative activities, co-management, financial support, labelling, traceability, right to decent work, social protection, etc.)
- Build the political will to invest in small-scale fisheries as a crucial tool to transform fisheries management, particularly within the context of the Blue Growth initiative and the implementation of the reformed EU Common Fisheries Policy. It was suggested that the GFCM member countries, the European Commission and FAO provide joint leadership in this regard (i.e. through the organization of a high-level event).
- Disseminate the conclusions of the Regional Conference on "Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea" to relevant international meetings, such as GFCM regular sessions, the FAO Committee on Fisheries (COFI) and relevant European Union (EU) meetings.

SPECIFIC CONCLUSIONS RELATING TO THE PANELS

PANEL I – Supporting the sustainable development of small-scale fisheries in the Mediterranean and the Black Sea under the Blue Growth perspective

Blue Growth is a recent concept that seeks to create sustainable economic, environmental and social development in the aquatic environment. As Mediterranean and Black Sea fisheries are dominated by small-scale fishing activities, if the exploitation of fish resources in these seas is to contribute to Blue Growth, then small-scale fishing will necessarily play an integral role in Blue Growth strategies.

In light of the discussions held during the panel, it is proposed to:

- Develop indicators to measure the economic and social impact of small-scale fishing, both in quantitative and qualitative terms. In particular, efforts should be made to estimate not only the value of the output produced by such fishing and its economic impact on coastal communities in the Mediterranean and Black Sea, but efforts should also be made to measure small-scale fishing's impact on related sectors such as fish processing and tourism. Furthermore, an analysis of the interaction of small-scale fishing with other sectors, particularly those also engaged in Blue Growth strategies (i.e. marine transportation, oil and gas, tourism, etc.), is needed for a better understanding of both the wider economic and social impacts of small-scale fishing, as well as, the risks these other sectors may pose to small-scale fishing communities.

- Examine the economic impact of small-scale fishing under different exploitation arrangements, with a view to identifying circumstances under which this activity might generate an investable surplus and undertake studies to estimate the potential size of this surplus. Similarly, efforts should be made to identify points of entry for technological, management, marketing and policy interventions that would facilitate the above-mentioned favourable circumstances.

- Identify relevant parameters – having acknowledged the need to develop a common definition of small-scale fisheries - for the classification of "small-scale fishing" in the Mediterranean and Black Sea, based on relevant regional characteristics (e.g. dimension of the vessel, gear used, activities of non-vessel based fisheries, etc.) and in relation to the harvested resources.

- Disseminate information on the effectiveness of the GFCM Data Collection Reference Framework (DCRF) and promote its use as a data collection tool for small-scale fishing. Provide technical assistance in the practical application of the DCRF in the collection of standardized data on small-scale fishing in the Mediterranean and the Black Sea.

- Produce a desk study on the social protection systems and national legislations in place and available to small-scale fishers in the Mediterranean and Black Sea riparian States, with a view to identifying and promoting the most successful options.

- Identify policy interventions which facilitate income and livelihood diversification for small-scale fishers. In particular, efforts should be made to identify opportunities for cross-over between the small-scale fishing and small-scale aquaculture sectors.

- Develop, in collaboration with GFCM members, a pilot programme that would test ways to both better integrate small-scale fisheries into a Blue Growth approach, as well as better integrate small-scale fisheries in the decision-making processes of other sectors whose Blue Growth activity may have an impact on small-scale fisheries.

PANEL II – Strengthening the role of stakeholders in the context of management and co-management schemes

Acknowledging concrete evidence on how co-management can be an effective approach for both resolving conflicts and developing innovative solutions for the management of small-scale fisheries, key actions were identified that would create enabling conditions for the institutionalization of stakeholder engagement through co-management schemes. Such key actions include the need for stronger investment in capacity building, both for institutions and for fisher organizations, and the need for a better understanding of legal and institutional frameworks that allow for the participation of fishers in fisheries management. The panel stressed that while Blue Growth presents important opportunities for small-scale fisheries, the effects of Blue Growth in other sectors may also present a risk to these fisheries. Stronger organization and co-management initiatives are needed in order to guard against such risks.

In light of the discussions held during the panel, the following actions are proposed:

- Conduct an analysis to assess national and international legal frameworks with a view to identifying institutional contexts that allow for the establishment of small-scale fisheries co-management schemes and with a view to defining general rules for the engagement and compliance of small-scale fishers with these schemes.
- Prepare best practice guidelines for the enforcement of small-scale fisheries co-management schemes in the Mediterranean and the Black Sea. Such guidelines should be linked directly to the SSF Guidelines and, in addition to providing advice on the institutional and legislative context, should provide direction for the elaboration and implementation of participatory processes, co-management settings and tools, approaches for monitoring, control and surveillance schemes and indicators to monitor the effectiveness of management measures.
- Provide support to currently ongoing co-management processes in the Mediterranean and build commitment for their multiplication across the region. A regional programme, based on a solid institutional framework and building on existing experiences and partnerships, should be established to offer a longer-term vision on how co-management can benefit small-scale fisheries at the regional scale.
- Map fishing activities in order to provide relevant information to be integrated into marine spatial planning processes. Such processes are crucial to securing tenure rights and access to the resources for small-scale fishers, and thus ensuring livelihoods and the sustainable development of communities reliant on small-scale fisheries. The GFCM, on behalf of its member countries, should advocate for this issue at a high-level with the European Commission, prior to the commencement of the marine spatial planning processes.
- Establish a capacity building programme devoted to supporting stakeholder roles in small-scale fisheries co-management and tailored to different targets (institutional, marine protected areas administration, local administrations, natural and social scientists, civil society, small-scale fishers and other resource users).

PANEL III – Improving the efficiency of marine protected areas (MPAs) as fisheries management tools and benefits from involving the small-scale fisheries sector

Recognising the priority socio-economic and environmental challenges for the management of marine ecosystems, marine protected areas (MPAs) offer a potential solution to concurrently address a multiplicity of issues. Indeed, an important strategy for reconciling conservation and sustainability objectives is the integration of the small-scale fisheries sector into management decisions in and around MPAs. Action must be taken at the local and national levels in view of reaching international and regional agreements. Such action can be effected by decision makers, MPA managers, fishers, scientists and the private sector.

In light of the discussions held during the panel, it is proposed to:

- Adapt and draw lessons from the experience of MPAs with no take zones and regulated buffer zones that have been successful in involving fishers in management decisions and in processes that both safeguard wild resources, while also preserving the livelihoods upon which small-scale fishers depend. Given the socio-economic benefits obtained by small-scale fishers in these exemplary MPAs, learning from such cases would provide guidance on how to sustain economic, social and cultural aspects of the profession. To support replication of these successful MPAs, adequate legal frameworks, political will and financial and human capital would be required.
- Replicate examples of collaboration at the inter- and intra-ministerial level that demonstrate the successful management of small-scale fisheries in and around MPAs when working "hand in hand". Such integrative models could encourage top-down and bottom-up processes in many riparian countries for securing the future sustainability of the profession, while also providing international technical guidance.
- Improve the management of MPAs, including multiple use MPAs, by relying on the scientific and traditional knowledge of fishers, by involving concerned users/stakeholders and by using adaptive approaches. To this end:
    - Tailor management in light of the outcomes of long term comparative monitoring of biological features, ecological effects of small-scale fisheries and socio-economic benefits in and outside MPAs
    - Develop adaptive participatory approaches for management plans for small-scale fisheries in and around MPAs, based on biological and socio-economic data, which could be jointly formulated, implemented and revised by MPA practitioners and fishers.
    - Adopt regulations to overcome conflicting uses of MPAs which could have a negative impact on the livelihood of small-scale fisheries, having regard to relevant conservation objectives
    - Consider participative management, in cases of use conflicts, specifically those between small-scale fisheries and recreational fisheries, to create a balance between the sustainable development of small-scale fisheries and, where applicable, the sustainable development of responsible tourism, so as to achieve conservation objectives.
- Consider conservation efforts, and MPAs in particular, as an investment in natural capital rather than as a public expenditure. As such, efforts should be made to protect this investment from risks, such as conflicting marine-based activities and land-based pollution.
- Safeguard the small-scale fisheries sector in and around MPAs, including by setting up cooperatives, through strategies that are integrated in development plans devised by local authorities and that provide a market edge in favour of responsible and sustainable fisheries practices.

PANEL IV – Enhancing small-scale fisheries value chains

The value chain of small-scale fisheries is enhanced by a favourable environment where fishers are strongly connected with other local actors, including public and private institutions and even consumers. This permits the creation of competitive economic clusters, which can foster the development of coastal communities. Clustering must be encouraged, eliminating all possible bottlenecks. In the case of SSF in the Mediterranean and Black Sea, four relevant areas of intervention have been identified: sustainability aspects (including governance and MPAs), marketing strategies (quality aspects), inter-sectoral integration and provision of infrastructures and services (in particular, access to markets and credit).

In light of the discussions held during the panel, it is proposed to:

- Identify best practices for value creation, especially in the fields of labelling, direct sale, processing, diversification, inter-sectoral integration and vertical coordination. Additional case studies should be carried out to further examine such best practice interventions and to promote their replication in various Mediterranean and Black Sea contexts.
- Model successful value chains, particularly in cases where clustering of various coastal economic activities occurs, to identify entry points for innovation and to better understand the scope for fisher cooperation in resource management and in product marketing.
- Establish a capacity building programme to support stakeholder roles in the creation of cooperatives, formulation of agreements with public and private institutions, development of partnerships and projects for coastal development.
- Better study and analyse issues related both to credit and financial institution support. Public institutions should provide basic infrastructures and services to foster value chains and to prevent market failure. Access to formal finance is a crucial concern. This includes access to both formal credit for capital expenses and financing for fishing operations. Facilities and financial products can be developed in partnership with banks for medium to long-term investment. Formal financing schemes (production contracts, storage receipts) can be applied with the participation of fishers, traders and public authorities.

PANEL V – Putting the principles of the SSF Guidelines into practice: the case of the Mediterranean and Black Sea

The SSF Guidelines constitute an important tool for supporting actions to securing sustainable small-scale fisheries in the Mediterranean and the Black Sea. These guidelines take a holistic perspective on the needs of small-scale fisheries and recognize that the implementation of these guidelines will necessarily be cross-sectoral. With a view to adapting these guidelines to the regional context, key elements to operationalize the principles of the SSF guidelines were explored: (i) Policy and legal frameworks; (ii) Main stakeholders; (iii) Institutional structures; (iv) Key entry points; and (v) Collaboration with other initiatives. The panel noted the importance of action at the local level and the need for effective participation of fishing communities. There are already positive developments taking place in the region in support of the SSF Guidelines implementation, e.g. the existence of regional organisations and platforms such as the Maghreb Platform for sustainable small-scale fisheries, the Mediterranean Platform of Artisanal Fishers (MedArtNet), Low Impact Fishers of Europe (LIFE) and the Mediterranean Advisory Council (MEDAC), and the development of national policies and initiatives (e.g., Aquapêche 2020 in Algeria, SSF national action plan proposals in EU countries).

In light of the discussions held during the panel, it is proposed to:

- Establish a GFCM working group on small-scale fisheries to facilitate the implementation of the SSF Guidelines in the GFCM region by developing national action plans and taking into account recommendations from relevant events and existing experience within the region and beyond.
- Strengthen the GFCM engagement with small-scale fishing communities by establishing a mechanism for supporting organisational development and agreeing on a modus operandi for meaningful collaboration. In particular, FAO's work on small-scale fisheries should be taken into account and special efforts should be made to collaborate with existing small-scale fisheries organizations and platforms, as well as to include women and marginalized groups in such collaboration.
- Promote, without compromising environmental sustainability, the improvement of socio-economic conditions within small-scale fisheries, particularly through the promotion of livelihood diversification as appropriate, and the endorsement of the principle of decent work, as defined by the Work in Fishing Convention (C188) of the International Labour Organization (ILO). Furthermore, ratification of this convention by GFCM member countries should be encouraged.
- Promote and facilitate the development of a forum for small-scale fisheries associations of northern and southern Mediterranean riparian countries, particularly through specific projects financed by member countries or by other international, governmental or non-governmental entities.

ACKNOWLEDGEMENTS

Satisfaction and gratitude were expressed by all participants in the Regional Conference to the Government of Algeria for kindly hosting the event and to the co-organizers for the thorough preparation of the event.

Annexe 9

Conclusions de la Conférence régionale sur la pêche artisanale

7–9 mars 2016 – Alger, Algérie

Préambule

La conférence régionale «Construire un avenir pour une pêche artisanale durable en Méditerranée et en mer Noire» (7-9 mars 2016, Alger, Algérie) a enregistré une forte participation, avec notamment la présence de plus de 200 participants, notamment des responsables politiques, scientifiques, professionnels, représentants des pêcheurs, travailleurs du secteur de la pêche, organisations de la société civile, ONG, instituts de recherche, organisations internationales, etc. Cette conférence a été organisée par la Commission générale des pêches pour la Méditerranée (CGPM) et le Département des pêches et de l'aquaculture de l'Organisation des Nations Unies pour l'alimentation et l'agriculture (FAO), y compris ses projets régionaux en Méditerranée, en collaboration avec le Ministère de l'Agriculture, du Développement Rural et de la Pêche de la République Algérienne Démocratique et Populaire, et en partenariat avec CIHEAM-Bari, MedPAN et WWF.

En 2013, le Premier symposium régional sur la pêche artisanale durable en Méditerranée et en mer Noire (27-30 novembre 2013, Malte) avait permis de placer l'accent sur les principaux défis et les opportunités pour le développement durable du secteur de la pêche artisanale dans la région. Depuis, ces questions n'ont cessé de gagner en importance dans les discussions portant sur la gestion de la pêche artisanale en Méditerranée et en mer Noire et dans le cadre de l'Initiative en faveur de la croissance bleue.

Cette conférence régionale se présente comme une occasion pour apporter une réponse pratique aux résultats du Symposium de Malte, en vue de tirer profit de l'élan généré pour proposer une stratégie tangible pour garantir le développement durable de ce secteur à l'avenir. Les études de cas concrètes réalisées ont permis d'approfondir davantage les thèmes clés qui se sont dégagés du Symposium et la présentation de leurs résultats s'est déroulée de manière à encourager les discussions et les échanges d'idées et à partager les expériences afin de mieux saisir les priorités et les opportunités de ce secteur.

Il est incontestable que la pêche artisanale joue un rôle social et économique de premier plan. Elle représente plus de 80 pour cent de la flotte de pêche, emploie au moins 60 pour cent des travailleurs directement engagés dans les activités de pêche à bord et contribue à environ 25 pour cent de la valeur totale des débarquements provenant des pêches de capture dans la région. La pêche artisanale offre l'un des meilleurs exemples d'utilisation durable des ressources: l'exploitation des ressources biologiques marines se déroule de manière à minimiser la dégradation de l'environnement tout en maximisant les bénéfices économiques et sociaux. Pourtant, un effort concerté est nécessaire pour faire en sorte que les meilleures pratiques deviennent des pratiques courantes.

Reconnaissant la nécessité de mener une action concertée en faveur du développement durable de la pêche artisanale, le Ministère de l'Agriculture, du Développement Rural et de la Pêche de l'Algérie a aimablement accepté d'accueillir cette conférence régionale dans l'optique de mobiliser un tel effort. Cet événement cadre avec le Plan «Aquapêche 2020», récemment lancé par l'Algérie à l'issue d'un processus de concertation national avec l'ensemble des acteurs et avec l'appui du Programme des Nations Unies pour le Développement (PNUD) et de la FAO. En accord avec les principes de croissance bleue, cette stratégie devrait également apporter une contribution déterminante à la promotion d'une pêche artisanale durable à l'échelon tant national que régional.

Les conclusions suivantes ont été formulées à partir des résultats de la conférence régionale, dans l'optique de préconiser des actions à l'appui en d'une pêche artisanale durable en Méditerranée et en mer Noire. Ces conclusions sont tout d'abord présentées sous la forme d'un ensemble de propositions générales et transversales puis regroupées suivant les cinq sessions thématiques de la conférence.

CONCLUSIONS GENÉRALES

L'importance de la Conférence régionale «Construire un avenir pour une pêche artisanale durable en Méditerranée et en mer Noire» a été reconnue, à la lumière des objectifs de développement durable des Nations Unies qui soulignent notamment la nécessité de fournir au secteur de la pêche artisanale un accès aux ressources marines et aux marchés. Les participants ont témoigné d'un très large soutien en faveur des objectifs de la conférence visant à susciter une prise de conscience, partager les savoirs et élaborer une stratégie future pour la promotion de ce secteur crucial de la pêche.

Les propositions générales suivantes ont notamment été formulées:

- Adapter à la région de la Méditerranée et de la mer Noire la mise en œuvre des Directives volontaires pour garantir des pêches artisanales durables dans le contexte de la sécurité alimentaire et de l'éradication de la pauvreté (Directives PAD).
- Lancer une étude socio-économique approfondie à l'échelon régional en vue d'obtenir des données de référence précises, actualisées et complètes sur la valeur et l'impact économique de la pêche artisanale et fournir ainsi, à terme, des éléments utiles aux interventions politiques.
- Engager un vaste processus consultatif comprenant notamment le lancement d'un mécanisme pour une stratégie régionale en faveur du développement durable du secteur de la pêche artisanale ainsi que des actions spécifiques visant à développer une politique coordonnée en soutien à ce secteur. Mettre en œuvre pour cela une stratégie régionale commune s'appuyant sur les réseaux et les plateformes existants au niveau régional et s'assurer que tous les acteurs de la Méditerranée et de la mer Noire soient sur un pied d'égalité.
- Développer un programme régional ayant pour objectif de fournir un appui et une assistance technique, en particulier aux pays en développement, afin de renforcer leurs capacités relatives au secteur de la pêche artisanale.
- Procéder dans chaque pays, lorsque de besoin, à une analyse de la législation et des mécanismes institutionnels permettant d'assurer la pleine participation des artisans pêcheurs à toutes les activités permettant d'assurer le développement durable du secteur (activités connexes, cogestion, soutien financier, labellisation, traçabilité, droit à un travail décent, protection sociale, etc.).
- Renforcer la volonté politique d'investir dans la pêche artisanale en tant qu'instrument fondamental pour transformer la gestion des pêches, en particulier dans le contexte de l'initiative en faveur de la croissance bleue et de la mise en œuvre de la réforme de la politique commune de la pêche de l'Union européenne. Il a été suggéré que les pays membres de la CGPM, la Commission européenne et la FAO assurent une conduite conjointe à cet égard (à savoir dans le cadre d'une manifestation de haut-niveau).
- Diffuser les conclusions de la Conférence régionale «Construire un avenir pour un pêche artisanale durable en Méditerranée et en mer Noire» dans le cadre de rencontres internationales pertinentes telles que les sessions annuelles de la CGPM, les sessions du Comité des pêches de la FAO (COFI) et autres réunions au sein de l'Union européenne (UE).

CONCLUSIONS SPÉCIFIQUES RELATIVES AUX PANELS

PANEL I – Soutenir le développement durable de la pêche artisanale en Méditerranée et en mer Noire dans l'optique de la croissance bleue

La croissance bleue est un concept récent qui vise à créer un développement économique, environnemental et social durable dans le milieu aquatique. Étant donné que la pêche artisanale est un secteur dominant en Méditerranée et en mer Noire, elle aura nécessairement un rôle crucial à jouer dans la croissance bleue si l'exploitation des ressources halieutiques doit s'inscrire dans le cadre de cette stratégie.

À la lumière des discussions tenues au sein du panel, il est proposé de:

- Mettre au point des indicateurs pour mesurer l'impact économique et social de la pêche artisanale, en termes quantitatifs et qualitatifs. Plus précisément, les efforts ne devraient pas se limiter à estimer la valeur de la production de cette pêche ainsi que ses effets sur les communautés côtières en Méditerranée et en mer Noire, mais devraient également s'attacher à mesurer l'impact de la pêche artisanale sur des domaines connexes tels que la transformation du poisson et le tourisme. En outre, une analyse des interactions de la pêche artisanale avec d'autres secteurs, en particulier ceux pris en compte dans les stratégies de croissance bleue (à savoir les transports marins, le secteur pétrolier et gazier, le tourisme, etc.) est nécessaire afin de comprendre les effets économiques et sociaux à plus grande échelle de la pêche artisanale ainsi que les risques que ces autres secteur pourraient poser pour les communautés de pêche artisanale.
- Analyser l'impact économique de la pêche artisanale dans différentes conditions d'exploitation en vue de déterminer les circonstances dans lesquelles la pêche artisanale pourrait générer un excédent susceptible d'être investi et permettre de mener des études afin d'estimer l'ampleur potentielle de cet excédent. De la même manière, les efforts devraient se concentrer sur l'identification de points de départ pour des interventions en matière de technologie, de gestion, de marketing et de politique, dans le but de contribuer à la mise en place des circonstances favorables mentionnées ci-dessus.
- Déterminer des paramètres appropriés – reconnaissant la nécessité d'établir une définition commune de la pêche artisanale – pour a classification de la « pêche artisanale » en Méditerranée et en mer Noire, en s'appuyant sur ses caractéristiques régionales pertinentes (ex: dimension des bateaux, engins utilisés, activités de pêche effectuées sans bateau, etc.) et en fonction des ressources exploitées.
- Diffuser des informations sur l'efficacité du Cadre de référence pour la collecte de données de la CGPM et promouvoir son efficacité en tant qu'outil pour la collecte de données sur la pêche artisanale. Fournir une assistance technique pour l'application pratique du DCRF en vue de la collecte de données harmonisées sur la pêche artisanale en Méditerranée et en mer Noire
- Réaliser une étude théorique sur les systèmes de protection sociale et les législations nationales en vigueur et accessibles par les artisans pêcheurs dans les pays de la Méditerranée et de la mer Noire en vue de déterminer et promouvoir les options les plus performantes.
- Relever des interventions politiques qui facilitent la diversification des revenus et des moyens de subsistance des artisans pêcheurs. En particulier, il convient de déployer des efforts pour déterminer des opportunités transversales entre les secteurs de la pêche artisanale et de l'aquaculture à petite échelle
- Élaborer, en collaboration avec les membres de la CGPM, un programme pilote permettant de tester des modalités pour intégrer au mieux la pêche artisanale dans une approche en faveur de la croissance bleue ainsi que dans les processus décisionnels d'autres secteurs où les activités liées à la croissance bleue pourraient avoir un impact sur la pêche artisanale.

PANEL II – Renforcer le rôle des parties prenantes dans le cadre des mécanismes de gestion et de cogestion

Compte tenu de l'existence d'exemples concrets démontrant l'efficacité de l'approche de cogestion pour résoudre les conflits tout en apportant des solutions innovantes dans la gestion de la pêche artisanale, des interventions clés susceptibles de créer les conditions propices à l'institutionnalisation de l'engagement des parties prenantes grâce à des schémas de cogestion ont été identifiées. Celles-ci portent principalement sur la nécessité d'investir davantage dans le renforcement des capacités, à l'échelon institutionnel comme à celui des organisations de pêcheurs, et d'améliorer la compréhension des structures institutionnelles et juridiques existantes prévoyant la participation des pêcheurs à la gestion des pêches. Le panel a souligné que, si la croissance bleue offre des opportunités importantes pour la pêche artisanale, ses effets dans d'autres secteurs peuvent aussi constituer un risque pour la cette pêche. Une meilleure organisation ainsi que des initiatives de cogestion sont nécessaires afin de se prémunir contre de tels risques.

À la lumière des discussions tenues au sein du panel, il est proposé de:

- Mener une analyse visant à évaluer les cadres juridiques nationaux et internationaux afin d'identifier des contextes institutionnels favorables à l'établissement de mécanismes de cogestion de la pêche artisanale et d'élaborer des normes générales encadrant l'engagement des pêcheurs et le respect des règles dans l'application de ces schémas.
- Formuler des directives portant sur les meilleures pratiques pour l'application des mécanismes de cogestion de la pêche artisanale en Méditerranée et en mer Noire. De telles directives devraient être directement liées aux Directives PAD et fournir non seulement des indications sur le contexte institutionnel et législatif mais aussi des orientations pour l'élaboration et la mise en œuvre de processus participatifs, de mécanismes et outils de cogestion, d'approches de suivi, contrôle et surveillance et d'indicateurs de suivi de l'efficacité des mesures de gestion.
- Fournir un appui aux processus de cogestion en vigueur en Méditerranée et favoriser l'engagement pour multiplier ces initiatives dans l'ensemble de la région. Il convient de mettre en place un programme régional reposant sur une structure institutionnelle solide, ainsi que sur les expériences et les partenariats existants, afin d'obtenir une vision à long terme des avantages potentiels que peut apporter la cogestion à la pêche artisanale à l'échelon régional.
- Cartographier les activités de pêche afin de fournir des informations pertinentes à intégrer aux processus de planification spatiale marine. De tels processus sont déterminants pour garantir aux artisans pêcheurs des droits d'utilisation des ressources et d'accès à celles-ci et assurer la subsistance et le développement durable des communautés qui dépendent de la pêche artisanale. La CGPM, au nom de ses membres, devrait préconiser la prise en compte de cette question à haut niveau avec la Commission européenne, et ce, en amont du processus de planification spatiale marine.
- Établir un programme de renforcement des capacités afin d'appuyer le rôle des acteurs dans la cogestion de la pêche artisanale et d'adapter ce programme en fonction des différents objectifs visés (institutions, administration des aires marines protégées, administrations locales, experts en sciences sociales et naturelles, société civile, artisans pêcheurs et autres utilisateurs des ressources).

PANEL III – Améliorer l'efficacité des aires marines protégées (AMP) en tant qu'instruments de gestion des pêches et examiner les avantages de la participation du secteur de la pêche artisanale

Reconnaissant les priorités socio-économiques et les enjeux environnementaux pour la gestion des écosystèmes marins, les aires marines protégés (AMP) représentent une solution potentielle pour aborder simultanément de multiples questions. En effet, une stratégie importante pour concilier les objectifs de conservation et de durabilité consiste à intégrer le secteur de la pêche artisanale aux décisions de gestion au sein et autour des AMP. Des mesures doivent être prises au niveau local et national en vue de parvenir à des accords internationaux et régionaux. De telles actions peuvent être réalisées par les décideurs, les gestionnaires d'AMP, les pêcheurs, les scientifiques et le secteur privé.

À la lumière des discussions tenues au sein du panel, il est proposé de:

- Adapter et tirer les enseignements des expériences réussies d'AMP comprenant des zones de pêche interdite et des zones de protection réglementées et impliquant les pêcheurs dans les décisions de gestion et les processus visant à assurer la sauvegarde des ressources sauvages tout en préservant les moyens de subsistance dont dépendent les artisans pêcheurs. Compte tenu des avantages socio-économiques obtenus par les artisans pêcheurs dans ce type d'AMP, les enseignements tirés de ces expériences pourraient fournir des indications sur la façon de soutenir les aspects économiques, sociaux et culturels de la profession. Favoriser la répétition de ces exemples réussis d'AMP nécessiterait un cadre juridique adéquat, une volonté politique ainsi que des moyens financiers et humains.
- Reproduire les exemples de collaboration efficace à l'échelon inter et intraministériel de la pêche artisanale qui démontrent la cogestion réussie de la pêche artisanale au sein et autour des AMP en travaillant « main dans la main ». Ces modèles d'intégration pourraient encourager des processus descendants et ascendants dans nombre de pays riverains pour assurer la durabilité future de la profession tout en fournissant des orientations techniques de nature internationale.
- Améliorer la gestion des AMP, y compris les AMP à usage multiple, en s'appuyant sur les connaissances scientifiques et le savoir traditionnel des pêcheurs, en impliquant les utilisateurs/acteurs concernés et en adoptant des approches adaptatives. À cette fin:
    - Ajuster la gestion à la lumière des résultats d'un suivi comparatif à long terme des caractéristiques biologiques, des effets écologiques de la pêche artisanale et des avantages socio-économiques au sein et en dehors des AMP ;
    - Élaborer, à partir de données biologiques et socio-économiques, des approches adaptatives et participatives pour des plans de gestion de la pêche artisanale au sein et autour des AMP, qui pourraient être formulés, mis en œuvre et revus conjointement par les professionnels des AMP et les pêcheurs ;
    - Adopter des réglementations visant à résoudre les utilisations conflictuelles des AMP susceptibles d'avoir un impact négatif pour la subsistance de la pêche artisanale, tout en tenant compte des objectifs de conservation.
    - Prendre en considération la gestion participative des conflits d'utilisation, spécifiquement ceux entre la pêche artisanale et la pêche de loisir, afin de créer un équilibre entre le développement durable de la pêche artisanale et, le cas échéant, celui du tourisme responsable, en vue d'atteindre des objectifs de conservation..
- Considérer les efforts de conservation, et les AMP en particulier, comme un investissement en capital naturel plutôt que comme une dépense publique. À ce titre, il convient de déployer des efforts afin de protéger cet investissement contre les risques tels que les conflits entre diverses activités liées à la mer ainsi que la pollution terrestre.
- Sauvegarder le secteur de la pêche artisanale au sein et autour des AMP, y compris à travers la mise en place de coopératives et par des stratégies intégrées aux plans de développement formulés par les autorités locales fournissant une part de marché favorable à des pratiques de pêche responsables et durables.

PANEL IV – Promouvoir les chaînes de valeur de la pêche artisanale

La chaîne de valeur de la pêche artisanale est améliorée par un environnement favorable dans lequel les pêcheurs sont étroitement reliés aux autres acteurs locaux, notamment les institutions publiques et privées, voire les consommateurs. Cela permet la création de pôles économiques compétitifs à même de favoriser le développement des communautés côtières. De tels regroupements doivent être encouragés afin d'éliminer le plus d'obstacles intermédiaires possibles. Dans le cas de la pêche artisanale en Méditerranée et en mer Noire, quatre domaines d'intervention pertinents ont été identifiés: la durabilité (y compris la gouvernance et les AMP), le marketing (aspects relatifs à la qualité), l'intégration intersectorielle et le développement d'infrastructures et de services (notamment l'accès aux marchés et au crédit).

À la lumière des discussions tenues au sein du panel, il est proposé de:

- Déterminer les meilleures pratiques pour la création de valeur, en particulier dans les domaines de l'étiquetage, la vente directe, la transformation, la diversification, l'intégration intersectorielle et la coordination verticale. D'autres études de cas devraient être réalisées afin d'examiner plus en détail ces meilleures pratiques et de promouvoir leur reproduction dans différents contextes en Méditerranée et en mer Noire.
- S'inspirer des exemples réussis de chaînes de valeur, notamment les cas de regroupement de différentes activités économiques côtières, pour déterminer les points de départ pour l'innovation et développer une meilleure compréhension du champ d'application de la coopération entre pêcheurs en matière de gestion des ressources et de marketing.
- Mettre en place un programme de renforcement des capacités destiné à promouvoir le rôle des parties prenantes dans la création de coopératives, l'élaboration d'accords avec des institutions publiques et privées et le développement de partenariats et de projets de développement côtier.
- Étudier et analyser de manière plus approfondies les aspects liés au crédit et aux institutions financières. Les institutions publiques devraient fournir les infrastructures et les services de base afin de promouvoir les chaînes de valeur et prévenir la faillite du marché. L'accès à la finance formelle et une question cruciale, qui englobe tant l'accès au crédit formel pour les dépenses de capital que le financement des opérations de pêche. Les infrastructures et les produits financiers peuvent être développés en partenariat avec les banques d'investissement à moyen et long terme. Les schémas de financement des chaînes de valeur (contrats de production, reçus de stockage) peuvent être appliqués, avec la participation de pêcheurs, commerçant et des autorités publiques.

PANEL V – Mettre en pratique les Directives PAD: le cas de la Méditerranée et de la mer Noire

Les Directives PAD sont un outil fondamental à la promotion des actions à l'appui de la pêche artisanale durable en Méditerranée et en mer Noire. Ces directives abordent selon une approche globale les besoins des artisans pêcheurs et insistent sur la nécessité d'une action intersectorielle pour leur mise en œuvre. Le panel a déterminé les éléments clés pour l'opérationnalisation des principes des directives, dans le but de les adapter au contexte régional: i) cadres politiques et juridiques, ii) principales parties prenantes, iii) structures institutionnelles, iv) points de départ et v) collaboration avec d'autres initiatives. Le panel a reconnu l'importance d'actions à l'échelon local et le besoin d'une participation efficace des communautés de pêcheurs. Des évolutions positives ont déjà lieu dans la région à l'appuis de la mise en œuvre des Directives PAD, notamment la mise en place d'organisations et de plateformes régionales telles que la Plateforme maghrébine de la pêche artisanale, la Plateforme méditerranéenne d'artisans pêcheurs (MedArtNet), l'organisation Low Impact Fishers of Europe (LIFE) et le Conseil consultatif de la Méditerranée (MEDAC) et l'élaboration de politiques et initiatives nationales (par ex. Aquapêche 2020 en Algérie, propositions de plan d'action national pour la pêche artisanale dans les pays de l'UE).

À la lumière des discussions tenues au sein du panel, il est proposé de:

- Mettre en place un Groupe de travail de la CGPM afin de faciliter la mise en œuvre des Directives PAD dans la zone d'application de la CGPM en élaborant des plans d'action nationaux et compte tenu des recommandations issues de manifestations pertinentes ainsi que des expériences existantes au sein de la région et au-delà de celle-ci.
- Renforcer la participation de la CGPM au sein des communautés de pêche artisanale en établissant un mécanisme visant à appuyer le développement organisationnel et convenir d'un mode opératoire pour instaurer une collaboration significative. En particulier, les travaux de la FAO sur la pêche artisanale devraient être pris en compte et des efforts spécifiques devraient être faits pour collaborer avec les organisations et les plateformes de pêche artisanale existantes et inclure les femmes et les groupes marginalisés dans une telle collaboration.
- Promouvoir, sans compromettre la durabilité de l'environnement, l'amélioration des conditions socio-économiques de la pêche artisanale, notamment en encourageant une diversification des moyens de subsistance, le cas échéant, et en souscrivant au principe de travail décent dans la pêche tel que défini par la Convention sur le travail dans la pêche (C188) de l'Organisation internationale du travail (OIT). En outre, la ratification de cette convention par les pays membres de la CGPM devrait être encouragée.
- Promouvoir et faciliter la mise en place d'un forum entre les associations de pêche artisanale des pays côtiers du nord et du sud de la Méditerranée, notamment dans le cadre de projets spécifiques financée par des membres de la CGPM ou par d'autres organismes internationaux, gouvernementaux ou non gouvernementaux.

REMERCIEMENTS

L'ensemble des participants de la conférence régionale ont témoigné leur satisfaction et leur gratitude au gouvernement de l'Algérie pour avoir accueilli cette manifestation, ainsi qu'aux co-organisateurs pour la préparation minutieuse de cette manifestation.

Appendix 10

Terms of reference for selected meetings

Proposed terms of reference for the SRC-WM training on stock assessment, in collaboration with the FAO regional projects

- Provide participants with basic technical concepts for the assessment of stock status, as well as a review of modern stock assessment methods used in the framework of the GFCM
- In preparation of the meeting (by email consultation), identify main stocks of interest for the experts participant in the meeting and collect all required input data to perform the assessment during the meeting
- Perform a practical session for the assessment of all stocks previously identified, including analysis of assumptions, input data and model robustness analysis.

Proposed terms of reference for the workshop on the data submission in line with the DCRF

- Analysis of the general user experience in participating to the DCRF pilot study (from October 2015 to June 2016), including the assessment of difficulties:
    - in the use of the data submission tools
    - in the collection of the data faced by the countries
- Practical session on the use of the DCRF online data submission tools
- Preliminary definition of data quality control capabilities

Proposed terms of reference for the Joint EIFAAC/ICES/GFCM Working Group on Eels (WGEEL)

1. Advise on the status of the stock, fisheries and other anthropogenic impacts
    - Assess the latest trends in the state and management of, and anthropogenic impacts on, the stock of European eel (*Anguilla anguilla)*;
    - Update and describe time series of data used directly and indirectly in determining the status of the stock;
    - Draft management options for anthropogenic mortality consistent with relevant harvest control rules, commenting on their effectiveness relative to objectives and other relevant considerations, and suggesting improvements;
    - Produce the first draft of the ICES annual eel advice.
2. Consider the scientific basis of the advice and improvements required
    - Estimate relevant reference points;
    - Report on issues that affect the scientific evaluation of anthropogenic impacts and ecosystems, and the effectiveness of management, including the timeliness, coverage and quality of data used in developing the advice;
    - Provide information on research needs to improve the quality of the scientific basis of the stock assessment and advice;

- Update and extend the eel stock annex where significant changes make it necessary, to provide a full methodological description of the assessment and advisory procedure for the European eel stock;
- Report on significant new or emerging threats to, or opportunities for, eel conservation and management;

3. Consider the management of the stock and anthopogenic impacts
   - Review all management measures and options agreed in regulatory arrangements concerning the stock, fisheries and other anthropogenic mortalities, and comment on their conformity with sustainability criteria.

Proposed terms of reference on stock assessment for demersal and small pelagic species (WGSAD and WGSASP)

The main objective of the annual meetings of each working group is to provide advice on the main commercial stocks, as prioritized by the SAC and the Commission. Specifically, each group will, on a stock-by-stock basis:

1. Analyse the data sets provided by the participants, check model parameters, evaluate model performance through sensitivity tests and residuals analysis, run stock assessments on a practical session and agree on final stock assessment models
2. When possible, estimate biological reference points (BRP) (e.g. for biomass and fishing mortality)
3. In cases where analytical BRP cannot be obtained, attempt to use an empirical approach based on standing stock as stock status indicator, the harvest ratio (catch/biomass from survey) as fishing impact, and some indicators (SST, Chlorophyll, condition factor) of environmental stress.
4. Provide diagnosis and advice on the status of stocks as assessed by the WG, and suggest management advice to the SAC.
5. Complete a stock assessment form detailing the input data, preliminary analysis and stock assessment model, including all assumptions, model runs and analysis of model uncertainty used for the provision of advice, on a stock by stock basis.
6. Present and discuss related scientific/technical information useful for the assessment of stock status in the GFCM area of application.

For the 2016–2017 intersession, and in addition to the generic ToRs as provided above, the **WGSASP** proposes to focus on:

7. Preparing the input data and organizing a dedicated session to test the following assessment models for the following stocks: VPA, catch at age models and 2-stage biomass models for sardine populations in GSA01, GSA03, GSA6, GSA7 and GSA16.
8. Increasing the number of stock assessments of small pelagic stocks in the Southern and Eastern Mediterranean.

For the 2016–2017 intersession, and in addition to the generic ToRs as provided above, the **WGSAD** proposes to focus on:

7. Preparing input data (including a revision of the methods for estimating natural mortality of *Parapenaeus longirostris*) for a dedicated session to test models and discuss about reference points to assess the status of shrimp stocks.
8. Reviewing biological parameters for *Mullus* spp. (parameters used in the different areas to be compiled in the intersessional period) in order to select appropriate ranges for each of them to be to be used at regional level.

Appendix 11(a)

Summary tables of national reports

Algeria/Algérie
Croatia/Croatie
Cyprus/Chypre[16]
Egypt/Egypte
France
Greece/Grèce
Italy/Italie
Lebanon/Liban
Libya/Libye
Malta/Malte
Montenegro/Monténégro
Morocco/Maroc
Slovenia/Slovénie
Tunisia/Tunisie
Turkey/Turquie

[16] National report sent by means of the e-tool and is presented in Appendix 11(b) only. No summary table is produced with the e-tool.

Algeria/Algérie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 04

B. Total landings: 86 086 tonnes (2015); 83 231 tonnes (2014);

C. Fleet: 5 032 vessels (2014); 4 569 (2013)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Sardina pilchardus	2015	Uncertain	01, 03 and partially 04	Y	N

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Le dispositif de collecte de données statistiques s'appuie sur des agents de collecte de données statistiques au niveau des ports de pêche, qui restituent les canevas renseignés aux antennes de pêche dont ils relèvent. Les dites antennes relayent quotidiennement ces données aux Directions de Wilaya qui, à leur tour, les transmettent mensuellement à la Direction Centrale du MPRH, qui consolide, traite et analyse les statistiques recueillies. La collecte de données statistiques des débarquements se fait de façon exhaustive par les agents collecteurs de deux manières :

La méthode directe: L'agent assiste aux débarquements et relève les données directement sur le quai soit par :

- Le recensement: Le collecteur assiste à tous les débarquements et les dénombre sans exception tel qu'il est le cas des sardiniers.
- L'échantillonnage: Le collecteur assiste à quelques débarquements et fait une extrapolation sur le reste des chalutiers et petits métiers.

La méthode indirecte: Dans ce cas l'agent n'assiste pas directement aux débarquements mais il obtient l'information par le biais d'un intermédiaire. Cet intermédiaire peut être les agents des gardes côtes, les mandataires, ou les professionnels.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

L'Algérie transmet annuellement des données relatives à la pêche et à l'aquaculture à la FAO, à la CGPM (Task1, Statlant 37A, et SIPAM) ainsi qu'à l'OADA.

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
ALPEL		Petits pélagiques	Campagnes en mer a pour but d'estimer par écho-intégration la biomasse des stocks de poissons petits pélagiques fréquentant les fonds entre 20 et 200m dans les limites de la GSA04.
ALDEM		Stocks démersaux	Évaluation des principaux stocks démersaux exploités dans la GSA04 suivant le Protocol MEDITS.

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
PAGPA	2015-2016	Enquête socio-économique	Le Plan d'Aménagement et de Gestion des Pêcheries Algériennes) vise à faire ressortir des indicateurs socio-économiques à même de permettre au gestionnaire de mieux anticiper les effets des mesures de gestions et de les adapter au mieux pour protéger les catégories les plus vulnérables, tout en préservant la ressource et l'outil de production.

C. Marine environment studies

Research/project title	Duration	Main topic	Description
Projet ACCOBAMS-CGPM sur l'atténuation des interactions négatives entre les espèces marines menacées et les activités de pêche	2015-2016	Bycatch	Etude préliminaire sur l'étendue des captures accidentelles des cétacées et de la déprédation le long des côtes algériennes

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

FAO CopeMed II :

› Groupe de travail sur les petits pélagiques de la mer d'Alboran

› Groupe de travail sous régional sur les espèces de petits pélagiques et démersales (en appui à la CGPM).

› Projet d'étude des effets de la mise en œuvre de la maille carrée de 40 mm dans la pêche au chalut.
› Projet d'étude des indicateurs socio-économiques du secteur des pêches en Méditerranée centrale et occidentale.
› Projet pêche artisanale en Méditerranée centrale et occidentale.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Recommandation GFCM/35/2011/2 sur l'exploitation du corail rouge dans la zone sous compétence de la CGPM

Dans le cadre de la reprise des activités de pêche au corail, il a été mis en place un nouveau dispositif d'encadrement législatif et réglementaire apte à garantir la préservation de la ressource et son exploitation durable tout en assurant une valorisation optimale de la ressource.

Ce dispositif s'articule autour de deux séries d'actions pour sa mise en œuvre :

(I) une reprise raisonnée et prudente des activités de pêche au corail, d'une part,

(II) un rehaussement du degré de gravité des infractions et durcissement des sanctions liées au non-respect des dispositions législative et réglementaire régissant l'activité de la pêche au corail.

A ce titre un modificatif et complément des dispositions de la loi cadre n°01-11 relative à la pêche et à l'aquaculture a été proposé comprenant les principes de :

- La valorisation du corail au niveau national par l'interdiction de son exportation à l'état brut et semi fini ;
- Sa traçabilité à partir de son exploitation, de sa transformation jusqu'à sa commercialisation à l'état brut et semi fini ;
- Un rehaussement du degré de gravité des infractions liées à la pêche au corail avec durcissement des peines et des sanctions ;
- Un renforcement du dispositif de surveillance et de suivi par la mise en place d'un dispositif de positionnement des navires corailleur à l'instar des navires armés et équipés à la pêche (art 20 bis de la loi n°01-11 relative à la pêche et à l'aquaculture, modifiée et complétée.

En matière de réouverture de la pêche, un nouveau cadre réglementaire régissant la pêche au corail a été mis en place, il y a eu promulgation :

- du décret exécutif n°15-231du 26 août 2015 fixant les conditions et les modalités d'exercice de la pêche au corail.

Ce décret fixe les conditions et les modalités applicables à l'exercice de la pêche au corail ainsi que les obligations définies par les clauses du cahier des charges.

Les arrêtés d'application du décret exécutif suscité, sont en cours de signature pour certains et en voie de publication pour les autres. Ces textes sont :

- Arrêté fixant les termes et le contenu du registre de plongée pour l'exploitation du corail ;
- Arrêté fixant les modalités du programme d'exploitation du corail ;
- Arrêté fixant les modalités de la déclaration sommaire du corail pêché ;
- Arrêté fixant les modalités d'ouverture et de fermeture des périmètres d'exploitation du corail ;
- Arrêté interministériel fixant la création, l'organisation et le fonctionnement de la commission locale d'identification du corail ;
- Arrêté interministériel définissant les conditions ainsi que les modalités de la mise en œuvre du dispositif de traçabilité du corail brut et semi-fini.

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

- Evaluation bioéconomique des impacts des différents scénarii de gestion des pêcheries Algériennes retenues dans le cadre du Plan d'Aménagement et de Gestion des Pêcheries Algériennes PAGPA.
- Appui au projet "Observatoire socioéconomique" notamment pour compléter l'application d'échantillonnage statistique et se conformer aux exigences de la matrice TASK1 de la CGPM. L'objectif du projet est la mise en place de la version web de l'Application SSPAL (Système Statistique de la Pêche en Algérie).
- Assistance pour la mise en place de récifs artificiels et étude des impacts sur la ressource halieutique.
- Socio-économie de la pêche artisanale : vulnérabilité et perspectives de développement intégré de l'activité de pêche la plus répandue en Algérie.

Croatia/Croatie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 18, 19

B. Total landings: 79 396 tonnes (2014); 74 705 tonnes (2013)

C. Fleet: 7 705 vessels (2016); 7 733 vessels (2015)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Sardina pilchardus	2014	overexploited and in overexploitation	17-18	Y	
Engraulis encrasicolus	2014	overexploited and in overexploitation	17-18	Y	
Solea solea	2014	in overexploitation with relative low biomass	17	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Croatian Fishing Fleet Register is an electronically-kept register, now web-based, in which relevant data on vessels and vessel activities are registered. At the moment, data are being entered and cross-checked. The Fleet Register is a centralized structure, where field offices enter the data which are all immediately recorded and stored in a central database.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

Project "SOLEMON" Evaluation of stock of Common Sole (*Solea solea*) and other flatfish in the Adriatic sea is an international project under umbrella of FAO AdriaMed for evaluations of common sole and other flatfish using "beam trawl" (rapido).

Project "UWTV Survey" is an international project under umbrella of FAO AdriaMed for alternative assessment of biomass stock of Norway lobster in the Jabuka/Pommo pit using underwater camera.

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

Currently, Croatia is developing a central DCF-GFCM database with information on technical and socio-economic data on all vessels included in the Fleet Register in each referent year. By the end of 2016, linking of databases with the Institute of Oceanography and Fisheries databases is planned to incorporate biological data in the central DCF-GFCM database. All relevant statistics in regards to DCF and GFCM rules are incorporated within the central database in order to facilitate the preparation of reports.

D. Existing databases and synergies with other applications

Croatia has established links between responsible authorities (Croatian Bureau of Statistics and the MoA) in order to meet the relevant requirement and secure the delivery of statistical data in a unified manner.

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
MEDITS	1996-to date	Biological sampling	Mediterranean International Bottom Trawl Survey
SOLEMON		Evaluation of demersal resources	Evaluation of stock of common Sole (*Solea solea*) and other flatfish in the Adriatic Sea
UWTV	2011-to date	Evaluation of demersal resources	Research on alternative assessment of biomass stock of Norway lobster in the Jabuka/Pommo pit using underwater camera.

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
National Data Collection Programme		Economic variables	National socio-economic survey is fully in line with the EU Data Collection Framework. The socio-economic data collected within the DCF is adapted to conform to the GFCM Task 1

C. Marine environment studies

Research/project title	Duration	Main topic	Description
Permanent national monitoring project		Environmental status, renewable energy	Monitoring which includes monitoring of biotic and abiotic parameters relevant to the marine environmental and renewable resources. Environmental data related to the marine ecosystems are also gathered in the framework of monitoring programs for fishery resources.
DeFishGear		Marine litter	The overarching aim of the project DeFishGear is the reduction of marine litter in Adriatic Sea. It will be accomplished through the first assessment of marine litter and the establishment of a regional network of experts who will continue to collaborate among themselves in order to ensure a sustainable joint management of marine litter in the Adriatic Sea.

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Croatia is fully involved in all activities carried out by FAO AdriaMed project.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

No incidental catches of cetaceans were recorded in 2014.

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

There were no recorded catches of Annex II or III species.

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

No incidental catches of sea turtles were recorded in 2015.

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

No incidental catches of seabirds were recorded in 2015.

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

No incidental catches of monk seal reported in 2015, and there are no known active habitat caves.

Section 13 - Proposals for future research programmes

- Support from Regional FAO AdriaMed Project related to fisheries research and management within Adriatic Sea (GSA 17&18) has been very important. It is deemed necessary to continue with the activities in this framework.
- Consideration should be given to international monitoring of demersal resources in Jabuka Pit. Jabuka/Pommo Pit is a principal fishing ground in the Adriatic Sea for Croatian and Italian bottom trawl fisheries fleet.
- Concerning small pelagic fish species, particularly sardine and anchovy, determination and monitoring of spawning grounds as well as nursery area is necessary; hence those studies should be continued.

Egypt/Egypte

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 26

B. Total landings: 62 746 tonnes (2014); 63 027 tonnes (2013);

C. Fleet: 4 179 vessels (2014); 4 278 (2013)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Trigloporus lastoviza	-	overexploited	26	N	
Solea solea	-	overexploited	26	N	
Boops boops	-	overexploited	26	N	
Saurida undosquamis	2014	in overexploitation	26	Y	
Metapenaeus stebbingi	2014	in overexploitation		Y	
Mullus surmuletus	2014	in overexploitation with relative high biomass	26	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

The General Authority for Fish Resources Development (GAFRD) collects fisheries data by two methods (Census and Sampling), the sampling data was submitted to SAMACWEB App. with the Support of the FAO EastMed project (computerized based system) which used for registering every fishing unit and recording the catch by fleet segment compatible with GFCM (FAO) Data Collection References Framework. Data operators at GAFRD and at the designated landing sites were trained on how to use with support of FAO. The outputs reports for 2015 were checked and the software become in use.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

Biological and fisheries data collection was scheduled and implemented by GAFRD with the support of the FAO EastMed Project.

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
		Deep-sea fisheries	National Institute of Oceanography and Fisheries (NIOF) started a marine survey on deep sea fisheries in Egyptian Mediterranean waters. Another survey is conducting to study bycatch and discards of the trawl fisheries in the coastal area off Alexandria.

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
		Socio-economic data	A survey was undertaken in order to examine the socio-economic situation of the fisheries in Egypt. The population of the economic survey was defined as the licensed motorized fishing fleet operating in the Mediterranean Sea in 2014. Information about the fishing fleet was collected and stratified according to criteria of the DCRF according to GFCM recommendations for the GSA 26. Data analysis is in progress and will be submitted to the GFCM as a part from DCRF.

C. Marine environment studies

Research/project title	Duration	Main topic	Description

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Biological and fisheries data collection was scheduled and implemented by GAFRD with the support of the FAO EastMed Project.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

France

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 07, 08

B. Total landings: 5 590 tonnes (2015, provisional data)

C. Fleet: 2 048 vessels (2012); 1 325 vessels (2011)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Merluccius merluccius	2014	In overexploitation with relative intermediate biomass	07	Y	STECF
Mullus barbatus	2014	In overexploitation with relative high biomass	07	Y	N
Engraulis encrasicolus	2015	Low biomass	07	Y	N
Sardina pilchardus	2015	Ecologically unbalanced Very low fishing mortality	07	Y	N

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Système d'Information Halieutique (SIH) de l'Ifremer.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

SIH considère l'ensemble du système pêche, dans toutes ses composantes et sur l'ensemble des façades. Il s'appuie notamment sur l'échantillonnage des captures commerciales (à terre et en mer) dont les paramètres biologiques, les campagnes à la mer, les pêches récréatives, les statistiques de pêche, les enquêtes activités et économiques. Il est dépositaire des cahiers des charges et des spécifications techniques pour les plans d'échantillonnage, la collecte, le stockage, l'accès aux données halieutiques, les restitutions internes et externes. Il élabore des indicateurs intégrés sur les pêcheries et réalise des synthèses à destination des acteurs de la filière pêche et du grand public.

D. Existing databases and synergies with other applications

Données intégrées dans la base HARMONIE et les protocoles sont disponibles sur un site web dédié (www.ifremer.fr/sih).

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
OBSVENTES	2010-to date	Echantillonnage biologique	Programme d'échantillonnage biologique et paramètres biologiques. Structure en taille et/ou en âge des captures (apports commerciaux) des principales espèces exploitées par différents métiers, ainsi que les paramètres biologiques afférents, pour l'évaluation des stocks.
MEDIAS	2008-to date	Biological sampling	Campagne française de prospection acoustique et chalutage se déroule chaque année au mois de Juillet dans le Golfe du Lion (plus Nord Catalogne certaines années)
MEDITS	1993-to date	Biological sampling	Campagne française de chalutage annuelle d'évaluation des ressources démersales.
OBSDEB		Enquêtes d'activités et des embarquements des navires de moins de 12 mètres	Enquêtes mensuelles sont conduites pour estimer le calendrier d'activité de chaque navire de pêche professionnelle < 12 m en mer et en lagune, et l'effort de pêche et la production des navires par échantillonnage aléatoire des marées, de la frontière italienne à la frontière espagnole (GSA 07). En Corse (GSA 08), l'activité des navires est recensée par enquête chaque année.
Galion	2016-2018	Discards	Gestion Alternative de la ressource du Golfe du Lion : L'objectif de ce projet est d'utiliser la connaissance de la distribution des captures des pêcheries chalutières du golfe du Lion pour limiter les rejets des espèces commerciales sous taille et ainsi de permettre une exploitation plus durable de ces espèces.
OBSMER		Observation des captures	L'objectif d'ObsMer est de permettre une meilleure compréhension de l'interaction entre les ecosystèmes marins et les activités de pêche. Le programme vise à observer la capture dans son ensemble et les activités de pêche, ainsi que l'environnement de la marée. Ces données servent notamment pour le calcul d'indicateurs de capture aux niveaux régional, national et européen, qui sont utilisées pour les évaluations de stocks.
Projet H2020 DiscardLess	2015-2018	Discards	Strategies for the gradual elimination of discards in European fisheries
SELPAL	2013-2015	Thon rouge	Programme sélectivité de la flottille palangrière ciblant le thon rouge dans le golfe du Lion.

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description

C. Marine environment studies

Research/project title	Duration	Main topic	Description
EcoPelGol	2012-2015	Etude de la dynamique de l'Ecosystème Pélagique du Golfe du Lion	Ce projet s'attache mécanismes gouvernant la dynamique et l'état des populations de petits pélagiques dans le Golfe du Lion à partir des données PELMED ainsi que des échantillons biologiques reçus mensuellement.
IPEP	2010-to date	Impact de la pêche sur les espèces protégées	Ce projet a pour objectif d'acquérir des connaissances sur l'écologie des requins pélagiques et des tortues marines et d'identifier les interactions avec les engins de pêche.
RéPAST	2015	Bycatch	Ce nouveau projet financé par France Filière Pêche est une extension du projet SELPAL qui vise à évaluer les taux de mortalité de la raie violette ou pélagique (*Pteroplatytrygon violacea*), espèce très fréquemment capturée par la pêcherie palangrière ciblant le thon rouge, lors de la remontée de l'engin; à clarifier les temps de résidence et leurs habitats critiques, à connaitre leurs mouvements à petite et grande échelles, à tester l'existence de sous-populations différenciées génétiquement

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

2000-2015

		ENGIN				
ESPÈCE	**ETAT**	CHALUT	FILET	HAMECON	NON DÉTERMINÉ	**TOTAL**
Caretta caretta	Indéterminé	1	23			*24*
	Mort	3	18	2	1	*24*
	Vivant	44	21	9	47	*121*
Dermochelys coriacea	Vivant		1		2	*3*
Lepidochelys kempii	Mort		1			*1*
Chelonia mydas	Vivant		2			*2*
Non identifiée	Indéterminé				3	*3*
	Mort		2		7	*9*
	Vivant	1	1	1	40	*43*
Total général		**49**	**67**	**8**	**100**	**230**

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

Greece/Grèce

Section 1 - Description of fisheries

A. Fishing grounds (GSAs):

B. Total landings: 57 710 tonnes (2014 provisional data); 63 638 tonnes (2013);

C. Fleet: 15 388 (31/12/2015); 15 706 vessels (31/12/2014);

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

The fisheries statistics data keep getting more accurate and valid. The pilot introduction of OSPA (Integrated Information Technology System), practically the gradual implementation of ERS gives the system an immediate and valid aspect. The Hellenic Statistical Authority (EL.STAT) remains the administrative body gathering fisheries data.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
National Fisheries Data Collection Programme	2011-2015	Biological-Metier-related variables	Data on landings and discards for all the métiers foreseen were collected during 2015 through on-board and on-shore sampling.
National Fisheries Data Collection Programme	2011-2015	Stock-related variables	Data collection for the stock-related variables (age, length, weight, sex, maturity and fecundity).
MEDITS	2011-2015	Biological sampling	
MEDIAS	2011-2015	Biological sampling	
Molecular methods for marine biodiversity assessment, the traceability of fisheries products and the identification of fish populations		Identification of fish species	Molecular methods applied in defining potential genetic population structures within the area of repartition of a particular fish species.
EPILEXIS		Fishing gear selectivity	Selectivity of the diamond and square mesh of the trawl cod end, biological and economic consequences and fish behavior comparative study.
STOCKMED		Identification of stock units	Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSAs.
Plesionika Manage		Shrimp fishery management	The aim of this study is to test with two different experimental designs the size selectivity, trap type efficiency, seasonal depth migration of the pandalid shrimp, he economic sustainability, trap selectivity, biological indices, the socio-economic fisheries profile and Alternative Management Scenarios.
MEDPEL		Catch and by-catch rate	The project objectives are to identify, in as much fine scale as possible, the spatiotemporal catch-rate variations of the main commercial and non-commercial (discarded) species in the Mediterranean pelagic long-line fisheries.

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
National Fisheries Data Collection Programme	2011-2015	Economic variables	Collection of the socio-economic variables
MAREA		Knowledge transfer	Mediterranean hAlieutic Resources Evaluation and Advice – Horizontal Services is a project which aims to organize a consortium of European research Institutes and Centre with expertise in fisheries research and which will be readily available to offer scientific advice on fisheries issues.
FISHINMED		Sustainable small-scale fishing communities	Mediterranean Network linking public and private institutions to support the social-economic local development of small-scale fishing communities thus favouring the diversification of fishing activities and the socio-economic relations for an integrated valorisation of the coastal area.
SOCIOEC		Stakeholders	European wide project bringing together scientists from several fisheries sciences with industry partners and other key stakeholders to work in an integrated manner on solutions for future fisheries management that can be implemented at a regional level.
MYFISH	2009-2015	MSY	Maximising yield of fisheries while balancing ecosystem, economic and social concerns. This project will: i) provide definitions of MSY variants which maximize other measures of "yield" than biomass and which account for the fact that single species rarely exist in isolation; ii) redefine the term "sustainable" to signify that Good Environmental Status (MSFD) is achieved and economically and socially unacceptable situations are avoided, all with acceptable levels of risk.

C. Marine environment studies

Research/project title	Duration	Main topic	Description
DeFishGear		Coastal ecosystems and pollution	Improving marine, coastal and delta rivers environment by joint management in the Adriatic area through its contribution to reduce pollution of marine environment with litter by addressing the source of marine litter pollution related to fisheries, by direct removal of marine litter from the environment through promoting "Fishing-for-litter' and "Derelict fishing gear management system" activities and by proposing common monitoring program of marine litter in all participating countries.
GLOBAQUA		Water resources	GLOBAQUA has assembled a multidisciplinary team of leading scientists in the fields of hydrology, chemistry, ecology, ecotoxicology, economy, sociology, engineering and modeling in order to study the interaction of multiple stressors within the frame of strong hydrological pressure on water resources.
SEAMAN		Marine ecosystems	Spatially resolved Ecosystem models and their Application to Marine MANagement.
ADRIPLAN		Marine spatial planning	The project aims to deliver a commonly-agreed approach for the development of cross-border Maritime Spatial Planning (MSP) in the Adriatic-Ionian Macro-Region, focusing mainly on two study areas, one in Northern Adriatic, and a second one in Southern Adriatic - Northern Ionian Sea.
ECODISC		Bycatch	ECODISC aims at understanding how fisheries discards affect ecological processes and biogeochemical cycles, and how this can be managed. These are addressed by a series of experiments and tools (maps, statistical and mathematical models) that aim to elucidate discards fate and their use as a food source by the ecosystem communities, and integrate this information to explore ecosystem effects of a possible application of partial or full discards ban.
VALUE		Bycatch	The study aims to analyse in detail the logistics of the discard landings at the auction markets using as case study the Keratsini monger market. In addition the study of their exploitation as raw material for the preparation of food pellets for the feeding of sea bream in cages. The results of the project will provide recommendations for the proper handling of the discards in order to be suitable for the purpose of fish feed making
DISCATCH		Bycatch	Pilot project on catch and discard composition including solutions for limitation and possible elimination of unwanted bycatches in trawl net fisheries in the Mediterranean
DEVOTES		Environmental status	Development of innovative tools for understanding marine biodiversity and assessing good environmental status.
BENTHIS		Benthos	Study of the diversity of benthic ecosystem in European waters and the role of benthic species in the ecosystem functioning.

			Fisheries impact is studied on benthic organisms and on the geo-chemistry.
NETMED		MPAs	Design of an ecologically coherent network of marine protected areas for the entire Mediterranean basin, based on the principles of systematic conservation planning; an efficient, transparent and holistic approach for marine reserves design, which informs their location, configuration and management.
PEGASO		ICZM	Building on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins in ways that are consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean.
WISER		Environmental status	Integrative system to assess ecological status and recovery by developing tools for the integrated assessment of the ecological status of the European surface waters.
ECOPARKS		Artificial reefs	The project aims at the establishment of two artificial reef parks in the island of Chios and Limnos. The parks will be equipped with innovative devices which act as artificial reef but provide extended aggregation and protection to juvenile fish against a limited cost compared with the conventional artificial reefs. The new devices enable the fishing industry to apply large-scale fish protection programs Aggregating Devices (FADs). The parks will serve as exhibition installations for the fishing industry and policy makers.

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc.) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

No incidental catches of seabirds reported during 2015.

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Data concerning incidental sharks and rays catch in 2015 are not available.

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

No incidental catches of sea turtles reported during 2015.

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

No incidental catches of cetaceans reported during 2015.

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

No incidental catches of monk seal reported during 2015.

Maps and geographic positions of monk seal caves were submitted to the GFCM Secretariat in Annexes I and II of the full National Report.

Section 13 - Proposals for future research programmes

Italy/Italie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 09, 10, 11, 15, 16, 17, 18

B. Total landings: 176 778 tonnes (2014); 172 624 tonnes (2013)

C. Fleet: 12 681 vessels (2014); 12 582 vessels (2013);

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Merluccius merluccius	2014	Exploited unsustainably	12-13-14-15-16	Y	N
M. merluccius	2014	Exploited unsustainably	18	Y	N
M. merluccius	2014	Exploited unsustainably	19	Y	Y
M. merluccius	2014	Exploited unsustainably	09	Y	Y
M. merluccius	2014	Exploited unsustainably	10	N	Y
M. merluccius	2014	Exploited unsustainably	11	N	Y
M. merluccius	2014	Exploited unsustainably	17-18	N	Y
Mullus barbatus	2014	Exploited unsustainably	18	Y	N
M. barbatus	2014	Exploited unsustainably	17	Y	N
M. barbatus	2014	Exploited unsustainably	17-18	N	Y
M. barbatus	2014	Exploited unsustainably	19	N	Y
Solea solea	2014	Exploited unsustainably	17	Y	Y
Parapenaeus longirostris	2014	Exploited unsustainably	18	Y	N
P. longirostris	2014	Exploited unsustainably	12-13-14-15-16	Y	N
P. longirostris	2014	Sustainably exploited	09	Y	N
P. longirostris	2014	Exploited unsustainably	19	N	Y
P. longirostris	2014	Exploited unsustainably	17-18-19	N	Y
Aristaeomorpha foliacea	2014	Exploited unsustainably	19	N	Y
A. foliacea	2014	Exploited unsustainably	18-19	N	Y
A. foliacea	2014	Sustainably exploited	09	N	Y
A. foliacea	2014	Exploited unsustainably	10	N	Y
A. foliacea	2014	Exploited unsustainably	11	N	Y
Engraulis encrasicolus	2015	Overexploited and in overexploitation	17-18	Y	N
Sardina pilchardus	2014	Overexploited (low biomass), with low fishing mortality	16	Y	N
S. pilchardus	2015	Overexploited and in overexploitation	17-18	Y	N
Squilla mantis	2014	Exploited unsustainably	17	N	Y
S. mantis	2014	Exploited unsustainably	18	N	Y
S. mantis	2014	Exploited unsustainably	17-18	N	Y

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Fishery statistics are collected within the European Regulation on Data Collection (EU reg. n. 199/2008). Statistics are produced on the basis of a sample of national fishing fleet, yearly updated, and their reliability is guaranteed by specific validation software.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

Fishery statistics are transferred to GFCM (through the Task 1 tool), to the European Commission, to Eurostat and to other RFMOs (like ICCAT). They are currently used by the national administration to support political decisions and to monitor the state of the fishing sector.

D. Existing databases and synergies with other applications

Within the European Regulation on Data Collection (EU reg. n. 199/2008) a centralized database has been developed to store fishery statistics (capacity, effort and landings data), economic data of the fleet, economic data of the aquaculture sector, economic data of the processing industries, biological data (parameters of the population by species and surveys data), and ecosystem indicators.

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
National Fisheries Data Collection Programme	2014	Fisheries	Modules on evaluating the fishing sector
MEDITS	2014	Biological sampling	Fishery independent survey data
MEDIAS	2014	Biological sampling	Fishery independent survey data
SOLEMON	2014	Biological sampling	Fishery independent survey data
		Stock assessment	Optimization of sampling methodologies for stock assessment
		Fish products safety	Nutritional and safety aspects of fish species from fishery and aquaculture
		Fish products safety	Diffusion of *Anisakis sp* and potential risks
		Knowledge transfer	Dissemination of scientific data, stock assessment data among fishers
		Discards	Monitoring and assessment of discards, both for small pelagic species and for demersal species
		Management plans	Development of an innovative technical scientific framework for the preparation of the management plans for fisheries
	2015	Management plans	Scientific elements for the update of the management plans for demersal species of GSAs: 9, 10, 11, 15, 16, 17, 18, 19
	2015	Management plans	Scientific elements for a management plan for demersal fisheries in the Strait of Sicily
	2015	Management plans	Evaluation of effects of measures regarding Fossa di Pomo area

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
		Socio-economics indicators	Productive structures analyses and socio-economic characteristics of Italian Fisheries
			Sustainability and management tools for Italian fishery: an impact assessment of TURF

C. Marine environment studies

Research/project title	Duration	Main topic	Description
		Bycatch	Assessment of bycatch of protected species in the pelagic trawl

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Activities within the framework of AdriaMed, MedSudMed and EastMed projects:

- 5 joint scientific surveys have been jointly carried out in the Adriatic Sea;
  - 2 joint stock assessment (*Parapenaeus longirostris*, *Merluccius merluccius*, GSA 12-16) and a preliminary stock assessment of *Mullus barbatus* GSA 15-16 have been produced in the south-central Mediterranean (Straits of Sicily);
  - 7 joint stock assessments (*Parapenaeus longirostris* GSA 18, *Merluccius merluccius* GSA 18, *Mullus barbatus* GSA 17 and 18, *Solea solea* GSA 17, *Engraulis encrasicolus* GSA 17-18, *Sardina pilchardus* GSA 17-18) plus an assessment-related work on *Nephrops norvegicus* in GSA 17 have been produced in the Adriatic Sea;
  - 7 stock assessments (*Mullus surmuletus* GSA 25, *Boops boops* GSA 25, *Metapenaeus stebbingi* GSA 26, *Mullus surmuletus* GSA 26, *Saurida undosquamis* GSA 26, *Sardinella aurita* GSA 27 - Lebanon, and *Sardinella aurita* GSA 26 & 27 joint) have been produced with the support of the EastMed Project.
  - Involvement either trainer and/or trainees in 90 theoretical or on-the-job training activities on the collection, storing and processing of fishery related data;
  - Involvement in 45 technical meetings in the Adriatic Sea, the Straits of Sicily and the Eastern Mediterranean and in the whole GFCM area, including working groups on demersal and small pelagic fisheries resources, study groups, seminars and technical meetings.

- Technical support has been provided to Turkey, Egypt, Lebanon, Albania, and Montenegro for the establishment of a monitoring system for fisheries (socio-economic and catch and effort).

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Recommendation GFCM/38/2014/1

In Italy have been implemented the prohibition of the use of any gears targeting small pelagics within 6 M with derogation for fishing vessels with LoA>15m (within 4 M), for 30 consecutive days (1 July to 30 July) from Monfalcone to Gallipoli (GSA 17 and 18), with the only exception of the Gulf of Trieste.

Italy is in the process of impose a maximum of 180 fishing days per year, not exceeding 20 days per month. For 2015, for vessels targeting specifically anchovy, the limit is 144 fishing days per year.

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

- From July 2015 to July 2016 Italy have implemented a ban for trawlers inside the area “Fossa di Pomo”.
- A seasonal closure have been implemented for trawlers (bottom and pelagic) for 30 – 40 days in a period from July to September, depending on scientific elements.

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Species	N specimen	Day/month/ year	Vessels’ type	Gear	GSA or statistical grid	Main target species	N discarded dead	N released alive	N unknown

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Species	Annex	N specimen	Weight (tonnes)	Day/month/ year	Vessels’ type	Gear	GSA	Retained for sale?	N discarded dead	N released alive
Mustelus asterias	III	3		2014	Mid-water pair trawls		17			
Squalus acanthias	III	16		2014	Mid-water pair trawls		17			

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Species	N specimen	Day/month/year	Vessels’ type	Gear	GSA or statistical grid	Main target species	N discarded dead	N released alive	N unknown

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

The importance of the following studies to improve the regional management of fisheries:

- Assessment of effects of management steps such as harvesting plans, use of non-damaging gear or spatial management (FRA, MPA, fishery rotational areas) in the view of marine spatial planning. Ecosystem effects of the fisheries to be considered in spatial terms with the aim to reduce the impact on the sea bed and restore fishery sustainability.
- In the context of Ecosystem Approach, development of a common data base, shared by countries, using georeferentiation and reporting both bathymetric, substratum features and biocenoses, essential fish habitat and including inshore and offshore areas; Coupling of hydrological information with biological data should be improved at regional level.
- Gear and operational technology - Investigate ways to make fishing gears and practices more efficient and able to reduce by-catch and discards, limiting habitat and ecosystem impacts, improving selectivity, while also improving fuel consumption when fishing.
- Improved and automatized monitoring systems, delivering information required for the implementation of the MSY to relevant, timely assessments and predictions.

- Ongoing investment in and coordination of marine infrastructure to be maintained and viewed in an international perspective in order to improve the quality and efficiency of data collection and monitoring.
- Traceability - Address the scientific challenges necessary to allow for complete traceability of seafood (for underpinning consumer confidence that seafood is safe and is supplied from known and approved sources and harvesting/processing methods) also to facilitate full control through the supply chain.
- Revising borders of some GSAs on the basis of available information
- Mapping spawning grounds and other essential fish habitats
- Assessing impact of fishing on communities and ecosystems
- Investigating effect of climate change on stock dynamics
- Evaluating spatial management measures (no take zones, fishery restricted areas, marine protected areas)
- Improving knowledge on the effect of fishery at ecosystem level, performing specific studies on discards and impact on the sea bottoms.

In special areas such as the Strait of Sicily and the Adriatic sea, where straddling and transboundary stocks are shared by fisheries of several countries, it is considered relevant:

- Improving knowledge on population biology and the identification of population units, including genetic approaches, to clarify relationships and connectivity among populations;
- Supporting a common collection of data on stocks and fisheries, based on both fishery independent and dependent approaches, within the framework of an international program;
- Assisting the develop of a common geo referred data base reporting both bathymetric, substratum features, biocenoses, and fishing grounds at regional level.

Lebanon/Liban

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 27

B. Total landings: 3 652 tonnes (2015); 2 981 tonnes (2014)

C. Fleet: 1 949 vessels (2014)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Sardinella aurita	2014	Uncertain (preliminary assessment), but current fishing mortality seems too high	27	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

FAO-EastMed project continued supporting collecting catch data by MOA along the Lebanese coast.

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description

C. Marine environment studies

Research/project title	Duration	Main topic	Description
CANA - Development of the Lebanese Marine Environment to Serve the Needs of Coastal Communities	2015	Marine ecosystems	The project intends to monitor shoreline and biophysical alterations of coastal areas while empowering Local Authorities toward a decentralized coastal management. To evaluate the efficacy of wastewater treatment plants, concerned marine areas will be monitored and their biological and physical features analyzed. This will include the assessment of plankton, macro benthos and fish stocks.
Evaluation of the ecological role of some key Lessepsian fish species in marine Lebanese waters	2015	Alien species	Specimens of *Sargocentron rubrum*, *Nemipterus randalli* and *Etrumeus teres* are collected from to catch of Lebanese fishers and biological parameters are investigated. Their stomach contents and growth are also studied

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

- FAO EastMed Project was instrumental to collect catch and biological data and analysis of data within EastMed Working Group on Fisheries Data Analysis and GFCM Working Groups on Stock Assessment

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

No incident was reported in 2015.

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Several citations were issued to violators by the Rangers of Ministry of Agriculture. Citations were sent to competent courts. No outcome of rulings was received by Ministry of Agriculture. Several specimens were returned to sea.

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

No incident was reported in 2015.

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

No incident was reported in 2015.

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

Libya/Libye

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 21

B. Total landings: 15 048 tonnes (2015)

C. Fleet: 3 951 (2015); 4 641 (2014)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Libya has signed two projects with FAO (FAO UTF Project) to create statistical and information system, projects formulation were accomplished in November 2014 and the document were revised during 2015.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description

C. Marine environment studies

Research/project title	Duration	Main topic	Description

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

- Working Group on Small Pelagic Fishery Resources in the south-central Mediterranean Sea (30 Nov -02 December 2015, IAMC-CNR Capo Granitola, Italy)
- Technical meeting on elasmobranchs in the south-central Mediterranean Sea (20-23 October 2015, FAO-HQ Rome, Italy)
- Study Group for Stock Assessment in the south-central Mediterranean Sea (23-19 October 2015, FAO-HQ Rome, Italy)
- FAO-MedSudMed Working Group on Demersal Fishery Resources (14-18 September 2015, MSM Palermo, Italy)

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

- Trawl fishing for demersal fish species was prohibited during the period June-July 2015
- Fishing for sponges in Libyan waters is being forbidden from 1 November to 30 May of each year.
- Fishing for dolphin fish in Libyan waters is being forbidden from 1 January to 15 August of each year

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

Malta/Malte

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 15

B. Total landings: 2 437 tonnes (2015); 2 395 tonnes (2014);

C. Fleet: 1 001 vessels (2015); 1 016 vessels (2014)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Merluccius merluccius	2014	In overexploitation with relative high biomass	12-16	Y	
Parapenaeus longirostris	2014	In overexploitation with relative intermediate biomass	12-16	Y	
Mullus barbatus	2014	Assessment considered as preliminary	12-16	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Malta is at present developing a Fisheries Information System (FIS). The FIS under development will be an integrated system whereby the databases related to the fleet register, catch assessment survey, logbooks, biological sampling, biological surveys and economic surveys will be consolidated. For submission obligations in connection with GFCM, EC and ICCAT, in the future the data will be exported from the FIS, processed for the end user's needs and a copy of the data sent will be stored in the FIS.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

Malta collects data on catch and effort for each segment by species, by quarter and by geographical origin. Catch and effort figures are based on data reported in logbooks (for vessels over 10 m LOA) and by sampling the small-scale fishery (for vessels less than 10 m LOA) through an exhaustive sampling survey questionnaire, on sales notes from the official fish market and from direct sales data. The fisheries statistics being collected have been submitted to international organisations for stock assessment purposes and scientific analysis. In 2015 Malta submitted data collected within the framework of the EU DCF to several international bodies / for use by several projects:

i) Joint Research Centre (JRC) of the European Commission
ii) International Commission for the Conservation of Atlantic Tunas (ICCAT) through Task I and Task II forms.
iii) General Fisheries Commission for the Mediterranean (GFCM) including dolphin fish annual reporting form and Task I statistical matrix.
iv) EU horizontal framework project MAREA
v) STOCKMED
vi) Working Group on Stock Assessment of Demersal Species (WGSAD)

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
Strengthening regional cooperation in the area of fisheries data collection in the Mediterranean and Black Sea	2015-2016	Data collection	The overall aim is to lay out a regional work programme outlining the planned activities and the corresponding timeframe and costs, including costs/benefits, in relation to the current implementation at Member State level. This regional work programme here defined as Multiannual Regional Work Programme will include a Regional Sampling Programme for 2016 covering Commercial Fisheries, a Regional Sampling Programme for 2016 covering the Data Collection on Fisheries Impacts on the Ecosystem and Procedures to Quality Assessment of Biological Data at regional level.
GAP II		Sensitive fish habitats	Bridging the GAP between fisheries scientists and fishers - nursery and spawning ground of commercially important demersal species within the Malta FMZ were identified

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
National Data Collection Programme		Economic variables	Socio-economic data is collected on annual basis

C. Marine environment studies

Research/project title	Duration	Main topic	Description
LIFE + BAĦAR	2013-?	Benthic habitats	Collection of data on the location of 4 habitats (*Posidonia*) beds, sandbanks, reefs and submerged or partially submerged caves) within the 25 nm Malta FMZ under the Habitats Directive in order to protect them by creating NATURA 2000 sites.
		Benthic habitats	Identification and mapping of the spatial distribution of sediment types and biocenoses in GSA 15, including the spatial distribution of sensitive habitats such as maerl beds

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

In 2015, Malta participated ino the 13th MedSudMed Coordination Committee Meeting (16-17th April 2015, Rome, Italy) and the 8th CopeMed II Coordination Committee Meeting (5-6th May 2015, Malaga, Spain). The aim of these meetings was to discuss activities held in the intersession period and decide on a workplan for the following year.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

The Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of cetaceans are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Data on shark catches are recorded at the fish market and during onboard observations. Efforts are being made to include the collection of detailed data through logbooks.

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

The Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Incidental catches of turtles are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

The Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of seabirds are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

The Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of monk seals are being monitored through this source. Efforts are being made to include the collection of this data through logbooks. Monk seals are very rare, if inexistent around the Maltese Islands.

Section 13 - Proposals for future research programmes

- Currently Malta is focusing on its Data Collection Framework, in view of the changes being proposed both at EU level with regards to the Common Fisheries Policy as well at the GFCM level with regards to the Data Collection Reference Framework (DCRF)

Montenegro/Monténégro

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 18

B. Total landings: 603 tonnes (2014); 561 tonnes (2013);

C. Fleet: 136 vessels (2015); 131 vessels (2014)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Merluccius merluccius	2014	in overexploitation with relative intermediate biomass level	18	Y	
Mullus barbatus	2014	in overexploitation with relative high biomass	18	Y	
Parapenaeus longirostris	2014	in overexploitation with relative intermediate biomass	18	Y	
Sardina pilchardus	2015	overexploited and in overexploitation	17-18	Y	
Engraulis encrasicolus	2015	overexploited and in overexploitation	17-18	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Montenegro has a Fisheries Information System (FIS), which is not fully operating at the moment, because the programming faze of some sub-systems is ongoing.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

During 2015, through the FAO-AdriaMed support, Montenegro has developed the register of licences for Aquaculture based on web application.

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

Vessel register; Logbook & landings declaration; Monthly report for vessels under 10m LOA; Licenses management sub-system; Common alarm system; VMS – Vessel Monitoring System – Vessels over 10m LOA;

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
MEDIAS	2015	Biological sampling	Biomass estimation of small pelagic species in GSA 18 using DEPM and Acoustic methods.
MORM-MONT	2012-2015	Fisheries development	Monitoring of coastal fisheries and fish fry composition along the Montenegrin coast, with the aim of conservation and sustainable management of marine fisheries.
Development of a new methodological approach to study the recruitment dynamics of fish and crustaceans in the Kotor bay	2015-2016	Demersal resources	

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description

C. Marine environment studies

Research/project title	Duration	Main topic	Description
The National Strategy for Integrated Coastal Zone Management		Coastal ecosystems	Coastal Area Management Programme
Biodiversity and structure of eastern Adriatic coastal fish and other marine organism communities: case studies of Croatia and Montenegro	2015-2016		
PPPOP		Coastal ecosystems	Special Plan for the Coastal Area of Montenegro

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Activities within the AdriaMed project framework continued. The pilot study on biological sampling data on Montenegrin coast has been continued through 2015. Samples of eighteen economically important species were taken from vessels in three fishing ports Bar, Budva, Herceg Novi by monthly dynamics. In the frame of Project

MEDIAS (supported by FAO AdriaMed Project) biomass estimation of small pelagic species in GSA 18 using DEPM and Acoustic method will be continued in 2015. In the frame of Project MEDITS (supported by FAO AdriaMed Project) biomass estimation of demersal resources will be continued in 2015.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

Morocco/Maroc

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 03

B. Total landings: 30 999 tonnes (2014); 34 134 tonnes (2013)

C. Fleet: 2 737 vessels (2014); 2 961 vessels (2013)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Sardina plichardus	2014	overexploited with a low fishing mortality	01&03	Y	
Mullus barbatus	2014	in overexploitation with relative intermediate biomass	01&03	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

L'INRH a pris la responsabilité de compiler les données de la tâche 1 de la CGPM, cette base de données regroupe les différentes données relatives à l'activité de pêche au niveau de chaque GSA (données biologiques, d'exploitation et de flottille). Le Maroc s'est engagé à fournir cette information avant le moi de juin de chaque année. Toutefois, certaines de ces données sont difficiles à collecter ou nécessitent un effort et des moyens financiers importants, notamment les données socioéconomiques, les données sur l'effort de pêche (zone de pêche par engin), ainsi que les données sur les rejets qui nécessitent l'embarquement régulier durant toute l'année des observateurs scientifiques à bord des navires de la pêche commerciale. La base de données de la matrice «Tâche 1» pour l'année 2013 a été transmise au Secrétariat de la CGPM en juin 2015. Cette matrice actualisée a regroupé la table « Tâche 1.1 » réservée à la segmentation de la flottille de la pêche nationale méditerranéenne, la « Tâche1.2 » qui regroupe les données socioéconomiques, la « Tâche 1.3 », consacrée aux données d'exploitation à savoir l'effort de pêche et la « Tâche1.5» relative aux données biologiques. Ainsi, l'analyse des données sont en cours de traitement pour ressortir les matrices de la « Tâche1», relative à l'année 2014 et l'envoyer au secrétariat de la CGPM avant juin 2016.

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
		Stock assessment	Évaluations des stocks des principales espèces
		Fish biology	Études des cycles de vie des espèces à haute valeur commerciale
			Recherches sur la révision des tailles marchandes des principales espèces exploitées

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
Evaluation des pertes économiques issues de l'interaction entre les mammifères marins et la pêche à la senne coulissante.	2015	Depredation issues	L'étude a couvert les 4 principaux ports de pêche à la senne tournante, à savoir Ras Kebdana, Nador, Al Hoceima et M'Diq. Elle a porté sur une actualisation des niveaux et intensité de ce phénomène d'interaction sur l'ensemble de la Méditerranée marocaine.
			L'étude des filières des petits pélagiques au Maroc : structure, dynamique et performances socio-économiques
SuiviCOM-Al Hoceima	2015	Small-scale fisheries	Etablissement d'un système communautaire de suivi de l'activité de pêche artisanale au niveau du Parc National d'Al Hoceima
La pêche artisanale en Méditerranée marocaine, exploitation et aspects socioéconomiques	2015	Small-scale fisheries	L'étude a permis de caractériser l'activité de pêche artisanale au niveau de la Méditerranée marocaine, à travers un suivi au niveau de 10 sites de pêche choisis de façon représentative.

C. Marine environment studies

Research/project title	Duration	Main topic	Description
		Elasmobranchs	Etudes sur l'inventaire des espèces des Elasmobranches peuplant la méditerranée marocaine
		EAF	Études de l'interaction entre l'activité de pêche et son environnement
		Cetaceans	Le suivi des enquêtes inscrites dans le cadre du programme d'étude des interactions entre les Cétacés et la pêche au niveau de la GSA03 Etude des interactions entre les Cétacés et la pêche
		MPAs, artificial reefs	Etude de l'impact de la mise en place de nouvelles mesures de gestion, telle que l'implantation des aires marines protégées, l'immersion des récifs artificiels et autres.
		Environmental status	État de la salubrité du milieu marin (études chimiques, accumulation des biotoxines dans les bivalves, études microbiologiques).
		Environmental parameters	Effet des facteurs environnementaux (principalement la salinité et la température) sur la biologie et le cycle de vie des espèces pélagiques et des espèces demersales à durée de vie courte (crevette rose du large).

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

Slovenia/Slovénie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 17

B. Total landings: 195 tonnes (2015); 254 tonnes (2014);

C. Fleet: 169 vessels (01/01/2016); 169 vessels (01/01/2015)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
Engraulis encrasicolus	2015	overexploited and in overexploitation	17-18	Y	
Sardina plichardus	2015	overexploited and in overexploitation	17-18	Y	

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

The InfoRib is and will remain the main system. It covers all the relevant fisheries data. The second is the VMS system which covers the VMS data. The third is the inspection information system Aquaspec, where all the inspection data are in place, the forth is ERS where all electronic reports and data from the electronic logbooks are stored and the fifth is biological data base BIOS. Some elements of the systems are already interconnected and in the future the interconnection between the systems will also improve in line with the requirements of the EU and other pertaining legislation in force and thus we will gain better control over fisheries activities.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with thek assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

InfoRib is the centralized information system which contains all the relevant data on fisheries in Slovenia. In the system there are the following modules: Fleet vessel register, Logbooks, Fishing Permits, Socio-economic data, Reporting, Sampling, Technical indicators, Code lists, First sale, Aquaculture, Processing Industry and Meetings Module. Biological Sampling Module is permanently stored in the Fisheries Research Institute database.

D. Existing databases and synergies with other applications

InfoRib is interconnected with the VMS data base and soon it will be interconnected also with ESR data. It enables different crosschecking of the data, validation of the data and queries for end users. In the future we will improve interconnection with the Aquaspec system and with the central node for fisheries data at the European Commission.

Biological data are stored at the Fisheries Research Institute of Slovenia in BIOS database. In the future also the interconnection between BIOS and InfoRib shall be established. The yearly maintenance of the systems in place is performed regularly. It includes also all the preparation work for different reports, for national and international end users.

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
MEDITS	1996-to date	Biological sampling	Collection and management of fishery data
MEDIAS	2007-to date	Biological sampling	Collection and management of fishery data
SOLEMON			
	2016	Ichthyoplankton	Pilot study on ichthyoplankton in Slovenian territorial waters targeting sardine and anchovy eggs and juveniles using Daily Egg Production Method (DEPM) protocol

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
		Economy	Evaluation of the fishing sector
		Economy	Evaluation of the economic situation of the processing industry

C. Marine environment studies

Research/project title	Duration	Main topic	Description

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

In the framework of FAO AdriaMed project:

- Stock assessment of several species
- Cooperation in the framework of SOLEMON project

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

GFCM/37/2013/1 on a multiannual management plan for fisheries on small pelagic stocks in the GFCM-GSA 17 (Northern Adriatic Sea) and on transitional conservation measures for fisheries on small pelagic stocks in GSA 18 (Southern Adriatic Sea):

- In line with the provisions of the "Multiannual plan", Slovenia prepared and sent to the GFCM secretariat, before the end of October 2013, its national "Monitoring and control plan for its fisheries targeting small pelagic stocks". An amended plan was sent at the end of the October 2014 and in 2015. In addition, Slovenia submitted to the GFCM secretariat also a list of the vessels authorized to fish for small pelagic stocks that are registered in harbours located in GSA 17. Under the provisions of this plan it is not possible to fish for small pelagics more than 20 days per month and maximum 180 days per year.

GFCM/38/2014/1 amending Recommendation GFCM/37/2013/1 and on precautionary and emergency measures for 2015 on small pelagic stocks in the GFCM GSA 17:

- In line with the abovementioned Recommendation, vessels targeting anchovy could not exceed 144 fishing days in 2015. In addition, countries subject of the management plan for small pelagics had to apply spatio-temporal closures of no less than 15 continuous days and up to 30 continuous days for vessels fishing small pelagic stocks in the GSA 17. Slovenia applied spatio-temporal closure in the period 1-15 April 2015 and it covered all waters under the jurisdiction of Slovenia.

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

- In accordance with the DCF regulation, the Adriatic countries brought together by the AdriaMed project, work in conjunction towards joint regional management of the shared fish stocks. So far the VPA and ICA stock assessment methods have been used to determine the SSB of anchovy and sardine in the GSA 17 and 18. The acquisition of the data for this type of stock assessment is costly and demanding in terms of resources which present a big problem for small coastal countries such as Slovenia. The sampling requirements of the Daily Egg Production Method (DEPM) are in better accordance with the available resources of the smaller coastal countries. Therefore, Slovenia supports the implementation of DEPM as one of the tools used to determine the status of the shared small pelagic stocks. In order to attain this goal Slovenia needs to provide the data from its seas. Hence, Slovenia started to conduct a preliminary survey in 2014 to determine the spatial and seasonal distribution of planktonic stages of European anchovy and sardine in the Slovenian seas. This would enable us to determine the appropriate number and position of sampling stations and the period in which to collect the samples for the DEPM. Addition of this data to the joint stock assessment would further improve the precision of the results.

Tunisia/Tunisie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 12, 13, 14

B. Total landings: 126 512 tonnes (2014)

C. Fleet: 14 000 vessels (2014)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

La collecte, l'archivage et l'élaboration des bases de données des statistiques de la pêche (production, effort, flottille) sont assurés par les services du Ministère de l'Agriculture, plus particulièrement la Direction Générale de la Pêche et de l'Aquaculture (DGPA).

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
Projet de recherche 1	2014	Stock assessment	Ressources halieutiques benthiques des eaux tunisiennes : Evaluation des stocks et aménagement des pêcheries.
Projet de recherche 2	2014	Stock assessment	Ressources pélagiques exploitables : Evaluation des stocks et aménagement des pêcheries
Projet de recherche 2	2014	Gear selectivity	Mise au point des engins de pêche sélectifs pour une exploitation rationnelle et durable des pêcheries tunisiennes

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
COGEPECT	2015	Socio-economic assessment	Contribution à la réalisation d'une évaluation de l'impact socioéconomique de la mise en œuvre des actions de cogestion des pêcheries côtières dans 04 sites pilotes du golfe de Gabès

C. Marine environment studies

Research/project title	Duration	Main topic	Description
Tortues marines		Sea turtles	L'amélioration des connaissances sur la biologie de la reproduction et sur l'écologie de la caouanne *Caretta caretta* La protection des plages de nidification par gardiennage des nids durant toute la saison estivale de l'action des pêcheurs et des visiteurs des îles et en assurant le maximum de succès aux opérations de montées des femelles nidifiantes et à l'émergence des nouveau-nés
Renforcement du réseau d'échouage des Cétacés en Tunisie	2014-2015	Cetaceans	
Elasmobranches			Révision systématique a concerné le genre *Dasyatis*
Poissons osseux / Espèces exotiques			Contribution à la caractérisation de la faune ichtyologique tunisienne (étude d'espèces rares, exotiques et menacées...)

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Dans le but de répondre à l'objectif de mise en œuvre d'un plan d'aménagement pluriannuel de la crevette rose de profondeur (*Parapenaeus longirostris*) et du merlu (*Merluccius merluccius*) dans le canal de Sicile, l'INSTM avec l'appui du projet régional FAO-MedSudMed ont incorporé dans leurs programme de coopération une action spécifique à la collecte et l'analyse des données socioéconomiques des flottilles de pêche ciblant les deux stocks sus mentionnés.

Dans le cadre de la collaboration avec les projets régionaux de la FAO MedSudMed et CopeMed II et suite à deux réunions de travail sur les élasmobranches en Italie, un inventaire des données biologiques par espèce d'élasmobranches (reproduction, croissance et les paramètres d'alimentation) et une analyse des campagnes de pêche dans les GSAs 14, 15, 16 et 21 pour les années 2003 et 2013 ont été effectués.

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

Instauration d'une nouvelle réglementation de l'activité de pêche durant la période d'intersessions qui se résume à la fermeture totale de la région sud de la Tunisie (GSA 14, golfe de Gabès) à la pêche au chalut durant une période de trois mois (du 1er juillet 2009 au 30 septembre 2009). Cette mesure de gestion est appliquée pendant 6 années : 2009, 2010, 2011, 2012, 2013, 2014 et 2015.

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

- L'INSTM continue régulièrement ses activités de recherche et entretient une collaboration assez étroite avec le projet régional FAO-MedSudMed. En effet, dans le cadre des activités de ce projet, la Tunisie continue ses activités concernant les évaluations des stocks partagés, particulièrement la chevrette et le merlu dans la région du Canal de Sicile. Par ailleurs, dans une perspective de l'application de l'approche écosystémique en tant qu'outil d'aménagement des pêcheries méditerranéennes, la Tunisie est intégrée dans un projet européen sur cet aspect. Ce projet de recherche ECOSAFIMED, qui groupe des instituts de recherche espagnole, italienne et tunisienne et financé, en grande partie, par l'Union européenne s'achèvera au courant du 1er trimestre de l'année 2016. Par ailleurs l'année 2015 sera consacrée à la finalisation des projets de recherche 2011-2014 et le lancement de nouveaux projets pour la période 2015-2018 et seront soumis pour approbation et financement aux ministères concernés.

Turkey/Turquie

Section 1 - Description of fisheries

A. Fishing grounds (GSAs): 22, 24, 28, 29

B. Total landings: 266 078 tonnes (2014); 339 047 tonnes (2013)

C. Fleet: 15 680 vessels (2015); 16 437 vessels (2014);

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?

Section 3 - Status of statistics and information system

A. Description of the national system of fishery statistics and/or any improvement/change occurred

Over the last years, markedly progress has been made in development of fisheries data collection system in Turkey. Fisheries Information System (FIS), an integrated Web-based database, has been developed. The FIS, which is being subject to routine updates, comprises a combination of resources organized to collect, process, transmit, and disseminate the fisheries relevant data. The system is composed of modules interacting to introduce and extract data to/from a centralized database.

B. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects

C. Type of data collected, transmission to GFCM Secretariat and other international bodies

The integrated FIS includes registry of commercial fishing vessels, fishing license registry, registry of recreational fishers, issue of special fishing permits to fishers, data on landings, quota (Bluefin tuna), catch quota (striped venus clam and eel), collection of biologic data, monitoring of anchovy catches transshipped to cold storages or processing plants, issue of catch certificate under the scope of EU Regulation 1005/2008, inspection forms, sales notes and collection of fisheries and aquaculture statistics.

D. Existing databases and synergies with other applications

Section 4 - Status of research in progress

A. Fisheries research with emphasis on management oriented assessment and GFCM priority species

Research/project title	Duration	Main topic	Description
The Estimation of Demersal Fish Stocks in West Black Sea	2011-2015	Stock assessment	To estimate the size of demersal stocks in the region and to estimate the main population parameters regarding to the stock

B. Socio-economic studies of fishing communities and fishing sector

Research/project title	Duration	Main topic	Description
The Effects of Gillnets in Black Sea Fisheries	2015-2017	Socio-economic assessment	To establish the inventory of gillnets, to conduct a socio-economic analysis, to determine the selectivity of gillnets, to monitor commercial fishing

C. Marine environment studies

Research/project title	Duration	Main topic	Description
Investigation of Some Physical and Chemical Characteristics in Water Column of Trabzon		Physical and chemical parameters	The project aims to assess variations of some physical and chemical parameters (temperature, salinity, sigma-t, electrical conductivity, pH, dissolved oxygen, chlorophyll-a, the light transmission, bench disc) in the water column
Determination of Terrestrial Pollution Effect to Coastal and Marine Ecosystem in Eastern Black Sea		Pollution	The project aims to determine the effects of land-based pollutants in coastal and marine ecosystem
Determination of Ecological Quality in the Eastern Black Sea Coast and Species Diversity of Benthic Invertebrate Organisms		Benthic community	Assessing the benthic invertebrate species abundance

Section 5 - Involvement in activities of FAO regional projects

A. Description of activities carried out with FAO regional projects, results obtained and assistance received

Section 6 - Management measures

A. Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations including assessment of their effects

Section 7 - Environment protection measures

A. Description of recent activities in establishing protected areas (e.g. fishing reserves, MPAs, and other spatial restrictions)

No fishing activity for turbot is permitted from 15 April to 15 June.
It is prohibited to catch sword fish from 1 October to 30 November and from 15 February to 15 March.
No fishing activity for common sole is permitted from 1 January to 1 February.

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

A. By-catch events

Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

A. Catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol

Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area

A. By-catch events

Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

A. By-catch events

Section 12 - Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (*Monachus monachus*) in the GFCM Competence Area

A. By-catch events

Section 13 - Proposals for future research programmes

None

Appendix 11(b)

National reports/Rapports nationaux

(in original language / dans la langue d'origine)

Algeria/Algérie
Croatia/Croatie
Cyprus/Chypre
Egypt/Egypte
France
Greece/Grèce
Italy/Italie
Libya/Libye
Lebanon/Liban
Malta/Malte
Montenegro/Monténégro
Morocco/Maroc
Slovenia/Slovénie
Spain/Espagne
Tunisia/Tunisie
Turkey/Turquie

ALGERIA/ALGÉRIE

1. Description des pêcheries nationales

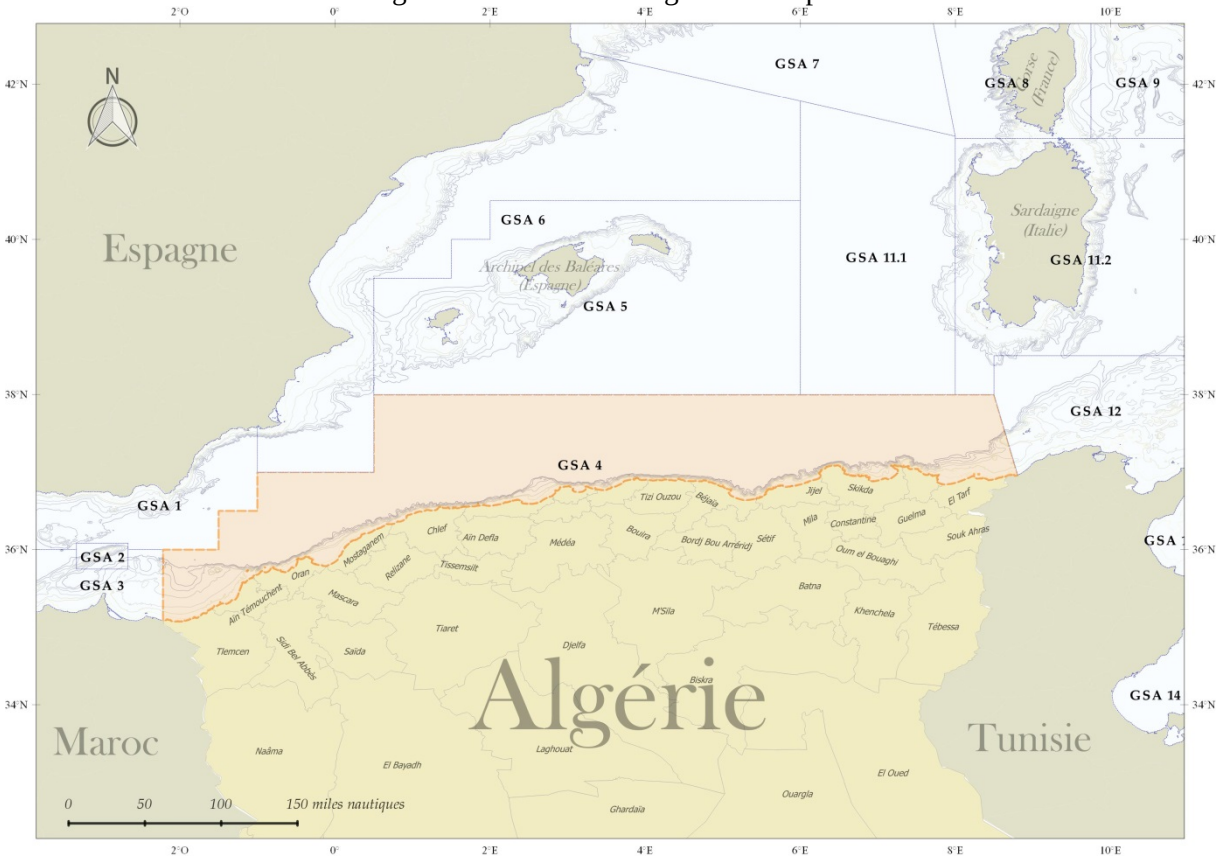
1.1. Description des zones de pêche et de la sous-région

Située dans la partie sud de la méditerranée occidentale, la GSA 04 couvre l'ensemble des côtes algériennes longues de 1280 km, de la frontière algéro-marocaine à l'Ouest (002° 12.72'W) jusqu'à la limite est à la frontière avec la Tunisie (008° 38.8'E).

C'est une côte plus ou moins droite qui présente sur toute sa longueur des échancrures largement ouvertes vers le nord. Celles-ci forment des anses, baies et golfes, dont les plus importants sont le golfe de Ghazaouet, la baie de Bou-Ismaïl, la baie d'Alger et les golfes de Skikda et d'Annaba.

Le plateau continental Algérien est extrêmement réduit sauf au niveau des deux régions frontalières et au niveau des baies. Nous estimons la superficie totale du plateau continental accessible à la pêche à 22 000 km² pour une aire marine sous juridiction Algérienne de près de 90 000 km².

Carte des côtes algériennes et de la configuration du plateau continental



La pêche dans la sous-région GSA 04 présente un caractère côtier très prononcé. Elle n'est pratiquée que dans la limite de l'étroite bande littorale où se concentre la quasi-totalité de l'effort de pêche national.

Une des caractéristiques marquante de la zone est qu'une bonne partie des aires de pêche sont constituées de fonds rocheux durs, impropres au chalutage classique mais plutôt adaptés à la pêche artisanale. Les seules superficies chalutables se situent au niveau des principales baies. Cela a pour effet d'engendrer de fortes pressions sur les habitats clés et vitaux à la survie et au maintien de la plus parts des stocks halieutiques dans la région.

Les pêcheries Algériennes de la GSA04 sont multi-spécifiques multi-engins, à forte composante artisanale.

Le petit métier est de loin le métier le plus répandu et le plus représenté en termes d'effectifs de marins et de nombre d'unités navales. La pêche à la senne est quant à elle le métier le plus important en termes de production halieutique en ciblant les petits pélagiques (sardine, anchois, sardinelle et les chinchards).

Comparativement, la pêcherie chalutière est peu représentée dans la GSA04. L'étroitesse du plateau continentale couplée à une nature accidentée dominante des fonds marins limitent considérablement son développement. Cette pêche cible principalement les rougets, le merlu, les pageots et les crevettes.

Une autre pêcherie importante de la GSA04, et non des moindre du point de vue de la valeur marchande, c'est la pêche aux grands migrateurs halieutiques représentés principalement par l'espadon et le thon rouge.

1.2. Les débarquements par groupes d'espèces

Tableau 1. Production nationale par groupe d'espèce (la production de l'aquaculture et de plaisance ne sont pas inclues).

Groupes d'espèces	2011	2012	2013	2014	2015
Poissons démersaux	8165	8000	7796	6995	6365
Poissons petits pélagiques	79 747	79 955	74 222	71 025	73 833
Poissons grands pélagiques	815	947	1 433	1 755	1867
Crustacés	2174	2310	1732	1979	2163
Mollusques	1507	1472	1452	1467	1858

Unité : tonnes

1.3. Le total des débarquements par espèce (tonnes) Principales espèces

Tableau 2.

Espèces/Années	2011	2012	2013	2014	2015
Allache	13430,654	17299,537	12510,475	13354,15	14160,10
Anchois	2707,662	2264,604	989,57	2411,365	3314,48
Bogue	7287,662	6467,027	4989,229	4372,835	4563,16
Crevette Blanche	924,545	1114,541	892,787	1084,113	946,36
Crevette Rouge	908,654	775,146	620,161	849,477	932,94
Espadon	216,252	387,767	521,357	612,4624	624,46
Merlu	382,983	515,092	669,873	976,492	905,12
Pageot	595,498	536,538	346,528	370,761	394,90
Poulpe	971,017	977,14	854,146	928,3714	1060,99
Rouget	998,65	925,7	757,15	768,11	893,3078
Sardine	33974,595	31873,251	35873,241	39701,821	40165,67

Espèces/Années	2011	2012	2013	2014	2015
Saurel	10966,502	11989,675	11967,594	9095,513	7351,56
Sépia	251,6758	245,498	219,3775	276,551	434,91
Total	73616,351	75371,516	71211,488	74802,024	75747,96

Unité : tonnes

2. La flotille nationale

Tableau 1. Nombre et segmentation de la flottille par métier

Segmentation en longueur	**Type de métier**	**Nombre de bateaux**	**Jauge Brute (TX)**	**Puissance (cv)**
< 6m	Petit Métier	2204	2707,478	55703,4
Total < 6m		**2204**	**2707,478**	**55703,4**
[12:18[	Chalutier	154	4476,714	55613
	Petit Métier	50	672,88	11849
	Sardinier	780	14938,55	208848
Total [12:18[		**984**	**20088,144**	**276310**
[18:24[	Chalutier	311	16661,09	155847
	Petit Métier	3	164,98	1570
	Sardinier	116	5169,8	57184
Total [18:24[		**430**	**21995,87**	**214601**
>=24m	Thonier	16	2277,13	16324
	Chalutier	88	10046,33	68574,94
Total >=24m		**104**	**12323,46**	**84898,94**
Total général		**5032**	**64568,879**	**768554,49**

1: Données provisoires; 2: Données 2014 révisées par rapport à la dernière version

3. État des stocks des espèces prioritaires

Les petits pélagiques

Durant l'intersession 2015, l'exploitation des stocks halieutiques dans la GSA04 n'a pas connue de grands changements ; l'effort nominal étant resté plus ou moins stable.

Une campagne d'évaluation directe par acoustique des stocks de petits pélagiques, ayant couvert l'ensemble des eaux nationales entre 20 et 200m de profondeur, a été réalisée en mars-avril 2015.

Les résultats sont en phase finale de traitement. Néanmoins, des résultats préliminaires montrent un léger rebond dans les biomasses estimées de la sardine et de l'anchois mais un repli dans le stock de

sardinelles. L'évaluation à partir des débarquements commerciaux (CPUE) n'ayant pas pu être menée, il est difficile de confirmer cette tendance.

En novembre 2015, une évaluation conjointe des stocks partagés de sardine des GSAs 03, 04 a été tentée au sein du groupe de travail WGSA de la CGPM. Pour la GSA04 seuls les débarquements de sardines des trois ports de la région Alboran (ports de Ghazaouet, Béni-Saf et Bouzedjar) ont été intégrés. Les résultats du modèle ne sont que préliminaires.

Les ressources démersales

La participation de l'Algérie (GSA04) au groupe de travail sur l'évaluation des stocks démersaux de la CGPM qui s'est réuni du 23 au 28 Novembre 2015 à Rome s'est effectuée sur la base des résultats du travail entrepris dans le cadre du 4ème groupe de travail du projet sous-régional FAO- CopeMed II tenu à Malaga (Espagne) du 02 au 06 Novembre 2015.

Les trois pays l'Espagne (GSA 01), le Maroc (GSA 03) et Algérie (GSA 04) ont entrepris un travail conjoint visant à évaluer les stocks de *Mullus barbatus*, de *Parapenaeus longirostris* et de *Merluccius merluccius* de la mer d'Alboran. L'évaluation s'est appuyée sur des modèles analytiques (LCA) (VIT), XSA et le modèle de production (modèle de Schaeffer) à partir des indices d'abondance des campagnes d'évaluation, des structures de taille de la pêche commerciale ainsi que des CPUE.

La conclusion de l'atelier est que les structures de taille des espèces disponibles pour l'Algérie (1er trimestre 2013 et aucune donnée pour 2014) sont insuffisantes pour permettre une évaluation et pour statuer sur le niveau d'exploitation des stocks étudiés.

Il est à déplorer à ce titre le retard accusé dans la mise en place du réseau national d'échantillonnage des débarquements des professionnels, principalement dû à des difficultés liées à l'insuffisance des moyens logistiques et des ressources financières. Ce manque de données sur les séries chronologiques des structures de taille et des indices d'abondance a eu pour effet de rendre délicate l'estimation du niveau d'exploitation des stocks halieutiques.

4. Etat des statistiques et du système d'information

4.1. Le dispositif statistique national

Le dispositif de collecte de données statistiques s'appuie sur des agents de collecte de données statistiques au niveau des ports de pêche, qui restituent les canevas renseignés aux antennes de pêche dont ils relèvent.

Les dites antennes relayent quotidiennement ces données aux Directions de Wilaya qui, à leur tour, les transmettent mensuellement à la Direction Centrale du MPRH, qui consolide, traite et analyse les statistiques recueillies.

La collecte de données statistiques des débarquements se fait de façon exhaustive par les agents collecteurs de deux manières :

-La méthode directe : L'agent assiste aux débarquements et relève les données directement sur le quai soit par :

- Le recensement : Le collecteur assiste à tous les débarquements et les dénombre sans exception tel qu'il est le cas des sardiniers.

- L'échantillonnage : Le collecteur assiste à quelques débarquements et fait une extrapolation sur le reste des chalutiers et petits métiers.

-La méthode indirecte : Dans ce cas l'agent n'assiste pas directement aux débarquements mais il obtient l'information par le biais d'un intermédiaire. Cet intermédiaire peut être les agents des gardes côtes, les mandataires, ou les professionnels.

Sur le plan juridique

Promulgation des textes suivants :

- Décret exécutif n°04-186 du 12 Joumada El Oula 1425 correspondant au 30 juin 2004 fixant les conditions et modalités de collecte et de transmission des informations et des données statistiques sur les captures et moyens de mis en œuvre tant en ce qui concerne les flottilles de pêche que les populations de pêcheurs, portant sur :

- la collecte et la transmission des informations et données statistiques, à la charge des DPRH territorialement compétentes, afférentes aux captures et moyens mis en œuvre; à la flottille de pêche; aux populations de pêcheurs.

- la collecte de toute information statistique d'ordre institutionnel relative aux activités de pêche et d'aquaculture auprès de l'autorité maritime locale, de l'autorité chargée de la gestion des ports de pêche, de l'autorité chargée des douanes et de l'autorité vétérinaire.

Les textes d'application cités ci-dessous, du décret exécutif suscité, fixent respectivement :

- les modalités d'intervention des agents statisticiens.
- les différentes catégories de documents et de formulaires de collecte et de transmission des informations statistiques ainsi que la périodicité de leur établissement et de leur transmission.

- Arrêté du 31 juillet 2007 fixant les modalités d'intervention des agents statisticiens.

- Arrêté du 31 juillet 2007 fixant les différentes catégories de documents et de formulaires de collecte et de transmission des informations statistiques ainsi que la périodicité de leur établissement et de leur transmission.

Ainsi que l'arrêté cité ci-dessous qui vient en application du décret exécutif n°03-481 du 13 décembre 2003 fixant les conditions et les modalités d'exercice de la pêche :

- Arrêté du 12 juin 2005 relatif au permis et à l'autorisation de pêche.

Sur le plan documents statistiques

Mise en place de nouveaux canevas qui cerne l'ensemble des aspects liés à l'activité de la pêche pour un suivi rigoureux nécessaire à l'élaboration des projections d'avenir (canevas décadaire, canevas Mensuel, canevas semestriel.

Sur le plan inventaires des bases de données existantes

-Réalisation d'un Recensement Général des Activités de la Pêche Maritime en collaboration avec l'Office National des Statistiques , qui a permis d'avoir une base de données nationales des activités de la pêche que soit en amont en matière des débarquements, de la flottille et des professionnels ou en aval, en matière d' infrastructures et de superstructures.

-Etude sur la consommation des poissons par les ménages : c'est une enquête réalisée sur un échantillon de 14000 ménages répartit sur l'ensemble du territoire national ;

-Mise en place d'un système d'échantillonnage des débarquements des pêches,

Assistance technique de la FAO au profit du MPRH pour la réalisation d'un projet pilote avec l'objectif de valider la faisabilité de l'introduction des procédures d'échantillonnage pour la collecte des données de la pêche maritime en Algérie. Trois wilayas représentatives des régions de l'ouest, du centre et de l'est ont été sélectionnées pour l'application d'un nouveau système basé sur l'échantillonnage (SSPAL « Système Statistique de la Pêche en Algérie »).

Les résultats du projet pilote ont été évalués par le projet TCP/ALG/3301 en Septembre 2012 en concluant que le système pilote pouvait constituer un modèle pour la mise en œuvre d'un programme statistique de la pêche côtière.

4.2. La gestion des données

Le secteur a mis en place une application développée sur Access dédiée à la saisie et traitement des données relatives aux débarquements des pêches, de l'aquaculture, de la flottille, des inscrits maritimes, sur les importations et les exportations, etc. Les données sont transmises chaque décadaires et chaque mois par voie électronique, puis transférés automatiquement à l'application Access.

Pour ce qui est des progrès de recherche et études sur les aspects socio-économiques, le MPRH a réalisé les enquêtes suivantes :

Enquête sur le circuit de la commercialisation en Algérie (2012/2013) avec un échantillon représentatif de différentes catégories intervenant dans le circuit de commercialisation (Armateurs, mandataires, grossistes, détaillant, concessionnaires (aquaculture).

Enquête socioéconomique sur la population des marins pêcheur en Algérie (2013) réalisée sur trois strates ; Patrons de pêche, Mécaniciens et Marins simples.

Enquête Nationale sur la pêche artisanale en Algérie (2014), réalisée sur les bateaux de pêche ayant une longueur inférieure à 7 m.

Ces enquêtes, ont permis au secteur de collecter des données socioéconomiques et les données relatives à l'effort de pêche,

L'Algérie transmet annuellement des données relatives à la pêche et à l'aquaculture à la FAO, à la CGPM (Task1, Statlant 37A , et SIPAM) ainsi qu'a l'OADA.

4.3. Données relatives à l'effort de pêche (flottille, collectif marin)

La collecte se fait auprès de :

- Directions de la Pêche et des Ressources Halieutiques (DPRH) des Wilayas (autorisations annuelles des pêches);
- L'autorité maritime locale (flottille, collectif marin….) ;
- L'autorité chargée de la gestion des ports de pêche (infrastructure et superstructure….);
- L'autorité chargée des douanes (importation, exportation…) ;
- - L'autorité vétérinaire (instance de contrôle…..).

5.État des programmes de recherche en cours

A ce jour, l'essentiel des données scientifiques disponibles sur l'état des pêcheries de la GSA04 (Algérie) proviennent des campagnes en mer d'évaluation directe des stocks, ALPEL et ALDEM et de statistiques officielles de production halieutique.

Le Programme **«** ALPEL **»** de campagnes en mer a pour but d'estimer par écho-intégration la biomasse des stocks de poissons petits pélagiques fréquentant les fonds entre 20 et 200m dans les limites de la GSA04. La fréquence des campagnes est d'une par an (hiver-printemps) et cible sept espèces de petits pélagiques : la Sardine (*Sardina pilchardus*), l'Anchois *(Engraulis encrasicolus*), la Sardinelle (*Sardinella aurita*), les Saurels (*Trachurus mediterraneus, T. trachurus, T. picturatus*), la Bogue (*Boops boops*).

En campagne, des échantillons biologiques sont récoltés par chalutage pélagique pour identifier les écho-traces les plus significatives puis traités *in-situ*. Parallèlement, des mesures de la température, salinité et teneur en chlorophylle de l'eau de surface sont effectuées et intégrés tout le long du parcours du bateau. Des profils CTD sont réalisés, à intervalles réguliers, sur l'ensemble de la colonne d'eau aux deux extrémités des radiales de prospection (au-dessus des fonds de 20m et de 200m).

Le programme des campagnes en mer « ALDEM » a pour objet l'évaluation des principaux stocks démersaux exploités dans la GSA04 suivant le Protocol MEDITS. 13 espèces sont ciblées par ce programme : les deux rougets *Mullus barbatus* et *Mullus surmuletus*, le merlu commun *Merluccius*

merluccius, le pageot *Pagellus acarne*, la Mostelle de fond *Phycis blennoïdes*, le merlan bleu *Micromesistius poutassou*, la Baudroie *Lophius spp*, la crevette rose *Parapenaeus longirostris*, la crevette rouge *Aristeus antennatus*, la langoustine *Nephrops norvegicus*, le poulpe *Octopus vulgaris*, le calmar *Loligo vulgaris* et la seiche *Sepia officinalis*.

De même, des mesures des paramètres physico-chimiques sont réalisées au niveau des zones de chalutage dans le but de caractériser les habitats des espèces étudiées et leurs préférences écologiques.

L'Enquête Nationale sur la pêche artisanale en Algérie : est une étude de caractérisation des petits métiers de la pêche, menée depuis 2014 sur le segment de flottille de longueur inférieure à 7 m. L'étude s'est poursuivie en 2015 et a été reconduite en 2016.

A ces deux programmes, vient s'ajouter depuis décembre 2015 un projet d'échantillonnage biologique des débarquements de la pêche commerciale. Ce programme concernera dans un premier temps trois ports répartis sur les trois façades maritimes de la GSA04 (Est, Centre et Ouest).

Les espèces retenues pour étude par le projet sont : *Mullus barbatus*, *Merluccius merluccius*, *Parapenaeus longirostris* et *Aristeus antennatus* pour la ressource démersale et *Sardina pilchardus*, *Engraulis encrasicolus* et *sardinella aurita* pour la pêcherie des petits pélagiques.

6. État d'avancement des études sociales en cours ou achevées durant l'intersession (économie, législation applicable, sociologie, etc.)

Durant l'intersession, une enquête socio-économique a été menée au niveau des ports de 06 wilayas (circonscriptions départementales) côtières, ciblant des échantillons représentatifs des différentes catégories socioprofessionnels de la communauté de pêcheurs.

L'enquête réalisée dans le cadre du projet national « PAGPA » (Plan d'Aménagement et de Gestion des Pêcheries Algériennes) vise à faire ressortir des indicateurs socio-économiques à même de permettre au gestionnaire de mieux anticiper les effets des mesures de gestions et de les adapter au mieux pour protéger les catégories les plus vulnérables, tout en préservant la ressource et l'outil de production.

Les champs d'investigation couverts par l'enquête sont :

- La caractérisation sur le plan économique de l'outil de production (segment de flottille, engin de pêche, équipage…etc.).
- La caractérisation socioprofessionnelle des différentes populations de marins pêcheurs
- L'enquête se poursuivra en 2016 pour couvrir l'ensemble des 08 wilayas côtières restantes.

7. Etudes environnementales (marines) en cours

Parmi les actions menées entre 2012 et 2014 qui ont contribué positivement au renforcement des conditions de bonne gestion environnementale du secteur, on notera la mise en fonctionnement du Laboratoire National de Contrôle et d'Analyse des Produits de la Pêche et de l'Aquaculture et de la Salubrité des Milieux.

Parmi les autres actions publiques positives on retiendra, également :

- La prise en charge intersectorielle relatif à la dépollution de la baie de Bou Ismail ;
- La mise en place de commissions au niveau des Directions de la Pêche et de l'Aquaculture (DPRH) des Wilayas chargées du suivi périodique de la salubrité des milieux aquatiques et des établissements aquacoles et de la traçabilité des intrants ;
- L'installation officielle du groupe interministériel, chargé de la mise en place d'un dispositif national de prévention et de suivi de la salubrité des zones de pêche et d'aquaculture ;
- Réseaux de contrôle et surveillance (phytoplanctons toxiques)
- Surveillance et contrôle de la posidonie oceanica/DPRHA
- L'organisation de l'opération ports bleus au niveau de l'ensemble des ports de pêche des Wilayas à façade maritime.
- La redynamisation du Comité Sectoriel Permanent de la Recherche Scientifique et du Développement Technologique (CSPRSDT).

D'un point de vue juridique

La réglementation algérienne a abordé les principaux points en matière de protection de l'environnement.

Avec au plan international :

- la ratification de plusieurs Conventions, Protocoles et Accords (ex. : Convention sur la diversité biologique, signée à Rio de Janeiro le 5 juin 1992 et ratifiée en 1995 ;
- Convention de Stockholm sur les polluants organiques persistants, adopté à Stockholm 22 mai 2001 et ratifié en 7 juin 2006 ;
- la Convention de Bâle sur le contrôle des mouvements transfrontières de déchets dangereux et leurs élimination, ratifiée en 1998 ; la Convention de Bonn sur la conservation de espèces migratrices de la faune sauvage, ratifiée en 2005 ;
- la Convention de RAMSAR relative aux Zones Humides, ratifiée le 11 décembre 1982 ; la Convention de Washington sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (convention de la CITES à laquelle l'Algérie à adhéré en 1982) ; la Convention africaine sur la conservation de la nature et des ressources naturelles (dite convention d'Alger) ratifiée en 1982.
- Protocole relatif aux aires spécialement protégées et à la diversité biologique en méditerranée, signé à Barcelone le 10 juin 1995, Accord sur la Conservation des cétacés de la mer noire, de la méditerranée et de la zone atlantique adjacente, signé à Monaco 24 novembre 1996 et ratifié le 19 mars 2007 ;
- Adhésion de la République algérienne démocratique et populaire à la convention internationale sur l'intervention en haute mer en cas d'accident entraînant ou pouvant entraîner une pollution par les hydrocarbures, adoptée à Bruxelles le 29 novembre 1969 et son protocole, Londres le 2 novembre 1973,…).

Aussi, le secteur s'attelle à mener les actions suivantes :

- la standardisation des protocoles d'échantillonnage, de transport, d'emballage et de conservation des échantillons (eau, air, sol, faune, flore et autres), au niveau de l'ensemble du territoire national, avec la participation des autres secteurs institutionnels.
- la standardisation des protocoles d'analyses au laboratoire qui devrait être respectée par l'ensemble des acteurs nationaux, en collaboration avec les autres secteurs institutionnels (Laboratoires, Centres de recherches et autres).
- Les types de paramètres à analyser avec détermination des seuils limites de contamination, en fonction du zonage de la propriété, du terrain ou de l'espace en question.
- L'efficacité dans l'application de la loi en matière de taxes environnementales qui peuvent contribuer à la diminution substantielle de la pollution au niveau de la mer, des oueds et des plans d'eau douce et espaces environnants.
- Les règles concernant la gestion environnementale détaillée des activités de pêche et d'aquaculture pour chaque professionnel du secteur.
- Les normes nationales concernant les seuils limites de contamination (niveaux agricole, résidentiel, commercial et industriel);
- Les mesures d'hygiène et de salubrité, applicables aux produits de la pêche et de l'aquaculture ;
- La mise aux normes de la réglementation au vue des standards internationaux.

D'un point de vue administratif

L'organisation des services spécialisés en matière de suivi et de contrôle de l'environnement, de gestion administrative des différents dossiers, de services de formation et de sensibilisation des professionnels de la pêche et de l'aquaculture ainsi que des moyens humains et matériels à mobiliser.

Les efforts fournis par l'Algérie dans le domaine de l'aménagement, de la protection et de la valorisation du littoral, ont été principalement couronnés par la mise en place de la Loi Littoral 02-02. Celle-ci, encadre l'utilisation et la valorisation de l'espace côtier et veille au respect des vocations des

zones côtières. Y sont rattachés plusieurs décrets d'exécution dont les résultats peuvent conduire à une meilleure réflexion sur les sites d'implantations portuaires et aquacoles. Parmi ces instruments :

- Les Plans d'Aménagement Côtier (PAC, Décret exécutif n° 09-114 du 7 avril 2009). En application des dispositions de l'article 26 de la loi n° 02-02 du 5 février 2002;
- Les Etudes d'Aménagement du Littoral (EAL).Au sens de l'article n°2 du décret exécutif n° 07-206, il est institué l'élaboration d'une Etude d'Aménagement du Littoral;.
- Le classement des zones côtières sensibles. En application des dispositions des articles 29 et 30 de la loi littoral (02-02), le décret exécutif n° 09-88 définit les modalités de classement des zones critiques du littoral;
- Les notices ou études d'impact sur l'environnement constitue un élément très concluant dans les études d'implantation et de conception d'ouvrages portuaires et de fermes aquacoles. Au sens du décret exécutif n° 07-145 l'étude (ou la notice) d'impact vise à déterminer l'insertion d'un projet dans son environnement en identifiant et en évaluant les effets directs et/ou indirects du projet, et vérifie la prise en charge des prescriptions relatives à la protection de l'environnement par le projet concerné.
- Aménagement portuaire, Convention Etat-Entreprise, l'objet de cette convention est de préciser les droits et obligations de l'Etat et du bénéficiaire de l'affectation des ports et abris de pêche (Entreprise) ainsi que les conditions, d'exploitation et de développement de ces ouvrages, installations et équipements qui y sont implantés.

En matière de données d'océanographie physique, plusieurs institutions se répartissent les charges, parmi lesquelles :

- Le Service Hydrographique des Forces Navales (SHFN).
- L'Agence Spatiale Algérienne (ASAL).
- L'Office Nationale de la Météorologie (ONM).
- Le Ministère des Travaux Publics (MTP).
- L'Ecole Nationale Supérieure des Sciences de la Mer et de l'Aménagement du Littoral (ENSSMAL).
- Le Conseil National de l'Information Géographique (CNIG).
- L'Observation National de l'Environnement et du Développement Durable (ONEDD).
- Commissariat National du Litttoral (CNL)

Les principales actions menées durant l'intersession qui ont contribué positivement au renforcement des conditions de bonne gestion environnementale du secteur, on notera la mise en place de deux réseaux de compétences RESANAL et ALPHyNET.

RESNAL pour réseau national de laboratoire d'analyse pour la surveillance des milieux aquatiques et ALPHyNET qui est le réseau du phytoplancton et des algues toxique, sont nés de la nécessité de renforcer l'expertise algérienne dans le domaine de la surveillance des milieux aquatiques à travers la mise en réseau des compétences et des capacités de recherche de plusieurs établissements publics.

Parmi les actions concrétisées durant l'intersession et qui ont une incidence certaine sur la bonne gestion environnementale des milieux marins, nous citons les plus importantes :

- Campagne SPHyTAL (Salubrité et Phytoplancton de la région de Tipaza et Alger) réalisée dans le cadre de la mise en application des deux réseaux de surveillances installé.
- Deux campagnes écosystémiques réalisées au niveau de la zone ouest et centre algérienne pour caractériser les zones de pêche et d'aquaculture afin d'évaluer l'impact de l'environnement sur les stocks prioritaires.
- Suivit et étude des espèces exotiques issues de migrations lessepsiennes, et notamment l'espèce Lagocephalus sceleratus qui a connu un épisode de forte apparition en 2015 au niveau de la côte algérienne.
- Organisation de deux séminaires nationaux autour de la thématique de la promotion de la pêche et de l'aquaculture respectueuses de la biodiversité. Les aspects réglementaires et économiques à même d'encadrer le développement de la pêche et de l'aquaculture ont été débattus par des experts de différents secteurs (pêches, environnement, transport et tourisme)

dans le cadre d'une stratégie de développement durable garantissant la protection des écosystèmes naturels et la préservation de la biodiversité.

8. Implication dans les activités des projets régionaux de la FAO

Membre de l'organisation des Nations Unies depuis 1962, l'Algérie ne cesse de collaborer avec l'Organisation des Nations Unies pour l'Alimentation et l'Agriculture FAO et se retrouve de ce fait activement impliqué dans plusieurs projets régionaux sous couvert de l'Organisation.

Dans le domaine des pêches, l'Algérie est impliqué dans le projet **FAO-COPEMED II,** au même titre que les sept autres pays de la méditerranée centrale et occidentale (Libye, Tunisie, Malte, Italie, France Espagne et Maroc).

Au sein de ce projet, qui se veut être la suite logique de la phase I du projet FAO-COPEMED I, l'Algérie active notamment dans :

- Groupe de travail sur les petits pélagiques de la mer d'Alboran
- Groupe de travail sous régional sur les espèces de petits pélagiques et démersales (en appui à la CGPM).
- Projet d'étude des effets de la mise en œuvre de la maille carrée de 40 mm dans la pêche au chalut.
- Projet d'étude des indicateurs socio-économiques du secteur des pêches en Méditerranée centrale et occidentale.
- Projet pêche artisanale en Méditerranée centrale et occidentale.

9. Mesures de gestion

En 2014, l'Algérie a inscrit dans son programme de développement du secteur des pêches un projet relatif à l'élaboration d'un Plan d'Aménagement et de Gestion des Pêcheries Algériennes (PAGPA). Cette étude qui est toujours en cours de réalisation à pour objet la conception d'un Système d'Information Géographique (SIG) dédié à la gestion des pêcheries nationales et intégrant les principaux aspects de l'activité de la pêche :

- état de la ressource,
- outil de production,
- infrastructures portuaires,
- cartographie de l'effort de pêche via le dispositif de suivi de control et de surveillance des navires de pêches (REC.MCS-CGPM/33/2009/7).
- données socio-économiques et de réglementation des pêches
- paramètres environnementaux,

Élaboration d'un plan d'aménagement de l'activité pêche faisant ressortir :

- les limites des zones sensibles à protéger,
- les zones réglementaires d'activité des différents types de métier,
- les zones de conflit potentiel entre professionnels de la pêche, mais aussi avec les autres utilisateurs de l'espace maritime,
- et la cartographie de l'effort de pêche national.

10. Mesures de protection environnementale

Sous couvert d'application des principes de l'approche de précaution, la création d'aires marines protégées en Algérie sont envisagées (AREA – ED, 2014 : Aires Marines et Côtières Protégées en Algérie). Il en existe une seule à l'heure actuelle ayant une existence légale : les îles Habibas. Elle a été créée le 29 mars 2003 par décret n°3-147 et bénéficie du classement national de réserve naturelle marine.

Aussi, des essais de mise en place de récifs artificiels par des associations environnementales en collaboration avec des organismes internationales.

Des Aires Spécialement Protégées d'intérêt Méditerranéen (ASPIM) ont été inscrite en 2005. D'autres AMP sont en cours de classement. Elles couvrent l'ensemble de la façade maritime avec au moins une par Wilaya côtière.

Les deux catégories d'espaces retenus sont :

Les espaces insulaires : Représentés par le complexe insulaire de l'Ouest algérien, dans l'axe Oran - Béni-Saf. Il comprend d'Est en Ouest :

- - L'Île Plane;
- - Les îles Habibas; et,
- - L'îlot Rachgoun.

L'île de Cavallo (Wilaya de Jijel) est également proposée dans le cadre de la réserve de Taza.

Les espaces mixtes (marins- terrestres) : Incluant pour la partie Est des côtes Algériennes les sites de:

- - Cap de Garde (Annaba);
- - la région d'El-Kala;
- - la presqu'île de Collo;
- - les zones de Taza (Wilaya de Jijel). (Chakour S., 2012. Étude socio-économique pour la future aire marine du Parc National de Taza. Commandée par WWF MedPO. 50 pp. + annexes) ;
- - et le Gouraya dans la wilaya de Bejaïa.

Pour le secteur centre, trois espaces sont proposés:

- - l'aire marine de Tigzirt (Tizi-Ouzou);
- - la zone du Chenoua (Tipaza);
- - l'île Aguelli (Reghaia).

Au niveau international, pour les Aires Spécialement Protégées d'Importance Méditerranéenne (ASPIM), les sites proposés sont :

- - La Réserve marine des bancs des kabyles (Jijel);
- - La Réserve marine du Cap de Garde (Annaba);
- - La Réserve naturelle marine des îles Habibas (Oran); et,
- - L'Ile de Rachgoun (Ain-Temouchent).

Au regard des Recommandations GFCM

<u>Recommandation GFCM/35/2011/2 sur l'exploitation du corail rouge dans la zone sous compétence de la CGPM</u>

Dans le cadre de la reprise des activités de pêche au corail, il a été mis en place un nouveau dispositif d'encadrement législatif et réglementaire apte à garantir la préservation de la ressource et son exploitation durable tout en assurant une valorisation optimale de la ressource.

Ce dispositif s'articule autour de deux séries d'actions pour sa mise en œuvre :

- une reprise raisonnée et prudente des activités de pêche au corail, d'une part,
- un rehaussement du degré de gravité des infractions et durcissement des sanctions liées au non respect des dispositions législative et réglementaire régissant l'activité de la pêche au corail.

A ce titre un modificatif et complément des dispositions de la loi cadre n°01-11 relative à la pêche et à l'aquaculture a été proposé comprenant les principes de :

- La valorisation du corail au niveau national par l'interdiction de son exportation à l'état brut et semi fini ;
- Sa traçabilité à partir de son exploitation, de sa transformation jusqu'à sa commercialisation à l'état brut et semi fini ;

- Un rehaussement du degré de gravité des infractions liées à la pêche au corail avec durcissement des peines et des sanctions ;
- Un renforcement du dispositif de surveillance et de suivi par la mise en place d'un dispositif de positionnement des navires corailleur à l'instar des navires armés et équipés à la pêche (art 20 bis de la loi n°01-11 relative à la pêche et à l'aquaculture, modifiée et complétée.

En matière de réouverture de la pêche, un nouveau cadre réglementaire régissant la pêche au corail a été mis en place, il y a eu promulgation du décret exécutif n°15-231du 26 août 2015 fixant les conditions et les modalités d'exercice de la pêche au corail.

Ce décret fixe les conditions et les modalités applicables à l'exercice de la pêche au corail ainsi que les obligations définies par les clauses du cahier des charges.

Les arrêtés d'application du décret exécutif suscité, sont en cours de signature pour certains et en voie de publication pour les autres. Ces textes sont :

- Arrêté fixant les termes et le contenu du registre de plongée pour l'exploitation du corail ;
- Arrêté fixant les modalités du programme d'exploitation du corail ;
- Arrêté fixant les modalités de la déclaration sommaire du corail pêché ;
- Arrêté fixant les modalités d'ouverture et de fermeture des périmètres d'exploitation du corail ;
- Arrêté interministériel fixant la création, l'organisation et le fonctionnement de la commission locale d'identification du corail ;
- Arrêté interministériel définissant les conditions ainsi que les modalités de la mise en œuvre du dispositif de traçabilité du corail brut et semi-fini

GFCM/35/2011/3 sur la réduction des prises accidentelles d'oiseaux marins par la pêche dans la zone sous compétence de la CGPM

GFCM/35/2011/4 sur les prises accidentelles de tortues marines par la pêche dans la zone sous compétence de la CGPM

GFCM/36/2012/2 sur l'atténuation des prises accidentelles de cétacés dans la zone sous compétence de la CGPM

GFCM/36/2012/3 sur les mesures de gestion des pêcheries pour la conservation des requins et raies dans la zone sous compétence de la CGPM

Un certain nombre d'actions ont été initiées : lancement en 2014 d'une enquête socioéconomique nationale et un recensement général des engins de pêche à risque, notamment les filets maillant.

Dans le cadre de la ratification de l'Accord ACCOBAMS et en conformité avec le Mémorandum d'Entente entre la CGPM et l'ACCOBAMS sur la réduction des interactions entre les cétacés et pêche, et sur la collecte des données scientifiques et techniques y afférentes, l'Algérie a inscrit deux études.

La première financée par la fondation MAVA, intitulée «*Etude préliminaire sur l'étendue des captures accidentelles et de la déprédation le long des côtes algériennes*» (Échéancier 2015-2017) vise :

- l'identification des interactions entre activité de la pêche et les espèces marines menacées tel que les cétacés, requins, tortues et oiseaux marins ;
- l'évaluation des impacts socio-économiques générés par le phénomène de déprédation ;
- proposition de mesures à adopter aux fins d'atténuer les interactions négatives, de protéger et conserver les espèces menacées en coordination avec la profession ;
- la mise en place d'un dispositif de suivi.

Dans ce cadre, une première étape a été lancée au niveau d'un certain nombre de points de débarquement avec pour objectif de dresser l'inventaire exhaustif des espèces accidentelles capturées par un échantillon de la flottille de pêche professionnelle. Cette campagne vise à mettre à jour les guides d'identification des espèces marines au profit des collecteurs pour une meilleure précision dans la collecte des données statistique.

La deuxième intitulée « Survey initiative » est un projet visant le recensement des populations de cétacés dans l'espace maritime sous juridiction nationale (GSA04). Le lancement de l'étude est prévu pour 2017.

12. Propositions de futurs programmes de recherche

- Evaluation bioéconomique des impacts des différents scénarii de gestion des pêcheries Algériennes retenues dans le cadre du Plan d'Aménagement et de Gestion des Pêcheries Algériennes PAGPA.
- Appui au projet "Observatoire socioéconomique" notamment pour compléter l'application d'échantillonnage statistique et se conformer aux exigences de la matrice TASK1 de la CGPM. L'objectif du projet est la mise en place de la version web de l'Application SSPAL (Système Statistique de la Pêche en Algérie).
- Assistance pour la mise en place de récifs artificiels et étude des impacts sur la ressource halieutique.
- Socio-économie de la pêche artisanale: vulnérabilité et perspectives de développement intégré de l'activité de pêche la plus répandue en Algérie.

CROATIA/CROATIE

Description of the fisheries

Croatian fisheries are carried out within the GSA 17 – Northern Adriatic and GSA 18 – Southern Adriatic. Majority of catches are realized within the GSA 17. Fisheries are divided in several main segments – small pelagic (purse seine) fishery, bottom trawl and other towed fishery, fixed gear fishery, bluefin tuna fishery and coastal (artisanal) fishery. A total of 109 different commercial species were landed in 2014. The most important ones in terms of quantity are listed in the tables below. The trends in terms of quantities landed have been stable over time, with the share of small pelagic species by far dominating the overall structure.

Total landings by main targeted species (in tons) in 2014:

	2014
Sardina pilchardus	56,942.81
Engraulis encrasicolus	9,114.94
Scomber japonicus	637.94
Mullus barbatus	1,165.71
Merluccius merluccius	894.99
Eledone spp	669.18
Trachurus spp	234.45
Nephrops norvegicus	344.63
Spicara spp	3.57
Octopus vulgaris	309.71
Sepia officinalis	200.64
Solea solea	193.70
Boops boops	74.16
Sprattus sprattus	47.63
Parapenaeus longirostris	366.15
Oblada melanura	33.10
Loligo vulgaris	214.04
Pagellus erythrinus	68.77
Sarpa salpa	58.04
Triglidae	81.99
Lophius spp.	92.01

Note: Total landings in 2014 in Croatia were 79,396.27 tons.

Vessels registered for commercial fishing on date 01.03.2016. (source: Croatian Fleet register)

number of vessels	7705	
LOA (range and average)	**number**	
< 12 metres	7076	
12 - 24 metres	505	
more than 24 metres	124	
Total kW + GT	51637,55 GT	418625,24 KW

Note: In the data provided vessels from small scale artesanal fisheries fleet for personal needs are included.

Status of stocks of priority species

Small pelagic

SAM assessment tuned by acoustic was preformed within AdriaMed Project framework (Rome, 2015: The AdriaMed Working Group on Small Pelagic Fishery Resources in the Adriatic Sea) and presented to subregional committee for the Adriatic Sea (SRC-AS) (Rome, 2015).

Outputs of these assessments demonstrated that sardine in GSA 17 and 18 Bcurrent is higher than Blim and slightly below precautionary reference point of Bpa with positive trend. Fishing mortality (Fcur) is 1,09, and fishing mortality corresponding to MSY was set at 0,71.

For anchovy stock in the GSA 17 and 18 SAM assessment demonstrate that current biomass is above limit value, but slightly below precautionary reference point. WG has set the current F value at 0,99, and fishing mortality that corresponds to MSY to 0,55. The working group recommends reducing fishing mortality for both species.

Demersal resources

Assessment of common sole (*Solea solea*) stock in GSA 17 has been performed and presented to SCSA (Rome, 2015). According to this assessment, as in previous year, recent state of stock is characterized as "overfished". Management advice is similar as the previous years: reduction of fishing mortality, especially by rapido trawling along western Adriatic coast. Also - stock assessment document has been performed and presented to the SCSA for hake (*Merluccius merluccius*) according which stock is also characterized as overfished and management advice is to reduce fishing mortality.

According to the scientific surveys MEDITS, long-term trends in biomass index in Croatian fishing sea shows high fluctuation with negative changes in last few years for the most stocks as, Norway lobster, selachians, some cephalopos etc.. Those changes are visible primarily in the decrease in the biomass of recruits in the extraterritorial waters in the open Adriatic Sea (Jabuka pit) which are known as spawning and nursery areas for majority of demersal stocks. This was recognised and no-take zone was set in the Jabuka pit and this ares has been completely closed for bottom trawling. This restriction has been introduced preliminary for a period of one year, with the possible (and expected) further extension based upon updated scientific advice. Situation with the most important demersal stock as red mullet show increase in the index of biomass and index of abundance, mainly due to the good recruitment in the last year.

Status of the statistics and information system

Croatian Fishing Fleet Register is an electronically-kept register, now web-based, in which relevant data on vessels and vessel activities are registered. At the moment, data are being entered and cross-checked. The Fleet Register is a centralized structure, where field offices enter the data which are all immediately recorded and stored in a central database. Data on the vessels (GT, kW, technical elements) are obtained from official documents issued by other relevant institutions (Ministry of

Maritime Affairs, Transport and Infrastructure - Croatian Register of Shipping and Croatian Register of Boats).

Republic of Croatia has established links between responsible authorities (Croatian Bureau of Statistics and the MoA) in order to meet the relevant requirement and secure the delivery of statistical data in a unified manner.

Croatia has since 2000 been implementing the obligation of all license holders to keep and submit the logbooks on fishing activities. According to the provisions of the national regulation, all license holders operating with fishing vessels equal to or longer than 10 m have to keep and submit the logbook. Logbook contains the data on catch and landing per species and quantity. Data on catches over 10 kg has to be entered into the logbook for all species. License holders of vessels below 10 m LoA are obliged by national regulation to submit monthly fishing reports of their fishing activities; therefore the entire commercial fleet is covered. Croatia has in 2011 embarked on installation of electronic logbooks on all its vessels over 15 m in length (since 1st.January 2012 the system is operational on all vessels over 18 m LoA). The process is continuing. The electronic logbook was installed to all vessels above 12 m LoA by the end of 2014. It is planned to install electronic logbooks to all active purse seiners and trawlers during 2016.

First sales of catches are regulated as has been explained in the report for previous years.

All sales data are reported via a web-based application in an electronic form. These data include relevant information on the vessel and the buyer, as well as on prices and quantities. Average prices of marine species are calculated using prices and quantities collected via sales notes.

Currently, Croatia is developing a central DCF-GFCM database with information on technical and socio-economic data on all vessels included in the Fleet Register in each referent year. By the end of 2016, linking of databases with the Institute of Oceanography and Fisheries databases is planned to incorporate biological data in the central DCF-GFCM database. All relevant statistics in regards to DCF and GFCM rules are incorporated within the central database in order to facilitate the preparation of reports.

Status of research in progress

Monitoring of small pelagic stock by acoustic survey as independent evaluations of stocks abundance as well as collection of biological and fisheries related data has been undertaken through national data collection framework (DCF). Also, through DCF other fisheries segments have been monitored.

Monitoring of demersal stocks has been continued, aiming at status evaluation of demersal resources in the Croatian fishing sea. Fisheries and biological data collection includes on board sampling and laboratory analysis, sampling on the landing ports and gathering basic socio-economic data.

Monitoring of coastal fisheries includes fisheries biological sampling on most important fishing gears (trammel and gill nets, as well as long lines and traps). Croatian scientists are included in project *"MEDITS" Mediterranean International Bottom Trawl Survey* permanently since 1996.

All monitoring projects have in 2015 been included in the data collection framework for according to EU regulation in force (DCF).

Project *"SOLEMON" Evaluation of stock of Common Sole (Solea solea) and other flatfish in the Adriatic sea* is an international project under umbrella of FAO AdriaMed for evaluations of common sole and other flatfish using "beam trawl" (rapido).

Project *"UWTV Survey"* is an international project under umbrella of FAO AdriaMed for alternative assessment of biomass stock of Norway lobster in the Jabuka/Pommo pit using underwater camera. Survey has been conducted since 2011 together with scientists from Ancona.

DeFishGear project - Derelict Fishing Gear Project in the Adriatic Sea (DeFishGear) is addressing wider context of the marine litter issue to ultimately provide a key strategic input on a regional level. The overarching aim of the project DeFishGear is the reduction of marine litter in Adriatic Sea. It will be accomplished through the first assessment of marine litter and the establishment of a regional

network of experts who will continue to collaborate among themselves in order to ensure a sustainable joint management of marine litter in the Adriatic Sea.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.).

National socio-economic survey is fully in line with the EU Data Collection Framework. The socio-economic data collected within the DCF is adapted to conform to the GFCM Task 1.

Marine environmental studies in progress

Croatia has been conducting a permanent national monitoring project which includes monitoring of biotic and abiotic parameters relevant to the marine environmental and renewable resources. Environmental data related to the marine ecosystems are also gathered in the framework of monitoring programs for fishery resources.

Involvement in activities of FAO Regional Projects

Croatia is fully involved in all activities conducting within Regional FAO AdriaMed project.

Management measures

All recommendations on bluefin tuna and swordfish in Mediterranean Sea as adopted by ICCAT and GFCM are fully incorporated in Croatian legislation and have been implemented in the inter-sessional period.

Environment protection measures

Croatia has three National parks and two Nature parks in the coastal area. In the are of national park all types of commercial fishery are prohibited, while on the are of natural parks fishing is taking place under special conditions set by the Park. In order to protect special habitats important for protection of juveniles, fishing is prohibited on the areas of river estuaries. Besides that, there are large areas under NATURA 2000 with limited fishing activities in order to protect Posidonia habitats...

With regard to: Recommendation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area

Provisions of GFCM related to the red coral are incorporated into Croatian legislation.

Traditional areas for collecting red coral are in the territorial waters of the Croatian open fishing sea mostly in central and southern parts at depths greater than 50 m.

With regard to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

Provisions of EU regulations on the incidental by-catch of seabirds are incorporated in Croatian legislation. There was no by-catch of seabirds reported in 2015.

With regard to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

Provisions of EU regulations on the incidental by-catch of sea turtles are incorporated in Croatian legislation and they are under strict protection in Croatia. There was no by-catch or accidental catch of sea turtles reported in 2015.

With regard to: Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area

Provisions of EU regulations on the protection of Mediterranean monk seal are incorporated in Croatian legislation and they are under strict protection in Croatia. There was no accidental catch of monk seal reported in 2015, and there are no known active habitat caves.

With regard to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

No by-catches of cetaceans were recorded in 2014.

With regard to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

Ban on use bottom-set nets to catch certain species of sharks including: *Hexanchus griseus*, *Cetorhinus maximus* and all species of the families *Alopiidae*, *Carcharhinidae*, *Sphyrnidae* and *Lamnidae*, is in force since 2010. There were no recorded by-catches of Annex II or III shark species.

Proposal for future research programmes

Support from Regional FAO AdriaMed Project related to fisheries research and management within Adriatic Sea (GSA 17&18) has been very important. It is deemed necessary to continue with the activities in this framework.

Consideration should be given to international monitoring of demersal resources in Jabuka Pit. Jabuka/Pommo Pit is a principal fishing ground in the Adriatic Sea for Croatian and Italian bottom trawl fisheries fleet.

Concerning small pelagic fish species, particularly sardine and anchovy, determination and monitoring of spawning grounds as well as nursery area is necessary; hence those studies should be continued.

CYPRUS/CHYPRE

Section 1 - Description of Fisheries

1A Fishing Grounds (GSAs)	14 - Gulf of Gabes, 15 - Malta Island, 20 - Eastern Ionian Sea, 21 - Southern Ionian Sea, 22 - Aegean Sea, 24 - North Levant, 25 - Cyprus Island, 26 - South Levant, 27 - Levant
1B Landing Reference Year	2014

Species	Species Group	Landing (Tonnes)
		1326.6

1C Fleet Information

Total Vessels	861
Total Vessels (Previous Year)	926
Reference Date	31/12/2014
Total kW	38,612
Total kW (Previous Year)	39,966

Total GT	3,644
Total GT (Previous Year)	3,753
AVG LOA	
Min LOA	4
Max LOA	28
AVG LOA (Previous Year)	7.2

Section 2 - Status of Stock for Priority Species

Reference Year	2014
Species	*Boops boops* (Bogue)
GSAs	25 - Cyprus Island

Stock Status	
By Biomass	
By Fishing Mortality	In overexploitation (F > FRP)
By Biomass and Fishing Mortality	In overexploitation (F > FRP)
Presented to GFCM WG?	YES - Validated
Presented to any other forum?	NO

Reference Year	2014
Species	*Mullus barbatus* (Red mullet)
GSAs	25 - Cyprus Island

Stock Status	
By Biomass	
By Fishing Mortality	In overexploitation (F > FRP)
By Biomass and Fishing Mortality	In overexploitation (F > FRP)
Presented to GFCM WG?	YES - Validated
Presented to any other forum?	NO

Section 3 - Status of Statistics and Information Systems

The authority responsible for the collection and management of fishery statistics in Cyprus is the Department of Fisheries and Marine Research (DFMR) of the Ministry of Agriculture, Natural Resources and Environment.

The data collected by the fishery statistical system are used to fulfill the following objectives:

a) To serve as a guide for management purposes, i.e. to direct the DFMR to decide on the introduction of measures and regulations for the fishery

1. To provide statistical information to other bodies: The data are transmitted to the International Organizations and Agencies, where Cyprus has the legal obligation to send, i.e. FAO, GFCM, ICCAT and the European Union.
2. To be analysed for scientific purposes: Along with length distributions collected by sampling, the data are used to evaluate the stocks of the five most important commercial demersal fish species.
   The Cyprus National Database for the collection and storage of data in the fisheries sector is comprised of the following databases: i).the Data Collection Network System (Data Transmission), ii) the Central Database iii) the Fishing Vessel Fleet Register (FVR) and iv) the Electronic Reporting System (ERS). The database facilitates the storage of data and its transmission to the relevant International bodies.
   The system comprises a series of sub-databases which include the following data: Fishing capacity, Fishing effort, Catches (Landings and Discards), Catch per Unit Effort data series, Biological Measurements, Economic data on the fishing fleet and processing industry. Updates of the National Database are made whenever necessary, for incorporating new requirements.
   All the data collected by the National database are dealt with confidence. Data access is limited to authorised personnel.

National entities or authories in charge for the collection of data pertaining the GFCM DCRF Tasks:

Task I	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task II	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task III	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task IV	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task V	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task VI	DEPARTMENT OF FISHERIES AND MARINE RESEARCH
Task VII	DEPARTMENT OF FISHERIES AND MARINE RESEARCH

Section 4 - Status of Research in Progress

Research or Project Title National Fisheries Data Collection Programme

Field 2014

From 2005 **To** 2016

Description

Status of research in progress

Cyprus implements annually the National Fisheries Data Collection Programme, in accordance with the Community Data Collection Framework - DCF (Regulations (EC) 199/2008 and (EC) 665/2008, Decision 93/2010/EU). The Department of Fisheries and Marine Research is the national authority of Cyprus responsible for the implementation of the DCF. Being the only beneficiary for the data collection, it is engaged with all DCF activities.

The national programme contains the following modules:

1. Module of evaluation of the fishing sector:

(a) Section for the collection of economic variables;

(b) Section for the collection of biological variables;

(c) Section for the collection of transversal variables;

(d) Section for research surveys at sea.

2. Module of evaluation of the economic situation of the aquaculture and processing industry sectors:

(a) Section for the collection of economic data for the aquaculture sector;

(b) Section for the collection of economic data for the processing industry.

3. Module of evaluation of the effects of the fishing sector on the marine ecosystem

4. Module for management and use of the data covered by the data collection framework

Particularly for the biological sampling, Cyprus collects information for the evaluation of length and age composition of landings, and the estimation of biological parameters (growth, maturity) for a number of demersal and large pelagic species.

During the intersessional period, the GFCM demersal priority species for which biological sampling was performed (for collecting length, age, maturity and sex data) are: *Boops boops, Mullus barbatus, Mullus surmuletus, Pagellus erythrinus*. Sampling was also conducted for Spicara smaris, which is of great national commercial importance. Furthermore, systematic length sampling was performed for an additional number of species, including *Sparisoma cretense, Siganus rivulatus, Siganus luridus, Merluccius merluccius, Pagrus pagrus, Diplodus sargus, Diplodus vulgaris, Serranus cabrilla* and *Spicara maena*.

Biological sampling was also conducted for the ICCAT and GFCM priority species *Thunnus alalunga, Thunnus thynnus* and *Xiphias gladius*. Data have been submitted to ICCAT, contributing to the assessment of the status of the stocks.

Discards sampling is also performed annually for the evaluation of discard rates from the different fleet segments. During discard sampling, all discard species are recorded.

The research survey at sea performed under the DCF is the International Bottom Trawl Survey in the Mediterranean (MEDITS) around Cyprus waters (GSA 25). The aim of the survey is to collect biological data from the Cyprus demersal species and creating time series of abundance and biomass indices and length frequency distributions. The trends of these data provide information on the status of the Cyprus fishery resources, which may contribute to their management.

Section 5 - Involvement in activities of FAO regional projects

Title	Involvements in activities of FAO Regional Projects
Year	2014
Type of Activity	Stock assessment,Socio-economics
Regional Projects	EASTMED
Brief Description	The Department of Fisheries and Marine Research participates in the EastMed regional project and activities.

Section 6 - Management Measures

GFCM Decisions	REC.MCS-GFCM/33/2009/6, REC.DIR-GFCM/33/2009/3, REC.CM-GFCM/30/2006/2, REC.DIR-GFCM/33/2009/5, REC.CM-GFCM/33/2009/2, REC.CM-GFCM/33/2009/1
Title or Reference to National Law	Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (Ninth Modification of Annexes of Law - Decree 51/2014, REGULATION (EU) No 1343/2011
Legislation Date	27/12/2013
Entry into force	This Law enters into force on the date of publication in the Official Gazette
Kind of text	Law

Abstract

The National and Community legislation provide for a number of management measures for the regulation of the Cyprus fisheries, including:

- Restrictive access to fisheries (limited number of licenses for each fleet segment)
- Effort control: Restrictions on the use of fishing gears (quantities, soaking time, depth and distance off ` shore)
- Establishment of Fishing Protected Areas (Implementation of (EC) Regulation 1967/2006)
- Regulation of fishing capacity (scrapping, assignment for other uses than fishing, engine restrictions, ceiling of the fleet vessel register)
- Minimum sizes of marine organisms (restriction of catching, retain on board, transship, landing, transfer, store, sell and market)
- Technical conservation measures: minimum mesh sizes
- Seasonal and area closures

Moreover, the DFMR formulated and implements a Fisheries Management Plan for the Cyprus Fleet targeting demersal and mesopelagic stocks in the coastal zone of the Republic of Cyprus. The Plan includes measures which are aimed at reducing the fishing effort for all categories of professional vessels that are active in the territorial waters, under the exclusive control of the Republic of Cyprus and to adjust the fishing fleet to the availability of such stocks. The main measures, which have been programmed, include the permanent withdrawal of vessels, the use of more selective fishing methods, the reduction in the number of fishing licenses, the reduction in the permitted fishing tools, the creation of fishing protected areas and stricter control measures.

During the intersessional period the ICCAT recommendations on the management of Mediterranean swordfish, the multiannual recovery plan for bluefin tuna and the conservation of thresher sharks, endorsed by GFCM, were implemented.

Section 7 - Environment Protection Measures

Name of the Area	Type of Spatial Restriction Established	From	To	Type of Closure
MPA AMATHOUNTAS, MPA PARALIMNI, MPA LIMASOL				

Objective	
Fisheries Affected	

Name of the Area	Type of Spatial Restriction Established	From	To	Type of Closure
MPA GEROSKIPOU				

Objective	
Fisheries Affected	

Name of the Area	Type of Spatial Restriction Established	From	To	Type of Closure
MPA AYIA NAPA				

Objective	
Fisheries Affected	

Section 8 - Recommendation GFCM/36/2012/2 (incidental catches of cetaceans)

Date of Incidental Catch 29/11/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Cetacean Species
25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Gillnets and entangling nets (not specified)		*Tursiops truncatus* (Bottlenose dolphin)

N Specimen	
Caught (Total)	1
Released Alive	0
Discarded Dead	1
Unknown Status	0

Date of Incidental Catch 15/12/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Cetacean Species
25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Gillnets and entangling nets (not specified)		*Tursiops truncatus* (Bottlenose dolphin)

N Specimen	
Caught (Total)	1
Released Alive	0
Discarded Dead	1
Unknown Status	0

Notes

National legislation prohibits the catch of cetaceans.

Section 9 - Recommendation GFCM/36/2012/3 (conservation of sharks and rays)

Date of Incidental Catch 09/04/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
25 - Cyprus Island	M - Polyvalent vessels (> 12 metres)	Drifting longlines	*Xiphias gladius* (Swordfish)	*Prionace glauca* (Blue shark) Annex III

Record by Number of Individuals	
Caught (Total)	1
Released Alive	0
Discarded Dead	0
Unknown Status	0
Retained for Sale	1

Record by Weight (Kilos)	
Caught (Total)	28
Released Alive	0
Discarded Dead	0
Retained for Sale	28

Date of Incidental Catch 26/06/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
22 - Aegean Sea	M - Polyvalent vessels (> 12 metres)	Drifting longlines	*Xiphias gladius* (Swordfish)	*Prionace glauca* (Blue shark) Annex III

Record by Number of Individuals	
Caught (Total)	
Released Alive	
Discarded Dead	
Unknown Status	
Retained for Sale	

Record by Weight (Kilos)	
Caught (Total)	55
Released Alive	0
Discarded Dead	0
Retained for Sale	55

Date of Incidental Catch 11/08/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
22 - Aegean Sea	M - Polyvalent vessels (> 12 metres)	Drifting longlines	*Xiphias gladius* (Swordfish)	*Prionace glauca* (Blue shark) Annex III

Record by Number of Individuals	
Caught (Total)	7
Released Alive	0
Discarded Dead	0
Unknown Status	0
Retained for Sale	7

Record by Weight (Kilos)	
Caught (Total)	176
Released Alive	0
Discarded Dead	0
Retained for Sale	176

Date of Incidental Catch 03/04/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
25 - Cyprus Island	M - Polyvalent vessels (> 12 metres)	Drifting longlines	*Xiphias gladius* (Swordfish)	*Prionace glauca* (Blue shark) Annex III

Record by Number of Individuals	
Caught (Total)	
Released Alive	
Discarded Dead	
Unknown Status	
Retained for Sale	

Record by Weight (Kilos)	
Caught (Total)	35
Released Alive	0
Discarded Dead	0
Retained for Sale	35

Date of Incidental Catch 20/09/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
24 - North Levant	F - Trawlers (> 24 metres)	Bottom otter trawls	*Boops boops* (Bogue),*Mullus barbatus* (Red mullet)	*Rhinobatos cemiculus* (Blackchin guitarfish) Annex II

Record by Number of Individuals	
Caught (Total)	
Released Alive	
Discarded Dead	
Unknown Status	
Retained for Sale	

Record by Weight (Kilos)	
Caught (Total)	3
Released Alive	0
Discarded Dead	0
Retained for Sale	3

Date of Incidental Catch 05/10/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Shark Species
24 - North Levant	F - Trawlers (> 24 metres)	Bottom otter trawls	*Boops boops* (Bogue),*Pagellus erythrinus* (Common pandora),*Mullus barbatus* (Red mullet)	*Rhinobatos cemiculus* (Blackchin guitarfish) Annex II

Record by Number of Individuals	
Caught (Total)	
Released Alive	
Discarded Dead	
Unknown Status	
Retained for Sale	

Record by Weight (Kilos)	
Caught (Total)	9
Released Alive	0
Discarded Dead	0
Retained for Sale	9

Notes

Cyprus fishing fleets catch shark species only as bycatch, and in general such catches are relatively negligible. Information on shark catches are collected from various sources, i.e. logbooks, sales notes and receipts, inspection reports, observers on board, port sampling and interviews. It is noted that efforts are made for improving the identification of shark species by the fishermen and the DFMR personnel, and for recording shark catches on a species level.
For 2014, the collected data regarding shark species that were caught by Cyprus fishing fleets and are included in Annex II or III of the SPA/BD Protocol are provided below:

Incidental catches of species listed in Annex II of SPA/BD Protocol:
- *Rhinobatos* spp. (GUZ). Catch weight: 92 kg. Comments: Landed, infringement reported by inspectors

Bycatch of species included in Annex III of SPA/BD Protocol:
- *Mustellus* spp. (SDV). Catch weight: 672 kg. Comments: Landed
- *Prionace glauca* (BSH). Catch weight: 294.4kg. Comments: Landed
- Squalus spp. (DGZ). Catch weight: 187 kg. Comments: Landed

All relevant provisions from Recommendation GFCM/36/2012/3, EU legislation and other RFMO recommendations have been included in the fishing license rules.

Section 10 - Recommendation GFCM/35/2011/4 (incidental by-catch of sea turtles)

Date of Incidental Catch 04/07/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Turtles Species
25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Trammel nets		*Caretta caretta* (Loggerhead turtle)

N Specimen	
Caught (Total)	1
Released Alive	1
Discarded Dead	0
Unknown Status	0

Date of Incidental Catch 25/07/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Turtles Species
25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Gillnets (not specified)	*Boops boops* (Bogue)	*Caretta caretta* (Loggerhead turtle)

N Specimen	
Caught (Total)	1
Released Alive	1
Discarded Dead	0
Unknown Status	0

Date of Incidental Catch 25/07/2014

GSA	Fleet Segment	Fishing Gear	Main target Species	Turtles Species
25 - Cyprus Island	M - Polyvalent vessels (> 12 metres)	Drifting longlines	*Thunnus alalunga* (Albacore)	*Caretta caretta* (Loggerhead turtle)

N Specimen	
Caught (Total)	2
Released Alive	2
Discarded Dead	0
Unknown Status	0

Notes

Cyprus National Legislation has been protecting sea turtles by banning capturing or harming sea turtles in any way (since 1978) and by setting closed fishing areas, especially sensitive nesting areas (since 1990). In addition the National Legislation has been harmonized with the provisions of the Habitat Directive where sea turtles are a priority species, as well as the Biodiversity Protocol of the Barcelona Convention.

Accidental catches by the pelagic longline fleet are recorded by observers through on-board sampling of the catches, which is part of the National Data Collection Program of Cyprus under the EU Data Collection Framework (DCF). During 2014, from a total of 5 fishing trips sampled on board, bycatches of *Caretta caretta* were reported for one fishing trip during summer; specifically two turtles were caught, and were released alive.

Information on turtles bycatch is also collected from the small scale inshore fleet during sampling at landing sites. During 2014, from a total of 429 fishing trips sampled, there were two reported incidents of turtle bycatch, both during summer; in both cases turtles were released alive.

Additionally data are systematically collected and monitored by DFMR concerning sea turtle strandings, including case of injured turtles.

Section 11 - Recommendation GFCM/35/2011/3 (on reducing incidental by-catch of seabirds)

Notes

Section 12 - Recommendation GFCM/35/2011/5 (on fisheries measures for the conservation of Monk Seal)

Notes

Section 13 - Proposals for future research programmes

Section 14 - Request of derogation to Paragraph 4 of Rec. GFCM/35/2011/2 (exploitation of Red Coral)

☐ **Requesting derogation**

EGYPT / ÉGYPTE

Prepared by: Alaa Eldin ElHaweet
Dean of College of Fisheries Technology & Aquaculture
Arab Academy for Science, Technology & Maritime Transport, Alexandria, Egypt

Description of the fisheries

Egypt is situated in the eastern part of North Africa, Southern Mediterranean Sea (nominated according to GSA as 26 - South Levant). The country has borders with Libya in the West and Gaza Strip in the East. Coastline of Egypt on the Mediterranean Sea is about 1 100 km long, extending from Sallum in the West to Rafah in the East, with connections to six coastal lagoons (Maruit, Edku, Burollus, Manzala, Port Fouad and Bardawil).

The continental shelf is narrow in western area comparable to the wider central delta region and its eastern side. The seabed is flat, mostly muddy to sandy along the middle and eastern coast. Limited grounds for trawling are available on the western coast where the area is sandy and rocky.

Total landings by main targeted species

According to the General Authority for Fish Resources Development (GAFRD, 2015), during 2014 about 62746 MT were landed at different fishing ports from the Egyptian Mediterranean coast. The main targeting species in the landing were:

Species / group	Scientific name	Catch (MT)	%
Sardinella nei	*Sardinella spp.*	10105	16.10
Shrimp	*Penaeus & Metapenaeus spp*	8061	12.85
Molluscs	*Ex Mollusca*	4146	6.61
Anchovy & small sardine	*Engraulis encrasicolus*	3641	5.80
Grey mullet	*Mugil spp.& Liza spp*	3131	4.99
Bogue	Boops boops	2565	4.09
Sharks, Rays, etc	*Chondrichthyes spp.*	2468	3.93
Crabs	*Portunus spp*	2427	3.87
Cuttlefish	*Sepia officinalis*	1782	2.84
Red mullet	*Mullus spp.*	1417	2.26
Hairtail	*Trichiurus lepturus*	1395	2.22
Red porgy	*Pagrus spp.& Pagellus spp.*	1366	2.18
Gilthead Sea bream	*Sparus aurata*	1019	1.62
Barracudas	*Sphyraena spp.*	959	1.53
Gurnard	*Eutrigla gurnardus*	892	1.42
Sea bass	*Dicentrarchus labrax*	873	1.39
Lizardfish	*Saurida undosquamis*	853	1.36
Spinefeet	*Siganus spp.*	822	1.31
Sole	*Solea spp.*	801	1.28
Jacks	*Caranx rhonchus*	719	1.15
Little tuna	*Euthynnus alletteratus*	712	1.13

Species / group	Scientific name	Catch (MT)	%
Bluefish	*Pomatomus saltatrix*	674	1.07
King fish	*Scomberomorus commerson*	658	1.05
Sea breams	*Diplodus spp*	639	1.02
Meagre	*Argyrosomus regius*	602	0.96
Grouper	*Epinephelus spp.*	509	0.81
Black spotted bass	*Dicentrarchus punctatus*	387	0.62
Crustaceans	*Oratosquilla massavensis*	310	0.49
Others		8106	9.58

Fleet

In 2014, the fleet was composed from 2903 motorized vessels (while in 2013 were 3042) and 1276 un-motorized boats mainly used paddle with length less than 6m (their number was 1236 during 2013). It is clear that the number of the fleet was decreased particularly for motorized boats in 2014 than 2013, however the LOA, HP and GT were increased. The fleet characters in 2014 can described as following:

Category	No of vessel	Mean LOA	Mean (range) of HP	Mean (range) of GT
small-scale vessels with engine 0-6	8	5.37	15.73 (9.9-46)	1.82 (1- 2.7)
small-scale vessels with engine 6-12	340	8.75	30.44 (8.5-81)	5.87 (1.7-16)
Polyvalent 12-24	99	14.07	72.08 (40-230)	23.13 (10 - 67)
Long liners 12-24	1166	14.04	74.97 (10-580)	26.21 (1.0 - 131)
Purse seiners 12-24	241	18.45	246.24 (12-1150)	56.17 (9.6-152.8)
Trawler 12-24	1020	19.64	225.81 (16-1250)	66.65 (4.4-361.6)
Trawler >24	29	25.50	645.45 (222-3486)	148.96 (100.5-313.5)
Grand Total (2014)	**2903**	**15.85**	**142.39 (8.5-3486)**	**42.56 (1.0-361.6)**

Status of stocks of priority species

Common Sole (*Solea solea*) stock off Alexandria city (at the center of GSA 26) was assessed, the results showed that the stock is overexploited (Eid, 2015).

Streaked Gurnard (*Trigloporus lastoviza*) stock in the Egyptian Mediterranean waters off Alexandria was studied. The results indicated that population is overexploited (E = 0.72) and suffering from high fishing pressure (El-Serafy et al, 2015).

Stock of Bogue, *Boops boops* from the Egyptian Mediterranean Waters was assessed. Results suggest a decreasing trend in the average fishing mortality during the study period by about 40 % (Mehanna, 2014).

Two fish species {lizard fish (Saurida undosquamis) & red mullet (*Mullus surmuletus*)} and one crustacean species {peregrine shrimp (*Metapenaeus stebbingi*) were assessed and have been presented

to the GFCM Working Groups, the results showed that the resources of these species in GSA 26 is in overexploitation status (Mahmoud et al. 2015).

Status of the statistics and information system

GAFRD collects fisheries data by two methods (Census and Sampling), the sampling data was submitted to SAMACWEB App. with the Support of the FAO EastMed project (computerized based system) which used for registering every fishing unit and recording the catch by fleet segment compatible with GFCM (FAO) Data Collection References Framework. Data operators at GAFRD and at the designated landing sites were trained on how to use with support of FAO. The outputs reports for 2015 were checked and the software become in use.

Both data groups (Census and Sampling) are inspecting by the National fisheries Statistical committee. Members of this committee are appointing by the Minister of Agriculture and Land Reclamation. Currently the Committee consists of a representative from GAFRD (5 officers), representative from the Fisheries Recourses Union, an aquaculture scientist, and two scientists from the National Institute of Oceanography & fisheries, and Arab Academy for Science &Technology.

Status of research in progress

Biological and fisheries data collection was scheduled and implemented by General Authority for Fish Resources Development, GAFRD, with the support of the FAO EastMed Project. The main target species during the entire year are shrimps (*Metapenaeus* spp., *Parapenaeus longirostris* and *Aristaeomorpha foliacea* and *Aristaeomorpha* spp.), *Sepia officinalis*, and some fish species like *Mullus* spp, *Saurida undosquamis, Sardinella aurita & sardine pilchardus.*

National Institute of Oceanography and Fisheries (NIOF) started a marine survey on deep sea fisheries in Egyptian Mediterranean waters. Another survey is conducting to study bycatch and discards of the trawl fisheries in the coastal area off Alexandria.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

A survey was undertaken in order to examine the socio-economic situation of the fisheries in Egypt. The population of the economic survey was defined as the licensed motorized fishing fleet operating in the Mediterranean Sea in 2014. Information about the fishing fleet was collected and stratified according to criteria of the DCRF according to GFCM recommendations for the GSA 26.

Data analysis is in progress and will be submitted to the GFCM as a part from DCRF.

Marine environmental studies in progress

No studies were carried out during the intersessional period relevant to the impact of the marine environment changes on the priority stocks and on the ecosystem alteration originated by the fisheries activities.

Involvement in activities of FAO regional projects

Biological and fisheries data collection was scheduled and implemented by General Authority for Fish Resources Development, GAFRD, with the support of the FAO EastMed Project. The primary objective of the study is to establish and implement an accurate monitoring system for fisheries activities along the Egyptian coast of Egypt. A sampling protocol was implemented to collect information about fishing effort, biology of the commercial landing species and related economic aspects by the national officials.

Results were submitted to stock assessment working group of GFCM.

Management measures

Some management measures related to GFCM recommendations were suggested to the ministry for new legislation system, action in progress.

Environment protection measures

Only one marine protected areas in Salloum area near the Libyan boarder was established few years ago and still in action.

References

Ahmed a. Mohammed (2015): Biological and fisheries studies on red mullet (Family: Mullidae) in the Egyptian Mediterranean Sea. M. Sc.in Marine Science, Faculty of Science Port said University.

GAFRD (2015): Fisheries statistics Year book. General Authority of Fisheries Resources Development (GAFRD). Ministry of Agriculture, Egypt, pp: 105.

Mahmoud, H.H., EL Haweet, A.A.K. and Dimech M. (2015): Report of the Working Group on Stock Assessment of Demersal Species (WGSAD), Scientific Advisory Committee on Fisheries (SAC) - GFCM, Rome, Italy,

Noha M. Eid (2015): Population Dynamics and Fisheries Management of the commercial species of family Soleidae off Alexandria coast, Mediterranean Sea. M. Sc.in Marine Science, Faculty of Science Port said University

Sabry S. El-Serafy, Fahmy I. El-Gammal, Sahar F. Mehanna, Nasr-Allah H. Abdel- Hameid, Elsayed F.E. Farrag (2015): Age, growth and mortality of Streaked Gurnard (Trigloporus lastoviza, Bonnaterre, 1788) in the Egyptian Mediterranean waters off Alexandria. International Journal of Fisheries and Aquatic Studies, 3(1): 75-80.

Sahar Fahmy Mehanna (2014): Stock Assessment of Bogue, Boops Boops (Linnaeus, 1758) from the Egyptian Mediterranean Waters. Vulnerability of Agriculture, Water and Fisheries to Climate Change. pp 313-322

FRANCE

Rapport d'activité scientifique pour la France dans le domaine de la recherche halieutique en Méditerranée durant l'année 2015

Description des pêcheries

Les pêcheries françaises de Méditerranée sont réparties entre deux GSA : la GSA 07 qui regroupe les zones de pêche du golfe du Lion et celles des côtes continentales françaises à l'ouest du golfe de Gênes et la GSA 08 couvrant les zones de pêche de Corse. A ces pêches maritimes, littorales et du large, s'ajoutent d'une part une activité de pêche lagunaire intéressant plus d'une vingtaine de lagunes dont la majeure partie borde le littoral du golfe du Lion et d'autre part, une activité hauturière couvrant l'ensemble de la Méditerranée, la pêche du thon rouge à la senne tournante. A l'exception de cette dernière, le golfe du Lion, grâce à son large plateau continental (15 000 km²) et l'importance de ses lagunes (49 734 ha) sur le littoral, regroupe la majeure partie de l'activité halieutique française en Méditerranée et de sa production. Les différents métiers peuvent se définir en 3 grands groupes: le chalutage, la pêche des poissons pélagiques à la senne tournante, et un ensemble de métiers divers pratiqués d'une façon polyvalente et à petite échelle, principalement à la côte et dans les lagunes.

Tableau 1 : Débarquements des principales espèces en 2015 (données provisoires)

Nom commun	**Nom latin**	**Code FAO**	**Débarquements (t)**
Thon rouge	*Thunnus Thynnus*	BFT	2562
Merlu européen	*Merluccius merlucius*	HKE	1465
Poulpe	*Octopus vulgaris*	OCC	427
Rouget de vase	*Mullus barbatus*	MUT	345
Anchois	*Engraulis encrasicolus*	ANE	235
Daurade royale	*Sparus aurata*	SBG	232
Sardine	*Sardina pilchardus*	PIL	229
Loup	*Dicentrachus labrax*	BSS	95

Description des flottilles

Le tableau suivant renseigne le nombre de navires actifs au moins un mois dans l'année par type d'engin en 2012

Tableau 2 : nombre de navires actifs au moins un mois dans l'année par type d'engin en 2012

Flottille	**Nombre de navires**	**Puissance totale (kW)**	**Jauge totale (U.M.S.)**	**Nombre de marins**
Senneurs à thons rouge	10	7 768	2 610	100
Senneurs (hors thons rouges)	39	7 414	887	149
Chalutiers de fond	61	18 324	5 154	218
Chalutiers pélagiques et mixtes	10	3 055	1 330	43
Ganguis	21	1 091	101	33
Dragueurs	11	951	53	19
Fileyeurs exclusifs	325	24 325	1 086	433
Fileyeurs polyvalents	316	31 059	1 272	442
Telliniers	20	782	22	25
Capéchades	157	4 908	153	179
Métiers de l'hameçon	39	3 277	224	59
Plongeurs mer	34	2 391	63	56
Plongeurs étang	43	2 426	55	52
Divers petits métiers mer	32	2 268	77	40
Divers petits métiers étang	105	5 484	141	128
Divers petits métiers étang-mer	57	3 781	109	70
Total	1 280	119 304	37	2048

Source SIH/IFREMER : Synthèse des flottilles de pêche 2012, Façade Méditerranée

Etats des principaux stocks exploités

Evaluation du stock partagé franco-espagnol de merlu (M. merluccius) du golfe du Lion (GSA 07),GFCM and STECF WGs

Le stock de merlu est dans un état de surexploitation avec une abondance relative intermédiaire et des recrutements périodiquement plus forts (1998, 2001-2002 et 2007) ayant assuré le maintien du stock à un niveau de très faible abondance. Depuis 2007, le recrutement a chuté pour atteindre le plus faible niveau de la période 1998-2013. Le recrutement estimé en 2014 est de 40913 milliers d'individus. La biomasse des reproducteurs affiche une tendance décroissante sur la période analysée avec une légère augmentation en 2014. Le niveau d'exploitation courant est bien au-dessus du niveau estimé durable, puisqu'une analyse prospective a montré pour le point de référence ($F_{0.1}$) une valeur de 0.15, avec un F actuel ($F_{actuel,\ 2012\text{-}2014}$) de 1.75. L'exploitation est principalement concentrée sur les jeunes individus.

Evaluation du stock partagé franco-espagnol de rouget (M. barbatus) du golfe du Lion (GSA 07), GFCM WG

Le stock du rouget de vase est dans un état de surexploitation (forte mortalité par pêche et abondance relative forte) avec périodiquement de plus forts recrutements (2005, 2010, 2012 et 2013). Le niveau d'exploitation est au-dessus du niveau estimé durable, puisque le point de référence $F_{0.1}$ est égal à 0.14 et que la mortalité par pêche courante ($F_{actuel,\ 2012\text{-}2014}$) est égale à 0.34. Cependant la mortalité par pêche est la plus faible de la série et la biomasse des reproducteurs suit une tendance croissante avec une stabilisation en 2014. L'exploitation est principalement concentrée sur les jeunes individus (âge 0-2), de plus 60% du recrutement (âge 0) est mature. La biomasse actuelle (2014) est au-dessus des 66th percentile, cependant elle est calculée sur une période relativement courte 2004-2014).

Evaluation du stock d'anchois (E. encrasicolus) du golfe du Lion (GSA 07), GFCM

La biomasse estimée en 2015 par acoustique a légèrement augmenté par rapport à l'année précédente et se rapproche du point de référence Bpa. Pour rappel, les points de référence ont été définis de manière empirique, Blim correspondant à la biomasse minimale enregistrée après laquelle le stock a montré une régénération. Ici Blim correpond donc à la biomasse de 1993. Bpa correspond à la biomasse au-dessus de laquelle on a 95% de chance de ne pas tomber sous Blim. Bpa correspond à 2*Blim.

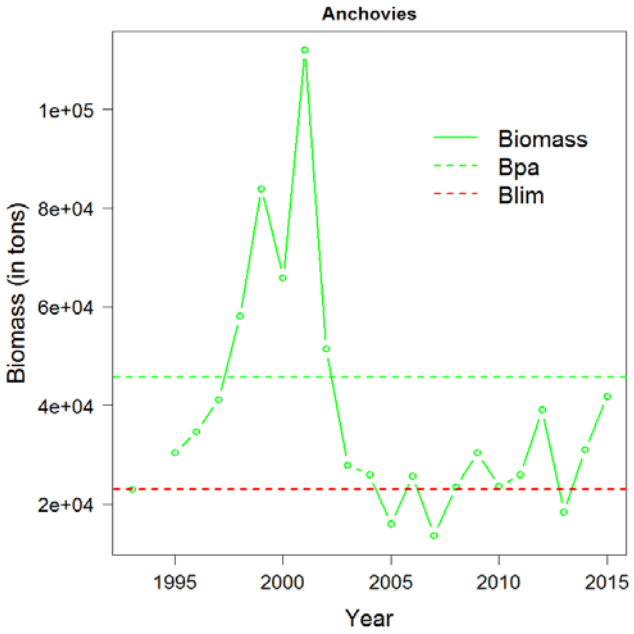


Figure 1 : Biomasse estimée par acoustique avec les points de référence Blim et Bpa.

Les paramètres biologiques de taille et condition sont toujours relativement faibles, tandis que les classes d'âge sont entièrement dominées par l'âge 1. Les captures d'anchois en 2014 étaient très similaires aux années précédentes fluctuant autour de 2000 t.

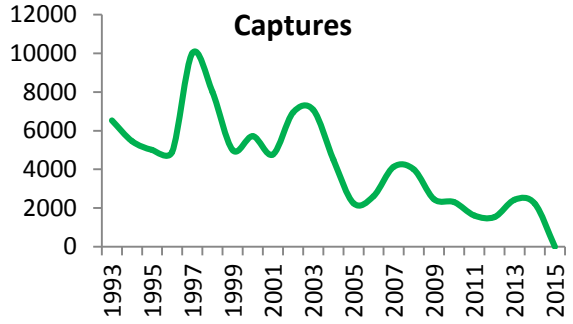


Figure 2 : Captures en tonnes depuis 1993

Le faible nombre de classes d'âge ne permet pas de suivre les cohortes dans le temps, un modèle structuré en âge ne peut donc pas être appliqué. De même, la campagne se déroulant au mois de juillet (période de reproduction de l'anchois), aucun indice de recrutement n'est disponible. Comme souligné dans d'autres stocks, nous nous trouvons dans une impasse méthodologique pour réaliser une évaluation analytique. L'état du stock repose donc sur la biomasse évaluée par acoustique et les points de référence empiriques, tout en tenant compte des indicateurs biologiques et du niveau des captures. Le statut du stock est donc **faible biomasse** (puisqu'elle se trouve entre Blim et Bpa). Compte-tenu du diagnostic de ce stock, la recommandation du groupe est de diminuer la mortalité par pêche.

Evaluation du stock de sardines (S. pilchardus) du golfe du Lion (GSA 07), GFCM

La situation de la sardine dans le Golfe du Lion reste très similaire à celle des années précédentes. En effet, la biomasse estimée par acoustique en 2015 est du même ordre que celle des 3 dernières années. La différence notable avec l'an dernier est le retour du recrutement (qui était quasi-absent en 2014).

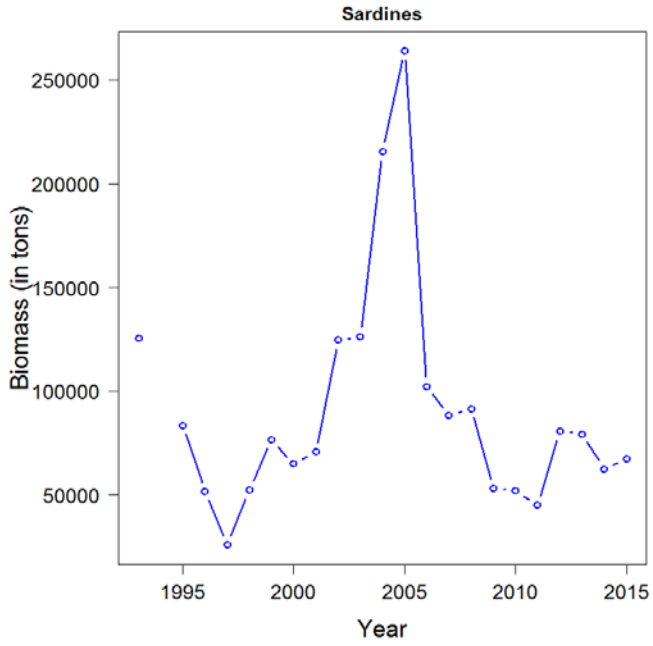


Figure 3 : Biomasse estimée par acoustique.

Concernant les paramètres biologiques, les sardines sont toujours petites et en mauvaise condition corporelle. La proportion de poissons d'âge 2 est légèrement remontée, tandis que les poissons plus âgés (>2) sont toujours quasi-inexistants. Une comparaison avec les données espagnoles de la GSA6 a montré que les grands individus ne migraient pas vers les eaux catalanes et que le problème de taille et condition y était similaire. Enfin, les captures sont extrêmement faibles depuis 5 ans (~600t) et majoritairement réalisée par les lamparos, l'activité des chalutiers pêchant la sardine ayant quasiment entièrement stoppé.

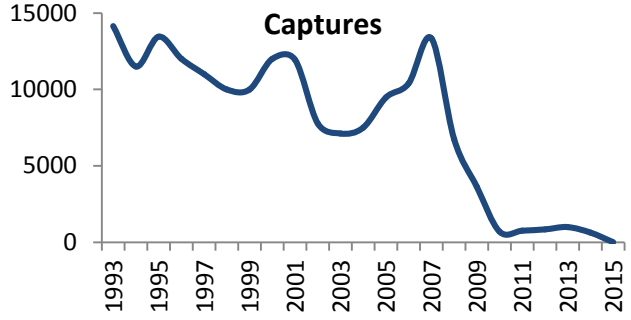


Figure 4: Captures en tonnes depuis 1993

Le faible nombre de classes d'âge ne permet pas de suivre les cohortes dans le temps, un modèle structuré en âge ne peut donc pas être appliqué. En revanche, l'utilisation d'un ***2-stage biomass model*** basé sur les captures avec 2 séries de forçage (une pour les adultes et une pour le recrutement) provenant de PELMED a permis de confirmer les résultats des évaluations précédentes.

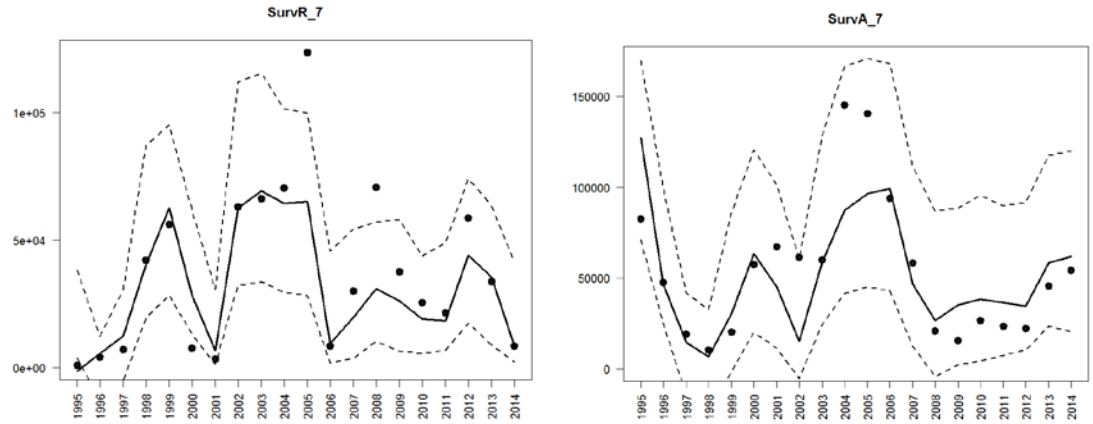


Figure 5: Résultats du 2-stage biomass model. A gauche, biomasse de recrutement et à droite biomasse adulte. Les points correspondent aux données de PELMED, tandis que le slignes repésentent les résultats du modèle avec son intervalle de confiance.

Ainsi, le taux d'exploitation reconstitué est de l'ordre de 2% (extrêmement faible par rapport au point de référence de Patterson de 40%). Le stock est donc toujours considéré **en déséquilibre écologique.**

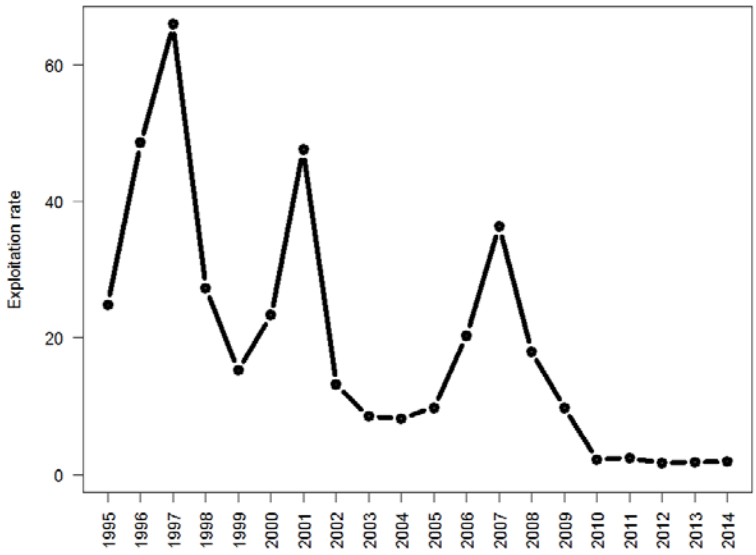


Figure 6 : Taux d'exploitation estimé par le 2-stage biomass model

Statistiques et système d'information

Le Système d'Informations Halieutiques (SIH) :

Le Système d'Information Halieutique (SIH) de l'Ifremer constitue un réseau d'observation scientifique des ressources halieutiques et des usages associés (pêche professionnelle et progressivement pêche récréative) de l'Ifremer, sur l'ensemble des façades maritimes. Les objectifs du SIH s'inscrivent dans l'un des 10 axes stratégiques de l'Ifremer : contribuer à une pêche durable. Il s'agit de permettre à la pêche d'assurer, d'une manière durable, l'approvisionnement alimentaire en produits sains tout en répondant aux nouveaux défis de l'état de la ressource, de la hausse des prix de l'énergie, de la rentabilité des entreprises et de la protection des habitats. Il est le résultat de

l'adaptation d'un système d'observation à des questions de recherche et d'expertise en réponse aux enjeux sociétaux :

- nécessité d'appréhender le « système pêche » dans son intégralité (y compris sa composante petite pêche côtière)
- question de l'adéquation entre les capacités de production et l'état des stocks (et donc de la régulation des usages)
- mise en place de l'approche écosystémique des pêches (couplage entre écologie, ressource, exploitation et économie)

Pour répondre aux missions de l'Ifremer, le SIH considère l'ensemble du système pêche, dans toutes ses composantes et sur l'ensemble des façades. Il s'appuie notamment sur l'échantillonnage des captures commerciales (à terre et en mer) dont les paramètres biologiques, les campagnes à la mer, les pêches récréatives, les statistiques de pêche, les enquêtes activités et économiques. Il est dépositaire des cahiers des charges et des spécifications techniques pour les plans d'échantillonnage, la collecte, le stockage, l'accès aux données halieutiques, les restitutions internes et externes. Il élabore des indicateurs intégrés sur les pêcheries et réalise des synthèses à destination des acteurs de la filière pêche et du grand public. Ces données sont intégrées dans la base HARMONIE et les protocoles sont disponibles sur un site web dédié (www.ifremer.fr/sih). La collecte des données de Méditerranée sur les ressources exploitées par la pêche professionnelle est réalisée dans le cadre de la DCF (Data Collection Framework). Elle repose sur différents programmes détaillés ci-dessous.

Programme d'échantillonnage biologique (OBSVENTES) et paramètres biologiques

Les actions « Echantillonnages biologiques des captures » et « paramètres biologiques », dans le golfe du Lion (GSA 7), visent à obtenir la structure en taille et/ou en âge des captures (apports commerciaux) des principales espèces exploitées par différents métiers, ainsi que les paramètres biologiques afférents, pour l'évaluation des stocks. L'échantillonnage des débarquements est réalisé sous criée ou sur les quais pour les navires >12 m. Depuis 2010, ces échantillonnages couvrent les navires <12 m (seulement 200 sorties/an). Les métiers identifiés ciblent préférentiellement daurade, loup, sole, merlu, rouget de vase et de roche, poulpe de roche, sardine, anchois et anguille. Des otolithes sont prélevés sur daurade, merlu, rouget de vase, anchois et sardine mais leur lecture exclut ceux du merlu liés à de trop fortes incertitudes. Maturité et condition sont suivies pour anchois et sardine. Ces échantillonnages visent à aborder les espèces exploitées, étant entendu que les espèces évaluées par les instances internationales comme la CGPM sont prioritaires.

Programme OBSDEB d'enquêtes d'activités et des débarquements des navires de moins de 12 m

L'objectif d'OBSDEB est d'améliorer la connaissance acquise sur les activités de la flotte de pêche professionnelle. Ce programme a été lancé par le Système d'Informations Halieutiques (SIH) de l'Ifremer, en collaboration avec la Direction des Pêches Maritimes en 2007. OBSDEB vise à estimer par échantillonnage les niveaux d'effort de pêche et de captures des "petits métiers", qui du fait de l'absence de flux déclaratifs, d'une forte inactivité des petites unités et de la très forte dispersion géographique de ces flottilles, sont aujourd'hui mal connus.

Programme OBSMER d'observation des captures en mer

L'objectif d'OBSMER est de permettre une meilleure compréhension de l'interaction entre les ecosystèmes marins et les activités de pêche. Le programme vise à observer la capture dans son ensemble et les activités de pêche, ainsi que l'environnement de la marée. Ces données servent notamment pour le calcul d'indicateurs de capture aux niveaux régional, national et européen, qui sont utilisées pour les évaluations de stocks. Le programme national prévoit pour la façade méditerranéenne (GSA 7), des observations sur les captures des chalutiers (fond et pélagique). Les débarquements d'espèces commercialisées, prises accessoires, rejets, et caractéristiques techniques de chaque trait sont collectés. En 2014, 31 chalutiers (soient 108 marées) ont été échantillonnées dans le Golfe du Lion (GSA7).

Programme MEDITS-France (GSA 07 et 08)

La campagne française de chalutage annuelle d'évaluation des ressources démersales (MEDITS) se déroule sur la façade Est Corse (65 traits) et dans le golfe du Lion (23 traits), en fin de printemps. Elle a lieu à la même période en Méditerranée (France, Espagne, Italie, Grèce, Chypre, Malte, Slovénie, Croatie, Monténégro, Albanie) et mer Noire (Roumanie et Bulgarie). Le programme Medits, lancé en 1993 a permis de standardiser les modalités pratiques d'échantillonnage (période, échantillonnage biologique, engin de capture…) et ainsi de constituer une base de connaissances commune sur les ressources démersales exploitées. Les observations biologiques sont réalisées selon le protocole décrit dans la dernière version de "Instruction manual MEDITS" (version 7, mars 2013 sur le site du SIH). L'ensemble des espèces collectées dont le benthos sont triées, pesées et dénombrées. Pour 84 espèces, des mensurations sont réalisées en plus et sur 41 de ces espèces (32 sélaciens, 3 poissons osseux, 4 crustacés, 2 céphalopodes) sont collectés tous les paramètres individuels (pesée individuelle, sexe, maturité, taille, otolithes pour les deux rougets et le merlu). Depuis 2015, des informations supplémentaires sont collectées pour la DCSMM, à savoir les gélatineux, les macrodéchets marins et pour certaines espèces (merlu, roussette, encornet rouge, merlan bleu, bucarde rouge, moule, pectinidae, ascidie rose, *Microcosmus sp*.) les isotopes, contenus stomacaux et contaminants. A partir de 2016, 20 stations WP2 et CTD seront réalisées (10 est-Corse et 10 Golfe du Lion).

Programme MEDIAS-France (GSA 07)

La campagne française de prospection acoustique et chalutage se déroule chaque année au mois de Juillet dans le Golfe du Lion (+ Nord Catalogne certaines années). Le protocole a été uniformisé avec les autres pays méditerranéens dans le cadre de MEDIAS depuis 2008. La prospection dans le Golfe s'effectue le long de 9 radiales perpendiculaires à la côte et distantes de 12 miles nautiques. Des chalutages d'identification des échos acoustiques sont ensuite effectués. L'ensemble des poissons collectés dans les chalutages est trié, pesé et dénombré. Les espèces cibles (anchois, sardines, sprats, maquereaux, chinchards et merlus) sont également mesurées et des paramètres biologiques (sexe, maturité, taux de gras, otolithes) sont récoltés. Enfin des paramètres physiques (température, salinité) et des données concernant les autres compartiments biologiques sont également collectés à l'aide de CTD, filets à zooplancton, bouteille Niskin et de protocoles d'observation des prédateurs supérieurs.

Programmes de recherche en cours :

Projet EcoPelGol (Ecologie de l'Ecosystème Pélagique du Golfe du Lion)

Le projet EcoPelGol (Ecosystèmes Pélagiques du Golfe du Lion, 2012-2015) repose essentiellement sur les données acquises pendant les campagnes PELMED ou par les échantillonnages réalisés par les professionnels. Alors que la biomasse d'anchois et de sardines a considérablement chuté ces dernières années, entraînant avec elle une crise de la pêcherie, leur abondance (i.e. le nombre de poissons) s'est maintenue voire à augmenter pour la sardine. Nous avons donc autant ou plus de poissons mais moins de biomasse. Dans le même temps, nous avons pu montrer un changement important de la structure en taille ces dernières années, les sardines et les anchois étant beaucoup plus petits depuis 2008 qu'avant. Cette diminution de la taille résulte pour la sardine à la fois d'une baisse de la croissance et d'une perte des individus les plus âgés (perte des classes d'âges > 2 ans), alors que seule la croissance semble en cause pour l'anchois. Associés à ces changements, une diminution forte de la condition corporelle (réserves de l'individu, souvent associées au gras d'un individu) a été observée chez les 2 espèces. Les poissons bien que nombreux sont donc plus petits et moins gras qu'auparavant, expliquant en partie la chute de l'effort de pêche et des captures. Nous avons également pu montrer que les individus les plus touchés par cette chute de condition étaient les individus les plus âgés, fournissant un premier indice au déséquilibre démographique observé. Ces études mettent donc en évidence une possible surmortalité adulte des sardines et un changement environnemental potentiel, source d'une croissance plus faible et d'une moins bonne condition. Une étude alliant contenus stomacaux et isotopes stables comparant l'alimentation des sardines, anchois et sprats actuelle avec celle des années 90 a montré une augmentation du recouvrement de la niche trophique entre espèces, ainsi qu'une diminution de la taille des proies consommées. Ceci conforte l'hypothèse d'un apport énergétique plus faible via l'alimentation de ces espèces, expliquant au moins en partie la diminution des réserves lipidiques de ces espèces. Malgré cette diminution d'énergie disponible, les sardines et

anchois semblent avoir maintenu (voire augmenté) leur investissement reproducteur en diminuant la taille à première maturité et en augmentant le rapport gonado-somatique. Ces 2 espèces semblent donc favoriser leur reproduction par rapport aux autres traits d'histoire de vie. Ceci pourrait se faire au détriment de leur croissance et de leur survie. Afin d'étudier plus avant la surmortalité adulte chez les sardines, nous avons évalué sur un an et plus de 1000 poissons la présence d'agents pathogènes pouvant les affaiblir voire les tuer. Aucun virus n'a pu être détecté (ni par PCR ni par culture virale), aucun macro-parasite non plus. En ce qui concerne les bactéries, seuls des vibrios ainsi que des Tenacibaculum ont été observés mais en faible prévalence et sans aucune lésion d'organe associée. Enfin, des micro-parasites ont été observés en histologie sur la majorité des individus, sans identification spécifique dans la majorité des cas. Une nouvelle étude visant à mieux comprendre la prévalence et l'intensité de coccidies (micro-parasites hépatiques isolés et identifiés en fin d'étude) est en cours. La prévalence ainsi que l'intensité de ces coccidies semblent relativement importantes, mais leur effet potentiel n'est pour le moment pas connu. Enfin, une étude visant à quantifier la pression de prédation exercée par le thon rouge sur les espèces petits pélagiques a pu montrer que les thons rouges consommaient une part infime des populations (< 2%) du Golfe du Lion et ce sans sélectivité de taille particulière, ils ne peuvent donc pas être tenus responsables de la chute de biomasse ou de la disparition des individus âgés.

Il semble donc que les populations de sardines et d'anchois soient affectés par un changement de la communauté planctonique qui serait constituée d'espèces moins énegrétiques qu'auparavant, engendrant une baisse de l'énergie disponible pour les petits pélagiques. Face à ce changement les sardines et anchois maintiendraient un investissement reproducteur fort en lien avec une croissance plus faible et pouvant aller jusqu'à affecter leur survie. Un projet visant à mieux comprendre la relation de la croissance/condition et reproduction de ces espèces avec les conditions environnementales (température, plancton) est en cours de développement. Ce projet alliera une étude corrélative basée sur des données collectées in situ et une approche expérimentale permettant de mieux comprendre les mécanismes impliqués. Pour cela, des premiers tests de pêche et mise en captivité de sardines a été effectué. Les premiers résultats sont prometteurs et semblent confirmer la possibilité pour des sardines nourries ad-libitum de reconstituer rapidement des réserves énergétiques importantes et de rétablir une croissance importante.

Projet H2020 DiscardLess – Strategies for the gradual elimination of discards in European fisheries

Dans le cadre de l'engagement de L'Union européenne à l'élimination progressive des rejets, le projet H2020 DiscardLess – Strategies for the gradual elimination of discards in European fisheries (2015-2018) regroupe 31 partenaires et doit aider à fournir les connaissances, outils et de technologies ainsi que l'implication des parties prenantes pour atteindre cet objectif. DiscardLess vise à évaluer les impacts des rejets sur le milieu marin, sur l'économie, et à travers la société au sens large avant, pendant et après la mise en œuvre de l'obligation de débarquement, permettant une comparaison entre l'intention initiale et les résultats. Plusieurs stratégies d'atténuation des rejets (DMS) offrant des solutions rentables à tous les stades de la chaîne d'approvisionnement des produits de mer seront proposées : 1) prévention des captures non désirées par la promotion de l'utilisation d'engins présentant des techniques innovantes de sélectivité et les changements dans les tactiques de pêche basés sur les connaissances scientifiques et des pêcheurs ; 2) faire un meilleur usage des prises indésirables inévitable en détaillant les innovations techniques et de marketing du navire au marché final, y compris la surveillance, la traçabilité et les composants de valorisation. Ifremer participe a de nombreux cas d'étude dont le cas d'étude méditerranée occidentale.

Ce cas d'étude, coordonné par l'IEO, recouvre deux zones de pêcheries contrastées : i) le système Golfe du Lion-Mer Catalane, très productif, partagé par la France et l'Espagne et où opèrent des pêcheries chalutières, fileyeurs et palangrières ciblant entre autres le merlu et le rouget barbet de vase, ii) l'archipel des Baléares, plus oligotrophique et uniquement exploité par des chalutiers.

Sur la base de données et de modèles existant une évaluation de l'impact biologique et écologique de l'interdiction de rejets sera réalisée. La sensibilité des fonds et l'impact de report d'effort potentiel

seront également évalués. Une étude bibliographique sur la sélectivité et les mesures permettant son amélioration sera proposée aux parties prenantes de la zone d'étude.

IFREMER et IEO collaboreront avec l'industrie de la pêche pour mettre au point des stratégies d'évitement des rejets. La cartographie des zones de rejets et d'exploitation permettra l'application d'un exercice de planification spatiale pour proposer des zones de fermetures saisonnières appropriées permettant de réduire les rejets. D'autres stratégies d' »vitement basées sur les pratiques et comportements seront également cataloguées avec l'aide de l'industrie de la pêche et l'ensemble de ces outils (zonations et pratiques) seront mis à leur disposition. En outre, Ifremer évaluera l'impact de ces stratégies, débarquement des rejets, sélectivité accrue ou évitement des rejets par zonation saisonnière des activités, sur la viabilité économique à moyen terme pour l'industrie. Les données pour la calibration de ce model seront fournies par IFREMER et l'IEO et les résultats des simulations du modèle seront restitués auprès des parties prenantes.

Projet Galion « Gestion Alternative de la ressource du Golfe du Lion »

Ce projet (2016-2018) en partenariat avec une organisation professionnelle représentative des pêcheries chalutières du Golfe du Lion, est le pendant local du projet Européen Discardless. Dans le Golfe du Lion, les espèces démersales faisant l'objet d'une évaluation sont actuellement en état de surexploitation et leur rétablissement impose une réduction de la mortalité par pêche. Pourtant le nombre de navires a fortement diminué ces dernières années, une zone de pêche restreinte où l'effort ne peut augmenter et des arrêts temporaires aux périodes de fort recrutement ont été mis en place parallèlement à l'adoption d'un plan de gestion de la pêche au chalut en Méditerranée. Les pêcheurs professionnels sont sensibles à la nécessité de limiter les captures non désirées en évitant certaines zones à certaines saisons.

Les pêcheries chalutières du golfe du Lion sont multi-spécifiques et ciblent de nombreuses espèces. Un grand nombre de ces espèces sont soumises à des tailles minimales de commercialisation et les rejets peuvent être importants. La nouvelle PCP prévoit désormais une obligation de débarquement selon laquelle toutes les captures doivent être conservées à bord et débarquées. Les poissons n'ayant pas la taille requise ne pourront pas être commercialisés aux fins de la consommation humaine. Dans ce contexte de plus en plus contraignant, les pêcheries chalutières ont tout intérêt à éviter les captures des espèces sous taille minimale et à diminuer le volume des rejets de façon à promouvoir un retour plus rapide au RMD des espèces qu'ils exploitent. L'objectif de ce projet est d'utiliser la connaissance de la distribution des captures des pêcheries chalutières du golfe du Lion pour limiter les rejets des espèces commerciales sous taille et ainsi de permettre une exploitation plus durable de ces espèces. Les travaux se focaliseront sur une meilleure connaissance des dynamiques spatiotemporelles de distribution des espèces cibles, en particulier du Merlu afin de proposer une stratégie d'évitement saisonnière des zones où les rejets sont potentiellement importants. Dans le souci d'éviter une dégradation des fonds, liée à un report d'effort dans des zones jusque-là préservées, cette étude visera à mieux connaitre la répartition des habitats benthiques du Golfe du Lion. Le projet GALION comporte deux composantes : La composante I s'attachera à l'analyse spatio-temporelle des juvéniles: (1) mettre en place un suivi des captures en mer pour venir compléter les données existantes dont la représentativité et la résolution spatiale et temporelle sont insuffisantes. (2) cartographier les captures commercialisables ou non à diverses saisons et à définir les zones où les rejets sont importants de façon récurrente. (3) évaluer la sensibilité potentielle et observer les fonds marins du Golfe du Lion de façon à proposer une stratégie d'évitement limitant les déplacements d'effort vers des zones sensibles. (4) utilisation concertée d'outils de planification spatiale (MARXAN) pour proposer des portefeuilles de zones d'évitement potentielles. Simulation des effets des différentes stratégies sur le RMD et la viabilité de la pêcherie à moyen terme. La plateforme de simulation ISIS-Fish (un modèle mathématique et un outil de simulation flexible capable de représenter une dynamique de pêcherie, bioéconomique et spatialisée, permettant d'évaluer l'impact de mesures de gestions) a été choisie comme cadre de développement du modèle de pêcherie. Il permettra d'intégrer la connaissance acquise lors du projet sur les distributions spatiales observées et envisagées. La composante II s'attachera à collecter des informations sur la sélectivité des engins utilisés, avec analyse des captures réalisées avec les deux maillages réglementaires actuels (40 mm carré et 50 mm losange) en

distinguant les petits chalutiers travaillant en zone plus côtière des plus grands qui ont la capacité de travailler en zones plus large. Par ailleurs, une démarche innovante sera testée pour observer les modalités d'échappement par observation vidéo. Cette étude sera complétée par une analyse économique afin d'appréhender les différences en terme de chiffre d'affaires liés à la mise en oeuvre de l'un ou l'autre type de maillage.

Projet SELPAL (sélectivité de la flottille palangrière ciblant le thon rouge dans le golfe du Lion)

Les objectifs de ce projet sont (1) de décrire l'activité de la pêcherie palangrière ciblant le thon rouge (effort, rendements) (2) de quantifier l'impact de la pêcherie sur les espèces accessoires (requins, raies, oiseaux, tortues) (3) de tester des mesures pour augmenter la sélectivité et atténuer ces impacts défavorables (4) d'acquérir des connaissances sur la biologie et l'écologie des espèces sensibles dans le golfe du Lion.

Ce projet, porté par la profession (AMOP-Association Méditerranéenne des Organisations de Producteurs et le CEPRALMAR- Centre d'études et de Promotion des Activités Lagunaires et Maritimes en Languedoc Roussillon), est financé par l'association France Filière Pêche (FFP), et soutenu par les Conseils Généraux de l'Hérault et des Pyrénées Orientales. Afin de mieux connaitre l'utilisation de leurs habitats et leurs migrations, des individus d'espèces potentiellement impactées ont été équipés de marques satellites au cours des deux dernières saisons : 16 requins peau bleue, et 5 espadons à bord des navires professionnels, 7 tortues marines (6 tortues caouanne *Caretta caretta*, une tortue verte *Chelonia mydas*) en collaboration avec le Cestmed (Centre d'étude et de sauvegarde de Méditerranée du grau du Roi). Un site dédié permet de suivre les actions du programme et visualiser les déplacements de certains individus marqués (http://amop-selpal.com). Ce projet vise à tester l'existence de sous-populations différenciées génétiquement. Grâce aux contacts établis avec des instituts de recherche, 250 échantillons de muscles de requin peau bleues ont été recueillis dans différentes régions du monde (Australie, Espagne, Hawaii, Ile de La Réunion, Les Açores, Malte, Nouvelle-Zélande). Initialement d'une durée de deux ans, ce projet a été prolongé et s'achèvera en décembre 2017.

Projet RéPAST (Raie pastenague)

Ce nouveau projet financé par France Filière Pêche (FFP) est une extension du projet SELPAL. Il vise à (1) évaluer, lors de la remontée de l'engin, le taux de mortalité de la raie pélagique (*Pteroplatytrygon violacea*), espèce très fréquemment capturée par la pêcherie palangrière ciblant le thon rouge (2) à clarifier les temps de résidence et leurs habitats critiques, (3) à connaitre leurs mouvements à petite et grande échelles, (4) à tester l'existence de sous-populations différenciées génétiquement. En 2015, 14 individus ont été équipés de marques satellites et 8 de capteurs températures pression. 50 échantillons de muscles ont été collectés pour les analyses génétiques. Ce projet a été prolongé d'un an et s'achèvera en décembre 2016.

Projet IPEP *(Impact de la pêche sur les espèces protégées):*

Ce projet a pour objectif d'acquérir des connaissances sur l'écologie des requins pélagiques et des tortues marines et d'identifier les interactions avec les engins de pêche.

L'intensification de l'effort des importantes pêches pélagiques dans toute la Méditerranée au cours des 30 dernières années, a eu, sans nul doute, un impact considérable sur ces deux taxons. En Méditerranée aussi les pratiques de pêche non durables risquent d'entrainer l'effondrement des populations d'espèces sensibles. Le manque actuel d'évaluations fiables de l'état des stocks de requins en Méditerranée crée un problème grave pour la CGPM (Commission Générale des pêches pour la Méditerranée). Au cours des trois dernières années, l'Ifremer a mis en place un programme pilote de marquages ayant pour but d'identifier les zones à risques et déterminer des mesures de gestion adéquates pour assurer la conservation requin peau bleue (*Prionace glauca*), espèce la plus commune en Méditerranée. Depuis 2013, 17 requins peau bleue ont été équipés de marques satellitaires. En Décembre 2015, une mission conjointe avec IEO de Malaga a permis de marquer 9 requins peau bleue dans la zone du Détroit de Gibraltar. Un site dédié permet de visualiser les déplacements de certains individus marqués (http://www.stellaris-asso.org/suivi-des-requins).

Le Groupe « tortues marines France (GTMF) » du service du Patrimoine National, le Réseau « tortues marines de Méditerranée Française » et l'Ifremer UMR–MARBEC ont effectué une synthèse des données disponibles sur les prises accidentelles de tortues marines par type d'engins de pêche sur la façade française Méditerranéenne à partir de diverses bases de données existantes (Recommandation GFCM/35/2011/4). Il est à signaler la capture exceptionnelle de deux tortues vertes (retrouvées vivantes) par des filets calées durant l'été 2014.

Tableau 3 : Bilan des captures de tortues marines (et mortalité) enregistrées par type d'engins de pêche sur la côte française entre 2000 et 2015 (Sources : Réseau tortues marines de Méditerranée Française (RTMMF) et Ifremer (Programme Obsmer), CestMed : Centre d'études et de sauvegarde des tortues marines en Méditerranée, et autres données bibliographiques)-données partielles pour 2014 et 2015.

Espèce	**Etat**	**Engin**				
		CHALUT	FILET	HAMECON	Non déterminé	Total
Caretta caretta						
	Indéterminé	1	23			*24*
	Mort	3	18	2	1	*24*
	Vivant	57	35	9	47	*148*
Dermochelys coriacea						
	Vivant		1		2	*3*
Lepidochelys kempii						
	Mort		1			*1*
Chelonia mydas						
	Vivant		2			*2*
Non identifiée						
	Indéterminé				3	*3*
	Mort		2		7	*9*
	Vivant	1	1	1	40	*43*
	Total général	**49**	**67**	**8**	**100**	**257**

Mesures de gestion

Elaboration de Plans de Gestion en application du règlement européen (CE) 1967/2006

L'Etat français a poursuivi en 2012-2013, l'élaboration des plans de gestion dans le cadre de l'article 19 du règlement européen (CE) 1967/2006 pour l'exploitation durable des ressources halieutiques en Méditerranée. Le Plan de Gestion Chalut a été déclaré conforme par la Commission Européenne en juillet 2013. Les Plans de Gestion dragues, sennes tournantes coulissantes, ganguis et sennes de plage ont été également déclarés conformes.

L'Ifremer a produit plusieurs documents et avis scientifiques, et participé aux réunions de travail, afin de fournir à l'ensemble des acteurs une information scientifique sur la situation actuelle de ces activités de pêche et sur les évolutions prévisibles de ces activités selon différents scénarios.

Ces plans de gestion reprennent une partie des dispositifs de régulation et de gestion qui fonctionnaient à une échelle géographique inférieure à la façade de Méditerranée française. L'articulation ou l'homogénéisation de ces règlements a d'abord permis d'ajuster les différents paramètres à l'échelle nationale, puis d'adopter ces règlements à un niveau national, ce qui augmente et renforce la régulation des pêches.

De nouveaux objectifs de gestion ont été adoptés dans ces plans de gestion, qui transposent des recommandations scientifiques nationales ou issues de la CGPM, et en accord avec les conventions internationales. Il s'agit principalement de :

Le plan de gestion chalut « contribue à l'atteinte du rendement maximum durable pour le merlu. Le point de référence retenu par les scientifiques est F0.1, comme étant le niveau de mortalité par pêche permettant d'atteindre le rendement maximal durable (RMD) [FRMD = F0.1]. L'objectif est d'adopter pour cette flottille, au plus tard en septembre 2015, une configuration qui permette de contribuer à l'atteinte à partir de 2015 et au plus tard en 2020 de F0.1 = 0,20 (résultat de l'analyse de données 2010, dernière estimation de la CGPM) ou la nouvelle valeur de référence équivalente, en cas d'une modification du diagramme d'exploitation. »

De nouveaux outils de régulation de l'effort de pêche ont été introduits pour permettre d'atteindre les objectifs adoptés, et principalement :

L'encadrement par Autorisation Européenne de Pêche, avec numerus clausus, nombre de jour, horaires ou lieu de pêche autorisés pour chaque activité,

L'instauration d'un régime d'effort de pêche pour le chalut, avec un plafond d'effort maximum en nombre de jour de pêche, effectif au 1er janvier 2013.

Après la déclaration conforme du Plan de gestion Chalut, l'Etat français a transposé ce document en texte réglementaire. Des règlements complémentaires ont précisé les modalités opérationnelles mises en œuvre, et en particulier l'instauration d'un régime d'encadrement de l'effort de pêche des chalutiers, initialement défini à un quota de 200 jours de pêche par navire et par an.

GREECE / GRÈCE

Description of fisheries

Table 1. Landing data for 2014 and final data for 2013.

Note that landings cover data from vessels equipped with engines having power more than 19HP.

BFT data include only landings, no transfers took place to fishfarms.

Data source is the EL.STAT (National Statistical Authority). Data source for large pelagics is DG for Sustainable Fisheries and Port Police.

	COMMON NAME	SCIENTIFIC NAME	LANDINGS 2013 (TONS)	LANDINGS 2014 (TONS)
	Sole	*Solea vulgaris*	799	465
	Others		51	85
FLATFISH			850	550
	Hake	*Merluccius merluccius*	4700	3135
	Others		6014	5380
GROUNDFISH			10714	8515
	Horse mackerels	*Trachurus spp*	1810	1545
	Mackerel	*Scomber scombrus*	100	65
	Sardine	*Sardina pilchardus*	6870	8404
	Anchovy	*Engraulis encrasicolus*	8750	9847
	Other pelagics		8605	6215
PELAGICS			26135	26076
	Bluefin tuna	*Thunnus thynnus*	178	161
	Albacore	*Thunnus alalunga*	93	287
	Other tunas		1450	279
	Swordfish	*XIphias gladius*	1731	1343
TUNAS			3452	2070
OTHER FISH			12163	11253
TOTAL FISH			53314	48464
	Lobster	*Palinurus spp*	105	116
	Norway lobster	*Nephrops norvegicus*	300	233
	Shrimp	*Parapenaeus longirostris*	1850	1492
	Other crustaceans		1802	1887
TOTAL CRUSTACEANS			4057	3728

	COMMON NAME	SCIENTIFIC NAME	LANDINGS 2013 (TONS)	LANDINGS 2014 (TONS)
	Mussel	*Mytilus galloprovincialis*	82	73
	Other shellfish		278	392
TOTAL MOLLUSCS			360	465
	Squid	*Loligo vulgaris*	780	600
	Cuttlefish	*Sepia officinalis*	1550	1115
	Octopus	*Octopus vulgaris*	1900	1835
	Other cephalopods		1677	1503
TOTAL CEPHALOPODS			5907	5053
GRAND TOTAL			63638	57710

The Greek marine fishery includes more than 96% of small scale inshore fishing vessels. A small percentage of the Greek fishing fleet comprises of vessels that operate trawling and purse seine fishing gear.

The following Table 2 shows the main fishing characteristics of the Greek fishing fleet according to the National Fleet Register (31/12/2015).

Table 2. Fishing Fleet Characteristics

LOA (m)	**No of vessels**	**Capacity (GT)**	**Engine Power (KW)**
0-9.99	14,012	25,208.28	243,238.63
10-14.99	831	8,986.92	63,311.04
15-23.99	373	14,969.22	73,189.76
24-49.99	172	21,000.84	51,561.54
TOTAL	**15,388**	**70,165.26**	**431,300.97**
Range of LOA	**Min.:** 2.56	**Max:** 34.5	
Average LOA	7.42		

Status of stocks of priority species

The information given below and presented to the National Report of last year remain unchanged since the fishing pressure in these stocks has not changed significantly during the intersessional period.

Anchovy (*Engraulis encrasicolus*) - GSA22 (Aegean Sea-NWpart)

In GSA 22 the Greek anchovy fishery is almost exclusively exploited by the purse seine fleet. Regarding the regulations enforced they concern a closed period from the mid December till the end of February and technical measures such as minimum distance from shore, gear and mesh size, vessel capacity, power of engine. There is a minimum landing size at 9 cm. Discards values are less than 1%,

reaching approximately 0.06% data for GSA 22. Data of the landings per vessel class indicate that small vessels (12-24 m) are mainly responsible for anchovy catches (>70% of sardine catches).

The assessment of the stock has been based on fishery independent surveys information as well as on Integrated Catch at Age (ICA) analysis model. Acoustic surveys estimations were used for Total Biomass estimates. ICA assessment method uses separable virtual population analysis (VPA) with weighted tuning indices. The application of ICA was based on commercial catch data (2000-2008) and as tuning indices were used the biomass estimates from acoustic surveys estimates and DEPM surveys estimates over the period 2003-2008 with a gap in 2007, as no surveys data were available for this year. The stock was found as fully exploited with no expected room for further expansion. The exploitation rate was found to produce moderate to high fishing mortality and the stock abundance was estimated as intermediate. No further surveys and assessments were carried out in 2009. No further surveys and assessments were carried out in 2009, while landings reduced of about 2000 tons in 2009. During 2015 the survey covered partly the targeted populations. The new data are under processing and analysis.

Sardine (*Sardina pilchardus*) in the Aegean sea - GSA22 (Aegean Sea-NW part)

In GSA 22 the Greek sardine fishery is almost exclusively exploited by the purse seine fleet. Regarding the regulations enforced they concern a closed period from the mid December till the end of February and technical measures such as minimum distance from shore, gear and mesh size, vessel capacity, power of engine. There is a minimum landing size at 11 cm. Discards values are less than 1%, reaching approximately 0.3% data for GSA 22. Data of the landings per vessel class indicate that small vessels (12-24 m) are mainly responsible for sardine catches (>88% of sardine catches).

The assessment of the stock has been based on fishery independent surveys information as well as on Integrated Catch at Age (ICA) analysis model. Acoustic surveys estimations were used for Total Biomass estimates. ICA assessment method uses separable virtual population analysis (VPA) with weighted tuning indices. The application of ICA was based on commercial catch data (2000-2008) and as tuning indices were used the biomass estimates from acoustic surveys estimates over the period 2003-2008 with a gap in 2007, as no acoustic survey data were available for this year. The exploitation rate was found to produce high fishing mortality and the stock abundance was estimated as intermediate. No further surveys and assessments were carried out in 2009 while landings remain stable since 2008. No further surveys and assessments were carried out in 2009, while landings remained stable since 2008. During 2015 the eco-survey covered partly the targeted populations. The new data are under processing and analysis and will be presented during the running year.

Conclusions for both anchovy and sardine

The conclusions based on those assessments should be considered preliminary and cautionary because they are based on a short time series of data. Based on the assessment results the anchovy stock is considered to be harvested sustainably, operating below but close to an optimal yield level, with no however expected room for further expansion. On the other hand the stock of sardine was found to be exploited above but close to the empirical level for stock decline. Thus the management advice is not to increase the fishing effort. The sustainability for harvesting of both stocks has to be confirmed in following years, while the stocks should be monitored in an annual basis with direct assessment surveys.

Red mullet (*Mullus barbatus*) – GSAs 22&23

The species is mainly fished by bottom trawlers and is one of the most important target species of the gear. Minor catches are also reported from artisanal fleets using various gillnet types. Management regulations include seasonal (June 1 - September 30) and spatial closures of the bottom trawl fishery, as well as a minimum landing size. The most recent assessment has been based on production modeling using survey (MEDITS) and catch data up to 2009.

Assessment results demonstrated that the stocks are at a healthy state and their current (2009) exploitation rates are at safe levels. The stocks of the this species were over-fished till the late 90's but improvement has been observed thereafter. Given the relatively small size of the species and its depth

preferences (more abundant over the continental shelf), it seems that the progressive implementation of increases in the trawl codend mesh-size and the prohibition of bottom trawling in depths < 50m had positively affected the state of their stocks. New data collected during 2015 are under processing and analysis and will be presented during the running year.

Striped mullet (*Mullus surmuletus*) – GSAs 22&23

The species is fished by bottom trawlers and artisanal fleets. Management regulations include seasonal (June 1 - September 30) and spatial closures of the bottom trawl fishery, as well as a minimum landing size. The most recent assessment has been based on production modeling using survey (MEDITS) and catch data up to 2009.

Assessment results demonstrated that the stocks are at a healthy state and their current (2009) exploitation rates are at safe levels. The stocks of the aforementioned species were over-fished till the late 90's but improvement has been observed thereafter. Given the relatively small size of the species and its depth preferences (more abundant over the continental shelf), it seems that the progressive implementation of increases in the trawl codend mesh-size and the prohibition of bottom trawling in depths < 50m had positively affected the state of their stocks. New data collected during 2015 are under processing and analysis and will be presented during the running year.

Hake *(Merluccius merluccius)* – GSAs 22&23

The species is fished by bottom trawlers and various artisanal fleets that use gillnets and longlines. Management regulations include seasonal (June 1 - September 30) and spatial closures of the bottom trawl fishery, as well as a minimum landing size. The most recent assessment has been based on production modeling using survey (MEDITS) and catch data up to 2009.

Assessment results have demonstrated that, in both GSAs, stock biomass shows a general decreasing trend in the last 4-5 years of the study. Both hake stocks undergo slight overfishing and their biomass is just above the estimated safe levels. Although there are not any relevant data, it is reasonable to assume that the recent banning of bottom trawling in depths < 50m resulted in shifts of fishing effort at deeper waters producing a negative impact on species, such as hake, mainly inhibiting the slope region. A fishing effort reduction of bottom trawlers and artisanal metier targeting hake has been recommended to keep stock biomass at safe levels. New data collected during 2015 are under processing and analysis and will be presented during the running year.

Pink shrimp (*Parapeneus longirostris*) – GSAs 22&23

Pink shrimp is fished by bottom trawlers and it is one of the main target species of the gear. Management regulations include seasonal (June 1 - September 30) and spatial closures of the bottom trawl fishery. The most recent assessment has been based on production modeling using survey (MEDITS) and catch data up to 2009.

Assessment results have demonstrated that, in both GSAs, stock biomass shows a general decreasing trend in the last 4-5 years of the study and current fishing pressure is at marginally safe levels. The Aegean stock (GSA 22) is slightly overfished (biomass below safe levels), while the Ionian stock (GSA 20) is still at safe levels. Although there are not any relevant data, it is reasonable to assume that the recent banning of bottom trawling in depths < 50m resulted in shifts of fishing effort at deeper waters producing a negative impact on species, such as pink shrimp, mainly inhibiting the slope region. A fishing effort reduction of bottom trawlers has been recommended to keep stock biomass at safe levels. New data collected during 2015 are under processing and analysis and will be presented during the running year.

Status of the statistics and the information system

The fisheries statistics data keep getting more accurate and valid. The pilot introduction of OSPA (Integrated Information Technology System), practically the gradual implementation of ERS gives the system an immediate and valid aspect. Since December 2014 only the bft fishery is obliged to use ERS. Since April 2015 all licenced vessels targeting large pelagics and since 20-08-2015 all vessels more than 10m of lenght are obliged to use ERS.

The Hellenic Statistical Authority (EL.STAT) remains the administrative boby gathering fisheries data. The Directorate General for Sustainable Fisheries collects and validates various data concerning among others:

a. fish landings for specific species (bft, swordfish and albacore) daily, pursuant ICCAT recommendations and the EU legislation. The Bluefin catch document is also collected daily with details about the caught specimens' presentation.

b. trade data concerning imports, exports and re-exports of swordfish and big-eyed tuna are kept, pursuant the the Reg(EC) 1984/2003.

c. data concerning imports of fishery products from third countries pursuant the Reg (EC) 1005/2008.

d. fish landings from vessels that land catches to foreign ports.

Moreover, the National Fleet Registry (NFR) is kept and includes vessels technical characteristics. NFR is the provider to Community Fleet Registry.

Status of research in progress

In Greece, the Mediterranean fisheries research is carried out primarily by the Hellenic Centre for Marine Research and the Fisheries Research Institute that belongs to the Hellenic Agricultural Organisation (DEMETRA). In addition to these two research institutes there are other departments in universities that carry out similar research work in fisheries. The following research projects are part of the ongoing research work.

National Fisheries Data Collection Programme 2011-2015

The following actions were partly carried out in 2015.

Evaluation of the fishing sector

Economic variables For the collection of the socioeconomic variables the target population of the survey was estimated through the National Vessel Register for 2013. The population was segmented in accordance with the technical specification of the Appendix III of the Commission Decision 2010/93/EU and the variables that were used for the segmentation were the Geographical Sub Areas (GSA), the main fishing gear and the overall length (LOA). The sample that was derived consists of 1.395 vessels. A questionnaire that consisted of closed-ended questions was developed for the collection of all economic variables described in Appendix VI of Commission Decision 2010/93/EC.

Biological-Metier-related variables Data on landings and discards for all the métiers foreseen in the NP were collected during 2015 through on-board and on-shore sampling.

Stock-related variables The data collection for the stock- related variables (age, length, weight, sex, maturity and fecundity) according to the Appendix VII of the Commission Decision 2010/93/EU, has been completed for all the stocks included in the sampling scheme which was foreseen in the NP. Also, the collection of the necessary data for the stocks of group 3 (G3 species) has been completed for the majority of the species.

Transversal variables The data collection on effort and landings was achieved based on the sampling scheme described in the NP.

Research surveys at sea: MEDIAS Regarding the MEDIAS survey, this has been partly accomplished

Evaluation of the effects of the fishing sector on the marine ecosystem

In the context of scientific research survey at sea, MEDIAS data were collected to determine some of the indicators listed in Appendix XIII of the Commission Decision 93/2010.

Management and use of data

The National data bases have adapted completely DCF standards and structures in order to support data storing and analysis for the following actions: MEDITS and MEDIAS surveys, onboard sampling, biological sampling, transversal variables, economic data, aquaculture, processing and eel survey. Most of the data are already stored in the database. The COST package was evaluated and historical data sets were used for testing the functionality and the produced output of the COST routines.

Molecular methods for marine biodiversity assessment, the traceability of fisheries products and the identification of fish populations Molecular genetic methods constitute a powerful tool for the indisputable identification of fish species, thus contributing towards an accurate account of the biodiversity level in a particular area. Furthermore, molecular methods are widely applied in defining potential genetic population structures within the area of repartition of a particular fish species. Genetic information at both the species and population levels is becoming indispensable to traceability issues. Such applications include determining the species composition of processed fisheries products, while, at a more advanced level, the geographical origin of any fish landed can potentially be identified. Thus, through the use of molecular genetics methods in fisheries research a duel benefit can be achieved: Firstly, the consumer can be protected from fraudulent substitutions of species in fisheries products and secondly, the relevant national or European authorities can be informed in cases of illegal, uncontrolled, and unreported (IUU) fisheries.

In Greece, recent relevant examples include the attempted marketing of slices of *Lepidocybium flavobrunneum* as *Xiphias gladius* and the identification of *Solea aegyptiaca* in the sole fisheries in the Thracian Sea. In both cases the species identifications were performed at the Fisheries Research Institute using molecular genetic methods. In the first case, a major super market chain requested that we test imported frozen fish slices marked as *Xiphias gladius.* In the second case, the *Solea aegyptiaca* was identified in a presumed *Solea solea* sample, that was analyzed in the frame of a European research project, proving that the range of expansion of this cryptic species is much wider in the Mediterranean than previously thought.

Stock units in the Mediterranean: Identification of distinct biological units (stock units) for different fish and shellfish species and among different GFCM-GSA. The main objectives of the study are to undertake a multidisciplinary identification of distinct fishery/biological units (stock units) for the most relevant demersal and small pelagic species in the Mediterranean in order to contribute to the improvement of the quality and the reliability of their assessment. The investigation of the relationship between the stock unit, the characteristics of the main fisheries involved and the GFCM-GSAs system and solutions proposed for the different species and fisheries taking into account the need to ensure consistency with the main current stratifications for data gathering and statistics reporting. In addition to this project provides an inventory of gaps and suggestion for further investigation including the genetic characterisation of provisional stock units already identified.

Mediterranean hAlieutic Resources Evaluation and Advice – HORIZONTAL SERVICES (MAREA) The project aims to organize a consortium of European research Institutes and Centre with expertise in fisheries research and which will be readily available to offer scientific advice on fisheries issues which are currently required or will be required by the commission. DG MARE has asked for scientific advice for 7 different issues from which 3 have received a top priority status. The scientific subject of the first 3 tasks is: Collection and mapping (GIS) of information for essential fish habitats

Development of a bio-economic modeling tool to develop and support multi-objective approaches for fisheries management. Identification of the main species and fleet segments/métier covering an adequate proportion of total catches/landings and total revenues of the main métier involved in multispecies multiple gears demersal fisheries in different Mediterranean sub-regions

Estimation of maximum net length of trammel nets, gillnets and combined bottom set nets by using the volume of the mass of the net.

Technical specifications of Mediterranean trawl gears (MY GEAR) The goal of the contract is to have updated information on the characteristics of trawl nets used in different Mediterranean fisheries, with

a view to possibly establish maximum dimensions and adequate rigging for trawl fishing gears. All these elements will contribute to improve the selectivity, to limit the fishing effort and to minimize the environmental impact of fishing gears. In addition, such information can be useful to evaluate the potential harvesting pattern of different gears in terms of explored area during fishing operations and thus contributing to underpin specific management measures of fishing capacity. Empirical relationships among different parts of the fishing trawl gears, including different type of likely attachments, as well as between some of these parts and the otterboard size and the engine power of the vessel shall be reported. The study must be carried out on the basis of the information collected and/or measured in relevant Mediterranean fishing fleets with the collaboration both of the fishing sectors and of the control/inspection bodies. Information must also be independently collected through the fishing-nets makers, door manufacturers and when possible fishermen. Literature information as well as results from research projects and studies, funded either with national or/and EU support, must be used in view of establishing synergies among different scientific domains while avoiding duplications.

The budget of each project will be agreed when each project will be approved by DG MARE and then, the proposal will be submitted for evaluation and approval from the Board of Directors of the Hellenic Centre for Marine Research separately and individually.

Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture (PREVENT ESCAPE) The primary objective of the project is to develop methods and technologies to prevent the escape of fish from aquaculture cages after the detailed assessment of such incidents in European waters and the study of their causes, as well as the species specific behavioural and biological characteristics of escapees and their interactions with the wild populations.

Catch rate determination pelagic long-lines fisheries (MAREA). The project aims on catch rate determination of Albacore, Swordfish and Bluefin tuna and the characterization and quantification of associated bycatch and discards in Mediteranean pelagic long-lines fisheries

Cooperation in Fisheries Aquaculture and Sea Food Processing (COFASP) The project is an ERANET and is the follow-up of the eranet MARIFISH. The project builds on the experience of the eranets MARIFISH and SEAS-ERA and covers capture fisheries and fish processing. The eranet participants are the EU funders of research on fisheries and processing of fisheries products

Surfacing System for Ship Recovery (SuSY) The proposed research is for engineering development for a salvage system to refloat sinking or sunken ships. HCMR is involved in the engineering review, feasibility studies, concept definition and sea trials of a prototype system.

Propagation of spillages is one of the largest environmental problems following a ship disaster. Instead of cleaning dirty areas, the SUSY system will avoid spillages by stabilizing vessels immediately after an accident. The main goal of the project is the development of well known submarine rescue technology into system usable for merchant ships in emergency situations. The systems for submarines are based on satellite booster technology with liquid or solid fuel to blow water out of the ballast tanks in a very short time to provide additional buoyancy to stop, for example, an uncontrolled diving process. Combining this technology with air pressure systems and balloon technology to create a multi-purpose modular system for ship rescue purposes is the SUSY project target. Therefore booster technology combined with pressure air technologies has to be adapted to salvage procedure requirements. In combination with new balloon textiles a secure vessel stabilisation process, as well as the salvage process, will be supported.

Different application scenarios/concepts can be envisaged: 1) preventative installation of rescue systems on ships with hazardous cargo, 2) equipment for coast guard and rescue squads to quickly stabilise capsized ships and 3) equipment for teams to lift sunken ships.

The technical challenges for SUSY where research is needed to develop the envisaged system are (1) developing a hydro-dynamical and a thermo-dynamical model as basis for a controlled process for the different possible scenarios, (2) developing a safety and secure buoyancy generating system based on liquid and solid fuel and air pressure, (3) find the right material to cope with the pressure, temperature and dynamic loads of the rescue scenario, (4) define a life-cycle cost model to assure the design of a

low cost modular system, (5) simulate the different scenarios to provide input for the design optimisation, (6) Finally SUSY will build a prototype to proof the concept in real sea tests.

Catches of pelagic (drifting) longline fisheries in the Mediterranean (MEDPEL). The project objectives are to identify, in as much fine scale as possible, the spatiotemporal catch-rate variations of the main commercial and non-commercial (discarded) species in the Mediterranean pelagic long-line fisheries.

Maximising yield of fisheries while balancing ecosystem, economic and social concerns (MYFISH). The project will provide definitions of MSY variants which maximize other measures of "yield" than biomass and which account for the fact that single species rarely exist in isolation. Further, MYFISH will redefine the term "sustainable" to signify that Good Environmental Status (MSFD) is achieved and economically and socially unacceptable situations are avoided, all with acceptable levels of risk. In short, MYFISH aims at integrating the MSY concept with the overarching principals of the CFP: the precautionary and the ecosystem approach.

System for the Assessment of Acceptable Ecological Flows in Rivers and Streams of Greece' (ECOFLOW/ 961- 02.5031301). The ECOFLOW project aims to create a systematic and standardized procedure for assessing ecologically acceptable flows in rivers and streams whose flow regime is impacted by water resource development. The flow of running waters sustains the web of life, and the ecological quality of waters in an entire river basin. Flow regime impairments has been little-studied in Greece, and remains a much neglected aspect of the national legislation, despite widespread conflicts over water resource management and uses. A specialized consortium of scientists and relevant industry corporations will work together to achieve pioneering research and technological development and provide an important contribution to water-quality protection on a nation-wide level. State-of-the-art methods and software products will be developed to assess impaired flow regime impacts in the uniquely varied streams and rivers of Greece. Fish and hydrogeological elements will be used as indicators of ecological quality. This work differs from instream methods previously applied in temperate-climate countries since it will be specifically adapted to the Mediterranean's unique bio-geoclimatic and ecological conditions. Lastly this project promotes the implementation of the EU Water Framework Directive through providing a scientifically sound basis for assessing ecologically appropriate flow regimes using scientifically defensible analytical tools

Derelict Fishing Gear Management System in the Adriatic Region (DeFishGear/ 985-01.3021308). DeFishGear project is coherent with the strategic theme "Improving marine, coastal and delta rivers environment by joint management in the Adriatic area" through its contribution to reduce pollution of marine environment with litter by addressing the source of marine litter pollution related to fisheries, by direct removal of marine litter from the environment through promoting "Fishing-for-litter' and "Derelict fishing gear management system" activities and by proposing common monitoring program of marine litter in all participating countries.

HCMR will be involved in 5 out of 10 workpackages (WP1, WP2, WP4, WP5, WP6) of the project. The first 2 correspont to common activitiew among partners related to project management and the dissemination of project results. In WP4,5,6 HCMR will be involved in the following:

In Corfu-Thesprotia region, the reserach vessel 'Philia' and an ROV will be used for marine litter assessment on the sea bottom the water column and for the assessment of microplastics abundance in surface waters. HCMR will collaborate with the other project partners in the development of plans and protocols. HCMR will also work in collaboration with FB12 for the assessment of litter on beaches. HCMR will provide guidance to other partners on sample preparation for microplastic identification. Finally, HCMR will be involved in implementing pilot actions in the ports of Corfu and Igoumenitsa (Greece), in order to manage and reduce fishing gear litter: fishermen awareness campaigns; derelict fishing gear collection for recycling; fishing-for-litter.

Managing The Effects Of Multiple Stressors On Aquatic Ecosystems Under Water Scarcity (GLOBAQUA). GLOBAQUA has assembled a multidisciplinary team of leading scientists in the fields of hydrology, chemistry, ecology, ecotoxicology, economy,sociology, engineering and

modeling in order to study the interaction of multiple stressors within the frame of strong hydrological pressure on water resources. The aim is to achieve a better understanding how current management practices and policies could be improved by identifying the main drawbacks and alternatives.

Plesionika Manage (02.2031403). The aim of this study is tyo test with two different experimental designs the size selectibity, trap type efficiency, seasonal depth migration of the pandalid shrimp, he economic sustainability, trap selectivity, biological indices, the socio-economic fisheries profile and Alternative Management Scenarios.

The aim of the first design is to test for size selectibity, trap type efficiency and seasonal depth migration of the pandalid shrimp

In the second design we aim to investigate the spatial/geographical variation of shrimp trap fishery catches in the south-eastern Aegean Sea

"Selectivity of the diamond and square mesh of the trawl cod end, biological and economic consequences and fish behavior comparative study" (EPILEXIS). The objective of this project is to study the selectivity of diamond and square mesh of the codend in the bottom trawl, the biological and economic consequences of their implementation and the behavior and condition of the retained fish and escapees. In this context, we will study the selectivity of the 40 mm square and 50 mm diamond mesh size in the codend of the trawl, which were determined based on the EU regulation (EC 1967/2006) as the minimum mesh sizes for this gear. For comparison purposes, the selectivity of the 40 mm diamond mesh size will also be examined, which was used until now, but is no longer in use based on EU regulation (EC 1967/2006). Data collection will take place during experimental fishing, in conditions as close as possible to those carried out by commercial fishery (using commercial fishing vessels, trawls and other commercial fishing equipments, testing hauls of commercial fishery). The study will be carried out by covering the codend with cover. Based on these data, the selectivity parameters, the composition of the catch, the percentage of commercial catch, by-catch and discards and quantity of the retained and escapees will be studied for each mesh size, for two seasons and three depth zones. In addition, underwater cameras inside the trawl and between the codend and the cover will be used for the study of the behavior and condition of the retained fish and escapees. Finally, economic data, related to each mesh size, will be collected (quantity and quality of landings, landings' commercial value, fuel cost, gear cost etc). All the above will form the basis for assessing the biological and economic consequences of the application of each mesh size in order to propose the most adequate one. The results of this project will be disseminated through a website, publications, participation in conferences and a workshop with the related stakeholders.

Status of the social sciences studies in progress

Mediterranean Network of sustainable small-scale fishing communities (FISHINMED).

Creating a Mediterranean Network linking public and private institutions to support the social-economic local development of small-scale fishing communities thus favouring the diversification of fishing activities and the socio-economic relations for an integrated valorisation of the coastal area.

Socio economic effects of management measures of the future CFP (SOCIOEC) SOCIOEC is an interdisciplinary, European wide project bringing together scientists from several fisheries sciences with industry partners and other key stakeholders to work in an integrated manner on solutions for future fisheries management that can be implemented at a regional level. The central concept is to provide a mechanism for developing measures that are consistent with the overarching sustainability objectives of the EU, and that can provide consensus across all stakeholders. The first step will be to develop a coherent and consistent set of management objectives, which will address ecological; economic and social sustainability targets. The objectives should be consistent with the aims of the CFP, MSFD and other EU directives, but they should also be understandable by the wider stakeholder community and engage their support. This will then lead to the proposal of a number of potential management measures, based on existing or new approaches. The second step will be to analyze the incentives for compliance provided by these measures. In particular, we will examine fisher's responses and perceptions of these measures, based on historical analysis as well as direct consultation and interviews. This project part will also examine how the governance can be changed

to facilitate self- and co-management to ensure fisher buy-in to promising management measures. In particular, the project will focus on the interpretation of overarching (i.e. EU) objectives in local and regional contexts. Finally, the project will examine the impacts of the management measures that emerge from this process, particularly in terms of their economic and social impacts. The IA analysis will be integrated by evaluating the proposed measures against the criteria of effectiveness, efficiency and coherence. Special attention will be paid in evaluating the proposed management measures' performance in terms of their ability to achieve the general and specific ecological objectives.

Identification of distinct biological units (STOCKMED). STOCKMED project has tackled, according to a holistic perspective, the identification of the stock units and their boundaries for 19 species of commercial interest in the Mediterranean. The study is based on available scientific data and published literature, concerning all those domains that are recognized as determinants in multidimensional identification of stocks. The challenges faced were therefore 1) to critically review available data/information and select relevant descriptors for investigating stock structure; 2) to develop a methodology to standardize and effectively integrate such highly heterogeneous types of data/information (generally collected for purposes other than the identification of stock units). The strength of the proposed methodological framework relies on its explicit spatial formulation and the incorporation of experts' judgment at different steps of the process. Information gathered in the different WPs regarded iological indicators from scientifc surveys, biological parameters from scientifc literature (e.g. growth, aturity, parasites), genetic structure of population, patterns of environmental factors (e.g. habitats and currents). The methodology developed allowed to identify possible geographical configurations of the stocks of each species, including the assessment of their uncertainty. These configurations represent the first example of the distribution of units of stocks in the Mediterranean according to a standardized approach and based on the current knowledge available. Finally a major availability of standardized information on the spatial distribution could improve the accuracy in selecting data for stock assessment and the consequent adoption of appropriate management measures.

ADRiatic Ionian maritime spatial PLANning (ADRIPLAN). The project aims to deliver a commonly-agreed approach for the development of cross-border Maritime Spatial Planning (MSP) in the Adriatic-Ionian Macro-Region, focusing mainly on two study areas, one in Northern Adriatic, and a second one in Southern Adriatic - Northern Ionian Sea. This approach will rely on a comprehensive assessment (environmental, legal, administrative, socio- economic), and will be developed taking into account the multiple demands and possibilities, with the contribution of both institutional members and observers participating in the project. In addition there will be interaction with key stakeholders whose activities are among the most important in the region (e.g. fisheries, tourism). The ultimate goal is to promote harmonized implementation of the relevant legal framework, namely the Mediterranean Protocol on Integrated Coastal Zone Management, and the proposed Directive ICZM-MSP (COM (2013) 133 final).

Spatially resolved Ecosystem models and their Application to Marine MANagement (SEAMAN). The sustainable use of the marine ecosystems set out for example in the Marine Strategy Framework Directive (MSFD) and the Common Fisheries Policy (CFP) an improved knowledge about the processes impacting the environment is needed. Spatially explicit ecosystem models are getting increasingly important to manage the challenges of natural conservation, sustainable use and economic exploitation. They are useful for understanding marine ecosystem dynamics, disentangle the region-specific impact of various ecosystem drivers and form a powerful tool to evaluate different management options in complex systems. However, uncertainties related to process formulations of growth, respiration, mortality and regenerative production, uncertainties related to the zooplankton compartment and conceptual challenges related to trophic coupling and fish behaviour limit the applicability of state of the art 3-d ecosystem models to marine ecosystem management significantly. Further limitations for an integrative ecosystem approach to management are lacking model instruments to assess ecosystem stressors such as the advance of invasive alien species or the impact of anthropogenic pollutants throughout the various trophic levels.

Technical Improvement of the fishing gear 'trawl' in order to enhance its use and achieve energy efficiency. The conclusions from several RTD projects conducted by the Institute for Marine Biological Resources and Inland Waters show that there is a great need to redesign the fishing gear 'trawl' in a scientific way based on the vessel characteristics and its equipment in order to achieve the following goals:

- improve its use and productivity by allowing the increase of fishing speed by 2 fold
- minimize energy losses due to friction of the trawl components in the water
- redesign the trawl using modern CAD/CAM/CAE tools and hydrodynamic models
- redesign the main frictional components such as the doors and recalculate the angle of attack)

ECOsystem effect of fisheries DISCards (ECODISC). The European Commission has decided the gradual banning of fisheries discards by imposing obligation for landing of unwanted catch as key point of the reform of the Common Fishery Policy. Discards constitute food source for several groups of species (especially seabirds and benthic scavengers) and cause alteration of trophic interactions which affect ecosystem functioning and structure. The effect of a discards ban on the environment is largely unknown, especially for oligotrophic systems like the Mediterranean Sea. ECODISC aims at understanding how fisheries discards affect ecological processes and biogeochemical cycles, and how this can be managed. These are addressed by a series of experiments and tools (maps, statistical and mathematical models) that aim to elucidate discards fate and their use as a food source by the ecosystem communities, and integrate this information to explore ecosystem effects of a possible application of partial or full discards ban. First the spatio-temporal distribution of discards in the Ionian Sea will be analyzed, discard management scenarios that are likely to be applied will be defined and resultant changes in discards quantities will be explored. A series of on board experiments will shed light on the survival of discards, their fate after sinking and their use by opportunistic benthic scavengers. A series of research trips is designed to explore discards use by seabirds and analyze their dependency by this food levy. The information gained will be integrated in an existing ecosystem model which will be updated to focus on the interactions of discarding with seabirds and benthic communities. The model will be used to simulate the defined discards ban management scenarios and results will be used to assess if discards play important role for the conservation of seabirds and/or the sustainability of fisheries resources. Finally, based on the model outcomes, management strategies will be evaluated

VALUE: Exploitation of the discards within the reformed CFP without the creation of income for the fishermen. The study aims to analyse in detail the logistics of the discard landings at the auction markets using as case study the Keratsini monger market. In addition the study of their exploitation as raw material for the preparation of food pellets for the feeding of sea bream in cages. The results of the project will provide recommendations for the proper handling of the discards in order to be suitable for the purpose of fishfeed making.

Marine environmental studies in progress

Development of Innovative tools for understanding marine biodiversity and assessing good environmental status (DEVOTES) The Marine Strategy Framework Directive (MSFD) identifies marine biodiversity as a key descriptor for the assessment of the environmental status of marine waters. However the understanding of the relationships between pressures from human activities and climatic influences and their effects on marine biological diversity are still only partially understood. There are a number of aspects of these relationships which need to be better understood in order to fully achieve a good environmental status (GES) of marine waters, a target of the MSDF.

The project will contribute, in a harmonized way for the four regions identified in the MSFD, to: (1) improve our understanding of the impact of human activities and variations associated to climate on marine biodiversity, (2) test indicators (referred in the Commission Decision on GES) and develop new indicotrs for assessment at several ecological levels (species, habitat, ecosystems) and for the characterization and status classification of the marine waters, (3) develop, test and validate, on the

basis of observations, innovative integrative modelling tools in order to further strengthen our understanding of ecosystem and biodiversity changes in space and time.

Furthermore the project will (1) enable the development of adaptive management (ecosystem-based management approach) strategies and management measures taking into account the role of industry and relevant stakeholders; (2) provide economic and social assessment of the consequences of management practices; (3) identify the barriers (socio-economic and legislative) that prevent progress towards GES; (4) provide a set of policy options for the relevant authorities to prioritize actions to reduce pressure from human activities and climatic influences.

Triennial scientific monitoring of the impacts of the construction of artificial reefs in the coastal area off Ierissos, Preveza and Kalymnos. In November 2015 the Fisheries Research Institute completed the three year scientific monitoring in three new artificial reefs in coastal regions of the coast of Greece. At each location created 3 new protected areas, which are intended to improve the conditions for development of major commercial stocks, reducing the natural and fishing mortality at juveniles. The total area of the three protected areas is about 30 square kilometers, located in different latitude and therefore relate to different species, which use artificial components as a nursery for a short or longer period.

Benthic ecosystem fisheries impact study (BENTHIS) Benthic ecosystems provide important goods and services, such as fisheries products and supporting, regulation and cultural services. There is serious concern about the adverse impact of fisheries on benthic ecosystem which may negatively affect the fisheries yield and integrity of the sea bed. To develop an integrated approach to the management of human activities in the marine environment, in particular fishing, there is a need to develop quantitative tools to assess the impact of fisheries on the benthic ecosystem and at the same time collaborate with the fishing industry to develop innovative technologies and new management approaches to reduce the impact on benthic ecosystems. BENTHIS will provide the knowledge to further develop the ecosystem approach to fisheries management as required in the Common Fisheries Policy and the Marine Strategy Framework Directive. It will study the diversity of benthic ecosystem in European waters and the role of benthic species in the ecosystem functioning. Fisheries impacts will be studied on benthic organisms and on the geo-chemistry. The newly acquired knowledge will be synthesized in a number of generic tools that will be combined into a fishing/seabed habitat risk assessment method that will be applied to fisheries in the Baltic, North Sea, Western waters, Mediterranean and Black Sea. Fisheries will be selected with the fishing industry based on the impact on the benthic ecosystem. BENTHIS will integrate fishing industry partners to collaborate in testing the performance of innovative technologies to reduce fishing impact. Finally, in collaboration with the fishing industry and other stakeholders, new management approaches will be developed and tested on their effects on the ecosystem and the socio-economic consequences. As such BENTHIS will provide the urgently needed scientific basis to integrate the role of marine benthic ecosystems in fisheries management.

Maximising yield of fisheries while balancing ecosystem, economic and social concerns (MYFISH) The MSY concept was included as a principle in the 2009 Green Paper on the reform of the Common Fisheries Policy (CFP) in accordance with the global imperative to manage fish stocks according to the maximum sustainable yield (MSY). This implies a commitment to direct management of fish stocks towards achieving MSY by 2015. Attaining this goal is complicated by the lack of common agreement on the interpretation of "sustainability" and "yield" and by the effects that achieving MSY for one stock may have on other stocks and broader ecosystem, economic, or social aspects. MYFISH will provide definitions of MSY variants which maximize other measures of “yield” than biomass and which account for the fact that single species rarely exist in isolation. Further, MYFISH will redefine the term “sustainable” to signify that Good Environmental Status (MSFD) is achieved and economically and socially unacceptable situations are avoided, all with acceptable levels of risk. In short, MYFISH aims at integrating the MSY concept with the overarching principals of the CFP: the precautionary and the ecosystem approach. MYFISH will achieve this objective through addressing fisheries in all RAC areas and integrating stakeholders (the fishing industry, NGOs and managers) throughout the project. Existing ecosystem and fisheries models will

be modified to perform maximization of stakeholder approved yield measures while ensuring acceptable impact levels on ecosystem, economic and social aspects. Implementation plans are proposed and social aspects addressed through active involvement of stakeholders. Finally, effects of changes in environment, economy and society on MSY variants are considered, aiming at procedures rendering the MSY approach robust to such changes. The expertise of 26 partners from relevant disciplines including fisheries, ecosystem, economic and social science are involved in all aspects of the project. Global experience is engaged from North America and the South Pacific.

Planning a network of marine protected areas for the Mediterranean Sea – NETMED. The present proposal suggests the design of an ecologically coherent network of marine protected areas for the entire Mediterranean Basin, based on the principles of systematic conservation planning; an efficient, transparent and holistic approach for marine reserves design, which informs their location, configuration and management. The aim is to protect marine biodiversity, in coastal and off-shore habitats, and preserve ecosystem services cost effectively. To accomplish this, spatial prioritization software will be used to accommodate ecological, social and economic considerations in identifying priority areas for conservation. The Mediterranean Sea offers a unique opportunity and urgent need to address this issue since: 1. especially in the western Mediterranean a large number of MPAs have already been implemented and can be used as initial framework for further implementation, 2. the knowledge about habitats and species distribution is far to be completed but some extensive mapping in several areas has been carried out and 3. the scientific community is highly sensible to the issue of Mediterranean habitats inventories as demonstrated by the effort of RAC/SPA. Given that and considering the particularities (geographical, social and political) of the study region, new conservation planning methodologies will be devised. In order to improve the proposed network and increase public support, an intense consultation process with experts on Mediterranean marine biodiversity and stakeholders will follow the initial network design. The final product of this approach will be compared with other non-systematic and national-driven approaches. Results will be of immediate use to managers of MPAs and ongoing conservation planning throughout the Mediterranean; the proposed network of MPAs will be integrated within a broader ecosystem-based strategy.

People for Ecosystem-based Governance in Assessing Sustainable Development of Ocean and coast (PEGASO) The aim of PEGASO is to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins in ways that are consistent with and relevant to the implementation of the ICZM Protocol for the Mediterranean. Many efforts have been deployed for developing Integrated Coastal Zone Management (ICZM) in the Mediterranean and the Black Sea which continue to suffer from severe environmental degradation. PEGASO will use the model of the existing ICZM Protocol for the Mediterranean and adjust it to the needs of the Black Sea through four innovative actions:

- Construct an ICZM governance platform as a bridge between scientist and end-user communities, going far beyond a conventional bridging. The building of a shared scientific and end users platform is at the heart of our proposal linked with new models of governance.
- -Refine and further develop efficient and easy to use tools for making sustainability assessments in the coastal zone (indicators, accounting methods and models, scenarios, socio-economic valuations, etc). They will be tested and validated in 9 sites (CASES) and by the ICZM Platform, using a multi-scale approach for integrated regional assessment.
- -Implement a Spatial Data Infrastructure (SDI), following INSPIRE Directive, to organize local geonodes and standardize spatial data to make it available to the ICZM Platform, and to disseminate all results.
- -Enhance regional networks of scientists and stakeholders in ICPC countries, supported by capacity building, to implement the PEGASO tools and lessons learned, to assess the state and trends for coast and sea in both basins, identifying present and future main threats, agree on responses to be done at different scales in an integrated approach, including Tran disciplinary and Tran boundary long-term collaborations.

Contribution in the elaboration of the Strategic Study of Environmental Impact of aquaculture within the frame of the National Cadastral Design and Sustainable Development plan for aquaculture (SMPE) Based on the EU and national legislation, the development of a production sector is required to be based on a National Cadastral and Sustainable Development Plan, major part of which is the Strategic Environmental Impact Study which includes the expected impact from the further development of aquaculture in Greece as well as set the roadmap and guidelines for this development.

Water body in Europe: integrative system to assess ecological status and recovery (WISER) WISER is an EU 7FP project, supports the implementation of Water Framework Directive (WFD) by developing tools for the integrated assessment of the ecological status of the European surface waters. Within this framework is the developing and testing methodological tools (e.g. EEI-c) most appropriate for the classification of ecological status of the Mediterranean transitional and coastal waters, using benthic macrophytes as bioindicators.

Fish Fry Protecting Devices (ECO-NET). The proposed project aims at meeting the market demand for innovative products that could assist the fishing industry to apply large-scale fish protection programs using relatively inexpensive materials and techniques. The idea is to use nets, which is an inexpensive material, already used in the fishing industry, and construct a series of Fish Aggregating Devices (FADs).

Architecture and roadmap to manage multiple pressures on lagoons (ARCH/ 877). The project aims to the study nad management of coastal marine aquatic ecosystems such as coastal wetlands. The contribution of the Institute for Marine Biological Resources is to study the coastal fisheries and the coastal resources along the front of such wetlands and the dynamics of the migration of these resources through the wetlands for reproduction and feeding purposes

Pilot project on catch and discard composition including solutions for limitation and possible elimination of unwanted by-catches in trawl net fisheries in the Mediterranean (DISCATCH). Conservation standards for sustainable exploitation, within an ecosystem approach to fisheries management, increasingly urge the elimination of the wasteful practice of biomass discarding at sea. Understanding the reasons for discarding and identification of solutions to tackle the bycatches of unwanted species and specimens is essential if discards are to be eliminated without affecting the minimum requirements of conservation standards. To strengthen the scientific basis for the ecosystem approach to fisheries management the EU requires knowledge on the impact of fishing on the structure, functioning and services of the ecosystem as well as on the socio-economic aspect of innovations in fisheries technology and management. The current project will provide this basis. The success of this multi-disciplinary project, however, will critically depend on a clear a priori understanding of how these different topics are inter-linked and fit into the overall framework of the project. The aim of DISCATCH will be to support the identification of viable solutions to address factors determining the catches of unwanted species and specimens in trawl fisheries with a view to reducing unwanted catches and eliminating discards. The main objectives of DISCATCH are:

- - to provide an overall assessment of the fishing fleet discarding behaviour and to identify the main reasons for discarding in Mediterranean continental shelf demersal and small pelagic trawl fisheries.
- - to identify measures, including technical ones related to fishing gear characteristics, to mitigate or eliminate bycatches of unwanted species and measures to eliminate discarding based on existing or new measures.

Monitoring of the state and abundance of Ladigesocypris ghigii (Pisces, Cyprinidae) population in Gadouras stream (Rhodes Island), during the construction of the Gadouras dam (402-02.4070101). The objective of the project is to continue the monitoring of the abundance of the *Ladigesocypris ghigii* population that inhabits the Gadouras stream in Rhodes Island, (since the construction of the Gadouras dam is still ongoing), until the end of 2008.

Monitoring of ecological water quality of rivers, coastal and transitional waters of Greece (article 8 Directive 2000/60/EU)

Fish Fry Protecting Devices (ECONET). The proposed project aims at meeting the market demand for innovative products that could assist the fishing industry to apply large-scale fish protection programs using relatively inexpensive materials and techniques. The idea is to use nets, which is an inexpensive material, already used in the fishing industry, and construct a series of Fish Aggregating Devices (FADs).

Fish Net Greece: Conserving the Corfu killifish. This project aims to use monitoring, captive breeding, research and trial translocation of the critically endangered Corfu Killifish *Valencia letourneuxi* in order to stabilise its population and prevent extinction in the wild. In this, the Kastoria Aquarium will contribute too with establishment of stocks of this species, in aquaria as well as in seminatural conditions. More specifically, the project will undertake the translocation of the target species from two sites where it presently exists in sufficient numbers, and move them to two sites that are suitable habitats, but either do not contain the species (though present in the basin), or where it occurs in low numbers. Some habitat restoration or enhancement will be undertaken at the latter sites, and the translocation will be conducted according to IUCN reintroduction guidelines. A Follow-up two –year monitoring phase to test the success of the actions will be undertaken. Finally, the project includes an awareness campaign, which will use interpretation panels and direct communication with local communities.

Creation of an ecosystem based fisheries model for the management of the Vovli lake. The aim of the project "Creation of an ecosystem based fisheries model for the management of the Volvi lake" is the integrated approach and the selection of exploitation models of the lake ecosystem.The main research areas of the project are: • The development of an ecosystem-based fisheries model that will correspond to the existing exploitation conditions of the Volvi lake.• The development of scenarios and model analysis that will lead to the prioritization of critical points for the production and the future sustainability of fish stocks.

- Data entry and database creation according to the project's needs.
- The recording and analysis of the characteristics of the fishers involved in the lake in relation to their occupation type and their dependence degree. • The development of a fisher's typology and of people dependent, in varying degrees, on the fisheries exploitation of the lake.• The impact assessment of changing the exploitation operational framework, according to the scenarios developed
- The presentation, the commenting and the evaluation of different scenarios for the optimization of exploitation taking into consideration the ecological and socio-economic impact assessment.

Pilot parks for fish fry protection (ECOPARKS). The proposed project aims at the establishment of two artificial reef parks in the island of Chios and Limnos. The parks will be equipped with innovative devices developed by HCMR which act as artificial reef but provide extended aggregation and protection to juvenile fish against a limited cost compared with the conventional artificial reefs. The new devices enable the fishing industry to apply large-scale fish protection programs Aggregating Devices (FADs). The parks will serve as exhibition installations for the fishing industry and policy makers.

***Posidonia* meadow location, mapping & printing on nautical maps of the Greek Seas based on specific technical requirements for the needs of the General Directorate of Fisheries (Ministry of Agriculture) in the framework of the Measure 3.1-Collective Actions of the Priority Axis 3, Measures of Community Interest in the Operational Program "Fisheries 2007-2013"**: The aim of the project was the production of a baseline map with seagrass meadows distribution throughout the Greek coastal areas using the grid of 1kmx1km provided by the European Environmental Agency (EEA 2013). The mapping of seagrasses was based on the combined use of satellite images, side-scan sonar images in situ observations by scuba diving and underwater boat-towed cameras. The input of mapping results on the grid of 1kmx1km was based on the use of four classes (class 1= 0-5%, class 2= 5-25%, class 3= 25-35%, class 4 >35%) of cell cover. The HCMR carried out the seagrass mapping in the area of the South Aegean Sea, the Fisheries Research Institute in the North Aegean Sea and the

Laboratory of Marine Geology the Ionian Sea and South Peloponnese coasts. In total 31.744 cells were evaluated. At class 1 were classified 26.088 cells from which 18.525 cells corresponded to 0% coverage (absence). At class 2 were classified 2.506 cells. At class 3 were classified 873 cells, while 2.277 cells were classified at the greater than 35% of coverage (class 4). According to the mapping results, *Posidonia oceanica* meadows are present practically almost everywhere along the Greek coasts (~16.000km), except in areas near estuaries, enclosed gulfs, or shallow and sheltered bays where the more eurythermal and euryhaline marine Angiosperms, *Cymodocea nodosa* and *Zostera noltei* are present. The most extensive (class 4) meadows of *P. oceanica* were located in the Ionian Sea (780 cells), followed by the North Aegean Sea (680 cells).

Management measures

Large Pelagic fishery. All Recommendations on BFT and swordfish in the Mediterranean sea as adopted by ICCAT and GFCM were fully implemented during the intersessional period.

Purse seine fishery. According to the provisions of article 6 of the Reg. (EC) 2371/2002 19 and the requirements of article 19 of the Reg. (EC) 1967/2006 a national management plan for the small pelagic fish stocks of Engraulis encrasicolus (anchovy) and Sardina pilchardus (sardine) exploited by purse seine fishery has been implemented in 2012.

The management plan provides for the procedure for the issuing of fishing authorisations valid for one year, the protection of the environment from the use of the gear, the definition of an annual monitoring plan according to reference points and targets for the sustainable exploitation of the fish stocks of anchovy and sardine.

Bottom trawling fishery. Similarly, a national management plan for the trawling fishery throughout the Greek territory has been approved by the European Commission in 2013.

The management plan provides for the issuing of fishing authorisations valid for one year as well as for an annual monitoring plan according to reference points and targets for the sustainable exploitation of the fish stocks of Mullus barbatus (red mullet), Mullus surmuletus (striped mullet), Merluccius merluccius (hake), Spicara smaris (pickerel) and Parapenaeus longirostris (pink shrimp).

Eel Management Plan. The Eel Management Plan includes measures targeting to the direct reduction of fishing and natural mortality, to the establishment of an efficient recording system and to the improvement of the efficiency of eel migrations.

Recommendation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area

No derogation of Paragraph 4 is applied.

Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

No incidental by-catch of seabirds was reported during 2015.

Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

No incidental by-catch of sea turtles was reported during 2015.

Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area

No incidental by-catch of monk seal was reported during 2015.

Maps and geographic positions of monk seal caves are provided in Annexes I and II.

Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

No incidental by-catch of cetaceans was reported during 2015.

Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

Sharks and rays are not target species by the Greek fishery. Data, concerning incidental sharks and rays by-catch in 2015, are not available.

ITALY / ITALIE

Description of the fisheries

The Italian national fleet registered in the Vessel Register, and operating as of December 2014, consists of 12,440 vessels accounting for a total tonnage of 156,876 GT and 999,758 kW.

Trawlers account for most (62%) of the domestic tonnage; small-scale fishing vessels, though representing the largest number of units, only make up for 10% of the total tonnage.

As for geographic distribution, the fleet still shows the same features that always distinguished the Italian fleet: low concentrations – with the exceptions of Apulia and Sicily, both in terms of number of vessels and tonnage – and strong differences in specialization, in terms of productivity and profitability, between the Adriatic and Sicilian fisheries on the one hand, and the Thyrrenian fleet on the other.

The fishing capacity of the national fishing fleet is subject to adjustment plans that provide for the gradual withdrawal of units deployed for fishing activities. Over the last seven years, the fleet has been affected by a continuous decrease in all technical parameters. Fleet has decreased by 7 percent in number and by 14 percent in total tonnage.

A steady decline in fishing activity (days at sea) characterize the Italian fleet: between 2008 and 2014 it fell by an average of 10%, dropping to 17% bottom trawlers, 25% for hydraulic dredges and 6% for small scale vessels. This trend can only be partly due to an increase in fuel price, though this surely had an impact on the trend over the last three years. But more generally, the decline in fishing activity can be explained by a different organization of the fishing sector, where operators spontaneously adopted strategies to optimize time spent at sea, both for commercial reasons and in order to cut back on operation costs associated to fishing and landing activities.

In 2014, the Italian fleet produced 176,778 tonnes of seafood generating 812,506 million euro. Results are down 2% in value since 2013, following the downward trend of the last few years, also characterized by a consistent downscale of the sector. In terms of quantity, in 2014, a light increase has been recorded.

The species most landed in 2014, were anchovies (31,842 tons.), followed by sardines (25,729 tons.) and clams (14,117 tons.); a substantial increase was recorded for anchovies (+7%), sardines (+14%) and swordfish (+19%) while a decrease was recorded for hake (-11%) and clams (-3%).

Several factors affected the fall in total captures and unitary productivity: changes in fishing zones, due to increased production costs, and a different composition of the catch, which targeted the most sought-after species on domestic and International markets affected by the economic crisis.

The fishing sector in 2014 continued to record considerably negative performances; the revenue produced by the fishing sector has consistently declined since 2008, a particularly bleak year for the industry. The added value produced by marine fishing in the last year was 460,50 million euro, of which 234.76 millions were allocated in salaries and the rest (2925.77 mill euro) represented the gross profits of the sector.

The general contraction of the economy account in this sector, due to a rise in intermediate consumptions (goods) and a fall in revenue, had negative repercussions on labour cost: only 29% of revenue was allocated to crew payments in the last year.

Table 1. Capacity and economic indicators by fleet segments, 2014

	2014						
	Total fleet	Trawlers	Pelagic fleet	Dredges	Small scale fishery	Multipurpose vessels	Longlines
Volume of landings ('000ton)	176.78	63.12	61.95	15.61	28.03	4.42	3.65
Value of landings (EUR million)	812.51	412	101	40	202	33	25
Fleet - number of vessels	12,681	2425	370	706	8,547	460	173
Fleet - total GT ('000)	159	98	24	9	16	6	5
Fleet - total kW ('000)	1,013	483	107	76	245	67	35
Days at sea (000)	1.433	329	44	55	929	53	23
Employment	26,932	7,816	2,534	1,541	13,074	1,244	722

Source: MIPAAF – National Program on Data Collection

Table 2 Main species harvested by quantity and value, 2014

species	**Landings, tons**	**Revenues (mln €)**	**Average price (€/kg)**
European Anchovy	31,842	52	1.65
European pilchards	25,729	19	0.72
Striped venus	14,117	32	2.28
European Hake	8,735	64	7.30
Deep-water rose shrimp	7,675	49	6.32
Striped mullet	6,270	28	4.50
Common cuttlefish	5,818	46	7.85
Spottail mantis squillid	4,740	27	5.74
Gastropods nei	4,204	12	2.76
Mullets	3,798	6	1.56
Swordfish	3,393	32	9.38
Musky octopus	2,959	14	4.72
Octopus	2,387	17	7.27
European sole	2,288	23	10.13
Giant red shrimp	2,237	42	18.58
Other species	50,585	351	6.93
Total	176,778	813	4.60

Source:Mipaf- National Program on Data Collection

Status of stocks of priority species (2015)

The information used to assess the status of commercial stocks in the Italian seas derives from both fishery independent survey data (e.g. MEDITS, MEDIAS, SOLEMON) and monitoring of commercial landings and discards, collected within the framework of the European Regulations on Fishery Data Collection (Reg. EC 1543/2000 and subsequent amendments and additions, Data Collection Regulation - DCR and Data Collection Framework-DCF).

The 7 GSAs surrounding Italy, represent the reference spatial scales for evaluation and assessment of commercial stocks based on analytical methods (e.g. Extended Survival Analysys: XSA, Length Cohort Analysys: LCA, Statistical Catch-at-Age: SCAA) and surplus production models.

The assessed stocks are among those with the highest commercial value for Italian fisheries. The assessments dealing with stocks shared with other Mediterranean countries were performed within the GFCM framework and were supported by FAO Regional Projects AdriaMed and MedSudMed. Stocks exploited almost exclusively by Italian vessels were assessed also by the STECF (EWG on Mediterranean Sea) of the European Commission.

Table 1 summarize the assessment results for stocks assessed in 2015. These are confined either in Italian waters or shared with other countries. Hake (*Merluccius merluccius*) was in an overfishing status in all the 7 Italian GSAs, with current fishing mortality (F_{cur}) largely exceeding the proxy for (F_{MSY}). Red mullet (*Mullus barbatus*) was close to the sustainable exploitation in South Adriatic (GSA 18), whilst it was in a high overfishing in North Adriatic (GSA 17) and Western Ionian Sea (GSA 19). A situation of overfishing was detected also for sole (*Solea solea*) in GSA 17.

Regarding crustaceans, giant red shrimp (*Aristaemorpha foliacea*) and deep-water rose shrimp (*Parapenaeus longirostris*) resulted sustainably exploited in the North Tyrrhenian Sea (GSA 9) and in overexploitation in the other GSAs where they were assessed. In the Strait of Sicily (GSA 16 and adjacent GSAs) the deep-water rose shrimp was slightly above the adopted F_{MSY} as observed also for the giant red shrimp in GSAs 18-19. Assessment on the mantis shrimp (*Squilla mantis*) in the Adriatic (GSAs 17-18) indicated a slight overfishing in the last years.

Small pelagics in the Adriatic Sea (GSAs 17-18 combined) showed signs of overfishing both for anchovy (*Engraulis encrasicolus*) and sardine (*Sardina pilchardus*). Biomass of both stocks was between the estimated Blim and Bpa. The indication of the GFCM (WGSASP) was to reduce the curret fishing mortality. In GSA 16 sardine resulted at low biomass level, with F_{cur} below the estimated F_{MSY}.

Table 3. List of stocks assessed in 2015 in Italian GSAs

SPECIES	GSA	Method	Years	F_{cur}	F_{01}	Bcur	Blim	Bpa	Status	Working Group
Sardine	16	Two-stage biomass model	1998-2014	E=0.11	E=0.4	24199 (from Medias)		34839 (B_{MSY})	Overexploited (low biomass), with low fishing mortality	GFCM
Sardine	17-18	SAM	1975-2014	1.04	0.71	208604	125318	250636	Overexploited and in overexploitation	GFCM
Anchovy	17-18	SAM	1975-2014	0.99	0.55	89501	45936	91872	Overexploited and in overexploitation	GFCM
Deep water rose shrimp	9	XSA	2006-2014	0.67	0.67				Sustainably exploited	GFCM
Deep water rose shrimp	12-16	XSA	2005-2014	1.22	1.1				Exploited unsustainbly	GFCM
Deep water rose shrimp	18	XSA	2007-2014	1.46	0.76	1963	1580		Exploited unsustainbly	GFCM
Deep water rose shrimp*	19	XSA	2007-2014	1.45	0.89	386	386		Exploited unsustainbly	STECF
Deep water rose shrimp*	17-18-19	XSA	2007-2014	1.53	0.69	3557	2863		Exploited unsustainbly	GFCM
Giant red shrimp*	19	XSA	2008-2014	0.66	0.29	250	44		Exploited unsustainbly	STECF
Giant red shrimp*	18-19	XSA	2008-2014	0.46	0.42	525	184		Exploited unsustainbly	STECF
Giant red shrimp	9	XSA	2006-2014	0.13	0.51	94	80		Sustainably exploited	STECF
Giant red shrimp	10	XSA	2006-2014	0.91	0.65	265	265		Exploited unsustainbly	STECF
Giant red shrimp	11	XSA	2008-2014	0.50	0.31	46	26		Exploited unsustainbly	STECF
Hake	9	XSA	2006-2014	0.96	0.26	2197	1569		Exploited unsustainbly	STECF/GFCM
Hake	18	XSA	2007-2014	0.85	0.18				Exploited unsustainbly	GFCM
Hake	12-16	XSA	2007-2014	0.71	0.18				Exploited unsustainbly	GFCM
Hake	19	XSA	2006-2014	0.95	0.18	1167	452		Exploited unsustainbly	GFCM/STECF
Hake	10	XSA	2006-2014	1.1	0.20	1635	967		Exploited unsustainbly	STECF
Hake	11	XSA	2006-2014	1.6	0.17	73	73		Exploited unsustainbly	STECF
Hake*	17-18	XSA	2008-2014	0.89	0.16	3285	2569		Exploited unsustainbly	STECF
Mantis shrimp*	17	XSA	2008-2014	0.63	0.48	11536	10452		Exploited unsustainbly	STECF
Mantis shrimp*	18	XSA	2007-2014	1.45	0.43	1712	848		Exploited unsustainbly	STECF

SPECIES	GSA	Method	Years	F_{cur}	F_{01}	Bcur	Blim	Bpa	Status	Working Group
Mantis shrimp*	17-18	XSA	2008-2014	0.69	0.56	13176	12878		Exploited unsustainbly	STECF
Red mullet	18	XSA	2007-2014	0.48	0.42				Exploited unsustainbly	GFCM
Red mullet	17	XSA	2006-2014	1.3	0.52				Exploited unsustainbly	GFCM
Red mullet*	17-18	XSA	2008-2014	0.54	0.41	6635	3439		Exploited unsustainbly	STECF
Red mullet*	19	XSA	2006-2014	0.99	0.45	496	496		Exploited unsustainbly	STECF
Sole	17	SCAA-SS3	1970-2014	0.62	0.26	3545	1454		Exploited unsustainbly	GFCM/STECF

*Assessments not yet formally accepted by the STECF plenary

Status of the statistics and information system

Fishery statistics are collected within the European Regulation on Data Collection (EU reg. n. 199/2008). Statistics are produced on the basis of a sample of national fishing fleet, yearly updated, and their reliability is guaranteed by specific validation software.

Within the European Regulation on Data Collection (EU reg. n. 199/2008) a centralized database has been developed to store fishery statistics (capacity, effort and landings data), economic data of the fleet, economic data of the aquaculture sector, economic data of the processing industries, biological data (parameters of the population by species and surveys data), and ecosystem indicators.

Fishery statistics are transferred to GFCM (through the Task 1 tool), to the European Commission, to Eurostat and to other RFMOs (like ICCAT). They are currently used by the national administration to support political decisions and to monitor the state of the fishing sector.

Status of research in progress

Fisheries data have been collected, in the framework of the Italian National Data Collection Program 2014, according to the legal Community framework put in place in 2008 with the adoption of a Council Regulations, a Commission Regulation and a Commission Decision laying down the detailed rules of application (Reg. CE 199/2008; Commission Decision 93/2010/EC).

In accordance with chapter II of the annex of the Commission Decision, this national program comprised the following modules, that were already summarized in the 2014 report.

Module of evaluation of the fishing sector; Module of evaluation of the economic situation of the aquaculture and processing industry sectors; Module of evaluation of the effects of the fishing sector on the marine ecosystem (i.e. biological sampling on board and at landing place; collection of stock related parameters; recreational fishery data collection for eel and bluefin tuna; scientific surveys); Module for management and use of the data covered by the data collection framework

For the 7 Geographical sub areas (GSA) and different institutes, members of the consortium that assists the MIPAAF, are in charge of collecting data (such as economic data, transversal data, biological data for demersal small and large pelagic species, recreational fishery on tuna and eel, aquaculture data, VMS data, ecosystem data, surveys data) on each one of these GSAs.

A particular attention has been given to the regional approach and compliance with Regional Coordination Meeting for the Mediterranean and Black Sea (RCMMed&BS) has been assured. Regarding the two surveys, MEDITs and MEDIAS, these have been carried out in line with previous years. MEDIAS have been implemented also in GSA 9 and 10

Other main research activities

Research activities on marine living resources have been carried out in Italy by several bodies, both private and public, among which are mainly involved University Departments and Research Institutes. The preliminary or complete reports, abstracts and resumes of previous projects of interest for GFCM are available at DG marine fisheries and aquaculture and may be requested by e-mail PEMAC1@politicheagricole.it :

- Scientific bases and tools to support the building up of management plans in the CFP (Common Fishery Policy) and the environmental and economic policies context.
- Assessment of Bycatch of protected species in the pelagic trawl
- Nutritional and safety aspects of fish species from fishery and aquaculture
- Optimization of sampling methodologies for stock assessment
- Diffusion of Anisakis sp and potential risks
- Application of Allocation zones for Aquaculture (AZA),in the framework of EU directive 2013 (COM 113)
- Dissemination of scientific data, stock assessment data among fishers,
- Capacity of restitution of coastal lagoons environments supporting local coastal stocks, qualitative and quantitative aspects;
- Monitoring and assessment of discards, both for small pelagic species and for demersal for the implementation of art. 15 of Reg. (UE) 1380/2013
- Development of an innovative technical scientific framework for the preparation of the management plans for fisheries for the implementation of the Reg. (UE) n. 1380/2013

Following projects have been just activated regarding:

- Scientific elements for the update of the management plans for demersal species of GSAs: 9, 10, 11, 15, 16, 17, 18, 19. Evaluation of effects of measures regarding Fossa di Pomo area, evaluation of clam fisheries inside the 0,3 nm, management measures for Italian ZTB (Zone di Tutela Biologica).
- Scientific elements for a management plan for demersal fisheries in the Strait of Sicily

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

See paragraph above . Main projects in progress:

Productive structures analyses and socio-economic characteristics of Italian Fisheries

Sustainability and management tools for Italian fishery: an impact assessment of TURF

Marine environmental studies in progress

None from DG marine fisheries and aquaculture

Involvement in activities of FAO Regional Projects

The Ministry of Agriculture, Food and Forestry Policies is the Donor of three FAO regional projects in the Mediterranean, namely AdriaMed "*Scientific Cooperation to Support responsible Fisheries in the Adriatic Sea*", MedSudMed "*Assessment and Monitoring of the Fishery Resources and the Ecosystems in the Straits of Sicily*" and EastMed "*Scientific and Institutional Cooperation to Support Responsible Fisheries in the Eastern Mediterranean*".

Italy's contribution to the achievement of FAO Regional Projects objectives is not exclusively financial, as it includes also partnership based on technical support and provision of human resources. National research Institutions contribute and participate to the development of Projects activities

including: surveys at sea, capacity development programmes, data collection, technical discussion, meetings, data sharing and joint analysis, joint stock assessment, staff training and development. In addition National Focal Points, fisheries administration and research institutions actively participated in multilevel consultation toward the identification of ways and means to elaborate possible management options to be adopted in the Mediterranean within the framework of AdriaMed (Adriatic Sea), MedSudMed (South Central Mediterranean) and EastMed (Eastern Mediterranean.

Overall:

- 5 joint scientific surveys have been jointly carried out in the Adriatic Sea;
- 2 joint stock assessment (Parapenaeus longirostris, Merluccius merluccius, GSA 12-16) and a preliminary stock assessment of Mullus barbatus GSA 15-16 have been produced in the south-central Mediterranean (Straits of Sicily);
- 7 joint stock assessments (Parapenaeus longirostris GSA 18, Merluccius merluccius GSA 18, Mullus barbatus GSA 17 and 18, , Solea solea GSA 17, Engraulis encrasicolus GSA 17-18, Sardina pilchardus GSA 17-18) plus an assessment-related work on Nephrops norvegicus in GSA 17 have been produced in the Adriatic Sea;
- 7 stock assessments (Mullus surmuletus GSA 25, Boops boops GSA 25, Metapenaeus stebbingi GSA 26, Mullus surmuletus GSA 26, Saurida undosquamis GSA 26, Sardinella aurita GSA 27 - Lebanon, and Sardinella aurita GSA 26 & 27 joint) have been produced with the support of the EastMed Project.
- Involvement either trainer and/or trainees in 90 theoretical or on-the-job training activities on the collection, storing and processing of fishery related data;
- Involvement in 45 technical meetings in the Adriatic Sea, the Straits of Sicily and the Eastern Mediterranean and in the whole GFCM area, including working groups on demersal and small pelagic fisheries resources, study groups, seminars and technical meetings.
- Technical support has been provided to Turkey, Egypt, Lebanon, Albania, and Montenegro for the establishment of a monitoring system for fisheries (socio-economic and catch and effort).

Management measures

In line with the provisions of the Recommendation GFCM/38/2014/1 in Italy have been implemented the prohibition of the use of any gears targeting small pelagics within 6 M with derogation for fishing vessels with LoA>15m (within 4 M), for 30 consecutive days (1 july to 30 July) from Monfalcone to Gallipoli (GSA 17 and GSA 18), with the only exception of the Gulf of Trieste.

In accordance with the provisions of the Recommendation GFCM/38/2014/1 in Italy have been also implemented a maximum of 180 fishing days per year, not exceeding 20 days per month. For 2015, for vessels targeting specifically anchovy, the limit is 144 fishing days per year for both GSA 17 and GSA 18.

From July 2015 to July 2016 Italy have implemented a ban for trawlers inside the area ”Fossa di Pomo".

A seasonal closure have been implemented for trawlers (bottom and pelagic) for a n. of 30 – 40 days in a period from July to September, depending on scientific elements.

Environment protection measures

See point “management measures regarding the area “Fossa di Pomo”

With regard to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

No information available at this point.

With regard to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

Within the framework of implementation activities of Regulation (EC) n. 812/2004, MiPAAF continue funding a long-term research and monitoring programme on bycatch of cetaceans, other protected species and species of conservation concern, including turtles, in mid-water trawlers, mainly operating in GSA 17.

In 2014 seven specimens of loggerhead turtles were caught, with a bycatch rate of 0.022 individuals/haul. However, these figures appear to be biased by a very low monitoring effort due to administrative issues. The usual number for this region and this metier are ranging between 18 and 49 events/year, with total annual estimates of bycatch ranging from about 400 to almost 2000 individuals.

With regard to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

Regulation (EC) n. 812/2004 framework aims to the evaluation of cetaceans bycatch in specific fishing gears, and has been implemented in 2014 and 2015. No bycatch events were recorded in 2014. Data from 2015 is still being analysed.

If considered alone, again the observed level of bycatch of cetaceans in Italian mid-water pair trawlers does not seem to pose a threat to the Adriatic bottlenose dolphin population. However, a fuller evaluation of the cumulative effect of all fisheries on these species in ongoing.

With regard to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

Always within the same research and monitoring framework (Regulation EC 812/2004) data on elasmobranch species were collected. The table below summarised the observed events in 2014.

Metier	**Fishing area**	**Main target species**	**Incidentally caught species**	**Number of incidents**	**Incidental catch rates[1]**
Pair pelagic trawls	GSA 17	Anchovy	*Mustelus asterias*	3[1]	0.010
			Squalus acanthias	16[1]	0.051
			Pteroplatytrygon violacea	4[1]	0.013

Key: [1]All events observers in the northern Adriatic (Emilia Romagna and Veneto).

Proposals for future research programmes

The importance of the following studies to improve the regional management of fisheries.

Assessment of effects of management steps such as harvesting plans, use of non-damaging gear or spatial management (FRA, MPA, fishery rotational areas) in the view of marine spatial planning. Ecosystem effects of the fisheries , to be considered in spatial terms with the aim to reduce the impact on the sea bed and restore fishery sustainability.

In the context of Ecosystem Approach, development of a common data base, shared by countries, using georeferentiation and reporting both bathymetric, substratum features and biocenoses, essential fish habitat and including inshore and offshore areas; Coupling of hydrological information with biological data should be improved at regional level.

Gear and operational technology - Investigate ways to make fishing gears and practices more efficient and able to reduce by-catch and discards, limiting habitat and ecosystem impacts, improving selectivity, while also improving fuel consumption when fishing.

Improved and automatized monitoring systems, delivering information required for the implementation of the MSY to relevant, timely assessments and predictions.

Ongoing investment in and coordination of marine infrastructure to be maintained and viewed in an international perspective in order to improve the quality and efficiency of data collection and monitoring.

Traceability - Address the scientific challenges necessary to allow for complete traceability of seafood (for underpinning consumer confidence that seafood is safe and is supplied from known and approved sources and harvesting/processing methods) also to facilitate full control through the supply chain.

- revising borders of some GSAs on the basis of available information
- mapping spawning grounds and other essential fish habitats
- assessing impact of fishing on communities and ecosystems
- investigating effect of climate change on stock dynamics
- evaluating spatial management measures (no take zones, fishery restricted areas, marine protected areas)
- improving knowledge on the effect of fishery at ecosystem level, performing specific studies on discards and impact on the sea bottoms.

In special areas such as the Strait of Sicily and the Adriatic sea, where straddling and transboundary stocks are shared by fisheries of several countries, it is considered relevant:

- - improving knowledge on population biology and the identification of population units, including genetic approaches, to clarify relationships and connectivity among populations;
- - supporting a common collection of data on stocks and fisheries, based on both fishery independent and dependent approaches, within the framework of an international program;
- - assisting the develop of a common geo referred data base reporting both bathymetric, substratum features, biocenoses, and fishing grounds at regional level.

LEBANON / LIBAN

Description of the fisheries

Description of the fishing grounds and GSA

GSA 27. The Lebanese coastline is 220 km long. The continental shelf is narrow, especially in the South. Bottom grounds are mainly rough with intensive rocky patches, good for stationary demersal gear. The fisheries of Lebanon are classified as small-scale, artisanal, and are traditionally based on bottom stationary gear (trammel nets and longlines), purse seine nets, and beach seines. Fishing operations, with the exception of longlines, are mostly carried out at depths of up to 50 meters. Most of the fishing nets (purse seines, gillnets and beach seines) have small mesh sizes (less than 2x2 cm).

The EastMed Project Pilot study for catch assessment for Lebanon continued in 2015.

Table 1 represents the totals of the major commercial fish catches by species for the whole of Lebanon. Accuracy was 89.1%.

Species	**Catch (ton)**
Clupeidae (sardines)	517
Euthynnus alletteratus	344
Pagellus acarne	304
Diplodus sargus	257
Siganus rivulatus	232
Pagellus erythrinus	151
Liza aurata	128
Pagrus caeruleostictus	121
Lithognathus mormyrus	107
Sardinella aurita	105
Oblada melanura	101
Seriola dumerili	96
Sphyraena sphyraena	96
Sphyraena chrysotaenia	74
Siganus luridus	70
Total	**3,652**

Fleet:

Number of vessels by fleet segment (Tables will be provided). Indicate updates from last year.

Data for 2015 is not available due to technical problems. Licensed vessels data for 2014 is as follows:

LOA	0-6m	6-12m	>12m	Total
No of vessels	546	1,365	38	1,949

LOA (range and average): LOA Range: 1.83-17.15m.
Average LOA: 7.173m
Total KW (or HP) + GT (or GRT): Total HP: 65,873

GT: only NT data available. Data available for only 854 vessels. Available Total (854 vessels): 11,298ton

Status of stocks of priority species

Indicate the species evaluated during the intersessional period expressing the exploitation status for each stock. The report should also indicate the geographical sub-areas covered by the assessment and whether those have been presented to the GFCM Working Groups or to any other instances.

A stock assessment was carried out by the team of the Marine and Coastal Resources (MCR) Program at the Institute of the Environment (IOE) – University of Balamand (UOB) for the following species: *Portunnus pelagicus, Boops boops* and *Diplodus sargus sargus.* The study covered one calendar year, from October 2014 until September 2015. Specimens were randomly collected on a weekly basis either directly from the fishermen or from local fish markets in North Lebanon. The results obtained for *B. Boops* and *D. sargus sargus* are currently being compared to a similar stock assessment study carried-out in 2011-2012 as part of a Master thesis that used the same methodology. Results will be shared once the analysis has been completed.

FAO-EastMed project drew up a proposal to collect catch, effort, biological and socio-economic data and submitted it to Lebanese stakeholders. CNRS-L is in charge of the data collection, which is in line with the new GFCM DCRF to fulfill all the GFCM data collection obligations of Lebanon. The period agreed for the proposed first phase of data collection was January – October 2015. The Parties have recently signed an agreement to continue the data collection in 2016. **Objective**: this action contributes to improve and implement the national biological data collection programme. As per Terms of Reference agreed between FAO and CNRS-L, CNRS-L is expected to collect biological data including length, weight, sex, and maturity stage. In order to assess the status of the stocks one small pelagic species and two demersal species are collected from the landings over the Lebanese coast. The species selected for the biological sampling of the small pelagic fishery is *Sardinella aurita*. For the small-scale polyvalent artisanal fishery two species were selected, namely *Pagellus erythrinus* and *Lithognathus mormyrus*. The results for sardinella aurita was presented to the Working Group on Stock Assessment of Demersal Species (WGSAD) and Working Group on Stock Assessment of Small Pelagic Species (WGSASP) that was held at the GFCM headquarters in Rome, Italy, from 23 to 28 November 2015. WGSASP considered that “the stock assessment was considered preliminar, as the VPA analysis with VIT was based on a single year and the working group consider that advice based on CMSY alone is not appropriate to provide advice. The working group encourages to present the assessment again next year with an extra year of data and to continue the research on the use of Catch only models to provide an advice on stock status”.

Status of the statistics and information system

Description of the national system of fishery statistics and/or any improvement/change occurred. Indicate whether or not progress in activities related to the collection and processing of fishery statistics have been done with the assistance of FAO regional projects. Type of data collected, transmission to GFCM Secretariat and other international bodies. Inventory of existing databases. Synergies with other applications.

FAO-EastMed project continued supporting collecting catch data by MOA along the Lebanese coast. Summary of data collected for 2015 are shown in “Total landings by species” presented above.

The fishing Licensing System that was commissioned by EastMed Project could not be used because of unavailability of internet connections at some fisheries outposts and because the software had many bugs that the vendor refused to ratify due to expiry of maintenance warranty.

Status of research in progress

Description of the results of the continuing and in progress research projects of interest to GFCM Sub-Committees and Working Groups, with particular emphasis on management oriented assessment and GFCM priority species.

Lebanese CNRS

Aiming to contribute to the improvement of the knowledge of coastal marine ecosystems toward a proper coastal management and to bring economic and social benefits to coastal communities and territories, the project **CANA plus on the "Development of the Lebanese Marine Environment to Serve the Needs of Coastal Communities"** commenced its activities in December 2015. The Project is financed by the Italian Ministry of Foreign Affairs and implemented by the CNRS-L. The project intends to monitor shoreline and biophysical alterations of coastal areas while empowering Local Authorities toward a decentralized coastal management. To evaluate the efficacy of wastewater treatment plants, concerned marine areas will be monitored and their biological and physical features analyzed. This will include the assessment of plankton, macro benthos and fish stocks.

The research project "**Fishery-independent assessment of distribution and abundance of fisheries resources in northern Lebanese marine waters**" financed by CNRS aims to estimate the relative abundance, spatial distribution and seasonal variation of main commercial stocks occurring in Lebanese continental shelf and upper slope. In addition, experimental fishing gears used for the implementation of the survey are tested to evaluate their potential for an expansion of the fishing metiers to new fishing grounds and species. Fishery-independent surveys estimates of abundance form the cornerstone of many stock assessments for teleost and shellfish species. These surveys provide valuable measures of relative abundance, rates of population change and size and sex composition for a wide range of species, being less subject to the unknown and often confounding factors that complicate the interpretation of fishery-dependent indices of stock status. Fourth and last seasonal survey is expected to take place April 2014.

In September 2015, Dr. Myriam Lteif successfully defended his doctoral thesis on "**Biology, distribution and diversity of cartilaginous fish species along the Lebanese coast, Eastern Mediterranean**" at the Université de Perpignan Via Domitia (France). The aim of this study is to contribute to a better knowledge of cartilaginous fish in the Lebanese coastal waters, Eastern Mediterranean.

Activities of the project "**Evaluation of the ecological role of some key Lessepsian fish species in marine Lebanese waters**" jointly financed by the CNRS-L and the Italian CNR will started in 2015. Specimens of *Sargocentron rubrum*, *Nemipterus randalli* and *Etrumeus teres* are collected from to catch of Lebanese fishers and biological parameters are investigated. Their stomach contents and growth are also studied.

The article **"Population biology of an endangered species: the common guitarfish *Rhinobatos rhinobatos* in Lebanese marine waters of the eastern Mediterranean Sea" (**Myriam Lteif et al.) was accepted for publication on 21 January 2016 by the international peer-reviewed *Journal of Fish Biology*. This study focuses on the population biology of the common guitarfish, a cartilaginous fish listed as Endangered in the International Union for the Conservation of Nature (IUCN) Red List.

The article **"Etude du régime alimentaire de l'anchois européen (*Engraulis encrasicolus*) en Atlantique Nord-Est et en Méditerranée" (**Sharif Jemaa et al.) was submitted to the peer-reviewed *Lebanese Science Journal*. The diet of the European anchovy *Engraulis encrasicolus* was studied in 13 different sites along its geographic distribution range, including Lebanon.

Although not directly involved in fisheries, the American university of Beirut published the following results of marine science research:

Bariche M., Torres M., Smith C., Sayar N., Azzurro E., Baker R., Bernardi, 2015. Red Sea fishes in the Mediterranean Sea: a preliminary investigation of a biological invasion using DNA barcoding. *Journal of Biogeography* 42: 2363-2373.

Fanelli E., Azzurro E., **Bariche M.**, Cartes E., Maynou F., 2015. Depicting the novel eastern Mediterranean food web: a stable isotopes study following Lessepsian fish invasion. *Biological Invasions* 17: 2163-2178.

Arab A., Kazanjian G., **Bariche M.**, 2015. Biological traits suggest a niche overlap between two grapsid crabs sharing the rocky intertidal of the eastern Mediterranean. *Journal of the Marine Biological Association of the United Kingdom*. Doi:10.1017/S0025315415001010

Marras S., Cucco A., Antognarelli F., Azzurro E., **Bariche M.**, Butenschön M., Kay S., Di Biletto M., Quattrocchi G., Sinerchia M., Domenici P., 2015. Predicting future thermal habitat suitability of competing native and invasive fish species: from metabolic scope to oceanographic modelling. *Conservation Physiology* 3(1): cou059. Doi:10.1093/conphys/cou059.

Crocetta F., Agius D., Balistreri P., **Bariche M.**, Bayhan Y.K., Çakir M., Ciriaco S., Corsini-Foka M., Deidun A., El Zrelli R., Ergüden D., Evans J., Ghelia M., Giavasi M., Kleitou P., Kondylatos G., Lipej L., Mifsud C., Özvarol Y., Pagano A., Portelli P., Poursanidis D., Rabaoui L., Schembri P.J., Taşkin E., Tiralongo F., Zenetos A., 2015. *New Mediterranean Biodiversity Records (October 2015).* Mediterranean Marine Science 16(3): 682-702.

Tsiamis K., Aydogan Ö., Bailly N., Balistreri P., **Bariche M.**, Carden-Noad S., Corsini-Foka M., Crocetta F., Davidov B., Dimitriadis C., Dragicevic B., Drakulic M., Dulcic J., Escanez A., Fernandez-Alvarez F.A., Gerakaris V., Gerovasileiou V., Hoffman R., Izquierdo-Gomez D., Izquierdo-Munoz A., Kondylatos G., Latsoudis P., Lipej L., Madiraca F., Mavric B., Parasporo M., Sourbes L., Taskin E., Turker A., Yapici S., 2015. *New Mediterranean Biodiversity Records (July 2015)*. Mediterranean Marine Science 16: 472-488.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

Description of the achievement and/or progress in activities related to the national research on the socio-economic aspects of the fishing communities and fishing sector.

N/A

Marine environmental studies in progress

Description of the main results from actions and studies carried out during the intersessional period which are relevant to the impact of the marine environment changes on the priority stocks and on the ecosystem alteration originated by the fisheries activities.

Lebanese CNRS

In the framework of the project CANA on "Establishing Monitoring and Sustainable Development of the Lebanese Sea", a book was issued at the occasion of the closure of the Project, which took place on October 26, 2015. Title of the book is "**CANA-CNRS A scientific vessel for Lebanon**". The book reported scientific results achieved by the Project in the years 2013-14, including:

BATHYMÉTRIE

Les conditions de la bathymétrie côtière au Liban

La campagne bathymétrique «Approches de Beyrouth»

CANA ATLAS

Sources sous-marines à Chekka

MARINE HYDROBIOLOGY

Hydrology

Coastal Pollution

Fishery

Cétacés

ENPI CBC MED Programme

WATER-Drop Project

M3HABs Project

CANA DISSEMINATION & EVENTS – 2014

Aiming to contribute to the improvement of the knowledge of coastal marine ecosystems toward a proper coastal management and to bring economic and social benefits to coastal communities and territories, the project **CANA plus on the "Development of the Lebanese Marine Environment to Serve the Needs of Coastal Communities"** commenced its activities in December 2015. The Project is financed by the Italian Ministry of Foreign Affairs and implemented by the CNRS-L and is expected to last one year. The project intends to monitor shoreline and biophysical alterations of coastal areas while empowering Local Authorities toward a decentralized coastal management. The project is made up by three major Work Packages (WPs):

WP1 - TREATMENT PLANTS MONITORING AND ENVIRONMENTAL REMEDIATION

WP2 - MARINE FRESH WATER SPRINGS

WP3 - ALTERATION OF COASTAL ECOSYSTEMS

University of Balamand

A Master thesis is currently under way at the MCR-IOE-UOB evaluating the colonization of the Artificial Reef deployed in June 2012 off the coast of Aabdeh – North Lebanon by the MCR-IOE-UOB. Once completed, a second study will be launched to evaluate the contribution of the Reef to the local economy of both fisher communities and ecotourism related to diving activities.

Involvement in activities of FAO regional projects

Description of activities carried out during the intersessional period by Regional Projects, level of involvement, results obtained and assistance received.

FAO EastMed Project was instrumental to collect catch and biological data and analysis of data within EastMed Working Group on Fisheries Data Analysis and GFCM Working Groups on Stock Assessment.

Management measures

Description of the management measures (legislation, regulations, etc) taken in direct response to GFCM recommendations during intersessional period **including the assessment of their effects**

Environment protection measures

Description of recent activities in establishing reserve areas during the intersession; and, whenever relevant scientific information do exist, highlighting the roles of existing marine protected areas in securing better opportunity for the sustainability of fish stocks.

With regard to: Recommendation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area

If derogation of Paragraph 4 *"CPCs shall ensure the prohibition of the exploitation of red coral populations at depth less than 50 m until scientific studies, as validated by GFCM-SAC, indicate otherwise"* is applicable, provide detailed information on the national management framework and the studies carried out at national level to apply this derogation.

Not Applicable.

With regard to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

Provide information on seabirds' incidental taking with reference to fisheries concerned, characteristics of gear type, times, locations (either by GSA or statistical rectangles) and affected species, if this information is available.

Minister Decision 396/1 on 12/5/2014. Ban on Catching Seabirds.

No incident was reported in 2015.

With regard to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

Provide information on the interaction of the fishing fleets with sea turtles in GFCM fisheries by gear type and characteristics: times, soak duration, depths and locations, target species, sea turtles species and disposition status of sea turtle specimen(s) (i.e. discarded death or released alive).

Minister Decision 125/1 on 23/9/1999. Ban on catching whales, seals and sea turtles.

No incident was reported in 2015.

With regard to: Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area

Provide information on any event of incidental taking and release of monk seal.

Provide maps and geographic positions of monk seal caves.

Minister Decision 125/1 on 23/9/1999. Ban on catching whales, seals and sea turtles.

No monk seals were reported in Lebanon.

With regard to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

Provide information on by-catch rates of cetaceans taking into account, amongst other relevant information: fisheries concerned, characteristics of gear type, times, locations (either by GSA or statistical rectangles) and affected cetacean species.

Minister Decision 1044/1 on 25/11/2014. General conditions to protect cetaceans.

One seal was found dead near Beirut.

With regard to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

Provide information on fishing activities, catch data, incidental taking, release and/or discarding events for sharks species listed either in Annex II or III of the SPA/BD Protocol.

Minister Decision 1045/1 on 25/11/2014. General conditions to catch sharks.

Several citations were issued to violators by the Rangers of Ministry of Agriculture. Citations were sent to competent courts. No outcome of rulings was received by Ministry of Agriculture. Sevral specimens were returned to sea.

LYBIA / LYBIE

Description of the fisheries 2015

GSA 21

Estimated total catch 15048 m.t. in 2015.

Total landing by group or species is not available due to difficulties facing our offices which are distributed along the whole Libyan coast.

Fleet segmentation

Fleet segment	No. of vessels	HP	GT
Polyvalent small-scale vessels without engine (<12 metres)	77		
Polyvalent small-scale vessels with engine (<6 metres)	1414		
Polyvalent small-scale vessels with engine (6-12 metres)	1390		
Trawlers (12 - 24 metres)	168		
Trawlers (> 24 metres)	91		
Purse Seiners (>12 metres)	135		
Long liners (> 6 metres)	11		
Tuna Seiners (> 12 metres)	41		
Polyvalent vessels (> 12 metres)	624		
Total	**3951**	**342082**	**159745**

Status of stocks of priority species:

No stock assessment and no species evaluated during the intersessional period.

Status of the statistics and information system

Libya has signed two projects with FAO (FAO UTF Project) to create statistical and information system, projects formulation were accomplished in November 2014 and the document were revised during 2015

Status of research in progress

Reports of acoustic and ichthyoplankton surveys conducted along the Libyan coast on 2008 and 2010 by support of MEDSUDMED are now under publication.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

No studies

Marine environmental studies in progress

No studies

Involvement in activities of FAO Regional Projects

- Working Group on Small Pelagic Fishery Resources in the south-central Mediterranean Sea (30 Nov -02 December 2015), IAMC-CNR Capo Granitola, Italy.
- Technical meeting on elasmobranchs in the south-central Mediterranean Sea 20-23 October 2015, FAO-HQ Rome - Italy
- Study Group for Stock Assessment in the south-central Mediterranean Sea -23-19 October 2015, FAO-HQ Rome - Italy
- FAO-MedSudMed Working Group on Demersal Fishery Resources 14-18 September 2015, MSM Palermo, Italy

Management measures

Trawl fishing for demersal fish species was prohibited during the period June-July 2015

Fishing for sponges in Libyan waters is being forbidden from 1 November to 30 May of each year.

Fishing for Dolphin fish in Libyan waters is being forbidden from 1 January to 15 August of each year.

Environment protection measures

No activities

With regard to: Recommendation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area

No exploitation of red coral exist in Libya..

With regard to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

No incidental by-catch

With regard to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

No incidental by-catch

With regard to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

Cetacean are not target species and no incidental catch is recorded.

With regard to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

MBRC has issued an identification manual on cartilaginous fishes as 1st step towards the process of conservation of sharks and rays.

MALTA / MALTE

Description of the fisheries in GSA 15

Fisheries in Malta are a relatively small industry where its social significance far outweighs its economic importance. The industry is mainly artisanal and fairly typical of the fisheries found in many Mediterranean countries. There are no inland fisheries in Malta. The average value of catches is around 0.10% of Malta's Gross Domestic Product (GDP), with the industry's direct contribution to GDP estimated at around two-thirds of this figure when the cost of imported inputs, particularly fuel, is considered. According to the Fishing Vessels Register, the commercial fleet capacity of registered vessels in 2015 was 1,001 of which 398 (39.76%) vessels and 607 (60.3%) vessels were commercial full-time and part-time vessels respectively.

The total gross tonnage and power of main engine for the full-time and part-time commercial vessels totalled 6962.7 t and 72,700.87 kW respectively. The length of full-time and part-time registered vessels ranged between 3.45 to 35 m and 3.00 to 10.8 m respectively.

Table 1. Number and type of Maltese fishing vessels by length class, status December 2015.

Registration type	Number of vessels by length class				
	VL0006	VL 0612	VL1224	VL2440	Nº of vessels
Full-time commercial	126	206	56	10	398
Part-time commercial	377	226	-	-	603
Grand Total	503	432	56	10	1001

Table 2. Gross tonnage by vessel registration type and length class, status December 2015.

Registration type	Gross tonnage (GT) by vessel length class				
	VL0006	VL0612	VL1224	VL2440	Total GT
Full-time commercial	133.94	991.84	3091.08	1658.96	5875.82
Part-time commercial	383.71	703.17	-	-	1086.88
Grand Total	517.65	1695.01	3091.08	1658.96	6962.7

Table 3. Power of main engine by vessel registration type and length class status December 2015.

Registration type	Power of main engine (kW) by vessel length class				
	VL0006	VL0612	VL1224	VL2440	Total kW
Full-time commercial	3679.73	20322.01	14217.53	5329.22	43547.76
Part-time commercial	9643.83	19508.55	-	-	29152.38
Grand Total	13323.56	39830.56	14217.53	5329.22	72700.87

Catches recorded in 2015 from logbooks and Catch Assessment Survey (Table 3), were dominated by chub mackerel (*Scomber japonicus*), swordfish (*Xiphias gladius*), dolphin fish (*Coryphaena hippurus*), blue fin tuna (*Thunnus thynnus*) and atlantic mackerel (*Scomber scombrus*) in decreasing order of importance as shown in Table 3 below. Chub mackerel is mainly caught by lampara and is used as feed in Aquaculture. The fishery of this species depends mostly on spans of good weather. Catches of dolphin fish occur mainly between the 15 August and 31 December mostly by the Fish Aggregating Device (FAD) fishery. Between the months of April and July the market is dominated by the landings of bluefin tuna and swordfish. Both these species are targeted by the same method that is pelagic drifting long-lines. The major fishing area is GSA15, however the long-line and trawling fleet also operates in the neighbouring GSAs.

Table 3. The ten most important marine capture fisheries in terms of catches (from logbooks and CAS data) for the Maltese fleet in 2015.

Scientific Name	FAO 3A Code	Weight (t)	% dist.
Scomber spp.	MAZ	625.8	25.7
Xiphias gladius	SWO	489.3	20.1
Coryphaena hippurus	DOL	334.3	13.7
Thunnus thynnus	BFT	179.9	7.4
Scomber scombrus	MAC	82.8	3.4
Lepidopus caudatus	SFS	82.7	3.4
Family Clupeidae	ASD, PIL, SAA	58.6	2.4
Boops boops	BOG	45.2	1.9
Mullus surmuletus	MUR	38.3	1.6
Thunnus alalunga	ALB	37.2	1.5
Sprattus sprattus	SPR	36.7	1.5
Grand Total		2436.93	100

Landings of other species originate from trawling, bottom long-lines and fixed net operations (trammel and gill nets).

Status of stocks of priority species

In 2015 the joint stock assessments for pink shrimp (*Parapenaeus longirostris*) and hake (*Merluccius merluccius*) in GSAs 12-16, was updated by Maltese, Tunisian and Italian scientists, combining data collected throughout the Central Mediterranean. These stock assessments were conducted under the auspices of the MedSudMed project, and finalised at the 2015 GFCM Working Group on Stock Assessment of Demersal Species. The biological reference points used were $F_{current}/F_{0.1}$. An assessment for Red Mullet (*Mullus barbatus*) was also conducted and presented at the GFCM Working Group on Stock Assessment of Demersal Species but this assessment was considered as preliminary.

Table 4. Results of stock assessment conducted in 2015.

GSA	English Name	Scientific Name	Reference year	$F_{current}/F_{0.1}$	Stock Status
12-16	Hake	*M. merluccius*	2012-2014	5.9-3.9	In overexploitation with relative high biomass
12-16	Deep-water pink shrimp	*Parapenaeus longirostris*	2012-2014	1.3	In overexploitation with relative intermediate biomass

Status of the statistics and information system

Malta collects data on catch and effort for each segment by species, by quarter and by geographical origin. Catch and effort figures are based on data reported in logbooks (for vessels over 10 m LOA) and by sampling the small-scale fishery (for vessels less than 10 m LOA) through an exhaustive sampling survey questionnaire, on sales notes from the official fish market and from direct sales data. The data collected is in line with the EU Data Collection Framework (DCF) EC 199/2008, EC 949/2008, EC 93/2010.

Data for the eventual analysis of stocks is derived from the Maltese sampling activities in line the EC Data Collection Framework (EC 199/08, EC 949/08, EC 93/2010). In 2015, Malta was obliged to collect biological data by the DCF for the following fishing gears;

- Bottom otter trawlers targeting mixed demersal and deep water species
- Drifting longlines targeting large pelagic fish
- Set longlines for demersal fish
- Trammel nets targeting demersal species
- Pots and traps for demersal species
- Bottom otter trawlers targeting demersal species
- Bottom otter trawlers targeting deep water species
- Purse seines targeting bluefin tuna (sampling at harvest)

Length data is collected for all Group 1, 2 and 3 species as outlined in the EU DCF. Biological parameters were also collected for blue fin tuna, swordfish and dolphin fish since catches generally constitute more than 200 tonnes annually and for some other Group 1, 2 and 3 species when possible. Such data is gathered to be utilised for analyses, such as for stock assessments.

Fisheries-independent data for demersal resources in GSA 15 is collected through the MEDITS (Mediterranean International Bottom Trawl Survey) while MEDIAS (Mediterranean International Acoustic Survey) targets small pelagic fish. These surveys are performed with the aim to study the demographic and spatial distribution of resources in the Mediterranean, with a standardised protocol between different countries.

The fisheries statistics being collected have been submitted to international organisations for stock assessment purposes and scientific analysis. In 2015 Malta submitted data collected within the framework of the DCF to several international bodies / for use by several projects:

- Joint Research Centre (JRC) of the European Commission
- International Commission for the Conservation of Atlantic Tunas (ICCAT) through Task I and Task II forms.
- General Fisheries Commission for the Mediterranean (GFCM) including dolphin fish annual reporting form and Task I statistical matrix.
- EU horizontal framework project MAREA
- STOCKMED
- Working Group on Stock Assessment of Demersal Species (WGSAD)

Malta is at present developing a Fisheries Information System (FIS). The FIS under development will be an integrated system whereby the databases related to the fleet register, catch assessment survey, logbooks, biological sampling, biological surveys and economic surveys will be consolidated. For submission obligations in connection with GFCM, EC and ICCAT, in the future the data will be exported from the FIS, processed for the end user's needs and a copy of the data sent will be stored in the FIS.

Status of research in progress

Using data collected under the DCF of the EU, the FAO sub-regional project MedSudMed and EU projects, Malta has been focusing on analysing data with particular reference to determining the stock status of commercially important species (see section 2 above).

In addition, research was conducted on the following themes:

GAP II - Bridging the GAP between fisheries scientists and fishers - nursery and spawning ground of commercially important demersal species within the Malta FMZ were identified (EU FP7 project GAP).

LIFE + BAĦAR – Benthic Habitat Research for marine Natura 2000 site designation – project started in October 2013 and its aim is to collect data about the location of 4 habitats (*Posidonia* beds, sandbanks, reefs and submerged or partially submerged caves) within the 25 nm Malta Fisheries Management Zone under the Habitats Directive in order to protect them by creating NATURA 2000 sites.

Strengthening regional cooperation in the area of fisheries data collection in the Mediterranean and Black Sea - This project falls under the MARE/2014/19 Tender and the overall aim is to lay out a regional work programme outlining the planned activities and the corresponding timeframe and costs, including costs/benefits, in relation to the current implementation at Member State level. This regional work programme here defined as Multiannual Regional Work Programme will include a Regional Sampling Programme for 2016 covering Commercial Fisheries, a Regional Sampling Programme for 2016 covering the Data Collection on Fisheries Impacts on the Ecosystem and Procedures to Quality Assessment of Biological Data at regional level. This project started on 8th April 2015 and has a duration of 12 months.

Status of the social sciences in progress or achieved during the intercessional period

Socio-economic data is collected on an annual basis to fulfil the requirements of the Data Collection Framework (DCF) in line with Council Regulation EC 199/2008, Commission Decisions 2008/949/EC and 2010/93/EU, and the GFCM Task 1.3.

Fleet socio-economic data is segmented by gear and vessel length according to Appendix III of Commission Decision 2010/93/EU and in the case of the GFCM requirements, as proposed by the 5th session of the Scientific Advisory Committee (SAC). The whole population is based on the fishing vessel register, as well as on logbook information where data on catch and landings is recorded. The technique of census for the fleet economic data is based on the Maltese fishing vessel register information as at 31st December of the reference years. The data is collected by means of questionnaires which are completed during direct interviews with the fishers.

Fish processing activities are limited in Malta however data collection by means of a survey amongst local operators is carried out annually. The frame for the collection of economic data is based on the Maltese business directory and processed fisheries products. The technique of census is planned to be carried out annually due to the small size of the market. Data is collected by means of postal questionnaires or questionnaires completed during direct interviews.

Socio-economic data with regards to aquaculture farms is collected from all the aquaculture farms in Malta. The frame for the collection of economic data is based on the registered aquaculture operations as at 1 January of the particular reference years. Data is collected in full collaboration with the National Statistics Office by means of postal questionnaires.

The results of this data collection are sets of variables or indicators as requested by Appendices VI, X and XII of Commission Decision 93/2010 and by task 1.3 in the case of the GFCM fleet economic data requirements. The aim of this data collection is to satisfy the European Commission's and GFCM requests as well as to monitor at a National level the socio-economic performance of the fisheries sector, fish processing industry and the aquaculture sector.

Malta annually submits the report on efforts to achieve a sustainable balance between fishing capacity and fishing opportunities in accordance with Commission Regulation (EC) 1013/2010. Amongst other sections, the report presents a set of technical, biological, economic and social indicators. Malta presented socio-economic indicators related to the years 2008 to 2011.

Marine environmental studies in progress

Ongoing studies with relevance to the marine environment surrounding the Maltese Islands include the identification and mapping of the spatial distribution of sediment types and biocenoses in GSA 15, including the spatial distribution of sensitive habitats such as maerl beds.

Involvement in activites of FAO regional projects

In 2015, Malta participated ino the 13th MedSudMed Coordination Committee Meeting (16-17th April 2015, Rome, Italy) and the 8th CopeMed II Coordination Committee Meeting (5-6th May 2015, Malaga, Spain). The aim of these meetings was to discuss activities held in the intersession period and decide on a workplan for the following year.

Other meetings in which Malta was an active participant were the working groups in support of demersal fisheries management. The list of meetings includes:

- MedSudMed meeting in support of fisheries management (17-18 March 2015, Gammarth, Tunis): This meeting was held between stakeholders, scientists and administration in view of the GFCM management plan on demersalon the Strait of Sicily.
- WG organised back-to-back with Copemed II (14-18 Sept 2015, Palermo, Sicily): This technical meeting supported the management of fisheries targeting deep-water rose shrimp, European hake and red mullets in the south-central Mediterranean Sea.
- MedSudMed Working group on demersal fisheries (19-24 October 2015, Rome, Italy): During this meeting the stocks status of Merluccius merluccius and Parapenaeus longirostris were updated. Moreover, work was also conducted on a preliminary assessment for Mullus barbatus

Management measures

Malta implemented the management measures in line with EU regulations, and according to the recommendations by ICCAT and GFCM. In 2013 Malta submitted its updated Fisheries Management Plan in line with EC 1967/2006 for bottom otter trawlers, the dolphin fish FAD fishery and 'lampara' to the European Commission. These were adopted and started to be implemented in October 2013. The affects of these management plans will be analysed in the last quarter of 2016.

Environment protection measures

With regard to: Recommedation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area. In Malta red coral is a strictly protected species listed in Schedule VI – Animals and Plant Species of National Interest in need of Strict Protection – of the Legal Notice 311 of 2006 (as amended) – Flora, Fauna and Natural Habitats Protection Regulations, 2006. Thus recommendation *GFCM/35/2011/2* does not apply for Malta.

With regards to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area, the Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of seabirds are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

With regards to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area, the Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Incidental catches of turtles are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

With regards to: Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area, the Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of monk sealss are being monitored through this source. Efforts are being made to include the collection of this data through logbooks. Monk seals are very rare, if inexistent around the Maltese Islands.

With regards to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area, the Department of Fisheries and Aquaculture (DFA) conducts onboard observations on drifting long lines and FADs. Catches of cetaceans are being monitored through this source. Efforts are being made to include the collection of this data through logbooks.

With regards to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area, data on shark catches are recorded at the fish market and during onboard observations. Efforts are being made to include the collection of detailed data through logbooks.

Other environment protections measures that can be found present in Malta are described in Annex 1.

Proposals for future research programmes

Currently Malta is focusing on its Data Collection Framework, in view of the changes being proposed both at EU level with regards to the Common Fisheries Policy as well at the GFCM level with regards to the Data Collection Reference Framework (DCRF).

Annex 1:

Other environment protections measures that can be found present in Malta

Conservation area around wrecks: (Notice to Mariners no 5 of 2008). This measure consists of a permanent protection plan in areas around wrecks. These areas are considered as 'NO STOPPING AREAS'. Anchoring is allowed to divers' vessels ONLY after pre-notification to the Valletta VTS. Masters of diving support vessels are to ensure that the appropriate signals in accordance with the International Convention for the Prevention of Collisions at Sea and the International Code of Signals, are shown at all times. Furthermore, spear fishing and the use of fishing gear such as set bottom lines, trammel nets, gillnets and entangling nets, encircling nets, demersal pots and traps are prohibited in these areas. Only surface fishing is allowed including trolling lines and angling for pelagic fish

Restricted area between 'Ponta ta' l-Ahrax' and 'Dahlet ix-Xilep: (Notice to Mariners No 2 of 2010) The purpose of this environment protection measure is to protect the Yelkouan Shearwaters (Garnija) seabirds that breed on cliffs. Implementation of this measure is held between 1st February and 30th July every year, applicable 2 hours before sunset till 2 hours after sunrise. During the above mentioned period:

Lights, other than lights prescribed in the Convention on the International Regulations for Preventing Collisions at Sea, 1972 (COLREGs) have to be switched off and no loud noise, other than sound signals prescribed in the Convention on the International Regulations for preventing Collisions at Sea, 1972 (COLREGs), from vessels is allowed whilst moving along the stretch of coast

Pleasure cruises operating as "Floating Discos" are obliged to follow the above guideline and switch off all lights and music while passing in the indicated area or otherwise keep clear from the buffer zone to the SPA

The letting off all lights and music while passing in the indicating area or otherwise keep clear from the buffer zone to the SPA

The buffer zone to the SPA is a 'no stopping zone' for all vessels other than carrying out fishing activities

Fishing activities in the area using strong lights (lampara etc) are prohibited in line with Art. 4 of the Fishery Regulations (SL425.01) and Council Regulation (EC) No 1967/2006 concerning management.

Conservation Area off il-Merkanti Shoals: (Notice to Mariners no 67 of 2004). The aim of this environment protection measure is to carry out studies so as to determine fish density and species richness over a long period of time. It is implemented on a permanent basis. Spear fishing and the use of fishing gear such as set bottom lines, trammel nets, encircling gill nets and entangling nets, demersal pots and traps are prohibited in the area. Only surface fishing is allowed

Conservation around the area of Filfla: (Government Notice 173 of 1990 - Berthing Regulation 1975) The prohibited zone is within a circle radius 1.1 nautical miles around Filfla with the aim to conserve the area within the enclosed area. Unless specifically authorised by him, no vessel or boat or any other craft may be berthed, moored or anchored and no person may swim or carry out any kind of acitivty connected with underwater diving or sea sport within one nautical mile radius off the island of Filfla.

North East of Malta, South East of Malta: The main scope of this measure is to protect seagrass beds in particular *Posidonia oceanic* or other marine phanerogams, coralligenous habitats and maerl beds (as per Article 4 of EC 1967/2006). Fishing with trawl nets, dredges, purse seines, boat seines or similar nets is prohibited. The use of towed dredges and trawl nets at depths beyond 1 000 m shall be prohibited. Trawling zones were removed from the area concerned by the Department of Fisheries and Aquaculture. Moreover, trawlers are constantly being monitored by the VMS section to check if they are trawling in the legal sites.

Other Fishing Restricted Area – The use of boat seines in all bays and creeks is prohibited. The limit of the area within which the use of the seine net shall be lawful will be outwards of a line drawn

between two stone pillars placed on opposite sides of such bays and creeks. Trammel and gill nets are not allowed to be used from the 15th February to the 15th July in those localities where the use of the seine net is prohibited. In the Grand harbour and Marsamxett harbour, the use of these implements is prohibited at all times within the prohibited areas above mentioned.

MONTENEGRO / MONTÉNÉGRO

Description of the fisheries

Montenegro is part of GSA 18 that shares with Albania on the east coast and with Italy on the west coast. In front of Montenegro is south Adriatic basin with the greatest depth of 1228m. The area of territorial water is 2460 km² and continental shelf 3885 km². The greatest part of Adriatic shelf is covered with muddy and sandy sediments. Sandy sediments are formed on the coastal area and in the shallow parts of Adriatic shelf, where on greater depths can be found muddy sediment, i.e. mud that derives from the land.

Activities of data collection on landings of main species. According to MONSTAT – Statistical Office of Montenegro, in 2014 total landing of pelagic fish was 222 tons, demersal fish 299 tons, cephalopods 51 tons andcrustaceans 31 tons (Statistical Yearbook 2015).

Table 1. Fleet:

LOA	Number	KW	GT
Minor gear without engine < 6 m	6	0	5.84
Minor gear with engine < 6	60	432.38	75.33
Minor gear with engine 6-12 m	31	1982.48	108.07
Trawl 6-12 m	4	607	43.86
Trawl 12-24 m	13	2692.15	288.81
Trawl > 24 m	4	2032	516.84
Purse seiners 6-12 m	13	472.31	34.95
Purse seiners 12-24 m	3	750.24	98
Purse seiners > 24m	2	1200	272.4
TOTAL	**136**	**10168.56**	**1444.1**

Status of stocks of priority species

The continuation of the international bottom trawl survey in the Adriatic in the framework of the MEDITS (MEDIterranean Trawl Survey) programme was carried out in July 2015, with 10 hauls at positions on the continental shelf and slope, covering a range of depths from 10 to 800 m, with a random stratified sampling design covering five bathymetric strata (10-50 m, 50-100 m, 100-200 m, 200-500 m and 500-800 m) and a total area of about 5000 km^2. According to the current MEDITS protocol, the sampling period is defined from half an hour after sunrise to half an hour before sunset. After each haul, the trawl contents were sorted according to the major groups (fish, crustaceans, cephalopods), the species identified, weighted and counted. Length frequency distribution and gonad maturity stages for target species were determined on a subsample of the catch.

The computer software ATrIs (Adriamed Trawl Survey Information System), provided by the FAO AdriaMed project, was used for data input and processing.

Monitoring of small-scale fisheries was condinued in 2015 within the framework of the “Monitoring of small-scale coastal fisheries and composition of fish fry with the aim of conservation and management of marine fishery resources” (MORMONT), supported by the Ministry of Science of Montenegro. Six monthly samples of target species from commercial landings were collected alternatively in three fishing ports (Herceg Novi, Budva, Bar). For each target species in the sample

individual total length (TL), body weight (BW), gonad weight (W_G), and gonad maturity stage (according to the MEDITS protocol) were collected. The results of the third, final year of the project were presented to the Ministry of Science in the form of a report, which is currently being evaluated by two independent international experts. The final report for the entire project was also submitted to the Ministry.

Representatives from the Institute of Marine Biology of the University of Montenegro participated at the meeting of the FAO AdriaMed Working Group on Demersal Fisheries Resources, hosted by the Fisheries Research Institute of Slovenia in Ljubljana on 11 and 12 November, 2015.

Joint stock assessment was continued for European hake (*Merluccius merluccius*) and deep-water pink shrimp (*Parapenaeus longirostris*) stocks, and performed for the first time for the red mullet (*Mullus barbatus*) stock in the geographic sub-region (GSA) 18, which encompasses southern Adriatic, and is exploited by Italian, Albanian and Montenegrin fleets. Obtained results were very similar to those of previous reports, with Montenegrin total fishing fleet contribution to the fishing mortality of European hake in 2013 being estimated to about 2% (75% Italian trawlers, 13% Italian longliners, 10% Albanian trawlers, 2% Montenegrin trawlers and about 0.1% Montenegrin gill- and trammel netters); 3% for deep-water pink shrimp (64% Italian trawlers, 33% Albanian trawlers) and less than 3% for red mullet (86.4% Italian trawlers, 1.4% Italian fixed netters, 9.3% Albanian trawlers, 2.6% Montenegrin trawlers, 0.3% Montenegrin gillnets). Hake stock is estimated to be in high overfishing, with intermediate biomass levels. Stock of deep-water pink shrimp is also estimated to be in high overfishing with intermediate biomass levels, while the red mullet stock is in low overfishing with high levels of biomass. Results of the stock assessment were presented at GFCM Working Group for Stock Assessment of Demersal Species (Rome, Italy, 23-28 November, 2015).

Biomass estimation of small pelagic species by DEPM and acoustic method

An estimate of sardine and anchovy biomass in Montenegrin waters was performed for the first time in 2002 by acoustic method, and it was continued in 2004. From August 2005, anchovy biomass was estimated by two methods simultaneously: DEPM (Daily Egg Production Method) and the acoustic method. The second cruse that involves application of both methods was performed in July 2008 when survey covered entire Montenegrin and Albanian continental shelf, while from 2010 onwards, survey is expanded to the entire GSA 18. Those surveys have been done in collaboration with researchers from Italy and Albania in the frame of FAO AdriaMed and EU-MEDIAS projects.

According to Recommendation of GFCM and EC to present biomass of small pelagic estimated by acoustic method at the end of the year when the survey is conducted, it was decided that in 2015 survey will start earlier than previous years, so the survey started in May 2015. Survey started in Montenegrin national waters on May 25th, and was continued through Albanian and Italian waters. In order to standardize methodology with other Mediterranean countries, acoustic data were collected during day time, while ichthyoplankton samples were collected during night.

A total of 62 ichthyoplankton samples were collected in the area of south-eastern Adriatic Sea. Hydrographic data (temperature, salinity, conductivity, oxygen and water density) were taken at each position, while a total of 13 pelagic trawls were made in total (from which 4 in Montenegrin waters).

Further challenges are to collect consistent information on landings from eastern part and to continue with application of two direct methods for biomass estimation in the entire GSA 18, in order to provide valuable data for future stock assessment that will ensure sustainable development of pelagic fisheries in the Eastern part of GSA 18.

During GFCM WG SP in 2015 a joint stock assessment of sardine and anchovy was performed for the entire Adriatic (GSAs 17 and 18) for the first time, following the provisions of Recommendations GFCM/37/2013/1, GFCM/38/2014/1 and GFCM/39/2015/1.

Status of the statistics and information system

Montenegro has a Fisheries Information System (FIS), which is not fully operated at the moment, because the programming faze of some sub-systems is ongoing.

FIS currently contains a several sub-systems:

- Vessel register;
- Logbook & landings declaration;
- Monthly report for vessels under 10m LOA;
- Licenses management sub-system;
- Common alarm system;
- VMS – Vessel Monitoring System – Vessels over 10m LOA;

Montenegro is planning thought the IPA 2014, which planned to start in September 2016, to develop several more sub-systems:

- Register o fisherman's;
- Electronic logbook;
- Sales notes;
- Bilogical and sampling data;
- application for automatic reporting from base;

The plan is by the end of 2019 to have fully operated FIS, which will be able to automatically share all necessary data between all relevant authorities / parties.

During 2015, through the FAO AdriaMed support , Montenegro has developed the register of licences for Aquaculture based on web application.

Status of research in progress

Activities within the AdriaMed project framework continued. The pilot study on biological sampling data on Montenegrin coast has been continued through 2015. Samples of eighteen economically important species were taken from vessels in three fishing ports Bar, Budva, Herceg Novi by monthly dynamics.

In the frame of Project MEDIAS (supported by FAO AdriaMed Project) biomass estimation of small pelagic species in GSA 18 using DEPM and Acoustic method will be continued in 2015. In the frame of Project MEDITS (supported by FAO AdriaMed Project) biomass estimation of demersal resorces will be continued in 2015.

The "Monitoring of coastal fisheries and fish fry composition along the Montenegrin coast, with the aim of conservation and sustainable management of marine fisheries (MORM-MONT)" project, which starte din 2012 was finalised in 2105, and the reports submitted to the Ministry of Science for evaluation.

Bilateral project between CNR (Italy) and IBMK (Montenegro), "Development of a new methodological approach to study the recruitment dynamics of fish and crustaceans in the Kotor bay", started in early 2015 and will last through the 2016. This project represtents the first attempt of sampling fish postlarvae in the Adriatic.

Bilateral projects of IBMK with Croatian institution have also started in 2015, "Bioecological and ecotoxicological research of the coastal areas of Croatia and Montenegro" with the Faculty of Science, University of Zagreb, and "Biodiversity and structure of eastern Adriatic coastal fish and other marine organism communities: case studies of Croatia and Montenegro" with the Institute of Oceanography and Fisheries in Split. The projects will last through 2016.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

Within the framework of the MAREA SEDAF project (specific contract nr.10) „Improved knowledge of the main socio-economic aspects related to the most important fisheries in the Adriatic Sea", each country responsible had to collate, review and scrutinize the available information on the main socioeconomic indicators at fleet segment level and on the basis of the main fisheries identified.

In Montenegro the availability of economic and social data was low so to fulfill the requirements and objectives of the project; a specific data collection has been implemented in the period April-June, 2014 with the support of ADRIAMED. Socio-economic sample survey was executed in cooperation with the ADRIAMED and Ministry of Agricultural and Rural Development of Montenegro. This activity will continue during the 2016.

Marine environmental studies in progress

Also, scientists from the Institute are involved in process of development of new strategic documents related to coastal area of Montenegro:

- The National Strategy for Integrated Coastal Zone Management **- ongoing**
- Spatial plan of special purpose coastal area of Montenegro (PPPOP) – ongoing
- Program research and production hydrocarbons in the offshore of Montenegro

Management measures

As explained in section 4 Montenegro are making significant efforts to develop information systems, and which is an essential component for the establishment of efficient control of fishing activities in order to sustainable management of the available sea resources. So, now in Montenegro all trawlers in Montenegro are using square mesh size 40mm, all fishing vessels more the 10m LOA are covered by the Vessel monitoring system, through the amendments on Law on marine fishery and Mariculture has been made a legal base for management plans and catch certificates.

Also, during 2015 Montenegro has implemented almost all GFCM recommendations. In according to that effort in Montenegrin legal frame work now we have:

GFCM RECOMMENDATIONS	**STATUS OF IMPLEMENTATION**
Rec. GFCM/37/2013/1 - On a multiannual management plan in the Adriatic Sea	Partly implemented
Rec. GFCM/36/2012/2 - Conservation of cetaceans	Implemented
Rec. GFCM/36/2012/3 - Conservation of sharks and rays	Implemented
Rec. GFCM/36/2012/1 and GFCM/35/2011/2 - Red coral	Implemented
Res. GFCM/35/2011/1 - On the submission of combined data on fishing vessels	Implemented
Rec. GFCM/35/2011/1 - Logbook	Implemented
Rec. GFCM/35/2011/3 - Bycatch of seabirds	Implemented
Rec. GFCM/35/2011/4 - Bycatch of sea turtles	Implemented

GFCM RECOMMENDATIONS	STATUS OF IMPLEMENTATION
Rec. GFCM/35/2011/5 - Conservation of the Monk seal	Implemented
Rec. GFCM/35/2011/6 - On reporting of aquaculture	Implemented
Rec. GFCM/34/2010/2 - On the management of fishing capacity	Implemented
Rec. GFCM/33/2009/2 - Minimum mesh size in the codend of demersal trawl nets	Implemented
Rec. GFCM/33/2009/3 - Task 1	Implemented
Rec. GFCM/33/2009/7 - Vessel Monitoring System (VMS)	Implemented
Rec. GFCM/33/2009/8 - List of vessels IUU fishing	Partly Implemented
Rec. GFCM/2008/1 - Port State measures	Partly Implemented
Rec. GFCM/2006/3 - On the establishment of 3 Fisheries Restricted Areas	Partly Implemented
Rec. GFCM/2005/1 - Trawl banning below 1000 m	Implemented

Regarding to data transmission Montenegro has been send all necessary date of Vessel records for 2013 (reported) and 2012 (reported).

Research suggestions for consideration by SAC

No

MOROCCO / MAROC

Introduction

La pêche sur la façade méditerranée revêt une grande importance économique et sociale au Maroc. La production halieutique en Méditerranée (sans Tanger) s'élève à une moyenne d'environ 2.41 % de la production totale nationale en poids, avec une valeur moyenne représentant 8.14 % de la valeur totale des débarquements au titre de l'année 2014.

Les ressources halieutiques font l'objet d'un suivi scientifique régulier par l'Institut National de Recherche Halieutique (INRH), à travers des campagnes de prospection en mer et un système de suivi des débarquements à terre et d'échantillonnage biologique. Ces activités de suivi scientifique en Méditerranée sont majoritairement assurées par les centres régionaux de l'INRH basés à Tanger et à Nador, visant notamment à étudier la biologie et l'écologie des espèces marines, à comprendre et modéliser les interactions des espèces exploitées avec leur environnement, à étudier la dynamique des stocks, à évaluer leur niveau d'exploitation, à étudier l'impact de la pêche sur l'environnement et l'écosystème marin et à effectuer des études socio-économiques relatives au secteur halieutique.

Description des pêcheries

La pêche en zone Méditerranéenne marocaine a réalisé en 2014 une production de **30 999 tonnes** pour une valeur de **491,35 millions de dirhams**. Elle peut être classée en trois types de pêcheries :

- La pêcherie des petits pélagiques : Les principales espèces des petits pélagiques ciblées sont : la Sardine, le Chinchard, le Maquereau et l'Anchois.

- La pêcherie des grands pélagiques : Cette pêcherie cible principalement le thon rouge, l'espadon et les thonidés mineurs (listao, bonite, melva, etc.).

- La pêcherie démersale : Les principales espèces ciblées par cette pêcherie sont le merlu, le grondin, la sole, le pageot acarne, le poulpe, la dorade, le rouget de vase, la crevette rose, la bogue, la seiche, le pageot commun et le merlan bleu.

La production par groupe d'espèces (sans le port de Tanger) est présentée ci-dessous sur la base des statistiques des pêches de 2014 établies par l'Office National des Pêches (ONP, 2014) :

Tableau 1 : Production en Méditerranée par groupe d'espèces en 2014

Espèces	Poids (Tonnes)	Valeur (KDhs)
CEPHALOPODES	4 086	176 464
COQUILLAGES	739	2 951
CRUSTACES	358	25 399
POISSONS PELAGIQUES	20 420	195 061
POISSONS DEMERSAUX	5 396	91 479
TOTAL	**30 999**	**491 354**

La flotte marocaine active en Méditerranée est composite et est abritée par 7 ports de pêche et environ 86 sites de débarquement de la pêche artisanale. En 2014, elle était constituée de :

Tableau 2 : Flotte marocaine opérationnelle en Méditerranée au titre de l'année 2014

Flotte	Nombre	TJB total	PM total	LHT moy.	Engins utilisés	Pêcheries cibles
SENNEURS	113	6 082	40 514	19	Senne tournante coulissante	Pêcherie des petits pélagiques
PALANGRIERS	39	1 155	8 587	14	palangre, filet fixe, ligne, nasses, etc.	Pêcheries des grands pélagiques et des espèces démersales
CHALUTIERS	88	4809	31 739	20	Chalut de fond	Pêcherie démersale
BARQUES	2 497	4 994	43 907	6	Ligne, nasses, filet fixe, etc.	Pêcheries démersale et des grands pélagiques

Mesures d'aménagement des pêcheries

Dans le cadre de la stratégie (*HALIEUTIS*) du Département de la Pêche Maritime, qui s'articule autour de trois axes: durabilité, performance et compétitivité, plusieurs mesures de gestion et d'aménagement des pêcheries en Méditerranée ont été adoptées, parmi ces mesures :

- Limitation de la taille des espèces pêchées dans les eaux marocaines (Arrêté ministériel n°1154-88 du 03 octobre 1988) ;
- Limitation de l'effort de pêche : les investissements en matière de nouvelle construction navale ont été suspendus depuis 1992 (gel d'investissement) ;
- Le contrôle strict des activités de pêche le long de la chaîne de valeur et l'application d'une procédure de certification et traçabilité des captures depuis janvier 2010 ;
- La mise en place depuis octobre 2011 de système de suivi et de transmission de données par satellite (VMS) à bord des navires ayant un tonnage supérieur à 2 unités de jauge brute. (Décret n°2-09-674 du 17 mars 2010) ;
- Publication de la loi 19-07 interdisant les filets maillants dérivants et son texte d'application ;
- Plan de gestion du thon rouge selon les recommandations ICCAT ;
- Plan d'aménagement de l'espadon (Arrêté n°1666-12 du 17 avril 2012, et Arrêté n°1176-13 du 08 avril 2013) ;
- Plan d'aménagement des espèces littorales (algues (Arrêté n°955-10 du 15 mai 2006), corail rouge, coquillages, etc.) ;
- Plan d'aménagement du poulpe au Nord de Sidi el Ghazi depuis juillet 2011 ;
- Plan d'aménagement de la pêcherie des petits pélagiques en Atlantique Nord et en Méditerranée (Arrêté n° 4196-14 du 25 novembre 2014) ;
- Plan d'aménagement de la pêcherie des espèces de merlu en Atlantique Nord et en Méditerranée (Arrêté n°4195-14 du 25 novembre 2014) ;
- Plan d'aménagement de la pêcherie des grands crustacés en Atlantique Nord et en Méditerranée (Arrêté n°4201-14 du 25 novembre 2014) ;
- Plan d'aménagement de la pêcherie des crevettes en Atlantique Nord et en Méditerranée (Arrêté n° du 4198-14 du 25 novembre 2014) ;
- Arrêté ministériel fixant les distances minimales à partir desquelles l'emploi des filets trainants est autorisé en Méditerranée (Arrêté n° 4202-14 du 25 novembre 2014) ;

- Plan de conservation des espèces de requins.
- D'autre part, en 2011, il y a eu la création de l'Agence nationale pour le développement de l'aquaculture (ANDA).

RECOMMANDATION CGPM/35/2011/2 SUR L'EXPLOITATION DU CORAIL ROUGE DANS LA ZONE DE COMPETENCE DE LA CGPM

Actuellement, la pêche du corail rouge en Méditerranée est interdite jusqu'au 2016. Cependant, elle est ouverte en zone atlantique Nord (entre cap Spartel et Larache) au niveau de l'isobathe situé entre 40 et 80 mètres et réglementée par l'Arrêté du 6 juillet 2011 qui fixe les quotas à pêcher, le nombre des navires et des plongeurs autorisé. Ce texte en cours d'amendement actuellement, va intégrer de nouvelles mesures de gestion prévues par la CGPM.

RECOMMANDATION CGPM/36/2012/3 CONCERNANT DES MESURES DE GESTION DES PECHES POUR LA CONSERVATION DES REQUINS ET DES RAIES DANS LA ZONE DE COMPETENCE DE LA CGPM.

Le Maroc assure un suivi régulier des captures et des prises accessoires des stocks d'Elasmobranches par espèce depuis 2010.

Les mesures de gestion appliquées sur les requins à savoir l'interdiction de pêche de trois espèces de requins (requin marteau (*famille des Sphyrnidae exception faite de l'espèce dite Sphyrna tiburo*), requin océanique (*Carcharhinus longimanus*) et requin renard à gros yeux (A*lopias superciliosus*)) par l'adoption de l'arrêté n° 1654-12 du 9 avril 2012. De même, un projet de plan de conservation des espèces de requins de fond et pélagiques est en cours d'adoption visant la conservation et la préservation de ces espèces très vulnérables.

Évaluation des stocks en Méditerranee :

Les études d'évaluation des stocks en Méditerranée marocaine sont réalisées chaque année dans le cadre des programmes nationaux et groupes de travail de la CGPM. A cet effet, les principales espèces débarquées en Méditerranée marocaine, font l'objet d'un suivi régulier par l'INRH moyennant la collecte de données nécessaires à l'analyse des indicateurs d'exploitation et d'évaluation de l'état des stocks.

Durant l'année 2015, les travaux d'échantillonnage biologique et des fréquences de taille ont concerné 10 espèces. Ces espèces sont en l'occurrence le rouget de vase « *Mullus barbatus* », la besugue « *Pagellus acarne* », la bogue « *Boops boops* », le pageot commun « *Pagellus erythrinus* » le poulpe « *Octopus vulgaris* », la dorade rose « *Pagellus bogaraveo* », le chinchard « *Trachurus trachurus* » et la sardine « *sardina pilchardus* », le thon rouge « *Thunnus thynnus* » et l'espadon « *Xiphias gladius* ».

Les espèces évaluées pendant la période d'intersession sont le rouget de vase « *Mullus barbatus* » et la sardine commune « *Sardina pilchardus »*.

Cas des espèces des petits pélagiques :

Pour ce groupe d'espèce, les travaux d'évaluation ont porté sur la sardine, étant donné qu'elle constitue l'une des espèces cibles et majoritairement présente dans les débarquements des senneurs. Pour le cas de l'anchois, la discontinuité de ses débarquements et le peu de données d'échantillonnage biologique sur l'espèce en question rendent les travaux d'estimation de son stock difficile à réaliser.

Pour cette nouvelle session, l'évaluation de l'état du stock de la sardine était conduite par deux modèles : un modèle analytique (programme VIT 1.3) et un modèle global (BioDyn).

Une série d'analyses de pseudo-cohorte par le VIT a été réalisée sur les matrices de captures annuelles en nombre par âge depuis 2010 à 2014 séparément et une sur la moyenne des 5 années ensembles. Les données d'entrée sont les captures par âge après transformation des captures en tailles par la clé taille-âge de l'année 2014. La mortalité naturelle utilisée est un vecteur calculé par la méthode de Gislason. Les paramètres de Von Bertalanffy ont été estimés par FISAT II pour l'année 2014 et le taux d'exploitation de référence est celui de Patterson (1992) E=0,4.

La détermination de l'état du stock est déterminée par rapport au taux d'exploitation de référence et le point de référence biologique Fcur/F0.1.

Le taux d'exploitation E=0.42 est supérieur à 0.4 (seuil de Patterson, 1992)). Le stock serait donc surexploité. Le ratio Fcur/F0.1 est inférieur à 1. L'effort de pêche peut être considéré faible.

Egalement, le stock de la sardine a été évalué par le modèle global BioDyn basé sur le modèle logistique de Schaefer. Le modèle calcule les points de référence Bcur/BMSY et Fcur/F0.1.

Les données d'entrée sont les captures en tonnes et la biomasse acoustique comme indice d'abondance pour la période 2005-2014.

Le modèle global BioDyn montre que la biomasse est proche de MSY (Bcur/BMSY=0.91) indiquant que le stock est proche de sa limite biologique de sécurité. Le ratio Fcur/F0.1 = 0.78 est inférieur à 1.

Compte tenu des deux méthodes qui donnent des résultats similaires et conformément à la grille préétablie de la CGPM concernant l'état des stocks de petits pélagiques relativement aux points de référence, on pourrait conclure que le stock de la sardine en méditerranée marocaine serait surexploité avec une faible mortalité par pêche.

La recommandation qui en résulte, suivant la grille susmentionnée, serait de réduire la mortalité par pêche.

Cas des espèces démersales

La pêche des espèces démersales en Méditerranée marocaine est pratiquée principalement par une flotte de pêche chalutière composé de 114 unités, par une flotte palangrière et par une flotte de pêche artisanale avec une moindre importance comparativement aux deux premières flottes.

Les principales espèces démersales ciblées par ces flottilles sont composées du pageot acarné, du rouget de vase, de la crevette rose du large, du merlu commun, de la bogue, du poulpe, du chinchard, de la seiche, du pageot commun, de la dorade rose et du merlan bleu. Ces espèces représentent environ 80% du volume des captures de ce grand groupe des espèces de fond.

Pour les espèces démersales, les évaluations ont concerné le stock du rouget de vase « ***Mullus barbatus*** » et ont été réalisées conjointement avec l'Espagne pour les GSAs 03 (Maroc) et 01 (Espagne).

Les débarquements de rouget de vase « *Mullus barbatus* » ont montré des fluctuations au fil des années avec deux pics majeurs enregistrés en 2004 et 2010 de l'ordre de 417 tons et 367 tonnes respectivement. La valeur moyenne annuelle des prises est de l'ordre de 313 tonnes. Les Profondeurs de pêche de cette espèce sont comprises, essentiellement, entre la côte et les fonds de 100 mètres.

L'évolution de l'effort de pêche (exprimé en jours de pêche) exercé sur le rouget de vase depuis l'année 2004 montre une succession de périodes de baisse et de hausse. En effet, après une baisse de 2004 à 2006, l'effort de pêche a de nouveau augmenté, atteignant un maximum d'environ 15.540 jours de pêche en 2009. Une phase de diminution a été enregistrée à nouveau jusqu'en 2013.

Après une diminution des CPUE entre 2004 et 2006 où la valeur minimale de ces dernières a été observée, un redressement a été enregistré entre 2007 et 2011. Entre 2009 et 2011, les CPUE ont fluctué autour d'une moyenne de 23,62 kg/jp. Après une rechute en 2012, les CPUE ont accusé une nouvelle augmentation en 2013, suivie d'une stabilisation en 2014.

L'évaluation de l'état du stock du rouget de vase a été effectuée en procédant à l'application des modèles structuraux et globaux, moyennant le logiciel XSA (Extended Survivor Analysis), le modèle de Schaeffer amélioré par Pedro De Barros (BioDyn, CECAFE, 2007) et la LCA et le modèle de rendement par recrue améliorés et préparés par Pedro De Barros sur des feuilles Excel (CECAF, 2007).

Les données utilisées dans cette évaluation des stocks proviennent des campagnes scientifiques de prospection par chalutage de fond, de l'échantillonnage biologique des débarquements et des

statistiques de la pêche, y compris l'effort de pêche, les captures et les CPUE. Les données couvrent la période 2003-2014.

Les paramètres de croissance utilisés dans cette étude (L∞, k et t0) sont ceux obtenus à partir d'une étude réalisée sur le rouget de vase dans la GSA 06 en 2011. Le vecteur de la mortalité naturelle par âge a été calculé d'après la formule de Caddy, en utilisant la feuille de calcul Excel PROBIOM (Abella et al, 1997).

Les résultats obtenus par les trois méthodes d'évaluation appliquées sur cette espèce indiquent que le stock est en état de surexploitation avec une biomasse relativement faible. Le stock se caractérise par une forte mortalité naturelle pour les petites tailles et par une mortalité par pêche élevée pour les tailles comprises entre 13 et 27 cm (LCA, Pedro De Barros-CECAF, 2007).

Le tableau suivant résume les principaux résultats de l'évaluation de l'état du stock du rouget de vase.

Modèle	**Indicateur**	**Point de référence**	**Valeur**	**Etat du stock**
BioDyn	Biomasse B	B/BMSY B/B0,1	79% 72%	Surexploité
LCA-Rendement par recrue	Mortalité par pêche F	F0,1 Fmax Fcurr Fcur/F0,1	0,29 0,5 1,73 5,97	Surexploité
XSA	Mortalité par pêche F	F0,1 Fmax Fcurr Fcur/F0,1	0,26 0,43 0 ,89 3,4	Surexploité
XSA	Biomasse B		1552 (33th percentile=1471)	Surexploité
XSA	Biomasse du stock reproducteur SSB		1062 (33th percentile=993)	Surexploité

A l'issue des résultats obtenus sur l'état de stock du rouget de vase, il est recommandé de réduire la mortalité par pêche exercée sur ce stock.

Statistiques et système d'information

L'INRH a pris la responsabilité de compiler les données de la tâche 1 de la CGPM, cette base de données regroupe les différentes données relatives à l'activité de pêche au niveau de chaque GSA (données biologiques, d'exploitation et de flottille). Le Maroc s'est engagé à fournir cette information avant le moi de juin de chaque année.

La compilation de la base de données de la Tâche 1 recommande une classification hiérarchique des métiers avec la structure suivante:

- Niveau 1: distinction entre navires de pêche actifs et inactifs ;
- Niveau 2: distinction selon l'engin de pêche ;
- Niveau 3: distinction selon le groupe d'engins de pêche ;
- Niveau 4: regroupement selon l'espèce cible (par exemple, Crustacés, petits pélagiques, etc.) mais aussi par assemblages mixtes (par exemple, Crustacés mixtes et poissons Demersaux, pélagiques mixtes et poissons Demersaux, etc.) ;

- Niveau 5: distinction selon le maillage et autres dispositifs sélectifs.

Toutefois, certaines de ces données sont difficiles à collecter ou nécessitent un effort et des moyens financiers importants, notamment les données socioéconomiques, les données sur l'effort de pêche (zone de pêche par engin), ainsi que les données sur les rejets qui nécessitent l'embarquement régulier durant toute l'année des observateurs scientifiques à bord des navires de la pêche commerciale.

La base de données de la matrice «Tâche 1» pour l'année 2013 a été transmise au Secrétariat de la CGPM en juin 2015. Cette matrice actualisée a regroupé la table « Tâche 1.1 » réservée à la segmentation de la flottille de la pêche nationale méditerranéenne, la « Tâche1.2 » qui regroupe les données socioéconomiques, la « Tâche 1.3 », consacrée aux données d'exploitation à savoir l'effort de pêche et la « Tâche1.5 » relative aux données biologiques.

Ainsi, l'analyse des données sont en cours de traitement pour ressortir les matrices de la « Tâche1», relative à l'année 2014 et l'envoyer au secrétariat de la CGPM avant juin 2016

Études sociales et économiques

Les principaux travaux socioéconomiques réalisés en 2015, sont les suivants :

- La pêche artisanale en Méditerranée marocaine, exploitation et aspects socioéconomiques : L'étude a permis de caractériser l'activité de pêche artisanale au niveau de la Méditerranée marocaine, à travers un suivi au niveau de 10 sites de pêche choisis de façon représentative. Ce travail a cerné le volet exploitation par l'identification des métiers pratiqués, l'effort de pêche exercé, les espèces capturées et les niveaux des captures réalisés. Aussi, il a cerné le volet socioéconomique par l'établissement des comptes d'exploitation par type de flottille, ainsi que l'estimation de l'emploi et des salaires des pêcheurs artisans.
- Etablissement d'un système communautaire de suivi de l'activité de pêche artisanale au niveau du Parc National d'Al Hoceima : Ce travail réalisé dans le cadre du projet SuiviCOM-Al Hoceima, en partenariat avec la FAO, a contribué à la mise en place d'un système de collecte des données d'exploitation et socioéconomiques, en impliquant de façon effective les communautés des pêcheurs artisans du Parc. En plus de confirmer la possibilité des communautés des pêcheurs pour contribuer à l'amélioration du suivi de leur activité, ce travail a permis de renforcer les capacités de ces acteurs en vue de participer au processus de gestion depuis ses premières étapes, et d'avoir le consentement de l'ensemble des intervenants dans le secteur pour la mise en place d'un comité de suivi qui veillera sur la durabilité et l'extension de ce système.
- Evaluation des pertes économiques issues de l'interaction entre les mammifères marins et la pêche à la senne coulissante. L'étude a couvert les 4 principaux ports de pêche à la senne tournante, à savoir Ras Kebdana, Nador, Al Hoceima et M'Diq. Elle a porté sur une actualisation des niveaux et intensité de ce phénomène d'interaction sur l'ensemble de la Méditerranée marocaine. Cette actualisation a aussi porté sur les niveaux des pertes économiques qui résultent de l'interaction, ainsi que leurs répercussions sur les différents intervenants (armateurs, pêcheurs, organismes de l'Etat et de services).

État des programmes de recherche en cours

Les études de recherche en cours au niveau de la Méditerranée marocaine (GSA 03) sont réalisées par les deux centres régionaux de l'INRH basés à Nador (Est) et à Tanger (Ouest) en étroite collaboration avec les laboratoires centraux du Département des Ressources Halieutiques et concernent :

- Les évaluations des stocks des principales espèces.
- Les études des cycles de vie des espèces à haute valeur commerciale (Octopus vulgaris, Parapenaeus longirostris, Merluccius merluccius, Mullus Spp, Sardina pilchardus).
- Les études de l'interaction entre l'activité de pêche et son environnement.
- La réalisation d'un inventaire des espèces des Elasmobranches peuplant la Méditerranée marocaine et collecte des données relatives à leur exploitation (capture et effort de pêche).

- Le suivi des enquêtes inscrites dans le cadre du programme d'étude des interactions entre les Cétacés et la pêche au niveau de la GSA03.
- L'étude de l'impact de la mise en place de nouvelles mesures de gestion, telles que l'implantation des aires marines protégées, l'immersion des récifs artificiels et autres.
- L'étude socio-économique de la pêcherie sardinière : ce travail porte sur la modélisation socioéconomique de la pêcherie en vue de simuler des mesures de gestions et d'optimiser l'exploitation.
- L'étude des filières des petits pélagiques au Maroc : structure, dynamique et performances socio-économiques.
- L'étude de la pêcherie à la palanza dans la lagune de la Marchica : exploitation, biologie et aspects socioéconomiques.
- Le suivi des impacts des récifs artificiels et des AMPs : aspects biologiques et socio-économiques.
- Le suivi des indicateurs d'exploitation et socioéconomiques de l'activité de la pêche côtière.
- L'évaluation des pertes économiques issues de l'interaction entre les mammifères marins et la pêche à la senne coulissante.
- Les caractéristiques socioéconomiques et potentialités d'exploitation des ressources littorales.

Ces études ont comme objectif principal de préparer des éléments scientifiques d'appui à la mise en place de plans d'aménagement pour les principales espèces.

SLOVENIA / SLOVÉNIE

Description of the fisheries

Description of the fishing grounds and GSA

The Slovenian fishing vessels are carrying out fishing activities in the area GSA 17.

Total landings by main targeted species (year 2015)

Code	Species	Landing [kg]
PIL	European pilchard (*Sardina pilchardus*)	43.824,89
SBG	Gilthead seabream (*Sparus aurata*)	28.826,31
ANE	European anchovy (*Engraulis encrasicolus*)	14.758,10
SOL	Common sole (*Solea solea*)	13.225,06
WHG	Whiting (*Merlangius merlangus*)	11.643,98
SQR	European squid (*Loligo vulgaris*)	10.431,37
EDT	Musky octopus (*Eledone moschata*)	8.002,6
MUL	Mullets nei (*Mugilidae sp.*)	5.918,2
FLE	European flounder (*Platichthys flesus*)	5.707,81
Other		53.358,84
TOTAL		**195.697,16**

Fleet

Fishing vessels	Number	LOA [m] (average)	kW (sum)	GT (sum)
Minor gear without engine < 6 m	8	4,77	0,00	5,87
Minor gear with engine < 6	73	4,78	929,49	70,30
Minor gear with engine 6-12 m	62	7,57	3.108,93	196,53
Trawlers 6-12 m	9	10,69	1.599,68	67,14
Trawlers 12-24 m	3	14,11	310,70	32,60
Trawlers > 24 m	0	0,00	0,00	0,00
Purse seiners 6-12 m	2	11,54	396,42	15,60
Purse seiners 12-24 m	1	18,00	199,00	30,76
Other	11	13,65	1.995,43	178,15
TOTAL	169	7,02	8.539,65	596,95

The data of the Slovenian fishing fleet is referring to the date of 1 January 2016.

Status of stocks of priority species

In the case of Slovenia, five species can be considered as priority species in the year 2015: European pilchard (*Sardina pilchardus*), Gilthead seabream (*Sparus aurata*), European anchovy (*Engraulis encrasicolus*), Common sole (Solea solea) and Whiting (*Merlangius merlangus*).

The most recent stock status for sardine and anchovy was presented at the meeting of SAC Sub regional Committees for the Adriatic Sea (SRC-AS) and Central Mediterranean (SRC-CM) that was held in Rome in the period 1-5 February 2015. Main findings regarding the status of the stock of these two species are as follows.

Sardine *(Sardina pilchardus*

B_pa =250.636 tons,

B_lim = 125.318 tons

B_Current = 208.604 tons

F current = 1.09

MSY = 0.715.

Anchovy *(Engraulis encrasicolus)*

B_pa = 91.872 tons,

B_lim= 45.936 tons.

B_Current = 89.501 tons

F current = 0.99,

MSY = 0.554.

Status of the statistics and information system

In Slovenia there are five information systems in place which will be combined together in line with the EU Control Regulation (Council Regulation (EC) No 1224 /2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy). The InfoRib is and will remain the main system. It covers all the relevant fisheries data. The second is the VMS system which covers the VMS data. The third is the inspection information system Aquaspec, where all the inspection data are in place, the forth is ERS where all electronic reports and data from the electronic logbooks are stored and the fifth is biological data base BIOS. Some elements of the systems are already interconnected and in the future the interconnection between the systems will also improve in line with the requirements of the EU and other pertaining legislation in force and thus we will gain better control over fisheries activities.

InfoRib is the centralized information system which contains all the relevant data on fisheries in Slovenia. In the system there are the following modules: Fleet vessel register, Logbooks, Fishing Permits, Socio-economic data, Reporting, Sampling, Technical indicators, Code lists, First sale, Aquaculture, Processing Industry and Meetings Module. Biological Sampling Module is permanently stored in the Fisheries Research Institute database.

It is interconnected with the VMS data base and soon it will be interconnected also with ESR data. It enables different crosschecking of the data, validation of the data and queries for end users.

In the future we will improve interconnection with the Aquaspec system and with the central node for fisheries data at the European Commission.

Biological data are stored at the Fisheries Research Institute of Slovenia in BIOS database. In the future also the interconnection between BIOS and InfoRib shall be established.

The yearly maintenance of the systems in place is performed regularly. It includes also all the preparation work for different reports, for national and international end users.

Status of research in progress

In the framework of National Program of the Republic of Slovenia for the collection and management of data, Slovenia is performing two research surveys at sea: MEDITS and MEDIAS.

MEDITS surveys have been performed from 1996 on two stations in Slovenian Sea. Samples have been taken with three rented Italian fishing vessels and from 1999 with Italian research vessel Andrea. All biological material is elaborated at the Fishery Research Institute of Slovenia. We are also performing data aggregations according to the MEDITS protocol.

MEDIAS surveys have been performed since 2007. The survey in Slovenian waters is a part of joint North Adriatic Echo-survey performed by Italian scientists from CNR ISMAR of Ancona with the research vessel G. Dallaporta each year, usually in September or October. The survey is performed in one day and includes echo-sounding and two samplings with pelagic trawl net.

In the framework of FAO-AdriaMed project the SOLEMON survey is performed in Slovenian waters by Italian scientists from CNR ISMAR of Ancona with the research vessel G. Dallaporta.

Status of the social sciences studies in progress or achieved during the intersessional period (economy, relevant legislation, sociology, etc.)

In the field of economic research Slovenia is implementing three studies on the basis of the Council Regulation (EC) No 199/2008 and of Appendix VI to the Commission Decision. The studies are:

1. Module of evaluation of the fishing sector;
2. Module of the evaluation of the economic situation of the aquaculture sector;
3. Module of the evaluation of the economic situation of the processing industry.

Slovenia has completed data for 2013 on fishing sector, processing industry and aquaculture sector. The 2014 data for all three sectors will be available in the first half of 2016.

Marine environmental studies in progress

In 2016 we will start a study of ichthyoplankton in Slovenian territorial waters targeting anchovy eggs and juveniles using Daily Egg Production Method (DEPM) protocol. This method is already used in other eastern Adriatic countries for stock assessment in the ADRIAMED project and probably the most suitable for Slovenia, considering the cost and effects. We will perform sampling in June when spawning peak of anchovy takes place.

Involvement in activities of FAO Regional Projects

FAO AdriaMed:

Stock assessment for some species, eg. *Sardina pilchardus, Engraulis encrasicholus, Solea solea*.

Cooperation in the framework of SOLEMON project.

Management measures

Fisheries management measures in Slovenia are consistent with the provisions of the *Council Regulation (EC) No 1967/2006* which contains principles and rules relating to the conservation and management of fishery resources in the Mediterranean Sea.

Principal document for the management of the fisheries in the territorial waters of Slovenian is *"Management plan of the Republic of Slovenia for certain fisheries within its territorial waters"* (hereinafter FMP – Fisheries Management Plan) which relates exclusively to commercial marine fishing in Slovenia's territorial seas. In accordance with the first paragraph of Article 19 of *Council Regulation (EC) No 1967/2006*, the FMP addresses the following types of fishing gear: trawl nets, boat seines, shore seines, surrounding nets and dredges.

The objective of the Fisheries Management Plan is to adjust the fishing capacities and fishing opportunities for those fishing vessels which target fish stocks which require protection and conservation as their stock status is in undesirable state. Management measures are also required for those groups of fishing vessels which target species whose stock levels are not known at the regional level and where the spatial opportunities for fishing and the number of fishing vessels involved in targeting these species require a restriction on the fishing effort of these vessels.

Small pelagic fish species have been predominant in the landings of Slovenian fishermen for many years, with the bulk of these landings being made up of sardine and anchovy. And as the majority of the landings of sardine and anchovy were made by purse seines (PS) and midwater pair trawls (PTM), management plans were prepared for these two fleet segments within the FMP.

In addition, owing to the fact that Slovenian fishermen operate in the very limited sea fishing area, where additional restrictions exist (navigation lanes, fishing reserves, conflict with other types of fishing gear, etc.) and because of the absence of stock assessments for demersal fish in the Northern Adriatic, measures to adjust the fishing effort have also been drawn up for the fishing vessels using the set gillnets (GNS), trammel nets (GTR) and bottom otter trawls (OTB).

To achieve the objective of adjusting fishing capacities and fishing opportunities, Slovenia has been implementing following management measures that were introduced in the FMP with an aim to reduce the fishing effort:

"Temporary suspension of the granting of commercial fishing licences"

Moratorium on the issuing of new fishing licenses has been introduced already in 2012 and is still in force. Implementation of this measure bans the issuing of new fishing licences for the following types of fishing gears: purse seines (PS), midwater pair trawls (PTM), set gillnets (GNS) and trammel nets (GTR) and bottom otter trawls (OTB).

"*Reduction in the fishing effort by implementation of a permanent and temporary cessation of* fishing activities"

The expected results of the scrapping measure (permanent cessation of fishing activities) which was implemented in the period 2012–2013 and was financed by the European Fisheries Fund, had a huge impact on the Slovenian fishing fleet as it decreased by 397,75 GT (37,63% of the national fleet) and 2,106 kW (19,20 % of the national fleet). Eight vessels were removed from the fleet, but among the scrapped vessels there were also two vessels that had been for decades the most important vessels in the Slovenian fishing fleet in terms of their size (each had LOA of 29 m, 156 GT and 600 kW) and in terms of total landings which were in recent years on average more than half of total Slovenian landings. These two vessels were at the same time the only pair of vessels using pelagic pair trawl (PTM) for targeting small pelagic fish, and thus the fishing effort of the Slovenian fishing fleet on small pelagic fish decreased considerably.

The achieved results of the scrapping measure had a huge impact also on the Slovenian landings, since the total landings in 2012 decreased by 54 % in comparison to the previous year: from 719,4 tons in 2011, down to 328,9 tons in 2012 and down to 238 tons in 2013. Total landings in 2014 were 254,14 tons and in 2015 they hit the record low at only 195,7 tons.

Most remarkable was decrease of the sardine and anchovy landings: the landings of these two species decreased for 87 % as a consequence of the scrapping measure. In 2014, landings of these two species slightly increased: up to 111,5 tons, but this is still much lower than landings of sardine and anchovy in 2011 which were 469,3 tons. In 2015 landings of these two species were again very low: 43,8 tons of sardine and 14,7 tons of anchovy, both species together only 58,5 tons.

Slovenia is included in the implementation of the "*Recommendation GFCM/37/2013/1 on a multiannual management plan for fisheries on small pelagic stocks in the GFCM-GSA 17 (Northern Adriatic Sea) and on transitional conservation measures for fisheries on small pelagic stocks in GSA 18 (Southern Adriatic Sea)" (hereinafter: "Multiannual plan")* which was adopted at the GFCM's plenary session that was held in Split in May 2013, which entered into the force in October 2013. In line with the provisions of the "Multiannual plan", Slovenia prepared and sent to the GFCM secretariat, before the end of October 2013, its national "Monitoring and control plan for its fisheries targeting small pelagic stocks". An amended plan was sent to the GFCM secretariat also at the end of the October in 2014 and in 2015. In addition, Slovenia submitted to the GFCM secretariat also a list of the vessels authorized to fish for small pelagic stocks that are registered in harbours located in GSA 17. Under the provisions of this plan it is not possible to fish for small pelagics more than 20 days per month and maximum 180 days per year.

As it was determined in 2014, that the stock of the anchovy in GSA 17 continues to be at undesirable levels *"Recommendation GFCM/38/2014/1 amending Recommendation GFCM/37/2013/1 and on precautionary and emergency measures for 2015 on small pelagic stocks in the GFCM GSA 17"* was adopted at the GFCM's plenary session held in Rome in May 2014.

In line with the abovementioned Recommendation, vessels targeting anchovy could not exceed 144 fishing days in 2015. In addition, countries subject of the management plan for small pelagics had to apply spatio-temporal closures of no less than 15 continuous days and up to 30 continuous days for vessels fishing small pelagic stocks in the GSA 17. Slovenia applied spatio-temporal closure in the period 1-15 April 2015 and it covered all waters under the jurisdiction of Slovenia.

Environment protection measures

In Slovenia we have 2 fisheries protected areas Portorož and Strunjan. On the basis of the Slovenian Maritime Fisheries Act it is prohibited to perform any kind of fishing activities in the fisheries protected areas. The only possible exception is fishing of winter shoals of mullets on the basis of temporary limited special fishing permission issued by the Ministry competent for fisheries.

With regards to:

Rec. GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area, it is not applicable in Slovenia, due to the fact that red coral is not present in the fishing area of Slovenia fishermen.

Rec. GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area. It is covered by the European and Slovenian national legislation. It is covered by the provisions of the Slovenian Decree on protected wild animal species. Within the framework of the EU Common fisheries policy we are in the process of the implementation of the provisions of the "Implementing Regulation (EU) 2015/1962 of 28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy" and "Regulation (EU) 2015/2102 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU) No 1343/2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement area".

Rec. GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area. It is covered by the European and Slovenian national legislation: "Regulation on the traceability of catches" and "Decree on protected wild animal species". Within the framework of the EU Common fisheries policy we are in the process of the implementation of the provisions of the "Implementing Regulation (EU) 2015/1962 of 28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy" and "Regulation (EU) 2015/2102 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU) No 1343/2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement area".

Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area". Within the framework of the EU Common fisheries policy we are in the process of the implementation of the provisions of the "Implementing Regulation (EU) 2015/1962 of 28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy" and "Regulation (EU) 2015/2102 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU) No 1343/2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement area".

Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area. Within the framework of the EU Common fisheries policy we are in the process of the implementation of the provisions of the "Implementing Regulation (EU) 2015/1962 of

28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy" and "Regulation (EU) 2015/2102 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU) No 1343/2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement area".

Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area. Within the framework of the EU Common fisheries policy we are in the process of the implementation of the provisions of the "Implementing Regulation (EU) 2015/1962 of 28 October 2015 amending Implementing Regulation (EU) No 404/2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy" and "Regulation (EU) 2015/2102 of the European Parliament and of the Council of 28 October 2015 amending Regulation (EU) No 1343/2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement area".

Proposals for future research programmes

In accordance with the DCF regulation, the Adriatic countries brought together by the AdriaMed project, work in conjunction towards joint regional management of the shared fish stocks. So far the VPA and ICA stock assessment methods have been used to determine the SSB of anchovy and sardine in the GSA 17 and 18. The acquisition of the data for this type of stock assessment is costly and demanding in terms of resources which present a big problem for small coastal countries such as Slovenia. The sampling requirements of the Daily Egg Production Method (DEPM) are in better accordance with the available resources of the smaller coastal countries.

Therefore, Slovenia supports the implementation of DEPM as one of the tools used to determine the status of the shared small pelagic stocks. In order to attain this goal Slovenia needs to provide the data from its seas. Hence, Slovenia started to conduct a preliminary survey in 2014 to determine the spatial and seasonal distribution of planktonic stages of European anchovy and sardine in the Slovenian seas. This would enable us to determine the appropriate number and position of sampling stations and the period in which to collect the samples for the DEPM. Addition of this data to the joint stock assessment would further improve the precision of the results.

SPAIN / ESPAGNE

Description of the fisheries

Spanish fleet operates mainly within four GSAs (excluding GSA2, which only supports a deep trawl fishery around Alboran Island). In each of them, different types of fishing grounds are exploited from shallow to deep waters by trawl, purse seine, long line and artisanal fleets. The total number of **authorised fishing vessels** as for the Mediterranean (excluding auxiliary vessels) included in the Fleet Register at date 31/12/2014 was 2.743; of these 150 belongs to surface longline vessels census, and the rest 2.593 vessels accounts for a total GT of 53.342,28, a total power of 219.355,26 Kw and a mean length of 12,24 m. Most of the fisheries are multiespecific, especially the trawl fishery which catches a great diversity of species of fish, crustaceans and molluscs (Table 2).

Table 1. Number and technical characteristics of the Spanish Mediterranean fleet by type of gear (year 2014)

GEAR		**Total**
Trawl	nº	626
	Total Kw	113.929,99
	Total GT	36.610,63
	Average LOA	20,33
	LOA Range (8,82 – 29,50)	
Purse seine	nº	231
	Total Kw	38.603,36
	Total GT	8.234,78
	Average LOA	17,80
	LOA Range (6,15 – 27,0)	
Tuna Purse seine	nº	6
	Total Kw	5.843,38
	Total GT	1.612,36
	Average LOA	38,68
	LOA Range (34,60 – 43,45)	
Long line in census MED (out of the total of 150 authorised vessels, only 72 LLD vessels had fishing operations in Mediterranean in 2014)	nº	150
	Total Kw	29.716,00
	Total GT	17.778,42
	Average LOA	21,86
	LOA Range (9,60 – 37,50)	
Set longlines	nº	72
	Total Kw	5.442,04
	Total GT	629,88
	Average LOA	10,95
	LOA Range (6,01 – 18,00)	
Minor Gears	nº	1.658
	Total Kw	55.536,49
	Total GT	6.254,63
	Average LOA	8,37
	LOA Range (3,25 – 27,00)	

(Authorised fishing vessels in year 2014 – not meaning all of them were active in the year of reference)

Table 2. Total landings in 2014 by main target species (in Tons). Species in Group 1 and Group 2 have been included as defined in the GFCM DRF

Group	SPECIES	Tm
G1	*Engraulis encrasicolus*	19052
	Merluccius merluccius	3238
	Mullus spp	2236
	Nephrops norvegicus	632
	Parapenaeus longirostris	247
	Sardina pilchardus	15448
G2	*Aristeus antennatus*	1156
	Boops boops	523
	Eledone spp	1664
	Galeus melastomus	119
	Lophius spp	1696
	Micromesistius poutassou	1534
	Octopus vulgaris	3052
	Pagellus bogaraveo	95
	Pagellus erythrinus	601
	Raja asterias	19
	Raja clavata	100
	Sardinella aurita	3268
	Scomber spp	3153
	Sepia officinalis	1016
	Trachurus spp	6203
Large Pelagic	*Thunnus thynnus*	1164
	Thunnus alalunga	282
	Xiphias gladius	2073

Data source: Landings of species G1 and G2 from Spanish sale notes 2014. Landings of large pelagic species from Standing Committee on Research and Statistics (SCRS) (ICCAT).

Status of stocks of priority species

DEMERSAL FISHERIES

GSA01 – Northern Alboran Sea

Red shrimp (*Aristeus antennatus*) is the most important resource of bottom trawling in the GSA01 (Northern Alboran Sea) and is targeted by the larger vessels of the trawl fleet segment. A total of 49 vessels (average 2011-2013) had fishing activities directed towards the pink shrimp in the GSA 01 fishing ground.This segment fleet, catches about 135 tonnes of red shrimp per year (average 2011-2013).

Spawning Stock Biomass (SSB) and Recruitment (R), declined until 2007 and have been relatively stable over the 2008-2013 period. Fishing mortality ($F_{bar\ 1-2}$) shows decreasing trend until 2007 with a drastic decline during this years and has been stable over the last six years. Since 2003, when the maximum was observed, the pink shrimp stock in GSA01 has suffered a fairly strong decrease in landings, spawning biomass and total biomass. Current indicators represent respectively 35% (Y), 46% (SSB) and 49% (B) of the values observed ten years ago. Y/R analysis shows that the F_{ref} = $F_{current}$ (0.82) exceeds the Y/R $F_{0.1}$ reference point (0.41).

The status stock in the GSA 01 is in In overexplotation with relative intermediate biomass. A reduction of the current fishing mortality is recommended by Progressive reduction of the fishing effort

European hake (*Merluccius merluccius* (Linnaeus, 1758)) is one of the target demersal species of the Mediterranean fishing fleets, largely exploited in GSA01 mainly by trawlers (91% landings) on the shelf and slope, and by small-scale fisheries using gillnets (6%) and long lines (3%) on the shelf (average 2012-2014). The trawling fleet in the GSA01 area is made up of 183 boats, averaging 35 GRT and 176 HP. During the last years, a decrease in landings was observed, starting in 2012 and reaching the minimum value in 2014 (244 tons, the lowest value in the series).

Spawning biomass (SSB) and yield (Y) show a decreasing trend from 2011 to 2014. Recruitment (R) showed fluctuations over the all series. After a sharp decrease from 2010, (R) seems to have stabilized during the last three years (around 11000 thousands).

Y/R analysis shows that the F_{ref} = $F_{current}$ (1.4) exceeds the Y/R $F_{0.1}$ reference point (0.2). It was recommended a progressive reduction of the fishing effort.

Assessment of *Mullus barbatus*

The assessment was carried out using GSA1 (Spain) and GSA 3 (Morocco) data combined for the 2003-2014 period. Stock is in overfishing status and relative intermediate biomass (B(t) value is between the 33rd and the 66th percentiles) Y/R analysis shows that the F_{ref} = $F_{current}$ (0.89) exceeds the Y/R $F_{0.1}$ reference point (0.26). Reduction of the current fishing mortality by reducing the fishing effortwas recommended

GSA05 – Balearic Islands

Red shrimp (*Aristeus antennatus*) exploited by the Spanish trawl fishery in the geographical sub-area GSA05 (Balearic Islands) is the main target species in the middle slope and it was considered in overexploitation since $F_{current}$(1.06) was higher than $F_{0.1}$(0.18), with relatively intermediate biomass. Recruitment showed oscillations along the entire data series. Spawning stock biomass showed a minimum in 1997-1998 and a decreasing trend during last three years. It was recommended to reduce the fishing mortality.

Hake (*Merluccius merluccius*) is the target species of the bottom trawl fishery in the deep shelf of Mallorca (Balearic Islands, GSA05). It was considered in overexploitation since Fcurrent(1.06) was higher than F0.1(0.15), with relative intermediate biomass. The main XSA outputs showed important oscillations along the data series without a clear trend. It was recommended to reduce the fishing mortality.

Striped red mullet (*Mullus surmuletus*) from the Balearic Islands (GSA05) is one of the target species in the shallow shelf, although it is also caught in the deep shelf. It is also a target species of part of the artisanal fleet, being caught during the second semester of the year, mainly by trammel nets. The stock exploited by the trawl and artisanal fisheries from GSA05 is in overexploitation ($F_{current}$=0.48, $F_{0.1}$=0.17), with relatively low biomass. Population results showed a clear decreasing trend for the last yeras, although they cannot be explained by changes in F as it has oscillated around 0.5 alogn the data series, without a clear trend.As in the previous species, it was recommended to reduce fishing mortality.

GSA06 (Northern Spain)

Assessment of *Deep-water rose shrimp*

Deep-water pink shrimp (*Parapenaeus longirostris*) is one of the main crustacean species for trawl fisheries in the GFCM geographical sub-area Northern Spain (GSA-06). It is an important component of landings in some ports and occasionally a target species of the trawl fleet composed of approximately 260 vessels. Landings remained relatively stable during the period 2005-2012, fluctuating between 102 and 141 t, and increased in 2014 (147 t).

Biomass (B) and Spawning stock (SSB) have stabilized with slight fluctuations over the last 10 years (2005-2014) around 300 and 60 tonnes respectively. Fishing mortality (F0-3) also shows a decreasing trend from 2001 to 2004 (2.2 and 0.7 respectively) and stabilizes during the 2005-2014 period with slight variations that ranges between 1 and 1.5. Recruitment (R) shows strong fluctuations over the time series, being observed a slight increase in the last four years. Current indicators represent respectively 44% (Y), 61% (SSB) and 58% (R) of the values observed in 2001. Y/R analysis shows that the Fref = Fcurrent (1.4) exceeds the Y/R F0.1 reference point (0.5). It was recommended a progressive reduction of the fishing effort.

Assessment of *Merluccius merluccius*

European hake is a target demersal species of the Mediterranean fishing fleets. It is largely exploited in GSA06, mainly by trawlers on the shelf and slope (91% landings), but also by small-scale fisheries using long lines (6%) and gillnets and trammel nets (3%) (average percents estimated between 2009 and 2013). The trawler fleet is the largest in number of boats and landings (472 trawlers and 2966 tons in 2013).

XSA results show that total biomass (B) fluctuates around 8000 t. Spawning biomass (SSB) and yield (Y) show a decreasing trend from 2006 to 2010. After this decrease, Yeld (Y) has stabilized with slight fluctuations over the last 4 years (2010-2013). Recruitment (R) showed a drastic decline from the maximum observed in 2008 but seems to have stabilized during the last three years (around 120000 thousands).

Fishing mortality (F_{bar0-3}) shows a increasing trend from 2008 to 2012 and decrease slightly in the last year (1.4). Y/R analysis shows that the $F_{ref} = F_{current}$ (1.4) exceeds the Y/R $F_{0.1}$ reference point (0.18).

The status stock in the GSA 06 is in In overexplotation with relative intermediate biomass. A reduction of the current fishing mortality is recommended by Progressive reduction of the fishing effort.

Assessment of *Mullus barbatus*

Bottom trawl fishery and MEDITS data for the period 1995-2013 have been used to assess the Mullus barbatus stock in the GSA06. Catch in the number of individuals is based on ages 1 and 2 after the enforcement of the 40mm square mesh in 2010, reflecting an improvement in the fishing pattern with respect to the period before the new mesh regulation, in which catches were based on ages 0 and 1. The assessment has been carried out applying tuned VPA (Extended Survivor Analysis, XSA) and Y/R analysis. Results from VPA indicate that average fishing mortality for ages 1-2 shows a general decreasing trend over the studied period reflecting the steady reduction observed in fishing effort. Recruitment in the last three years is at a lower level with respect to the previous years, even though the fact that spawning stock biomass has increased in the last years. This suggests a Ricker S/R relationship. The stock is in overexplotation (F0.1 < Fcurrent) with a relative high biomass. It is advised to reduce current fishing mortality by a reduction of the fishing effort.

Assessment of *Aristeus antennatus*

Bottom trawl fishery and MEDITS data for the period 1996-2013 have been used to assess the Mullus barbatus stock in the GSA06. Results of Extended Survivor Analysis (XSA) indicate a general decreasing trend in the average fishing mortality for ages 1-2 over the studied period. Recruitment shows a slight increasing trend, being in the last two years under the average for the whole period.

Total biomass and SSB show a slight increasing trend. Results of Y/R analysis show an increase in Y/R and SSB/R due to the improvement of exploitation pattern.

Red shrimp (Aristeus antennatus) exploited by the Spanish trawl fishery in the geographical sub-area G.S.A. 06 is considered in over-explotation status. Fcurrent (0.94) is higher than F0.1 (0.47). It was recommended to reduce the fishing mortality.

GSA07 – Gulf of Lions

Hake, *M. merluccius*, is one of the most important demersal target species of the commercial fisheries in the Gulf of Lions (GSA07). In this area, hake is exploited by French trawlers, French gillnetters, Spanish trawlers and Spanish long-liners. The stock was considered in overexploitation (Fcurrent=1.75, F0.1=0.15), with relative intermediate biomass. It shows periodically higher recruitments (1998, 2001-2002 and 2007). The current fishing mortality is by fleet is for French trawlers 1.399, for French gillnetters 0.170, for Spanish trawlers 0.160 and for Spanish longliners 0.025. Since 2007, the recruitment follows a decreasing trend and is currently at a low level. The recruitment estimated for 2014 is below the series average. The spawning stock biomass displays a decreasing trend over the analysed period, with a slight increase in 2014. The exploitation level is currently above the level estimated to be sustainable. The exploitation is mainly concentrated on young individuals. It was recommended to reduce fishing mortality by: i) respect the minimum legal landing size and legal mesh size; ii) spatio-temporal closures for the protection of nurseries and spawning zones and iii) respect the freezing of the effort in the Fishery Restricted Area.

Red mullet (*M. barbatus*) in the Gulf of Lions (GSA07) is exploited by both the French and Spanish trawl fleets. The stock is in overfishing status (Fcurrent=0.34, F0.1=0.14) with a relative high biomass and punctually higher recruitments (2005, 2006, and 2013). The current fishing mortality is by fleet is for French trawlers 0.29, for French gillnetters 0.01 and for Spanish trawlers 0.04. The current fishing mortality is the lowest of the series and the spawning stock biomass currently follows an upward trend, with stabilization in 2014. The exploitation is mainly concentrated on young individuals (age 0-2). Moreover 60% of the recruitment is mature. It is important to notice an important decrease in numbers of French trawler fleets since 1998, reducing the number of boats by 50 %, following management measures taken in 2011 and over in 2013 (reduction by 30% of the number of trawlers in 3 years). It was recommended to reduce fishing mortality by: i) respect the minimum legal landing size and legal mesh size; ii) spatio-temporal closures for the protection of nurseries and spawning zones and iii) respect the freezing of the effort in the Fishery Restricted Area.

SMALL PELAGIC FISHERIES

GSA01 – Northern Alboran Sea

Anchovy (*Engraulis encrasicolus*) is the target species of the purse seine fleet working in N. Alborán. BioDyn (Surplus production Model) was applied to assess the state of the resource. The assessment was not accepted as there is uncertainty in the assessment and methodological problems; the model only relies on CPUE, which is very similar to the landings. CMSY test were done during the WG but they are considered preliminary. Catches highly variable mainly based on recruitment. Very small population, found in only 1 or 2 trawls in the acoustic survey these 2 last years. The stock is considered uncertain. Not to increase fishing mortality.

Sardine (*Sardina pilchardus*) is the other small pelagic being targeted by the purse seine fishery working in N. Alboran. BioDyn (Surplus production Model) was applied to assess the status of the resource. The assessment was not accepted as there is uncertainty in the assessment and methodological problems; the model only relies on CPUE, which is very similar to the landings. CMSY test were done during the WG but they are considered preliminary. Catches slightly decreased, but size and growth increased slightly as large fish are present, the WG recommends exploring the consistencies in the cohorts and try to run statistical catch at age for next year.The WG suggests to test also the performances of alternative production or age structured model. The stock is considered uncertain. Not to increase fishing mortality.

GSA06 – Northern Spain

Anchovy (*Engraulis encrasicolus*) is the target species of the purse seine fleet working in GSA06 (Northern Spain). BioDyn (Surplus production Model) was applied to assess the status of the resource. The assessment was not accepted as there is uncertainty in the assessment and methodological problems. CMSY test were done during the WG but they are considered preliminary. Catches are increasing, acoustic biomass estimates as well. The WG notes its difficulty with this anchovy stock (as in GSA 7 & 16), as the age composition does not allow performing catch at age models, and the recruitment is not captured by the survey which occurs at the time of spawning preventing the use of 2-stage biomass models. The stock is considered uncertain but no sign of overexploitation. It is recommended not to increase fishing mortality.

Sardine (*Sardina pilchardus*) is the other small pelagic being targeted by the purse seine fishery working in GSA06 (Northern Spain). The BioDyn (Surplus production Model) was applied to assess the status of the resource. The assessment was not accepted as there is uncertainty in the assessment and methodological problems. CMSY test were done during the WG but they are considered preliminary. Lowest catches in the historical series from 1945. Low acoustic biomass estimate since 2008, lowest ever in 2014. Body condition, growth, and size have also been decreasing. An attempt to run catch at age model should be made next year. The stock is considered depleted. Reduce fishing mortality and implement a recovery plan.

TUNA FISHERIES ASSESSMENTS

1 164 tons (RW) of Bluefin tuna (*Thunnus thynnus*) were caught in the Mediterranean Sea during 2014 by the Spanish fleet, most of which (96.4 %) were caught by Purse seine. The rest (3.6 %) correspond to long-liners (34 t), hand line (2.5 t) and sport fisheries (5.5 t). The main fishing grounds were Balearic Islands and Alboran Sea.

Albacore (*Thunnus alalunga*) was caught in the Mediterranean during 2014 using mainly surface long-lines (95.6%), but also with other surface gears (2.7 %) and traps (1.7 t). In 2014, 282 tons (RW) were landed in the Spanish Mediterranean (similar to the level recorded in 2013).

Swordfish (*Xiphias gladius*) landings in 2014 were 2 073 t. (RW) in the Spanish Mediterranean. The main catches (97.4 %) correspond to long-line fisheries (2 019 t). Other minor catches were obtained by traps and other surface fisheries.

Small tuna in Spain were caught mainly in the Mediterranean Sea. These species are caught using surface gears and traps, but *Euthynnus alleteratus* is also caught as by-catch in longline fisheries. The total catch in 2014 was 1634 t (RW), substantially lower than in 2013. The specific composition of these catches was: 585 t (35.8 %) of Atlantic Bonito (*Sarda sarda*), 749 t (45.8 %) of bullet tuna (*Auxis rochei*), and 300 t (18.3 %) of Atlantic little tunny (*Euthynnus alletteratus*).

Status of the statistics and information system

The Spanish fisheries statistics and information system is based on the data from three different sources: sales notes, logbooks and landing declarations (under RD 1822/2009 and in compliance with Regulation CE 1224/09 and Regulation UE 1380/2013). Data are collected in port and in all places in which a first sale of the fishery products is carried out. Data of landings by species, commercial categories, prices, fishery vessel identification, fishing grounds, landing ports and dates are recorded on a daily basis. Data from logbooks and landing declarations are collected by General Secretariat for Fisheries of the Spanish Ministry. Data from sale notes are primarily collected and processed by the fisheries offices of the autonomous governments, and recorded in the centralized database of General Secretariat for Fisheries, in charge of collecting all the information related to fisheries and transmitting to the Commission, Fisheries Organizations and any other National or International Institutions.

IEO collects length and biological data of main commercial species under the guidelines of the National Program supported by the EU for the collection and management of fisheries data in accordance with Community programmes (Reg. (EC) 199/2008). Data information is managed in the framework of the SIRENO database developed by the IEO. SIRENO moreover stores fish market

information, observers on board information and research surveys data. Moreover, the General Subdirectorate for Statistics collects and processes the economic information on fisheries.

To appropriately manage this information, the General Secretariat for the Fisheries is developing a global tool to compile the different sources of information in a common database. The main purpose is to store and to export the data in the suitable format required by International bodies.

Status of research in progress

During the interssesional period, the IEO continued to monitor the fisheries of the main commercial species at the principal landing sites. The target demersal species sampled are Hake, Red mullet, Stripped red mullet, Anglerfish (*Lophius piscatorius*), Blue whiting (*Micromesistius poutassou*), red shrimp (*Aristeus antennatus*), Norway lobster (*Nephrops norvegicus*) *Parapenaeus longirostris* and *Octopus vulgaris*, while the target of small pelagic species are Anchovy, Sardine, Atlantic horse mackerel (*Trachurus trachurus*) and Chub macherel (*Scomber japonicus*), and the target of large pelagic species are Albacore, Bluefin tuna and Swordfish.

Demersal and small pelagic species.

The project REMALA of the Oceanographic Center of Málaga elaborated the data collected from the small scale fisheries activity and the monthly surveys undertaken during 2014. The results of the project were presented in the Symposium held in Málaga (September 2015) on the Ibero-Atlantic Margins. The aim of the project is to analyze the adequacy of the Bay of Málaga (GSA01) for the creation of a fishing protected area, due to its importance as areas of reproduction, spawning, nursery and growth of several commercial species. The study undertaken aims at establishing the management measures for the sustainability of fishery resources.

Concurrent sampling of the lengths is made of the main fisheries of each GSA: otter bottom trawl, purse seine, trammel net and set long line. Bottom trawlers are sampled in all GSAs, purse seines are sampled in the GSA 1, 6 and 7, trammel nets are sampled in the GSA 1, 6 and 5, set long lines are sampled in the GSA 6 and 7 and traps are sampled in the GSA 1. On the other hand, biological studies of reproduction and growth are carried out of the demersal and small pelagic objective species.

The principal objective of length and biological sampling of demersal and small pelagic species is to obtain the data and parameters necessary to assess the main stocks in our coasts.

The annual international bottom trawl survey MEDITS was carried out with the aim of estimating relative abundance index of the main demersal species in the continental shelf and slope of the Spanish Mediterranean, including Balearic Islands. The yearly survey MEDIAS, which undertakes the international acoustic survey in the Mediterranean, was carried out in summer since 2009. Both surveys are activities carried out on a yearly basis under the framework of the National Program supported by the EU.

Bluefin tuna, swordfish, albacore and small tuna (atlantic bonito, bullet tuna, little tunny, and skipjack tuna) are the main species in the Mediterranean tuna research program of the IEO. Biological sampling of tuna species is carried out in order to support research on stock structure by means of genetic analyses (tissue) and microconstituents analyses (otoliths), as well as reproduction (gonads) and growth (spines, vertebrae and otoliths).

During 2014, bluefin tuna was sampled from Spanish BFT fisheries in the Western Mediterranean (mainly long-line fisheries).

There were tagging programs in course during 2014 by using conventional and electronic tags under the project and financing of ICCAT GBYP Programme. Conventional tagging activities were developed in collaboration with both commercial and recreational fisheries.

The status of the Eastern and Mediterranean stock of bluefin tuna was assessed in 2014 (ICCAT), showing a rebuilding trend in course and better perspectives than in the previous assessment.

Research activities on albacore (*Thunnus alalunga*, ALB) on board recreational and long-line fishery vessels targeting ALB are ongoing. Research on maturity and growth, started in 2013, is still ongoing

and results from this study are reported to ICCAT and other fora. In July, 2011 took place the ICCAT assessment session of Mediterranean albacore. Results show a population relatively stable pattern for the recent past. The next assessment is scheduled to take place in 2016.

Research activities regarding small tunas, mainly atlantic bonito (*Sarda sarda*), little tunny (*Euthynnus alletteratus*), and bullet tuna (*Auxis rochei*) are ongoing. Work continues on improving our knowledge on maturity schedules and fecundity rates, age and growth. Within the activities related to studies in captivity, the reproduction and breeding activities of atlantic bonito, together with bluefin tuna still continue.

Swordfish is being routinely sampled in the Mediterranean. Biological samples were collected along 2014 in the Spanish swordfish fisheries (mainly long-line). Swordfish were tagged using Conventional tags along 2014. These activities were developed in collaboration with commercial fisheries. In 2014 an assessment of the Mediterranean stock of swordfish took place in ICCAT. As a summary, the Mediterranean population of swordfish showed a stable situation. Nevertheless, the recruitment is mainly based in a few age classes. This situation carries a degree of risk for the stability of the fisheries. An update of the Mediterranean swordfish stock assessment is scheduled for 2016.

Status of the social sciences studies in progress or achieved during the intersessional period

Information on social statistics of the Spanish fishery sector can be found in the following link of the Ministry´s web page. It is based on requirements from National Plan for Statistics and EUROSTAT (official statistical organism of the European Union). Sectors are economically classified into primary sector (marine fishery and aquaculture), secondary sector (processed fish industries) and tertiary sector (exterior trade). Statistics since year 2008 are available.

http://www.magrama.es/es/estadistica/temas/estadisticas-pesqueras/default.aspx

Marine environmental studies in progress

During this intersessional period, the IEO continues carrying out the series of quarterly surveys monitoring oceanographic conditions off Málaga (GSA1), Murcia (GSA6) and Mallorca (GSA5) under the framework of the activities developed to study climatic changes in the Mediterranean.

Research activities related to the effects of Marine Protected Areas (MPAs) on exploited communities, species and artisanal fisheries have continued, quantifying benefits of spillover to adjacent fisheries and increased reproductive potential at regional level as a result the MPA protection. The research on red lobster as an indicator of the “marine reserve effect” has been continued by the Instituto Español de Oceanografía (IEO), while the research on global change has continued yearly from 2013, on behalf of the SSF in order to keep the historic series going on from more than 12 years, which witness the important function of this MPA as sentinel of climate change in the Mediterranean sea.

Studies of the artisanal fisheries in the Menorca Channel have been conducted around the MPA of Levant / Cala Ratjada and in the wider channel as controls of the effects of protection in the Columbretes MPA. The species selectivity of artisanal fisheries, with attention to diversity of species and in particular benthic structural has been studied comparing the performance of different type of nets in the framework of the project LANBAL.

Research on the biology, ecology and fisheries of the lobster *Palinurus elephas* has been continued with advances in juvenile growth, patters of recruitment from natural and artificial (collectors) habitats and in relation to depth, video surveys with submarine and ROV to characterize juvenile habitats, estimation of external tag loss rates and v-notch tagging effects on lobster.

The Pinna project aims to quantify the population of an endangered species (*Pinna nobilis*) at MPAs and control areas. Several surveys have been conducted indicating high densities associated to protected areas. Data on genetics, gonad cycle, size structure, age determination, recruitment, invasive species effects, trophism, anchoring impacts of Pinna nobilis have been obtained.

The COCONET projects focus on network of MPAs coupled with sea-based energy potential. Several subtasks are under progress, especially on anthropic impacts, MPAs, impacts of OWF on marine

biota. Other international projects such as MMMPA (Monitoring Mediterranean MPAs and Medblue from IUCN) have been getting information from the 7 mediterranean spanish marine reserves.

Other remarked projects developed in cooperation with many research institutions in the framework of the UE or founded by National Agencies are: **SARAS** Project (Eurofleets/UE) focusing the very recent processes in the sea floor along Alboran Basin and margins, as well as **MONTERA** Project (CICYT) searching geohabitats on seamounts and related benthic communities, and the **CONTOURIBER** Project (CICYT) looking at the sedimentary dynamic of the drift deposits driven by contour currents around continental margins. Regional actions in cooperation with Malaga University have been also developed in the frame of **MOSAICO** and **TESELA** Projects along the south east Iberian coastal zone searching the effects of the river discharges on the sea floor deposits and modelling. Particular attention is paid to geological hazards and risks is done in order to prevent catastrophic disasters along the sea side. Oceanographic multidisciplinary surveys with SGP vessels have continued.

Project **INDEMARES** (www.indemares.es) was finished in 2015. It was launched in 2009 aiming to promote research, conservation and assessment of the sea and its habitats in order to comply with commitments regarding the Marine European Natura 2000 network and reinforce the application of international conventions on the sea (as OSPAR and Barcelona). The project is being convened by the Biodiversity Foundation (Ministry for Agriculture, Food and Environment) and nine institutions, Gubernamental Deparments and NGOs are involved in the project -among which IEO, CSIC, General Secretariat for Fisheries, WWF/Adena and Oceana- in the study of 10 marine areas, 5 of them within the Mediterranean (Creus Canyon, Menorca Channel, Columbretes, Seco de los Olivos Bank and Volcanic Cones around Alborán Island).

Furthermore, in each of the 7 Spanish Mediterranean Marine Reserves, managed by the General Secretariat for Fisheries, studies realised within the Spanish Marine Reserves Network teams, some in collaboration with the IEO and others with Universities, have been reduced due to the financial constraints. Nevertheless some works continue in order to tackle fisheries enhancement and biodiversity focusing emblematic groups such as marine phanerogams, cetaceans by opportunistic sightings as well as on invertebrates such as Pinna nobilis, Dendropoma petraeum, Cladocora caespitosa or gorgonians. Marine Reserves have turn out to be emblematic sites to investigate biodiversity and global change effects as within them, managers can witness effects of superficial marine waters heating on gorgonians or brain coral as well as the evolution of invasive species as the alga *Caulerpa cylindracea*, among others.

Management measures

Spanish fisheries legislation sets out different management measures, without prejudice of EU or international regulations, applied to purse seine, bottom trawl, long line fisheries as well as minor gears. The expected effect is to contribute to the conservation and regeneration of fishery resources, as well as protecting nursery areas, protected habitats, and reducing fishing mortality. The main regulations currently in force or recently approved are:

- Fishery Law 3/2001, applicable to all the fishing activities practised by Spanish vessels, as well as Community or international fishing vessels in Spanish waters. It includes measures on conservation of fisheries resources, protection and regeneration of fisheries resources, management measures of fishing activity, regulation of recreational fisheries and inspection and control measures.

- Regarding the process of updating the national law to EU legislation (mainly Council Reg. 1967/2006), some rules have been recently approved, regardless of the basic national regulation for each fishing gear established by Royal Decree.

In this regard, Order AAA/2808/2012 establishes a Management Plan for Fisheries Resources Conservation within the Mediterranean for purse seiners, trawl and artisanal fleet, for the period 2013-2017. It continues the first plan dated 2006, that has been adapted every two years since then. The current multiannual management plan 2013-2017 has been made up according to art. 19 of Council Regulation 1967/2006, and further approved by EU Commission. It establishes for the first time biological reference points for specific target species, according to scientific reports from IEO.

Management measures focuses on reducing fishing effort through technical measures and fleet capacity adjustment to the state of the resources. Once the objective of reducing the fishing effort by a 10% stated in the previous MP was reached, the current one establishes an additional reduction of a 20% of global fishing effort for the year 2017. It also makes reference to the main regulations in force as for management and technical measures for purse seine (art. 4), bottom trawling (art. 5) and minor gears (art. 6).

A comprehensive set of national regulations in the Mediterranean can be consulted in the following link:

http://www.magrama.gob.es/es/pesca/legislacion/Caladeronacional.aspx

As for tuna fisheries, the main national regulations are the following:

- Ministerial Order AAA/642/2013, which regulates Bluefin tuna fisheries in Eastern Atlantic and Mediterranean Sea, modified by Ministerial Order AAA/339/2014. Both EU and national rules emerge from ICCAT regulations, which for BFT it is stated by Recommendation 13/07, that establishes a Multi-annual Recovery Plan for Bluefin tuna within the East Atlantic and Mediterranean, amended by Recommendation 14/03. TACs, seasonal closures, fishing gears and authorised vessels are established, among other measures.

- Ministerial Order AAA/658/2014, regulating surface longline fisheries for hihgly migratory species and creating a unified census for surface longliners

- Royal Decree 71/1998, that regulates tuna fisheries and related species in the Mediterranean

Regarding Red Coral, national regulation has been modified and adapted to the last GFCM Recommendations through Royal Decree 629/2013.

As for European eel, there is a National Management Plan in force according to EU Regulation 1100/2007 (comprising 12 specific management plans of the Autonomous Regions out of wich 6 are located in Mediterranean Basin). More info:

http://www.magrama.gob.es/es/pesca/temas/planes-de-gestion-y-recuperacion-de-especies/planes-gestion-anguila-europea/default.aspx

Regarding recreational fisheries, Royal Decree 347/2011 is the current legal framework for recreational fisheries within exterior waters. It establishes a National Register of authorised vessels, a list of authorised species, fishing modalities, limits of catches, general conditions for recreational fisheries and competitions, prohibited practices, specific authorizations for some species, catches declarations, etc. Marketing of catches is strictly prohibited.

With regard to Marine Reserves, the General Secretariat for Fisheries keeps on managing the seven Spanish Mediterranean Marine Reserves currently existing, with enforcement through guards on the spot, follow up, awareness programs, etc.

Research suggestions for consideration by SAC

For the assessment of marine resources much greater attention is needed in taking into ecological considerations for the implementation of ecosystem based approach in fisheries. Studies focusing on the impact of environmental changes (climatic variability, increase of gelatinous plankton, etc.) and on the variability of marine resources, as well as, on their effect on fishing catchability and fleet efficiency are recommended.

Works towards a better definition of shared stocks or delimitation of shared stock areas should be continued and promoted, at subregional level.

TUNISIA / TUNISIE

Héchmi MISSAOUI, Othman JARBOUI, Mohamed Nejmeddine BRADAI & Scander BEN SALEM

1.- DESCRIPTION DE L'ACTIVITE DE PECHE

Les côtes tunisiennes s'étendent sur environ 1 300 km abritant 8 ports hauturiers, une quarantaine de ports côtiers et de nombreux sites de débarquement éparpillés tout au long des côtes. Selon les dernières statistiques de la Direction Générale de la Pêche et de l'Aquaculture (DGPA), la production annuelle en 2014 a atteint environ 126 512 tonnes dont plus de 52 480 tonnes constitués d'espèces de petits pélagiques (sardine, sardinelle, saurel, maquereaux, anchois, …). Les différents types de pêche pratiqués sont essentiellement la pêche côtière, la pêche au chalut benthique, la pêche au feu et à la petite senne, la pêche au thon, la pêche au coquillage et la pêche aux éponges et au corail. Selon l'activité de pêche pratiquée, les fonds fréquentés pourraient s'étendre du rivage (pêche à pied des coquillages) jusqu'à plus de 600 m de profondeur (pêche au chalut). Par ailleurs, il est à noter que les eaux tunisiennes sont subdivisées en trois zones principales : la zone Nord (GSA 12) ; la zone Est (GSA 13) et la zone Sud (GSA 14). La flottille de pêche est constituée d'environ de 14 000 unités de pêche dont 7964 barques côtières non motorisées, 5226 barques côtières motorisées, 418 chalutiers, 395 sardiniers et 51 thoniers (Annuaire Statistique de la DGPA, 2014). Selon leur activité et leur zone de pêche, la longueur totale des unités de cette flottille peut varier d'environ 3 m (barque non motorisées) à environ une trentaine de mètres (chalutiers puissants et thoniers). De même pour la puissance des moteurs qui peut osciller entre 0 et 150 Cv (Chevaux vapeur) pour les barques côtières et de 250 à 700 Cv pour les unités les plus puissantes

2.- STATUT DU SYSTEME D'INFORMATION ET STATISTIQUE

Tout d'abord, il est important de noter que la collecte, l'archivage et l'élaboration des bases de données des statistiques de la pêche (production, effort, flottille) sont assurés par les services du Ministère de l'Agriculture, plus particulièrement la Direction Générale de la Pêche et de l'Aquaculture (DGPA). Le Ministère dispose actuellement d'une base de données informatisée et l'information selon l'espèce, l'engin, les unités de pêche, …remonte à l'année 1995. Ce système serait amélioré au courant des années à venir pour renforcer la qualité des données collectées. En effet, actuellement, au niveau de collecte de données, la méthode appliquée repose sur les journaux de pêche, particulièrement pour les chalutiers, les thoniers et les senneurs. Pour la pêche côtière, la collecte se base sur un recensement et une présence physique lors des débarquements, un travail délicat qui demande beaucoup d'effort et de moyens.

3. ACTIVITÉS DE RECHERCHE EN COURS

Dans le domaine de l'évaluation des stocks, les différentes activités de recherche sont effectuées par l'Institut National des Sciences et Technologies de la Mer (INSTM), plus particulièrement le Laboratoires des Sciences Halieutiques (LSH), en collaboration très étroite avec l'université tunisienne, les services du Ministère de l'agriculture des ressources hydrauliques et de la pêche et la profession (Union tunisienne de l'agriculture et de la pêche [UTAP]). En effet, depuis l'année 1996, la Tunisie a lancé, d'une façon continue, un grand programme d'évaluation des ressources halieutiques vivantes tunisiennes. Ce programme a été structuré selon des étapes consécutives.

Au courant de l'année 2014, le laboratoire a lancé trois autres actions de recherche en continuité avec celles précédentes. Ces actions sont les suivantes:

Projet de recherche **1 :** Ressources halieutiques benthiques des eaux tunisiennes : Evaluation des stocks et aménagement des pêcheries.

Projet de recherche 2 **:** Ressources pélagiques exploitables : Evaluation des stocks et aménagement des pêcheries

Projet de recherche 3 : Mise au point des engins de pêche sélectifs pour une exploitation rationnelle et durable des pêcheries tunisiennes.

Concernant les différents thèmes abordés par ces actions de recherche, les opérations de collecte de l'information ont débuté cette année.

Cependant, il est important de noter que dans le cadre des activités de la CGPM, les équipes de recherche tunisiennes et celles italiennes, dans le cadre du projet FAO/MedSudMed ont présentés 2 travaux d'évaluation. En effet, ces évaluations qui ont concerné les stocks de la chevrette et du merlu, ont été présentées, discutées et approuvées lors de la réunion du groupe de travail des Démersaux (Rome (Italie), 23 au 27 novembre 2015).

4. ÉTUDES EN SCIENCES SOCIOÉCONOMIQUES

Durant la période intersession, les activités en rapport avec les études économiques et sociales réalisées par l'INSTM ont concerné :

4.1. Formation sur les techniques de collecte des données socioéconomiques de l'activité de pêche:

Dans le but de répondre à l'objectif de mise en œuvre d'un plan d'aménagement pluriannuel de la crevette rose de profondeur (*Parapenaeus longirostris*) et du merlu (*Merluccius merluccius*) dans le canal de Sicile, l'INSTM avec l'appui du projet régional FAO/MEDSUDMED ont incorporé dans leurs programme de coopération une action spécifique à la collecte et l'analyse des données socioéconomiques des flottilles de pêche ciblant les deux stocks sus mentionnés.

Ainsi, cette action a comporté, en premier lieu, le déroulement d'une session de formation pour les enquêteurs sélectionnés sur les techniques de collecte des informations socioéconomiques de l'activité de pêche qui a eu lieu à Tunis du 11 au 13 janvier 2016. Cette formation a été réalisée par Mr Mathieu Bernardon (expert contracté par le projet) assisté par Mr Luca Ceriola et Mme Nicoletta Milone (fonctionnaires du projet) pour 03 chercheurs et 04 techniciens de l'INSTM ainsi que pour 03 ingénieurs de la DGPA. Le programme de cette formation est le suivant:

Lundi 11 Janvier 2016– Formation théorique

Introduction sur les enquêtes et des objectifs du système de collecte de données;

Approche méthodologique : quelles données collectées et pour quel usage

Revue du questionnaire, explications et adaptation au contexte;

Préparation logistique pour les enquêtes de terrain.

Mardi 12 Janvier 2016 Formation pratique au port de pêche de La Goulette

Enquêtes et interviews par les enquêteurs au port de la goulette;

Debriefing.

Mercredi 13 Janvier 2016 Formation pratique

Débriefing sur les enquêtes de la veille (e.g. Les méthodes d'enquête, la perception des personnes interviewées);

Introduction à l'analyse des données d'enquête;

Prochaines étapes et calendrier d'enquête.

4.2. Participation dans le projet de cogestion des pêcheries côtières du golfe de Gabès (projet COGEPECT mis en œuvre dans le cadre de la coopération JICA/DGPA) :

L'INSTM est le chef de file des aspects scientifiques du projet COGEPECT. Les principales actions entreprises par l'INSTM sont :

Contribution à la réalisation d'une évaluation de l'impact socioéconomique de la mise en œuvre des actions de cogestion des pêcheries côtières dans 04 sites pilotes du golfe de Gabès (septembre - décembre 2015).

Contribution au suivi et à l'évaluation mi-parcours des actions du projet (février 2015).

5. ÉTUDE DANS LE DOMAINE DE L'ENVIRONNEMENT MARIN

Dans le cadre des programmes de recherche exécutés au sein du laboratoire biodiversité et biotechnologie marines de l'INSTM, nous avons étudié le statut de plusieurs groupes d'espèces de vertébrés marins pour la plupart menacés ou menaçant. Les principaux résultats obtenus en 2015 sont ci-dessous résumés :

Tortues marines

Le monitoring des sites de ponte de la caouanne sur les îles Kuriat en collaboration avec Le CAR/ASP, l'APAL et la FSS, avait pour mission principale :

L'amélioration des connaissances sur la biologie de la reproduction et sur l'écologie de la caouanne *Caretta caretta* ;

La protection des plages de nidification par gardiennage des nids durant toute la saison estivale de l'action des pêcheurs et des visiteurs des îles et en assurant le maximum de succès aux opérations de montées des femelles nidifiantes et à l'émergence des nouveau-nés ;

Marquage des femelles nidifiantes ;

La formation de stagiaires, tunisiens et étrangers.

Sensibilisation des groupes tunisiens et touristes qui visitent les lieux.

Il est à signaler la participation active l'année 2015 de la société civile (deux associations environnementales) dans cette action et surtout en matière de sensibilisation et formation.

Par ailleurs, un nouveau site de ponte prometteur à la Chebba (Est de la Tunisie) a été également suivi. Les principaux paramètres de reproduction de *Caretta caretta* sont consignés dans les tableaux 1 et 2.

Tableau 1 : Données sur la nidification de *Caretta caretta* sur la grande Kuriat en2015

14 Nids (2015)	Taille de ponte	œufs éclos	infertiles	Œufs non éclos		morts dans l'œuf	morts dans le nid	Taux de fertilité	Taux d'éclosion	Taux d'émergence
				Early	Late					
Moyenne	**91,08**	**70,54**	**10,38**	**8,08**	**1,85**	**0,23**	**1,31**	**87,99**	**75,81**	**74,34**
Ecartype	**23,12**	**28,43**	**7,73**	**6,98**	**1,99**	**0,44**	**2,18**	**9,09**	**15,67**	**16,90**

Tableau 2 : Données sur la nidification de *Caretta caretta* sur la petite Kuriat en 2015

04 Nids (2015)	Taille de ponte	œufs éclos	infertiles	Œufs non éclos		morts dans l'œuf	morts dans le nid	Taux de fertilité	Taux d'éclosion	Taux d'émergence
				early	late					
Moyenne	**103,50**	**75,25**	**11,75**	**11,00**	**4,25**	**1,25**	**1,50**	**89,71**	**75,58**	**74,07**
Ecartype	**21,61**	**9,43**	**10,69**	**14,07**	**3,20**	**1,26**	**1,91**	**7,31**	**19,29**	**19,01**

En 2014 et principalement en 2015, il y eu exécution du projet « Renforcement du réseau d'échouage des Cétacés en Tunisie », financé par ACCOBAMS. Tous les autres objectifs du projet ont été accomplis :

- officialisation du réseau d'échouage des tortues et des cétacés
- organisation des journées de formation et de sensibilisation
- mise en place d'un site web ;

- échange de données avec la base de données MEDACES ;
- mise en place d'une banque de tissus.

Au cours de 2014 et 2015, 19 tortues marines *Caretta caretta* ont été soignées et réhabilitées dans le centre de soins des tortues marines.

Les élasmobranches

Une révision systématique a concerné le genre *Dasyatis*. Les investigations ont confirmé la présence d'une espèce congénère à *Dasyatis pastinaca*. Les études génétiques basées sur les séquences d'ADN mitochondriale cytb, montrent une différence significative entre deux espèces. En effet, les haplotypes de chaque espèce sont regroupés dans un clade bien distinct.

Une nouvelle description de *Dasyatis pastinaca* et d'une nouvelle espèce est soumise pour publication.

Achèvement de l'étude biologique *Dasyatis pastinaca*.

Dans le cadre de la collaboration avec les projets régionaux de la FAO ; MedSudMed et CopeMed II et suite à deux réunions de travail sur les élasmobranches en Italie, un inventaire des données biologiques par espèce d'élasmobranches (reproduction, croissance et les paramètres d'alimentation) et une analyse des campagnes de pêche dans les GSAs 14, 15, 16 et 21 pour les années 2003 et 2013 ont été effectués.

Une cartographie préliminaire de la répartition des 45 espèces recensées dans cette étude a été également réalisée considérant l'indice de densité (ind / km2) et l'indice de la biomasse (Kg / Km2).

Poissons osseux / espèces exotiques

Dans le volet « Contribution à la caractérisation de la faune ichtyologique tunisienne (étude d'espèces rares, exotiques et menacées...) un suivi des captures des Tetraodontidae sur les côtes tunisiennes a été effectué. Ce travail a montré que ces espèces sont fréquentes le long de nos côtes. Cependant, *Lagocephalus lagocephalus* et *Lagocephalus sceleratus* sont plus commun dans le golfe de Gabès.

Dans ce même volet une nouvelle espèce de la famille des Carapidae a été signalé pour la première fois dans le golfe de Gabès «*Carapus acus*». Des travaux sur l'écologie spécifique de ce poisson est en cours.

Il est à signaler par ailleurs, l'invasion de la région du golfe de Gabès par une nouvelle espèce de crabe exotique *Portunus segnis*. Cette espèce a causé beaucoup de problèmes pour les pêcheurs. Plusieurs études (biologie, génétique, pêche et distribution) ont été lancées l'année 2015.

Les cétacés

Recensement des échouages vivant et mort des cétacés.

Méduses

Depuis quelques années la prolifération de méduses est de plus en plus fréquente dans les eaux tunisiennes, une prolifération de méduses s'est traduite par un échouage massif de *Pelagia noctulica* sur les plages du Nord du pays précédé par des colmatages importants des filets de pécheurs et une pullulation inquiétante à proximité de la ferme aquacole.

La mission d'investigation programmée en urgence par l'INSTM en réponse à ce phénomène a permis de constater des anomalies thermiques se traduisant notamment par une température de l'eau de mer supérieure à la moyenne des températures des mois de janvier à mars des 4 années précédentes ; ainsi que des taux de Nitrates et de chlorophylle plus élevées que ceux précédemment enregistrés à la même saison et dans la même région du golfe de Tunis.

Ces anomalies constituent des facteurs favorables à l'apparition de cette floraison. Les blooms de méduses peuvent contribuer à modifier la structure des systèmes pélagiques en passant d'un système dominé par les poissons à un autre dominé par les méduses.

6. NOUVELLES MESURES D'AMENAGEMENT

Instauration d'une nouvelle réglementation de l'activité de pêche durant la période d'intersessions qui se résume à la fermeture totale de la région sud de la Tunisie (GSA 14, golfe de Gabès) à la pêche au chalut durant une période de trois mois (du 1er juillet 2009 au 30 septembre 2009). Cette mesure de gestion est appliquée pendant 6 années : 2009, 2010, 2011, 2012, 2013, 2014 et 2015.

7. PROPOSITION DE RECHERCHE POUR LE CSC

L'INSTM continue régulièrement ses activités de recherche et entretient une collaboration assez étroite avec le projet régional FAO/MEDSUDMED. En effet, dans le cadre des activités de ce projet, la Tunisie continue ses activités concernant les évaluations des stocks partagés, particulièrement la chevrette et le merlu dans la région du Canal de Sicile. Par ailleurs, dans une perspective de l'application de l'approche écosystémique en tant qu'outil d'aménagement des pêcheries méditerranéennes, la Tunisie est intégrée dans un projet européen sur cet aspect. Ce projet de recherche ECOSAFIMED, qui groupe des instituts de recherche espagnole, italienne et tunisienne et financé, en grande partie, par l'Union européenne s'achèvera au courant du 1er trimestre de l'année 2016.

Par ailleurs l'année 2015 sera consacrée à la finalisation des projets de recherche 2011-2014 et le lancement de nouveaux projets pour la période 2015-2018 et seront soumis pour approbation et financement aux ministères concernés.

TURKEY / TURQUIE

DESCRIPTION OF THE FISHERIES

Turkish fishery can be described as multi type fishery, from artisanal to small scale and to industrial fishery. Fishing is conducted in international waters, EEZ and Turkish territorial waters of Mediterranean Sea, Aegean Sea, Marmara Sea and Black Sea (Table 1).

Total fish production of Turkey in 2014 (latest official) including inland fishery and aquaculture was 537.345 tones (inland catch 36.134 tones, aquaculture production 235.133 tones and marine catch 266.078 tones). The total fishery production of Turkey between 2008 and 2014 is given in Table 2.

Major landing comes from small pelagic fishery mostly anchovy, sprat, sardine, horse mackerel and Atlantic bonito of industrial fishery.

The inland capture fishery has been stayed almost the same quantities in total production in 2014. The most important species in inland capture are Common carp, Pearl mullet, Sand smelt, Gibel carp, Mullet and Snail which account to about 85% of the inland capture production.

Table 1. Fisheries type by regions and main commercial species.

Fishing type	**Sea regions**	**GSAs**	**Species**
Pelagic fisheries	Eastern Black Sea	29	Anchovy, horse mackerel, bonito, sprat
	Western Black Sea	29	Anchovy, sprat, bonito, bluefish, scad, chub mackerel, sardines, dogfish
	Marmara	28	Anchovy,bonito,sprat, scad,bluefish,sardines
	Mediterranean and Aegean	22,24	Sardines, chub mackerel
Trawl fisheries	Western Black Sea	29	Whiting, red mullet, turbot
	Aegean	22	Mixed
	Mediterranean	24	Mixed
Highly Migratory Species	Mediterranean and Aegean	24 22	Tuna Swordfish
Artisanal fisheries (gillnet, trammelnet, longline, traps)	Black Sea, Marmara, Mediterranean and Aegean	29,28,24,22	Mixd (whiting, turbot, red mullet, grey mullet, shrimp, sparids, sole and dab, squids, octopus and cuttlefish, swordfish)
Sea snail fisheries (dredging)	Eastern Black Sea	29	Sea snail
Clam fisheris (dredging)	Western Black Sea	29	Baby clams
Shrimp/Prawn fisheries	Marmara, Aegean and Mediterranean	28,22,24	Shrimp
Lagoon fisheries	Mediterranean , Aegean and Marmara	24,22,28	Mixed (seabass, seabream, eel, mullets)

Table 2. Total fish production (2008-2014)

Year	Capture				Aquaculture		Total
	Marine	%	Inland	%	Amount	%	
2008	453.113	70.1	41.011	6.4	152.186	23.5	**646.310**
2009	425.275	68.2	39.187	6.3	158.729	25.5	**623.191**
2010	445.680	68.2	40.259	6,2	167.141	25,6	**653.080**
2011	477.658	67.9	37.096	5,3	188.790	26,8	**703.545**
2012	396.322	61.5	36.120	5.6	212.410	32.9	**644.852**
2013	339.047	55.8	35.074	5.8	233.394	38.4	**607.515**
2014	266.078	49.5	36.134	6.7	235.133	43.8	**537.345**

Table 3. Marine fish landings(tonnes)

Species/Year	2008	2009	2010	2011	2012	2013	2014
Anchovy	251.675	204.699	229.023	228.491	163.982	179.615	96.440
Sprat	39.303	53.385	57.023	87.141	12.091	9.764	41.647
Horse mackerel	32.177	28.268	20.447	25.010	30.945	28.423	16.323
Sardine	17.531	30.091	27.639	34.709	28.248	23.919	18.077
Whiting	12.231	11.146	13.558	9.455	7.367	9.396	9.555
Atlantic bonito	6.448	7.036	9.401	10.019	35.764	13.157	19.031
Grey mullet	3.345	2.987	3.119	2.514	4.010	2.504	1.721
Blue fish	4.048	5.999	4.744	3.122	7.389	5.225	8.386
Turbot	528	383	295	166	202	209	197

Fleet Structure

There are 18.602 fishing vessels registered in Fisheries Information System (FIS). The size range of fishing vessels is given in the Table 4. The majority of fishing fleet is comprised of small vessels less than 18 meters in length. Nearly half of the total fishing fleet is based in the Black Sea ports. The majority of large vessels operate in the Sea of Marmara and the Black Sea. Under the current fishing fleet management system, fishing license is not granted to a new vessel. Turkey has implemented a new decommissioning scheme for 2013-2015. 364 fishing vessels 12 meters and above in length were bought back in 2013; 456 fishing vessels 10 meters and above in length in 2014 and 191 fishing vessels 10 meters and above in length in 2015 were bought back.

Table 4. Size range of fishing vessels (2015)

Size(m)	**0-4.9**	**5-7.9**	**8-9.9**	**10-11.9**	**12-14.9**	**15-19.9**	**20-29.9**	**30-49.9**	**50+**	Total
Marine	767	9.637	3.027	796	457	288	463	238	7	**15.680**
Inland	304	2.307	198	33	64	16	0	0	0	**2.922**
Total	**1.071**	**11.944**	**3.225**	**829**	**521**	**304**	**463**	**238**	**7**	**18.602**

STATUS OF STOCKS FOR PRIORITY SPECIES

Largest fisheries yield in Turkey is obtained from the Black Sea and the Black Sea catch is dominated by pelagic fishes, mainly by anchovy. The fleet targeting anchovy also exploits the other important fishes like horse mackerel, Atlantic bonito, blue fish etc. Therefore fishery displays a multispecies nature not only in the Black Sea but more so in the other seas surrounding the country. In order the monitor the status of the fish stocks in the country a project entitles “Black Sea Anchovy Stock Assessment Project” has been launched in 2011.

The goals of the project are to supplement the existing data collection system with fisheries independent data; to develop a stock assessment methodology to be used first in the assessment of the anchovy stock; and to further expand the species coverage to the other stocks in the jurisdictional waters of Turkey in the near future. The assessment results which relies on extensive market sampling and acoustic surveys, indicated that current fisheries mortality on the anchovy stock is above the precautionary FMSY (E=0.4), however it is also shown that climatic conditions prevailing in the region have very strong impact on the fish, particularly on the recruitment. A series of measures enforced to reduce the current fisheries mortality rate to the safe biological limits, such as day time fishing prohibition, bathymetric limit, fishing vessel by back program, yielded positively right after the years they were implemented.

STATUS OF THE STATISTICS AND INFORMATION SYSTEM

Over the last years, markedly progress has been made in development of fisheries data collection system in Turkey. Fisheries Information System (FIS), an integrated Web-based database, has been developed. The FIS, which is being subject to routine updates, comprises a combination of resources organized to collect, process, transmit, and disseminate the fisheries relevant data. The system is composed of modules interacting to introduce and extract data to/from a centralized database. The integrated FIS includes registry of commercial fishing vessels, fishing license registry, registry of recreational fishers, issue of special fishing permits to fishers, data on landings, quota (Bluefin tuna), catch quota (striped venus clam and eel), collection of biologic data, monitoring of anchovy catches transshipped to cold storages or processing plants, issue of catch certificate under the scope of EU Regulation 1005/2008, inspection forms, sales notes and collection of fisheries and aquaculture statistics. The scope and functionality of the Fisheries Information System has been further increased with new modules and programmes, monthly survey data on aquaculture and inland water fishing, fishing data collection, inspection and control forms. A Fisheries Geographical Information System was established.

Vessels over 15 meters are under an obligation to record and keep logbook. The application of VMS has been started in 2008 with the vessels involved into Bluefin tuna fishing under the rules of ICCAT. About 200 vessels have been equipped with VMS-device. Fishing vessels over 15 meters are under an obligation to have Automated Identification System (AIS).

By the addition of one of newly constructed and equipped port office in Black Sea region, the number of fisheries port offices has reached up 43 in total.

Compliance controls have been routinely done at marine and inland waters, landing points, wholesale and retail fish markets, processing establishments and cold storages.

To increase marine research and MCS capacity, especially in the Mediterranean, a vessel named ARAMA-1 in length 32m was launched in 2014 by MoFAL.

STATUS OF RESEARCH IN PROGRESS

The Estimation of Demersal Fish Stocks In West Black Sea

Start of project activities:01.01.2011

Project completion:31.12.2015

The aim of the project: to estimate the size of demersal stocks in the region and to estimate the main population parameters regarding to the stock.

The Monitoring of the Status of Deep Sea Pink Shrimp (Parapenaeus longirostris) Stock in Marmara Sea

Start of project activities:01.01.2011

Project completion:31.12.2014

The aim of the project: to determine the main population parameters (the distribution of size-frequency, size-weight-sex etc.) and the properties of the catch landed (the amount of the stock, CPUE, by-catch and discards etc.) for deep sea pink shrimp.

STATUS OF THE SOCIAL SCIENCES STUDIES IN PROGRESS OR ACHIEVED DURING THE INTERSESSIONAL PERIOD (ECONOMY, RELEVANT LEGISLATION, SOCIOLOGY, ETC.)

The Effects of Gillnets in Black Sea Fisheries

Start of project activities:01.01.2015

Project completion:31.12.2017

The aim of the project:

-To establish the inventory of gillnets

-To conduct a socio-economic analysis

-To determine the selectivity of gillnets

-To monitor of commercial fishing

MARINE ENVIRONMENTAL STUDIES IN PROGRESS

The Investigation of Some Physical and Chemical Characteristics in Water Column of Trabzon

With this project, by examining monthly and seasonal variations of some physical and chemical parameters (temperature, salinity, sigma-t, electrical conductivity, pH, dissolved oxygen, chlorophyll-a, the light transmission, bench disc) in the water column, creation of a data base based on long-term data used for different objectives, has been targeted. Measurement of these parameters will be made using the SBA-25 models CTD system.

Determination of Terrestrial Pollution Effect to Coastal and Marine Ecosystem in Eastern Black Sea

The aim of the project is to determine the effects of land-based pollutants in coastal and marine ecosystem. Water, plankton and sediment samples will collect at stations which will determined area of Artvin-Samsun.

The project will be obtained as a result of the natural ecosystem levels of pollutants are determined by the data, investigated the effects of land-based inputs. The possible effects of pollution in the food chain and ultimately will be fishing.

Determination of Ecological Quality in the Eastern Black Sea Coast and Species Diversity of Benthic Invertebrate Organisms

Studying area in Hopa- Samsun coastal structures and habitats, considering the depth along the line of 4 different depths(≤5-15m, 15-25m, 25-35m, 35-40≥m), throughout the year, planned to be seasonal. Sediment sampling as a means of sampling area 0.1 m^2 Van Veen Grab sampling tool will be used with. Sample 1mm-500µ sieve eliminating the distinction between benthic species will be made. Sediment grain size, organic carbon, water temperature, salinity and pH are measured.

Benthic invertebrate species in the region as a result of the research catalog, the diversity of species diversity index (H ') (Shannon and Weaever, 1949), (J) (Pielou, 1975) will disclose. In addition, the European Union Water Framework Directive ecological quality under the AMBI values (AZTI Marine Biotic Index) and M-AMBI (Multivariate-Marine Biotic Index) will determinate. Possible aquaculture areas will be a pre-determined the ecological quality status of benthic.

INVOLVEMENT IN ACTIVITIES OF FAO REGIONAL PROJECTS

-

MANAGEMENT MEASURES

In company with the last current The Notification 3/1 Regulating Commercial Fishing(2012-2016), new technical measures have been taken effect. These are;

No fishing activity for turbot is permitted from 15 April to 15 June.

The minimum legal mesh size for bottom-set nets used to catch turbot is 400 mm.

The minimum landing size for turbot is 45 cm total length.

It is prohibited to catch sword fish from 1 October to 30 November and from 15 February to 15 March.

No fishing activity for common sole is permitted from 1 January to 1 February.

The minimum landing size of Sea bass has been increased from 18 cm to 25 cm and for Dentex from 20 cm to 35.

To enhance accuracy of the anchovy landing statistics, the transportation of anchovy from the landing site to the market are permitted through “transport forms” filled for each vessel and issued by the local fisheries authorities or fishing cooperatives. The regulation was first enforced in 2008 only for anchovy, and expanded to all species landed in a quantity larger than 50 kg in 2012.

As of 2012 the minimum depth limit allowed for purse seine and for pelagic trawls has been increased from 18 to 24 meters.

Turkey has started to establish satellite based Fishing Vessels Monitoring System integrated with electronic logbook, covering all vessels of 12 m and over in length.

ENVIRONMENT PROTECTION MEASURES

With regard to: Recommendation GFCM/35/2011/2 on the exploitation of red coral in the GFCM Competence Area

It is prohibited to harvest red coral in accordance with Article 16 of the Notification 3/1 Regulating Commercial Fishing.

With regard to: Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area

It is prohibited to use driftnet in fishing activities according to the Article 45(22) of the Notification 3/1 Regulating Commercial Fishing.

With regard to: Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM Competence Area

It is prohibited to to take on board, tranship and land sea turtles in accordance with Article 16 and the Provincial Directorates should take necessary measures in the breeding period of sea turtles in accordance with Article 8(a) of the Notification 3/1 Regulating Commercial Fishing.

With regard to: Recommendation GFCM/35/2011/5 on fisheries measures for the conservation of the Mediterranean monk seal (Monachus monachus) in the GFCM Competence Area

It is prohibited to take on board, tranship and land monk seals in accordance with Article 16 and it is prohibited to use light and dive with all fishing equipment in monk seal caves in accordance with Article 8(c) of the Notification 3/1 Regulating Commercial Fishing.

With regard to: Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

It is prohibited to catch cetaceans such as dolphin, whale and seal in accordance with Article 16 of the Notification 3/1 Regulating Commercial Fishing. It is prohibited to use driftnet in fishing activities according to the Article 45(22) of the Notification 3/1 Regulating Commercial Fishing.

With regard to: Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area

For all season, shark and rays catching are prohibited in all coastal lines of Turkey in accordance with Article 16 of the Notification 3/1 Regulating Commercial Fishing.

PROPOSALS FOR FUTURE RESEARCH PROGRAMMES

None

The Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its eighteenth session in Nicosia, Cyprus, from 21 to 23 March 2016. The session was attended by delegates from 20 contracting parties, 7 representatives of observers, representatives of the FAO, including its regional projects, and the GFCM Secretariat. The Committee reviewed the work carried out during the 2015–2016 intersession, including within its newly established subregional subsidiary bodies, two of which had met for the first time in 2016 (Subregional Committee for the Adriatic Sea and Subregional Committee for the Central Mediterranean). On the occasion of the publication on *The State of Mediterranean and Black Sea Fisheries* (SoMFi) 2016, the Committee examined the main highlights of the report, including key characteristics of Mediterranean fleet and catches, socio-economic, and bycatch, highlighting its importance as a a flagship publication aimed at regularly disseminating information on fisheries in the GFCM area of application. The Committee formulated advice on the following aspects: i) marine environment and ecosystems, including vulnerable marine ecosystems, marine spatial protection measures and bycatch; ii) statistics and information, including the implementation of the Data Collection Reference Framework (DCRF); iii) status of Mediterranean stocks and associated scientific advice, including at the subregional level. At the Mediterranean level, the Committee discussed in particular the specific cases of red seabream (*Pagellus bogaraevo*) in the Strait of Gibraltar and of European eel (*Anguilla anguilla*), recognizing the importance of collecting and analysing accurate data towards the development of a Mediterranean adaptive regional management plan for this species. At the subregional level, specific conclusions included: i) detailed scientific advice to improve existing management plans for small pelagic fisheries in the Adriatic Sea and to develop a new management plan for demersal fisheries in the Strait of Sicily, and ii) new mechanisms aimed at facilitating the adoption of management measures, especially for stocks requiring urgent action, and concentrating efforts on a number of priority species by subregion. In addition, the Committee discussed a number of key issues of regional relevance in connection with the management of red coral populations (*Corallium rubrum*, L.) and of European eel, as well as work on indicators to monitor good environmental status (GES). Moreover, a concept note for a bycatch monitoring programme towards a strategy to mitigate biological and socio-economic impacts in the Mediterranean and the Black Sea was endorsed. In relation to small-scale fisheries, the Committee welcomed the outcomes of the Regional Conference held in March 2016 as well as the creation of a new working group, suggesting to include recreational fisheries to its mandate. In recognizing the increasing demand for scientific and technical expertise on fisheries in the region, the Committee also endorsed a proposal to organize a GFCM Forum on Fisheries Science (GFCM FishForum). Finally, the Committee agreed upon its work plan for 2016–2017 and elected its new Bureau, paying tribute to the work done by the immediate past members of the Bureau.

Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa dix-huitième session à Nicosie, Chypre, du 21 au 23 mars 2016. Ont participé à la session les délégués de vingt parties contractantes, sept représentants des observateurs, ainsi que des représentants de la FAO, y compris ses projets régionaux, et du Secrétariat de la CGPM. Le Comité a passé en revue les travaux réalisés pendant la période intersessions 2015-2016, notamment dans le cadre de ses quatre nouveaux organes subsidiaires, deux d'entre eux ayant tenu leur première réunion en 2016 (le Comité sous-régional de la mer Adriatique et le Comité sous-régional de la Méditerranée centrale). À l'occasion de l'édition 2016 du rapport de la CGPM sur la situation des pêches en Méditerranée et en mer Noire (*The State of Mediterranean and Black Sea Fisheries* [SoMFi]), le Comité a examiné les points saillants du rapport, notamment les principales caractéristiques de la flotte et des captures en Méditerranée ainsi que les aspects socio-économiques et ceux liés aux captures accidentelles, soulignant son importance en tant que publication phare visant à diffuser régulièrement des informations relatives aux pêches dans la zone d'application de la CGPM. Le Comité a formulé des avis portant sur les aspects suivants: i) environnement et écosystèmes marins, y compris les écosystèmes marins vulnérables; ii) statistiques et informations, notamment la mise en œuvre du cadre de référence pour la collecte de données (DCRF); iii) état des stocks méditerranéens et avis scientifiques connexes, y compris à l'échelon sous-régional. À l'échelon de la Méditerranée, le Comité a examiné notamment le cas spécifique de la dorade rose (*Pagellus bogaraevo*) dans le détroit de Gibraltar ainsi que celui de l'anguille européenne (*Anguilla anguilla*), reconnaissant qu'il était important de collecter et d'analyser des données précises en vue de l'élaboration d'un plan de gestion régional adaptatif en Méditerranée pour cette espèce. À l'échelon sous-régional, les conclusions spécifiques portaient notamment sur: i) des avis scientifiques détaillés visant à améliorer les plans de gestion existants pour les pêcheries de petits pélagiques en mer Adriatique et à élaborer un nouveau plan de gestion pour les pêcheries démersales dans le canal de Sicile, et ii) de nouveaux mécanismes visant à faciliter l'adoption de mesures de gestion, notamment pour les stocks nécessitant une intervention urgente, et à cibler les efforts sur un certain nombres d'espèces prioritaires par sous-région. En outre, le Comité a abordé plusieurs questions essentielles d'envergure régionale relatives à la gestion des populations de corail rouge (*Corallium rubrum*, L.) et à l'anguille européenne ainsi qu'aux travaux portant sur les indicateurs de suivi du bon état écologique. Par ailleurs, une note conceptuelle concernant un programme de suivi des captures accidentelles en vue de l'élaboration d'une stratégie visant à en atténuer les impacts biologiques et socio-économiques en Méditerranée et en mer Noire a été approuvée. S'agissant de la pêche artisanale, le Comité s'est félicité des résultats de la Conférence régionale tenue en mars 2016 ainsi que de la création d'un nouveau groupe de travail et a suggéré d'inclure la pêche récréative dans le mandat de ce nouveau groupe. Au vu de la demande croissante d'expertise technique et scientifique en matière de pêches dans la région, le Comité a fait sienne la proposition d'organiser un forum CGPM sur les sciences halieutiques (FishForum CGPM). Enfin, le Comité est convenu de son programme de travail pour 2016-2017 et a élu son nouveau Bureau, après avoir rendu hommage au travail réalisé par les membres du Bureau sortant.

ISBN 978-92-5-009225-6 ISSN 2070-6987

9 789250 092256

I5646Bi/1/05.16