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

Report of the nineteenth session of the

SCIENTIFIC ADVISORY COMMITTEE ON FISHERIES

Ljubljana, Slovenia, 16–19 May 2017

Rapport de la dix-neuvième session du

COMITÉ SCIENTIFIQUE CONSULTATIF DES PÊCHES

Ljubljana, Slovénie, 16-19 mai 2017



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

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PREPARATION OF THIS DOCUMENT

This is the final report approved by the participants in the nineteenth session of the Scientific Advisory Committee on Fisheries of the General Fisheries Commission for the Mediterranean held in Ljubljana, Slovenia, from 16 to 19 May 2017.

PRÉPARATION DE CE DOCUMENT

Le présent document est le rapport final adopté par les participants de la dix-neuvième session du Comité scientifique consultatif des pêches de la Commission générale des pêches pour la Méditerranée tenue à Ljubljana, Slovénie, du 16 au 19 mai 2017.

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Commission générale des pêches pour la Méditerranée. Rapport de la dix-huitième session du Comité scientifique consultatif des pêches. Ljubljana, Slovénie, 16-19 mai 2017.

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ABSTRACT

The Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its nineteenth session in Ljubljana, Slovenia, from 16 to 19 May 2017. The session was attended by delegates from 18 Mediterranean contracting parties and one cooperating non-contracting party, nine observers, representatives of the FAO, including its regional projects, the GFCM Secretariat and invited experts. The Committee reviewed the work carried out during the 2016–2017 intersession, including within its four new subregional subsidiary bodies (Subregional Committee for the Adriatic Sea, Subregional Committee for the Central Mediterranean, Subregional Committee for the Eastern Mediterranean and Subregional Committee for the Western Mediterranean) which all met during the intersession. In relation to the recent adoption and launch of the mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries, the Committee welcomed the swift launch of multiple priority activities, recognizing that the strategy objectives were ambitious but that related action was necessary. In this respect, it discussed the main activities already launched or foreseen as well as the major issues to be tackled by the GFCM Forum on Fisheries Science (Fish Forum), due to be held at the end of 2018. Furthermore, the Committee formulated advice on the following aspects: i) overall status of Mediterranean stocks; ii) marine environment and ecosystems; and iii) data collection and quality indicators. In line with the subregional approach implemented and based on the conclusions of the four subregional committees, the SAC also provided specific advice for each subregion. At the Mediterranean level, the Committee discussed: i) the indicators of good environmental status; ii) the status of the stocks, in particular European hake; iii) the management of red coral populations (*Corallium rubrum*, L.) and of European eel (*Anguilla anguilla*); iv) the fight against illegal, unreported and unregulated (IUU) fishing; v) interactions between fisheries and marine environment, including deep-sea fisheries and vulnerable marine ecosystems; and vi) data collection and data quality. At the subregional level, based on the priority species identified for each subregion, specific conclusions were related to the management of i) small pelagic species in the Adriatic Sea, including the establishment of a fisheries restricted area; ii) demersal species in the Strait of Sicily; iii) blackspot seabream in the western Mediterranean; and iv) deep sea fisheries and non-indigenous species in the eastern Mediterranean. In addition, the Committee discussed the implementation of the SAC subregional approach. Finally, the Committee agreed upon its work plan for 2017–2019.

RÉSUMÉ

Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa dix-neuvième session à Ljubljana, Slovénie, du 16 au 19 mai 2017. Ont participé à la session les délégués de 18 parties contractantes de Méditerranée et une partie non contractante coopérante, neuf observateurs, des représentants de la FAO, y compris ses projets régionaux, le Secrétariat de la CGPM et des experts invités. Le Comité a passé en revue les travaux réalisés pendant la période intersessions 2016-2017, notamment dans le cadre de ses quatre nouveaux organes subsidiaires sous-régionaux (Comité sous-régional pour la mer Adriatique, Comité sous-régional pour la Méditerranée centrale, Comité sous-régional pour la Méditerranée orientale et Comité sous-régional pour la Méditerranée occidentale) qui ont tous tenu des réunions durant la période intersessions. S'agissant de l'adoption et du récent lancement de la stratégie à moyen terme (2017-2020) en faveur de la durabilité des pêches en Méditerranée et en mer Noire, le Comité s'est félicité de la mise en route rapide de plusieurs activités prioritaires, reconnaissant que les objectifs fixés par cette stratégie étaient ambitieux mais qu'il était nécessaire de prendre des mesures pour les accompagner. À cet égard, il a examiné les principales activités déjà lancées ou prévues ainsi que les questions principales qui devraient être traitées par le Forum CGPM sur les sciences halieutiques (Fish Forum), prévu fin 2018. Par ailleurs, le Comité a formulé des avis portant sur les aspects suivants: i) état général des stocks en Méditerranée; ii) environnement et écosystèmes marins; et iii) collecte de données et indicateurs de qualité. Conformément à l'approche sous-régionale mise en œuvre et à partir des conclusions des quatre comités sous-régionaux, le CSC a également fourni des avis spécifiques à chaque sous-région. À l'échelon de la Méditerranée, le Comité a examiné: i) les indicateurs du bon état écologique; ii) l'état des stocks, en particulier le merlu européen; iii) la gestion des populations de corail rouge (*Corallium rubrum*, L.) et d'anguille européenne (*Anguilla anguilla*); iv) la lutte contre la pêche illicite, non déclarée et non réglementée (pêche INDNR); v) les interactions entre la pêche et le milieu marin, y compris la pêche en eaux profondes et les écosystèmes marins vulnérables; et vi) la collecte et la qualité des données. À l'échelon sous-régional, compte tenu des espèces prioritaires identifiées pour chaque sous-région, des conclusions spécifiques ont été tirées concernant la gestion i) des espèces de petits pélagiques en mer Adriatique, y compris l'établissement d'une zone de pêche réglementée; ii) des espèces démersales dans le canal de Sicile; iii) de la dorade rose en Méditerranée occidentale; et iv) de la pêche en eaux profondes et des espèces non indigènes en Méditerranée orientale. En outre, le Comité a examiné la mise en œuvre de l'approche sous-régionale du CSC. Enfin, le Comité est convenu de son programme de travail pour 2017-2019.

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OPENING AND ARRANGEMENTS FOR THE SESSION

1. The nineteenth session of the Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO) was held in Ljubljana, Slovenia, from 16 to 19 May 2017. The session was attended by delegates from 18 Mediterranean contracting parties and one cooperating non-contracting party, nine observers, representatives of the FAO, including its regional projects, the GFCM Secretariat and invited experts. The list of participants is provided in Appendix 2.

2. On behalf of the GFCM Chairperson, Mr Abdellah Srour, GFCM Executive Secretary, thanked the host country for the impeccable hospitality and emphasized the crucial importance of this session in light of the adoption of the mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries (the mid-term strategy) and the Malta Declaration, highlighting the central role of the GFCM in actively implementing this declaration towards achieving sustainability objectives for Mediterranean fisheries.

3. Mr Marjan Podgoršek, State Secretary of the Ministry of Agriculture, Forestry and Food of Slovenia, welcomed participants in Ljubljana, recalling the fruitful cooperation with the GFCM as well as the importance for Slovenian fisheries of the work done by the SAC. In underlining the important biological and socioeconomic dimension of fisheries in his country, he advocated for the formulation of sound advice and the adoption of management measures at the international level that account for the characteristics of the sector in each country. He finally expressed wishes for continuous progress and collaboration in the future.

4. The session was called to order by Mr Othman Jarboui, SAC Chairperson, who also welcomed participants and referred to the steady progress made by the SAC over recent years, improving its ability to address the most challenging issues through the subregional approach and providing sound advice on a wider range of issues. In mentioning the mid-term strategy, he noted that it placed considerable importance on the role of the SAC in achieving the overall goals set by the Commission. He called upon countries to support the work of the SAC in addressing upcoming challenges deriving from the mid-term strategy.

5. The GFCM Executive Secretary reported that 16 countries had presented their credentials and urged countries that had not submitted their credentials to do so before the end of the session. The SAC Chairperson informed the delegations that the statement of competence and voting rights of the European Union (EU [Member Organization]) and its Member States submitted at the fortieth session of the Commission also applied to this session.

ADOPTION OF THE AGENDA

6. After introducing delegates and observers, the GFCM Executive Secretary informed the meeting of organizational arrangements.

7. The Committee adopted the agenda as attached under Appendix 1. The list of documents is reproduced in Appendix 3 and the opening speeches are included in Appendix 4.

INTERSESSIONAL ACTIVITIES

Review of relevant decisions by the fortieth session of the Commission

8. The GFCM Secretariat recalled the main objectives of the five recommendations adopted at the fortieth session of the Commission and relevant for the Mediterranean, namely: i) Recommendation GFCM/40/2016/2 on the progressive implementation of data submission in line with the GFCM Data Collection Reference Framework (DCRF); ii) Recommendation GFCM/40/2016/3 establishing further emergency measures in 2017 and 2018 for small pelagic stocks in the Adriatic Sea (GSA 17 and

GSA 18); iii) Recommendation GFCM/40/2016/4 establishing a multiannual management plan for the fisheries exploiting European hake and deep-water rose shrimp in the Strait of Sicily (GSAs 12 to 16); iv) Recommendation GFCM/40/2016/5 establishing a minimum conservation reference size for European hake in the Mediterranean Sea; and v) Recommendation GFCM/40/2016/7 concerning the authorization of the use of remotely operated vehicles within the framework of national scientific research programmes on red coral. The three resolutions on guidelines for drafting GFCM decisions, the mid-term strategy and sustainable small-scale fisheries also adopted by the Commission were mentioned. Finally, the pending proposal for a GFCM recommendation on measures concerning recreational fishing activities in the Mediterranean Sea was brought to the attention of the SAC.

9. The Committee was reminded of the decision taken by the Commission with regard to the Review Panel. In this respect, it was underlined that, should a contracting party or cooperating non-contracting party (CPC) consider it necessary, on the basis of the outcomes of the nineteenth session of the SAC, to address cases requiring urgent specific management actions, this would constitute a valid and sufficient reason to include an item on the agenda of the forty-first session of the Commission in order to activate the Review Panel. To this effect, the interested CPC should send a formal request to the GFCM Executive Secretary.

10. It was recalled that the discussions related to activities and advice on the assessment and management of Black Sea fisheries were placed under the Working Group on the Black Sea (WGBS), considering that the WGBS had been established for this specific purpose and that it could count on the participation of all Black Sea riparian states, in line with the subregional approach.

Overview of SAC achievements during the intersession

11. On the basis of document GFCM:SAC19/2017/2, the SAC Chairperson presented the activities implemented during the intersession, highlighting that the SAC had carried out 15 activities, of a regional or subregional scope, covering technical work related to stock assessment, fisheries management, data collection, interactions between fisheries and the environment as well as ad hoc issues. He also informed participants that all subregional committees (SRCs) had met during the intersession, providing specific advice in relation to existing management plans or discussing future management priorities, noting that the work on the assessment of management measures was growing in importance in the context of the formulation of advice.

12. The SAC Chairperson made specific reference to the progress made in relation to Recommendation GFCM/40/2016/2 on the progressive implementation of data submission in line with the Data Collection Reference Framework (DCRF), a milestone towards improved collection of fisheries data. He also mentioned the results achieved within the framework of two meetings dealing with deep-sea fisheries (DSF) and vulnerable marine ecosystems (VMEs), as well as another one on red coral.

13. The Committee praised the remarkable work carried out during the intersession, noting that technical activities covered increasingly varied and complex topics, addressing all the requests of the Commission and providing a clear basis for the formulation of advice.

National reports to the SAC

14. The GFCM Secretariat presented, on the basis of document GFCM:SAC19/2017/Inf.5, a synthesis of the information contained in 15 national reports sent by Mediterranean countries, which overall was similar to previous years. The following elements, however, were worth noting: i) the fleet size had increased in Algeria (+16 percent from 2011 to 2015) and in Morocco (+28 percent from 2013 to 2015), but had decreased in Spain (-23 percent from 2011 to 2016) and Cyprus (-17 percent from 2013 to 2016); ii) an increasing trend for landings was observed in the last year in Albania (+10 percent) and Lebanon (+17 percent), while a decreasing trend from 2011 was observed in Libya (-50 percent), Morocco (-27 percent), Egypt (-26 percent), Montenegro and Spain (-15 percent) and Croatia (-

12 percent); iii) the number of reported stocks assessed in recent years, including the assessments carried out at the national level only and not discussed in relevant GFCM working groups, increased (77 in 2017 *versus* 57 in 2016); iv) many countries carried out studies addressing the identification of stock units, the management of discards, surveys on small pelagic species and socioeconomic analysis; v) several countries issued regulations and laws to implement GFCM recommendations adopted in 2016; and vi) data on incidental catches of vulnerable species were generally lacking. The national reports are reproduced in Appendix 15.

15. The Committee welcomed the full submission of national reports through the new electronic tool and praised the collaboration of all countries in this endeavour, stressing that it enabled to streamline data input and build coherent and easy-to-access databases, hence providing better information to support the work of the SAC.

16. Several delegations stated they had faced some difficulties in familiarizing themselves with the new electronic tool, suggesting that some sections of the national reports, as well as some features of the electronic tool could still be improved. The GFCM Secretariat affirmed that it stood ready to continue providing assistance for the online submission of national reports. Moreover, in view of reconsidering the current report format, it was agreed that the SAC would be consulted in the coming weeks to collect comments for possible improvements to be submitted to the Commission for review and possible action.

17. In light of the considerable relevance of vulnerable species in the preservation of marine ecosystems, the consistent lack of reporting on incidental catches of those species was discussed, as it limited the capability of the SAC to formulate appropriate advice. The delegate of Algeria, followed by other delegations, referred to the difficulty in effectively collecting this type of information at the national level, since it mainly relied on the direct involvement of fishers, which was out of their direct control.

18. The actions foreseen in the mid-term strategy in relation to vulnerable species, in particular the bycatch monitoring programme, were regarded as an important opportunity to advance on the subject and countries were invited to exchange successful practices. In this respect, the representative of MedReact suggested to cross-check infringement reports from inspections as a potential additional source of information.

Major activities of the FAO regional projects

19. The most significant activities carried out by the FAO regional projects (AdriaMed, MedSudMed, CopeMed II and EastMed) during the intersession, including scientific cooperation, research activities, training programmes, as well as technical assistance (namely stock assessment, support to fisheries monitoring, statistics and information systems) were presented on the basis of document GFCM:SAC19/2017/Inf.19. Delegates were also reminded that detailed information on the activities and outputs of the regional projects could be found in the annual report of the coordination committee of each project, available on their relevant websites.

20. The Committee acknowledged the impressive work carried out by the FAO regional projects and welcomed their considerable efforts towards increased subregional cooperation in support to SAC activities.

21. All delegations of countries benefiting from the support of regional projects took the floor to thank the donors and commend the significant contribution of the projects in fostering discussion on fisheries management and gathering fisheries-related data, including in support of stock assessment and the identification of stock boundaries.

22. The delegate of the EU expressed satisfaction for the fruitful cooperation and dialogue in addressing different issues in all Mediterranean countries and highlighted the importance of ensuring a

good flow of information with partners and donors on data and results, in particular through the websites.

23. The GFCM Secretariat commended the existing synergies between the GFCM and the FAO regional projects, highlighting that such collaboration had even been strengthened in recent years and had enabled the creation of a strong network putting Mediterranean countries in a position to address current pressing challenges towards the sustainability of fisheries. In particular, the mid-term strategy had provided an effective opportunity to reinforce existing ties and address the ambitious goals identified by the Commission.

PROGRESS IN THE IMPLEMENTATION OF THE MID-TERM STRATEGY, INCLUDING IN COOPERATION WITH PARTNERS

24. The GFCM Secretariat recalled the adoption and launch of the mid-term strategy by the Commission, including the work undertaken to fine-tune activities and identify resources and partnerships for their execution. It was reminded that effective cooperation, namely with the FAO Fisheries Department and its regional projects and with relevant partners, in particular those with whom a memorandum of understanding was in place, was considered key to successfully implementing the mid-term strategy. It was also stressed that Target 5 would transversally support the other four targets by providing a framework for enhanced stakeholder coordination and for capacity-building.

25. The delegates expressed deep satisfaction for the swift launch of multiple priority activities within the mid-term strategy, recognizing that its objectives were ambitious but that related action was necessary. To this end, the FAO regional projects expressed their full support, as well as the support of the FAO Fisheries Department in general and stressed that fruitful coordination with the GFCM should be continued in order to optimize resources.

26. The ensuing discussions reflected on the presentation of activities to be carried out. Information was provided on the work towards harmonizing scientific surveys-at-sea so as to execute surveys that would produce comparable results supporting regional assessments. In addition, the thematic sessions of the GFCM Forum on Fisheries Science (Fish Forum), due to be held at the end of 2018, were presented together with expected country-level contributions. The structure of a regional survey to collect standardized socioeconomic data on Mediterranean fisheries, including small-scale fisheries, was also shown. Finally, the draft roadmap to estimate illegal, unreported and unregulated (IUU) fishing activity was introduced, including a step-wise approach to evaluate and then estimate impacts.

27. Regarding strengthened scientific advice, the delegate of the EU raised the need for timely action on urgent issues proposing that, in certain situations, stock assessments produced by the Working Groups on Stock Assessment (WGSAs) could be used prior to their validation by the SAC. The GFCM Secretariat clarified that stock assessments produced by the WGSAs were already being used by both the relevant subregional committees and the workshops on the assessment of management measures (WKMSE), even before they were finally validated by the SAC, as it would be impossible otherwise to advance on providing advice on management measures during the intersession.

28. The delegate of Monaco welcomed the interesting diversity of topics the Fish Forum was expected to address, noting that these were set to provide direct responses to the targets of the United Nations Sustainable Development Goals (SDGs). He stated that the GFCM, as a United Nations body, should ensure that the SDGs are systematically referred to in this event, especially considering the Fish Forum goes above and beyond SDG 14 (life below water) by also tackling interrelated topics such as climate change (SDG 13), economic growth (SDG 8) and gender equality (SDG 5).

29. Following the request for clarification by the delegate of Egypt on the role of the Fish Forum, the objectives of the forum were underscored as reinforcing capacities and broadening expertise in the Mediterranean. It was recalled that the Fish Forum would adhere mainly to three principles, namely: i) enlarging the base of knowledge on pertinent subjects to support GFCM technical work in

areas such as stock assessment and the development of management advice; ii) better identifying available research tools and widening the network of research institutes contributing to the work of the GFCM in order to reinforce expertise, particularly for topics such as socioeconomics, fishing technology and environmental issues; and iii) establishing priorities for fisheries research to guide future strategic efforts.

30. A number of important issues to be considered for the proposed thematic sessions of the Fish Forum were raised by delegations. In particular, it was determined that the science-policy interface – for instance how to provide precise advice that facilitates the adoption of recommendations – with regard to salient issues such as small-scale fisheries (SSF) and environmental impacts should be addressed.

31. Activities underway to support sustainable small-scale fisheries were then introduced. It was explained that, to support enhanced participation of small-scale fishers in management, existing small-scale fishing organizations were being mapped in order to perform an assessment of capacity needs and develop a roadmap for reinforcing participatory processes. Work to assess the nature and impact of marine recreational fisheries was also presented. With a view to supporting the implementation of the Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines), the collaboration between the GFCM and the FAO Fisheries Department was showcased during a dedicated side-event on the development of a social protection study.

32. In this respect, the delegate of Lebanon highlighted that the possible implications of the current geopolitical situation and the refugee crisis on coastal fishing and small-scale fishing communities made it all the more urgent to tackle the issue of social protection, especially in the eastern Mediterranean.

33. With reference to small-scale and recreational fisheries, the delegates of Malta and Morocco both expressed the need to provide more precise definitions of these fishing activities. The GFCM Secretariat noted that ongoing efforts sought to understand how these activities were defined at the national-level, in order to work towards developing a coherent regional definition. Further discussions on this topic were expected at the first meeting of the Working Group on Small-Scale and Recreational Fisheries (WGSSF) (September 2017).

34. The delegate of Albania highlighted the important role of SSF and, noting the current lack of SSF organizations in her country, welcomed the activities proposed in the mid-term strategy to promote participatory processes for small-scale fishers.

35. The representative of MEDAC expressed gratitude for the ongoing collaboration on small-scale and recreational fisheries, took the opportunity to introduce the work of his organization and offered its support and expertise to future GFCM efforts in this field.

36. Following the side-event on the social protection study for small-scale fishers, Albania, Egypt, Lebanon, Morocco and Tunisia expressed interest in participating in the case studies in their countries, with the support of the GFCM. The delegate of Algeria suggested also widening the scope of the study and circulating a general questionnaire to all Mediterranean and Black Sea countries, including those not participating in the case studies, so that the study is as comprehensive as possible.

37. To address the need for better and more comprehensive bycatch data¹, the GFCM Secretariat presented the scope of specific monitoring programmes being launched to collect data on discards and incidental catches of vulnerable species using scientific observers on board. It was explained that the

¹ Bycatch is the part of the catch that is unintentionally captured during a fishing operation in addition to target species. It may refer to the catch of other commercial species that are landed, commercial species that cannot be landed (e.g. undersized, damage individuals), non-commercial species, as well as to incidental catch of endangered, vulnerable or rare species (e.g. turtles, sharks, marine mammals etc.) (DCRF, 2016)

activity was being carried out together with relevant partners and sought to identify appropriate bycatch mitigation measures. Furthermore, a joint GFCM, FAO Fisheries Department and World Wide Fund for Nature (WWF) side-event on assessing the potential effects of climate change on Mediterranean and Black Sea fisheries and ecosystems was held.

38. The delegate of Albania emphasized the importance of data on incidental catch of vulnerable species and underlined the role that monitoring and control efforts can play in gathering such data.

39. The SAC congratulated the intensified efforts in the area of climate change and fisheries and supported the roadmap towards a regional strategy which was presented. The delegates of Egypt and Morocco underlined that climate change is a reality that must be faced and, therefore, the development of adaptation measures is crucial. The delegate of the EU noted that solid data collection in order to better understand the current situation was also key for implementing such an ambitious roadmap.

40. The representative of ACCOBAMS congratulated the GFCM on the extensive work carried out, expressed satisfaction for the joint activities already undertaken, and underlined that it considered the mid-term strategy as the basis for its future collaboration with the GFCM on issues regarding cetacean conservation and interactions between cetaceans and fisheries. He also confirmed the interest of the ACCOBAMS Secretariat in collaborating on the organization of the Fish Forum. This interest was also echoed by the representative of the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP).

41. Similarly, the representative of the International Union for Conservation of Nature (IUCN) confirmed its readiness to partner in the organization of the Fish Forum and also thanked the GFCM for its work on marine ecosystems, expressing interest in seeing the collaboration with the GFCM on incidental catches of vulnerable species expanded to other species.

42. Finally, the delegate of Lebanon noted the extensive human resources needed for the successful execution of the work plan proposed. In response, it was underlined that the mid-term strategy was a common effort, supported by the staff of the GFCM Secretariat, the FAO and its regional projects, but also dependent on inputs and resources of countries and on synergies with partner organizations. In this respect, the delegate of Tunisia noted the important role of national focal points in coordinating and monitoring national-level activities and the urgency of promptly nominating such focal points to ensure that the activities were initiated expeditiously.

FORMULATION OF ADVICE IN THE FIELD OF FISHERY MANAGEMENT AND RESEARCH

Overall status of Mediterranean stocks

43. The SAC Chairperson presented an overview of the overall status of stocks in the Mediterranean Sea (as reproduced in Appendix 5), based on the conclusions of the Working Groups on Stock Assessment of Demersal Species (WGSAD) and Small Pelagic Species (WGSASP) and of the EIFAAC/ICES/GFCM Working Group on European Eel (WGEEL). He reported that, overall, 20 percent of the stocks assessed in 2016 were considered to be sustainably exploited while the rest of the stocks were either in overfishing, overfished, depleted, ecologically unbalanced or a combination of the above. He also recalled that the Commission had adopted, within its mid-term strategy, a list of priority species for which the provision of advice from the SAC would be mandatory. Finally, he referred to the work on common indicators of good environmental status (GES) for commercially exploited marine populations, for which the SAC should endorse their descriptions and targets.

44. The Committee noted that, regarding priority species, the coverage of stock assessments for European hake, deep-water rose shrimp and red mullet was relatively good (more than 40 percent of the GSAs assessed), while that for small pelagic species was lower (around 20 percent for sardine and anchovy). It also noted that blackspot seabream and round sardinella had not been recently assessed in

the relevant subregions (western and eastern Mediterranean, respectively). The subregion with the best coverage in terms of combination of priority species and GSAs was the Adriatic Sea (90 percent of the priority stocks assessed), followed by the central Mediterranean (36 percent), western Mediterranean (32 percent) and eastern Mediterranean (3 percent). The need to improve the coverage through enhanced participation of all stakeholders was highlighted.

45. The delegate of Morocco, echoed by the FAO regional projects, asked if the reported percentage of sustainably exploited stocks merely represented a ratio number or were weighted by stock landing values. It was clarified that the percentage was based on the number of stock units considered to be sustainably exploited, divided by the total number of stock units assessed, and the Committee was reminded that the appropriateness of this metric as a regional indicator was still under technical discussion and a consensus should ideally be reached in view of the preparation of the report on *The state of Mediterranean and Black Sea fisheries* (SoMFi) 2018.

46. Regarding the proposed targets for bycatch, fishing effort and catch per unit effort (CPUE) as GES common indicators, it was stressed that these indicators alone may not be suitable to describe the state of some particular stocks or fisheries. They could, however, provide a regional view on the state of exploited populations together with other common indicators (SSB, fishing mortality and landings). The possibility of using other indicators (e.g. recruitment, body condition and age composition) to better address the complexity of Mediterranean fisheries was also suggested. The Committee recognized the need to progress in fine-tuning all identified indicators and advised to prepare a proposal to aggregate these indicators at the subregional and regional levels, in order to assess their performance.

47. Among stocks beyond biologically safe limits, attention was brought to the situation of European hake, with the highest average overexploitation rate (current fishing mortality was on average 7.4 times higher than considered sustainable and had increased since the 2015 assessments). In relation to small pelagic species, attention was brought to sardine and anchovy in GSA 7, which were considered as ecologically unbalanced and depleted, respectively. For the case of European eel, it was highlighted that its status was considered as critical.

48. As for European hake, it was recommended to: i) take immediate management actions to reduce fishing mortality by adopting additional multiannual management plans; ii) identify new nursery areas; iii) carry on with the simulation of different management scenarios; and iv) establish a tagging project to obtain essential data on growth, natural mortality, migration patterns and connectivity. For European eel, it was recommended that anthropogenic mortality affecting production and escapement of silver eels be reduced – or maintained – as close to zero as possible, and that data be collected within the DCRF, with a view to developing a Mediterranean adaptive regional management plan for this species. For small pelagic species, it was recommended to increase the number of stocks assessed in the region and to urgently implement a recovery plan for anchovy in GSA 7. For all fish priority species, the harmonization of otolith-reading methodologies was recommended.

49. The delegate of Croatia highlighted difficulties in the age determination of small pelagic and demersal species as well as uncertainties around age-length keys, thereby questioning the quality of age-based stock assessments for these species. The coordinator of the WGSASP mentioned the efforts made by this working group to investigate the sensitivity of assessments to these uncertainties, which demonstrated the robustness of the advice given.

50. After noting some discrepancies in the report of the WGSAD in the relative biomass level of four demersal stocks (which were then corrected as reproduced in Appendix 5), the delegate of the EU recognized that, although for a large percentage of demersal stocks the fishing pressure was too high, biomass levels for some of them were not low within the time series considered for the assessment (8 stocks were found with a high relative biomass level, 4 with an intermediate level and 14 with a low relative biomass level), and the GFCM could therefore still take measures to manage fishing pressure in order to avoid further deterioration of the biomass level. On the other hand, some small pelagic stocks

showed a low or very low biomass level, even when fishing mortality was very low, which might indicate that a longer time lag would be needed for these stocks to recover.

Marine environment and ecosystems

51. The SAC Chairperson reported on recommendations emanating from the work towards the definition and management of DSF and the protection of VMEs, including VME indicators, relevant protocols and the mapping of DSF areas. He also presented the conclusions of the Workshop on red coral (WKREDCORAL), especially in relation to the possibility of implementing an adaptive regional management plan for this fishery, a concept note on a research programme for red coral, and other issues outlined in Recommendation GFCM/40/2016/7, such as the use of remotely operated vehicles (ROV).

52. Several delegations requested clarifications on the proposed elements for the management of DSF and the protection of VMEs, in particular the definition of the depth limit. It was noted that the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas did not include a clear definition of DSF, and that different depth limits, ranging from the shelf break to the slope, were used to address deep-sea ecosystems, as well as DSF in the Mediterranean.

53. In light of the above, the Committee agreed that a definition of DSF should not be included, at this stage, in the formulation of advice, nor in the scope of the technical elements proposed. Moreover, it was debated that, at this stage, only the following vessels should be subject to the management measures proposed in such technical elements: i) fishing vessels above 15 metres in length overall (LOA) operating with bottom-contact fishing gear targeting *Aristaeomorpha foliacea*, *Aristeus antennatus*, or *Plesionika martia*; and ii) fishing vessels above 15 metres LOA operating with bottom-contact gear (bottom trawls, longlines, gillnets and pots and traps) at depths greater than 300 metres.

54. The Committee endorsed updated technical elements for the establishment of a VME encounter protocol, as well as for the mapping of existing deep-sea fishing areas and the establishment of an exploratory deep-sea bottom fishing protocol, as reproduced in Appendixes 6(A), (B) and (C) respectively, to be submitted for consideration to the Commission.

55. The representative of Oceana applauded the work done by the WGVME in compiling relevant information on areas hosting VMEs, highlighting the importance to continue working towards encounter protocols that include move-on rules and impact assessments and stressing the need for the WGVME to meet regularly, also as a forum to support the technical discussions towards the preparation of fisheries restricted area (FRA) proposals.

56. In relation to red coral, the Committee noted there were considerable gaps in the information and data submitted by CPCs and the Commission was urged to address this problem. It also recommended that countries strengthen monitoring, control and surveillance and more systematically implement the measures included in the adopted guidelines for the management of red coral.

57. Finally, the Committee advised that, to support a better understanding of the status of the resource, the use of ROV for scientific purposes should be allowed, stressing that any recommendation on this matter should ensure that this instrument is not used for any other purposes. Recognizing that a research programme on red coral would produce valuable results to complement the provision of advice, the Committee also endorsed the elements for a revised concept note on a research programme on red coral as reproduced in Appendix 7, to be developed and submitted to the consideration of the Commission.

Data collection and quality indicators

58. The SAC Chairperson recalled that Recommendation GFCM/40/2016/2 on the progressive implementation of data submission in line with the DCRF had been adopted for one year only and that work had been undertaken during the intersession to prepare its potential full implementation. He also informed the Committee of discussions, within the GFCM, on the definition and use of data quality indicators.

59. The Committee praised the swift action taken to ensure all countries shared their experience with the DCRF by jointly addressing challenges and identifying solutions to ensure the systematic transmission of fisheries data via the online platform.

60. Based on relevant provisions in Recommendation GFCM/40/2016/2 – whereby data submitted in line with the DCRF should comply with given specifications on the GFCM fleet segmentation – the Committee reviewed the proposals from some countries, namely Italy, Slovenia and Spain, that requested to aggregate some of the fleet segments originally proposed in the recommendation, and decided to endorse them for reference years 2015 and 2016. It was suggested to organize a technical meeting, once data submission in line with the DCRF is fully implemented, to tackle, among other, this important matter.

61. The delegate of Montenegro expressed appreciation for the progress made in facilitating data submission, mentioning that efforts at the national level had already been undertaken to align data collection with DCRF requirements and that his country stood ready to submit data accordingly.

62. The delegate of Italy, echoing previous interventions, praised the fruitful work carried out in the field of fisheries data collection and confirmed his country would submit national data in line with the DCRF through the online platform.

63. The delegate of Libya informed that his country was in the process of revising relevant national legislations, including on fleet segmentation to adapt them to DCRF provisions. In this respect, the GFCM Secretariat stood ready to provide technical assistance to support Libya in this endeavour, in collaboration with the regional projects, as appropriate.

64. The delegate of Morocco, announced that her country was now ready to support the full implementation of data submission in line with the DCRF and requested technical assistance on data transmission procedures.

65. The delegate of the EU recalled the commitment made in the Malta MedFish4ever Declaration to ensure that, by 2020, all key stocks are subject to adequate data collection. In this regard, he commended the important achievements made in fisheries data collection and data quality, which allowed the GFCM to better fulfil its mandate, reiterating the full support of the EU in ensuring that data collection and transmission are fully implemented in line with the DCRF. Finally, he underlined the importance of ensuring CPCs are made aware of the quality of their data in order to find appropriate and timely remedies, if needed.

66. The representative of UNEP/MAP Regional Activity Center for Specially Protected Areas (RAC/SPA) applauded the considerable improvements made by countries in the field of data collection, underlining that the DCRF could substantially support the Integrated Monitoring and Assessment Programme (IMAP) of the Mediterranean, which strongly depended on the monitoring of ecological objectives.

67. The Committee advised fully implementing data transmission in line with the DCRF, inviting the Commission to adopt a new recommendation based on that adopted in 2016 and replacing the Task 1 statistical matrix.

68. In addition, the Committee agreed to temporarily adopt conformity, stability and consistency indicators for data quality checks (with preliminary thresholds), as described in Appendix 8. The preliminary results of this first phase of implementation of data submission by CPCs through the online platform would be presented at the next SAC session, so that they could be incorporated on a permanent basis within the data submission protocols.

Specific conclusions and recommendations at the subregional level

69. The conclusions and recommendations emanating from the four SRCs were presented. These referred to the management plans in place for small pelagic species in the Adriatic Sea and for demersal species in the Strait of Sicily as well as to the ongoing work towards management of blackspot seabream in the western Mediterranean and of red shrimps in the eastern Mediterranean.

Adriatic Sea

70. The most salient issues related to the management plan for small pelagic fisheries in the Adriatic Sea were outlined, in particular the outcomes of the simulations of alternative scenarios performed by the WKMSE.

71. The Committee noted that, under most of the scenarios tested, sardine and anchovy remained outside biologically safe limits and collapsed in some cases. On the contrary, when different variations of Recommendation GFCM/37/2013/1 were simulated, on average, the stocks recovered to safe biological limits.

72. The Committee took note of the suggestion of the WKMSE of revising the management plan in Recommendation GFCM37/2013/1, updating the reference points with those proposed by the benchmark assessment and included in the report of the eighteenth session of the SAC and applying a temporal framework for achieving BPA (by 2018) and FMSY (by 2020). Moreover, it advised that the implementation of management measures in line with those targets take into consideration the characteristics of the different fleet segments, including their share in fishing mortality.

73. The delegation of the EU, supported by Albania and Croatia, pointed to the urgent need for additional scientific work on the evaluation of management scenarios in order to include different fleet segments, an evaluation of the impacts of spatial closures and an analysis of the socioeconomic impacts of previously simulated scenarios. The representative of MEDAC also supported this suggestion.

74. The Committee endorsed the recommendations of the WGSASP and the Subregional Committee for the Adriatic Sea (SRC-AS) on small pelagic species in the Adriatic Sea, with particular reference to: i) the need to review the growth parameters of sardine before the next assessment; ii) the recovery of historical data on fry fisheries in GSA 18 as indices of sardine recruitment; and iii) the need to address the different timings of western and eastern acoustic surveys.

75. A proposal for the establishment of a FRA in the Pomo/Jabuka pit (GSA 17) was presented. This proposal built upon a recommendation to improve the status of several stocks (notably European hake) and covered a key area in terms of essential fish habitats for valuable species, vulnerable species and VMEs. The FRA would comprise a core area, within which all demersal fisheries would be permanently banned, and an external buffer area where restrictive measures on bottom trawling would be enforced.

76. The Committee welcomed the FRA proposal and acknowledged the importance of protecting areas such as the Pomo/Jabuka Pit. In particular, the delegate of the EU supported the proposal, pending the request to foresee an investigation on the impacts of the closure on stock dynamics towards the achievement of F_{MSY} .

77. The representative of Oceana also welcomed the FRA proposal as it contributed to the establishment of an essential fish habitat network by 2018, as foreseen by the Malta MedFish4Ever Declaration. She was joined by the representative of IUCN, who in addition noted that the area was within an ecologically or biologically significant marine area (EBSA) and suggested minor modifications with respect to IUCN-listed species.

78. The delegations of Croatia and Italy informed the Committee about a bilateral agreement on national measures to manage fisheries in the Pomo/Jabuka pit through a no-take zone for bottom trawling and the partial closure of adjacent buffer areas to different fishing gear. The area covered was very similar to that included in the FRA proposal. The closure was agreed to last for three years and be subject to scientific monitoring as well as to additional management measures (e.g. an authorized vessel register).

79. The bilateral closure was warmly welcomed by the delegate of Montenegro and the representatives of MEDAC and WWF. In particular, the representative of WWF commented that this kind of spatial measure could only be effective if scientists, fishers and administrations were in agreement and highlighted that in these cases, a co-management scheme could be appropriate.

80. The Committee therefore requested that the Commission consider the establishment of a new GFCM FRA in the central Adriatic Jabuka/Pomo Pit, on the basis of the technical elements and coordinates provided in the proposal included in Appendix 14.

81. Since the proposal covered fisheries management measures, the delegate of the EU informed that the possibility of developing a proposal to be submitted to the attention of the Commission would be explored.

82. On the general issue of implementing management measures for Adriatic Sea fisheries, the delegate of Montenegro recalled that, as he highlighted on previous occasions, the Montenegrin fleet was very small. He asked for some flexibility and understanding regarding the request to submit fisheries data, including the reconstruction of past data.

83. The delegate of Albania echoed such request for flexibility, pointing out that her country had experienced in the past issues related to misreporting catch statistics and number of vessels. She also asked that the characteristics of the different fleet segments, including their share in fishing mortality, be taken into consideration. She mentioned that Albania was working to build a functional data collection system, including incorporating data retrieved from the previous five years, thanks to the technical assistance provided by the GFCM within the framework of the letter of agreement recently signed between the GFCM and the Government of Albania.

Central Mediterranean

84. The most salient issues related to the management plan for demersal fisheries (European hake and deep-water rose shrimp) in the Strait of Sicily (GSAs 12–16) were presented, with particular reference to the outcomes of the WKMSE. Under current fishing mortality (status quo), European hake and deep-water rose shrimp both continued to be in overfishing and, in the case of European hake, the biomass continued to decrease. With a 30 percent reduction of fishing mortality, the biomass of deep-water rose shrimp increased by 2020, whereas with an 80 percent reduction, both species showed a strong increase in biomass but catches for deep-water rose shrimp did not recover to current levels.

85. The delegate of Tunisia enquired whether simulated management scenarios could take into account gear selectivity, which is an important aspect of this fishery, and if the socioeconomic effects would be considered in the future. It was clarified that in the analysis done, selectivity was indirectly simulated by modifying mortality at age, while socioeconomic effects were only addressed by evaluating changes in the level of catches.

86. The Committee endorsed the recommendations made by the Subregional Committee for the Central Mediterranean (SRC-CM) on the management plan for demersal fisheries in the Strait of Sicily. In addition, the Committee endorsed the recommendations made by the SRC-CM towards improving the advice for this fishery, namely: i) to use fleet-based assessment models as operational models for the assessment of management scenarios and move towards a more comprehensive Management Strategy Evaluation (MSE) framework, including uncertainty and evaluating the socioeconomic impacts of management strategies as well as the effects of gear selectivity; this should be accompanied by training activities on MSE; and ii) to validate model-predicted nursery areas in the southern part of the Strait of Sicily with direct observations. Furthermore, the Committee underlined that, in order to be able to discuss issues related to socio-economic aspects and fleet segments in the WK MSE, data should be provided in a timely manner, ahead of the workshop.

Western Mediterranean

87. The main outcomes of the session on blackspot seabream (*Pagellus bogaraveo*) in the Strait of Gibraltar (GSAs 1 and 3), held during the first meeting of the Subregional Committee for the Western Mediterranean (SRC-WM), were presented. It was acknowledged that previous stock assessments of this species in GSAs 1 and/or 3 were carried out in 2007 and 2011, highlighting that the resource was in overexploitation with a low biomass. The participants were also reminded that this species was included in the list of priority species for the western Mediterranean in 2016 and, as such, an assessment of the status of the stock was a priority.

88. The delegation of Morocco provided information on the Moroccan management of blackspot seabream in the Strait of Gibraltar, highlighting that the country was implementing the mid-term strategy and the DCRF, collecting exploitation indicators and conducting biological sampling in order to perform analytical assessments in response to GFCM recommendations, in collaboration with Spain and with the support of CopeMed II.

89. Since one of the needs for the blackspot seabream stock was to identify stock boundaries, the delegate of Spain was asked whether this species could be included among those species covered by the project discussed at the CopeMed II working group on stock identification. The representative of CopeMed II remarked that the project stood ready to support Spain and Morocco towards the joint assessment of the species in GSAs 1 and 3. However, including blackspot seabream in the stock identification project would require that thought be given to technical and scientific issues, considering that the project was currently concentrating on other species (European hake and sardine).

90. The delegate of the EU pointed out that this species had a complex hermaphroditic life history, which might result in unforeseen impacts of the fishery on its populations, through the preferential capture of one sex or the other depending on the targeted size. In order to provide the best scientific basis for advice and considering that, for the time being, the management of this species might have to be carried out in the absence of a stock assessment, he suggested the GFCM Secretariat to compile other biological information (e.g. size at first maturity and size at sex inversion) that might be useful to the GFCM (as reproduced in Appendix 13).

91. The representative of Oceana welcomed the discussion on this topic, recalling the commitment made within the mid-term strategy and reiterated in the MedFish4Ever Declaration to update the stock assessment of this species as a key step towards a potential management plan by 2020.

92. The Committee recommended to: i) improve the data and methods available for the stock assessment of this species; ii) address the issue of stock identification possibly in 2018–2019; and iii) compile a summary of available biological data to be put at the disposal of the SAC.

Eastern Mediterranean

93. An overview of issues related to the status of eastern Mediterranean stocks and the recommendations of the Subregional Committee for the Eastern Mediterranean (SRC-EM) were presented. It was recalled that the SRC-EM had: i) highlighted the short time series of data available, stressing the need to ensure the continuation of data collection; ii) recommended the application of data limited stock (DLS) assessment methods for eastern Mediterranean stocks through a dedicated pilot study; and iii) recommended to compile the best available information and carry on with data analysis towards a revision of the list of priority species.

94. Furthermore, considering the relevance of the deep-water red shrimp fishery, the SRC-EM had advised to: i) assess the status of giant red shrimp (*Aristeomorpha foliacea*) and blue and red shrimp (*Aristeus antennatus*) stocks in the future, taking into account the peculiarities of the different fleets; and ii) advance towards a management plan for this fishery, incorporating *inter alia* aspects of the FAO DSF Guidelines, namely those included in the WGVME recommendations. Finally, a proposal for a GFCM-UNEP/MAP joint monitoring programme on non-indigenous species (NIS) in the eastern Mediterranean was outlined and the key aims of this pilot programme were described.

95. The delegate of Turkey remarked that the Middle East Technical University (Mersin) had some of the longest time series of data for the area and expressed his willingness to contribute to the work of the SAC subsidiary bodies in using these data. In this respect, the delegate of Egypt highlighted that the time series available for a number of species (e.g. red mullet and peregrine shrimp) were long enough to be used for stock assessments. This was echoed by the representative of EastMed, who remarked how the number of assessments had been increasing in recent years. He also underlined that the assessment of some species in the area was being carried out using data-poor assessment methods and that a procedure should urgently be established, based on the precautionary approach, in order to use these assessments for the provision of advice.

96. In addition, the delegate of Egypt recalled the discussions held at the SRC-EM on the priority species for the subregion, underlining the need to incorporate red shrimps in the list of priority species.

97. The delegates of Egypt and the EU concurred on the importance of NIS in the subregion. The delegate of Egypt highlighted that some of these species were commercially exploited and should therefore be subject to fisheries management, while other species could pose a threat to the ecosystem and should be treated as a conservation issue.

98. The delegate of Cyprus also welcomed the initiative and underlined that particular focus should be given to invasive species considering their potential effects on the ecosystem.

99. The Committee endorsed the conclusions of the SRC-EM, insisting on data collection especially for priority species and proposed to add giant red shrimp and blue and red shrimp to the list of priority species for the eastern Mediterranean. Moreover, it endorsed the joint UNEP/MAP-GFCM monitoring programme on NIS in the eastern Mediterranean.

IMPLEMENTATION OF THE SAC SUBREGIONAL APPROACH

100. The GFCM Executive Secretary recalled the main steps of the implementation of the subregional approach, as embedded in the GFCM constitutive agreement, mentioning that four SRCs had been established as SAC technical fora in which experts and stakeholders provided views on subregional issues of relevance, while ad hoc technical workshops and permanent working groups, of a subregional or regional nature, were still being organized on a case-by-case basis to address specific aspects identified by the SAC such as the interaction between fisheries and the environment.

101. The Committee noted that this approach had been effective thus far in more systematically addressing relevant matters identified by the SAC and requested by the Commission. Moreover, specific

subregional fisheries management issues were addressed by experts and administrations directly concerned, which resulted in enhanced participation in terms of experts, country representatives and partners. More specifically, it was recognized that the SRCs contributed to the identification of priority species at the subregional level, provided advice that was then incorporated in GFCM recommendations and promoted new initiatives such as the discussion on FRAs.

102. The delegate of the EU, in noting that some time might still be needed to fully understand the implications of this approach, acknowledged that after these first two years, the experience proved very positive. He stressed that thematic issues of major importance, such as those related to environment or socioeconomics, should be regularly addressed within expert groups that should be of a permanent nature.

103. Following a question by the delegate of Lebanon regarding the role of the FAO regional projects within the SAC subregional approach, the GFCM Executive Secretary specified that one of the added values of the new approach was a better alignment with the work carried out by the regional projects. This was because both the GFCM and the projects benefitted from a tighter level of synchronisation, internally and *vis-à-vis* countries, while maintaining their already clearly defined respective institutional roles. He added that the subregional technical units which were being set up in countries that had formally proposed to host them (Spain and Bulgaria for the time being) would be an additional boost to enhanced coordination. Similarly, it was recalled that Lebanon and Malta had also submitted formal offers to host technical units.

104. In this latter respect, the delegate of Morocco thanked Spain for its kind offer to host the western Mediterranean technical unit, as it represented an important milestone for enhanced cooperation and exchange of expertise in the area, adding that her country looked forward to tightly collaborating with the appointed moderator.

105. The SAC agreed that its renewed structure, based on a combination of SRCs, ad hoc technical expert groups and permanent working groups, was most appropriate to implement its work in line with the mandate entrusted to it by the Commission. The generic terms of reference of the SRCs were updated and it was agreed that each SRC would develop specific objectives for each meeting, as appropriate.

SAC WORK PLAN FOR 2017–2019

106. The SAC Chairperson introduced the preliminary SAC work plan, based on the work carried out during the intersession. After examining priorities for the next intersession, the Committee endorsed its 2017–2019 work plan as reported below.

Regional issues

- Produce the 2018 SoMFi report using the most comprehensive, up-to-date and complete data and information (based on the structure reproduced in Appendix 9).

Enhanced knowledge and strengthened advice

- Compile relevant information at the national level on priority species towards increasing the stock assessment coverage for these species.
- Assess the possibility of using data-limited stock assessment methods, where appropriate, and ensure the provision of precautionary advice for those priority stocks for which only fragmented or missing data exist.
- Define an approach for the harmonization of otolith reading for selected priority species (anchovy, sardine, European hake, red mullet) between national institutions.

- Test the introduction of new assessment methods such as statistical catch-at-age (SCAA) and integrated analysis.
- Support the implementation of harmonized scientific surveys at sea in line with the agreed roadmap (reproduced in Appendix 10) in order to provide relevant information for the assessment of stocks as well as general information on Mediterranean ecosystems.
- Compile socioeconomic fisheries data, including on SSF, in line with the agreed survey methodology and roadmap for data collection, in view of providing accurate, timely and complete baseline data on fisheries to be integrated in management advice.
- Within the framework of the WGSAs, assess the work done on the definition and estimation of identified common indicators and targets to ensure GES. Evaluate alternative indicators (e.g. recruitment, body condition) as well as different aggregation methods to obtain regional estimators.
- Implement conformity, stability and consistency data quality checks on data submitted under Recommendation GFCM/40/2016/2. Provide feedback to CPCs on the quality of submitted data, in line with the quality indicators, and propose remedial actions when necessary.
- Define a common methodology to obtain estimates of red coral production (e.g. using live or dry weight) and to validate the information included in logbooks, including through the use of scientific observers on board and on landing sites.

IUU fishing

- Support the implementation of the roadmap for the estimation of IUU fishing (available as Appendix 11).

Interactions between fisheries and marine environment

- Perform a regional review on the current state of bycatch in the GFCM area of application and elaborate common guidelines for data collection and monitoring of bycatch activities.
- Together with relevant partners, implement a bycatch monitoring programme, including the collection of representative data, using scientific observers on board.
- Produce identification guides (e.g. posters, leaflets, etc.), in collaboration with relevant partners, in order to help fishers in the identification and self-reporting of the main VME taxa, including by means of the proposed VME encounter protocol.
- Compile information on potential VME locations in the Mediterranean, using data from surveys and experts, with a view to obtaining information from scientific observers and fishers once available and with the aim of establishing a Mediterranean VME database.
- Initiate work to map fishing activities in deep-sea areas (“fishing footprint”).
- Work towards the assessment of the potential impacts of climate change on fisheries and ecosystems in order to develop a regional adaptation strategy.
- Compile information on the distribution, abundance and impact of NIS on Mediterranean fisheries and ecosystems and propose a roadmap towards a NIS regional adaptation strategy.
- Investigate mitigation measures to address interactions of predators and vulnerable species with fisheries, on the occasion of an ad-hoc meeting to be organized in 2018, with the participation of regional and international experts.

Subregional issues

- Progress towards the development of a more comprehensive MSE framework that includes uncertainty, socioeconomics and fleet-based analyses. In particular, socioeconomic information

should be compiled and work should aim to develop socioeconomic models to be incorporated in the assessment of management scenarios in both the Adriatic and central Mediterranean subregions.

- Conduct training activities to increase the capacity, in the subregions, to perform quantitative assessments of management scenarios, including on the use of socioeconomic models.

Western Mediterranean

- Organize a technical expert session on blackspot seabream, in order to examine the progress made on the actions suggested in the background document (SRC-WM, 2017), including a preparatory bilateral Morocco-Spain technical work (taking into account the existing work within ICES and CECAF).
- Organize a second training on stock assessment in this subregion.

Central Mediterranean

- In the context of the implementation of surveys at sea, investigate simulated nursery areas for European hake and deep-water rose shrimp in the Strait of Sicily.

Eastern Mediterranean

- Identify elements supporting the development of an adaptation strategy to cope with the potential effects of NIS, based on the results of the UNEP/MAP GFCM NIS pilot study as well as on previous and ongoing initiatives.
- Organize a dedicated session to update elements for the management of deep-water red shrimp.
- Organize a dedicated session on NIS based on the outcomes of the pilot study.
- Organize a dedicated session on the provision of advice for DLS.
- Perform a detailed analysis of catches and information by species towards revising the list of priority species in the eastern Mediterranean.

107. The Committee agreed on the list of meetings below. Draft terms of reference for selected meetings are available in Appendix 12.

Meeting	Place/Date
Working Group on Small-scale and Recreational Fisheries (WGSSF)	FAO HQ 14-15 September 2017 TBC
FAO/GFCM/JRC summer school on quantitative fisheries stock assessment	Italy, 10–22 July 2017
EIFAAC/ICES/GFCM Working Group on Eel (WGEEL)	Kavala, Greece 3–10 October 2017
Working Groups on Stock Assessment of Demersal (WGSAD) and Small Pelagic Species (WGSASP)	Rome, TBC November 2017
Workshop on the assessment of management scenarios for Mediterranean case studies, including ad hoc session for small pelagic species in the Adriatic Sea	January 2018
SRC-WM, including a session on blackspot seabream	February 2018
SRC-EM, including sessions for deep-water red shrimps and NIS	February 2018
SRC-AS	March 2018

Meeting	Place/Date
SRC-CM	March 2018
Working Group on Vulnerable Marine Ecosystems (WGVME)	April 2018
Twentieth session of the SAC	Morocco June 2018
Training course on quantitative assessments of management scenarios	July 2018
Second SRC-WM training on stock assessment methods	September 2018
High-level meeting on small-scale fisheries	September 2018
GFCM Forum on Fisheries Science	December 2018
Workshop on fisheries data submission in line with the DCRF	TBD
Workshop towards the implementation of a Mediterranean management plan for European eel	TBD
Working Group on Red Coral (WGREDCORAL)	TBD
Expert group on the assessment of IUU fishing	TBD

108. Since the first meeting of the WGSSF would be in September 2017, the Committee agreed to defer work plan activities on small-scale and recreational fisheries until the WGSSF meeting. In light of this, it invited the WGSSF to include in its work an assessment of the impact of SSF and recreational fishing activities on coastal species and to report then to the SAC for review.

109. The Committee took note of some activities already planned by partners, which were regarded as an important opportunity to advance on some actions identified in the SAC work plan. This was the case of the AdriaMed Study Group on otoliths of demersal species organized by the FAO regional projects, which could support the work on the harmonization of otolith readings. In this latter regard, the delegate of Spain offered the help of the Spanish Institute of Oceanography.

110. It was proposed to organize an ad hoc meeting on the management strategy evaluation of small pelagic species in the Adriatic Sea to pursue the work done by the WKMSE in 2017, in response to Recommendation GFCM/40/2016/3. The delegate of the EU considered it more appropriate to wait for the new advice of the WGSASP, in 2017. Since the annual WKMSE meeting was already foreseen for early 2018, the Commission was invited to consider whether the two meetings could be merged.

111. The delegate of the EU explained that EU catches represented 99 percent of the catches of small pelagic species in the Adriatic and that a European management plan for small pelagic species in the Adriatic Sea was currently under evaluation. This process required a responsive scientific mechanism within the Scientific, Technical and Economic Committee for Fisheries (STECF), which should be in line with that of the SAC. In this regard, he considered that changes in the input data were likely to modify the reference points agreed by the SAC at its eighteenth session, and proposed to hold a joint SAC-WGSASP-STECF meeting on the assessment of small pelagic species in the Adriatic Sea with a view to achieving a convergence in the scientific advice.

112. The GFCM Secretariat specified that the decision on whether to modify the stock assessment methods and/or assumptions as well as to revise reference points and propose new ones to the SAC, should be based on a scientific assessment made by the experts within the GFCM WGSAs. In this context, it was recalled that whenever possible, and unless the WGSAs identify evidence of relevant violations of the model assumptions or substantial changes in the input data that are susceptible to affect model outcomes, stock assessment models and reference points should be kept stable for a period of time, so to avoid additional variability in the advice provided. It was noted that the above mentioned in-depth evaluation of the assessment models and input data, as well as the estimation of reference points for this stock, had been carried out during a dedicated benchmark assessment session in 2015.

113. Following comments by the delegate of Montenegro, the Committee took note of the request from the EU delegate, underlining that in any case GFCM technical meetings were open and that STECF experts were welcome to participate in the regular meetings of the WGSASP. The Committee asked the GFCM Executive Secretary to investigate and report to the Commission, at its next session, on the feasibility of organizing the next session of the WGSASP, taking into account the proposals made by the EU delegate, in light of the applicable procedures.

114. All countries were invited to actively contribute by ensuring the agreed work plan is duly followed, making necessary resources available, fully replying to requests of information and timely submitting appropriate data.

ANY OTHER MATTERS

115. The representative of the Marine Stewardship Council (MSC) presented a side-event on the outcomes and progress of the MedFish project, which sought to conduct a comprehensive analysis of fourteen French and Spanish Mediterranean fisheries using the MSC fisheries standard as a benchmark for sustainability. The three steps of this two-year project included a scanning and mapping phase, pre-assessments against MSC standards, and the development of action plans. In light of the approach used, it was stressed that the concept could be replicated in other areas of the Mediterranean basin. The Committee applauded this initiative, which was fully in line with the sustainability objectives of the mid-term strategy, as it could contribute to assessing progress in achieving strategic objectives. In this respect, the delegate of Italy mentioned that some Italian fisheries were involved in the MSC programme. It was clarified too that SSF were also contemplated.

116. The representative of ACCOBAMS informed the Committee about the ACCOBAMS Survey Initiative (ASI), which aimed primarily to assess the distribution and abundance of cetaceans at the regional scale. He noted that a field survey would be conducted in summer 2018 using a common protocol, with the participation of scientists from all Mediterranean countries. He indicated that the ACCOBAMS Secretariat would continue informing the SAC about the progress and outcomes of the project which could be useful for assessing the conservation status of cetacean populations and evaluating bycatch rates.

117. The Committee repeatedly thanked the Government of Slovenia for hosting the session paying tribute to the dedication of its staff, the outstanding organization and the perfect working conditions offered during the session. The excellent support and warm hospitality extended to all delegates and participants were highly appreciated.

118. The SAC Chairperson and delegates congratulated the GFCM Secretariat for its excellent work and tireless efforts made to ensure a smooth preparation and conduct of the session. Delegates were also thanked for their contribution towards the success of SAC intersessional activities.

DATE AND PLACE OF THE NEXT SESSION

119. The Committee agreed that its twentieth session would be held tentatively in June 2018. A decision on the exact dates would be taken at the forty-first session of the Commission.

120. The Committee took note of the kind invitation made by the delegation of Morocco to host the twentieth session, subject to official confirmation by the competent authorities.

ADOPTION OF THE REPORT

121. The report, including its appendixes, was adopted on Friday 19 May 2017.

OUVERTURE DE LA SESSION ET ORGANISATION DES TRAVAUX

1. Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) de l'Organisation des Nations Unies pour l'alimentation et l'Agriculture (FAO) a tenu sa dix-neuvième session à Ljubljana (Slovénie) du 16 au 19 mai 2017. Ont participé à la session des délégués de 18 parties contractantes méditerranéennes, d'une partie non contractante coopérante et de neuf 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. Au nom du Président de la CGPM, M. Abdellah Srouf, Secrétaire exécutif de la CGPM, a remercié le pays hôte de sa remarquable hospitalité et a insisté sur l'importance déterminante de cette session au regard de l'adoption de la stratégie à moyen terme (2017-2020) en faveur de la durabilité des pêches en Méditerranée et en mer Noire (stratégie à moyen terme) et de la Déclaration de Malte, soulignant le rôle central de la CGPM dans la mise en œuvre active de cette déclaration en vue de la réalisation des objectifs de durabilité pour les pêcheries méditerranéennes.

3. M. Marjan Podgoršek, secrétaire d'État auprès du Ministère slovène de l'agriculture, des forêts et de l'alimentation, a souhaité la bienvenue aux participants à Ljubljana. Il a rappelé la coopération fructueuse établie avec la CGPM et a insisté sur l'importance que revêtaient les travaux du CSC pour les pêches de son pays. Par ailleurs, soulignant l'importante dimension biologique et socioéconomique de la pêche en Slovénie, il a préconisé l'adoption, au niveau international, de mesures de gestion fondées sur des avis éclairés et tenant compte des caractéristiques du secteur dans chaque pays. Enfin, il a exprimé le souhait que les activités et la collaboration se poursuivent à l'avenir.

4. La session a été ouverte par M. Othman Jarboui, Président du CSC, qui a souhaité à son tour la bienvenue aux participants et a évoqué les progrès constants réalisés par le CSC au cours de ces dernières années, qui lui ont permis de renforcer sa capacité de s'attaquer aux défis les plus importants dans le cadre de son approche sous-régionale et de donner des avis éclairés sur un plus large éventail de questions. Évoquant la stratégie à moyen terme, il a noté que celle-ci accordait une importance considérable au rôle du Comité aux fins de la réalisation des objectifs généraux fixés par la Commission. Il a demandé aux pays d'apporter leur appui aux travaux du CSC afin de relever les défis à venir découlant de la stratégie à moyen terme.

5. Le Secrétaire exécutif de la CGPM a signalé que 16 pays avaient présenté leurs pouvoirs et a prié les pays qui ne l'avaient pas encore fait de s'acquitter de cette démarche avant la fin de la session. Le Président du CSC a informé les délégations que la déclaration de compétences et droits de vote de l'Union européenne (UE [organisation membre])) et de ses États membres soumise à la quarantième session de la Commission s'appliquait également à cette session.

ADOPTION DE L'ORDRE DU JOUR

6. Après avoir présenté les délégués et les observateurs, le Secrétaire exécutif de la CGPM a informé les participants des modalités d'organisation de la session.

7. L'ordre du jour a été adopté par le Comité tel qu'il figure à l'annexe 1. On trouvera la liste des documents à l'annexe 3 et les allocutions d'ouverture à l'annexe 4.

ACTIVITÉS INTERSESSIONS

Examen des décisions pertinentes prises par la Commission à sa quarantième session

8. Le Secrétariat de la CGPM a rappelé les principaux objectifs des cinq recommandations adoptées par la Commission à sa quarantième session, concernant la Méditerranée, à savoir: i) la Recommandation CGPM/40/2016/2 relative à la mise en œuvre progressive de la communication de

données conformément au Cadre de référence pour la collecte de données de la CGPM (DCRF); ii) la Recommandation CGPM/40/2016/3 établissant des mesures d'urgence supplémentaires en 2017 et 2018 pour les stocks de petits pélagiques en mer Adriatique (sous-régions géographiques 17 et 18); iii) la Recommandation CGPM/40/2016/4 établissant un plan de gestion pluriannuel des pêcheries exploitant le merlu européen et la crevette rose du large dans le canal de Sicile (sous-régions géographiques 12 à 16); iv) la Recommandation CGPM/40/2016/5 établissant une taille minimale de référence de conservation pour le merlu européen en mer Méditerranée; et v) la Recommandation CGPM/40/2016/7 concernant l'autorisation d'utiliser des véhicules sous-marins télécommandés dans le cadre de programmes nationaux de recherche scientifique sur le corail rouge. Les trois résolutions adoptées par la Commission concernant les principes directeurs pour la rédaction des décisions de la CGPM, la stratégie à moyen terme et les pêches artisanales durables, ont également été évoquées. Enfin, la proposition en attente concernant une recommandation de la CGPM établissant des mesures pour les activités de pêche récréative en mer Méditerranée a été portée à l'attention du CSC.

9. La décision prise par la Commission au sujet du Groupe d'examen a été rappelée au Comité. À cet égard, il a été souligné que, si une partie contractante ou une partie non contractante coopérante (PCC) considérait nécessaire, sur la base des résultats de la dix-neuvième session du CSC, d'aborder des cas qui requièrent des actions de gestion spécifiques urgentes, cela constituerait un motif valable et suffisant pour ajouter un point à l'ordre du jour de la quarante et unième session de la Commission afin d'activer le Groupe d'examen. Dans ce but, la PCC concernée devrait envoyer une demande formelle au Secrétaire exécutif de la CGPM.

10. Il a été rappelé que le Groupe de travail sur la mer Noire (WGBS) avait été chargé de l'examen des activités portant sur l'évaluation et la gestion des pêches en mer Noire, ainsi que de la formulation d'avis en la matière, dans la mesure où celui-ci avait été créé précisément dans cet objectif et qu'il pouvait compter sur la participation de tous les États riverains de la mer Noire, en accord avec l'approche sous-régionale.

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

11. S'appuyant sur le document portant la cote CGPM:SAC19/2017/2, le Président du Comité a présenté les activités mises en œuvre pendant la période intersessions, précisant que le CSC avait mené 15 activités, de portée régionale ou sous-régionale, couvrant des travaux techniques relatifs à l'évaluation des stocks, la gestion des pêches, la collecte de données et les interactions entre la pêche et l'environnement, ainsi que des questions particulières. Il a aussi informé les participants que tous les comités sous-régionaux s'étaient réunis pendant cette période, ce qui leur avait permis d'émettre des avis spécifiques concernant les plans de gestion existants ou d'examiner les priorités futures en matière de gestion, et il a fait valoir que l'évaluation des mesures de gestion prenait une importance croissante dans le cadre de la formulation des avis.

12. Le Président du CSC a signalé en particulier les progrès accomplis au regard de la Recommandation CGPM/40/2016/2 relative à la mise en œuvre progressive de la communication de données conformément au Cadre de référence pour la collecte de données de la CGPM (DCRF), qui constituait une étape importante vers l'amélioration de la collecte de données relatives aux pêches. Il a aussi évoqué les résultats obtenus dans le cadre de deux réunions portant sur la pêche en eaux profondes et les écosystèmes marins vulnérables et d'un atelier sur le corail rouge.

13. Le Comité a salué le travail remarquable accompli pendant la période intersessions, notant que les activités techniques couvraient des sujets de plus en plus divers et complexes et qu'elles répondaient à toutes les demandes émanant de la Commission, fournissant une base précise pour la formulation d'avis.

Rapports nationaux établis à l'intention du CSC

14. Le Secrétariat de la CGPM a présenté, en s'appuyant sur le document portant la cote CGPM:SAC19/2017/Inf.5, une synthèse des informations contenues dans les 15 rapports nationaux transmis par les pays méditerranéens, qui dans l'ensemble étaient semblables à ceux des années précédentes. Les éléments suivants, cependant, étaient à signaler: i) la taille des flottilles avait augmenté en Algérie (+16 pour cent entre 2011 et 2015) et au Maroc (+28 pour cent entre 2013 et 2015) mais elle avait diminué en Espagne (-23 pour cent entre 2011 et 2016) et à Chypre (-17 pour cent entre 2013 et 2016); ii) on avait observé une évolution croissante des débarquements l'année précédente en Albanie (+10 pour cent) et au Liban (+17 pour cent) et une tendance décroissante depuis 2011 en Libye (-50 pour cent), au Maroc (-27 pour cent), en Égypte (-26 pour cent), au Monténégro et en Espagne (-15 pour cent) ainsi qu'en Croatie (-12 pour cent); iii) le nombre déclaré de stocks évalués ces dernières années par les pays, y compris les évaluations réalisées au niveau national uniquement et non examinées dans les groupes de travail de la CGPM avait augmenté (77 en 2017 contre 57 en 2016); iv) de nombreux pays avaient réalisé des études portant sur la délimitation des unités de stocks et sur la gestion des rejets, des enquêtes sur les espèces de petits pélagiques et des analyses socioéconomiques; v) plusieurs pays avaient promulgué des lois et des règlements pour la mise en application des recommandations de la CGPM adoptées en 2016; et vi) les données relatives aux captures accessoires étaient généralement insuffisantes. Les rapports nationaux sont reproduits à l'annexe 15.

15. Le Comité a constaté avec satisfaction que, grâce au nouvel outil électronique, la communication des rapports nationaux avait été complète et il s'est félicité de la collaboration consentie par tous les pays à cet égard, soulignant que cela avait permis de simplifier la saisie des données et de constituer des bases de données homogènes et faciles d'accès dans lesquelles le CSC pouvait puiser de meilleures informations à l'appui de ses activités.

16. Plusieurs délégations ont déclaré qu'elles avaient du mal à se familiariser avec le nouvel outil électronique et qu'à leur avis certaines sections des rapports nationaux ainsi que certaines fonctions de l'outil électronique pouvaient encore être améliorées. Le Secrétariat de la CGPM s'est déclaré prêt à continuer de fournir une assistance pour la transmission en ligne des rapports nationaux. Afin également de repenser le format actuel des rapports, il a été convenu que le CSC serait consulté dans les semaines à venir en vue recueillir des commentaires concernant des améliorations potentielles, qui seront transmis à la Commission pour examen et action éventuelle.

17. Compte tenu de la grande importance que revêtent les espèces vulnérables aux fins de la conservation des écosystèmes marins, le Comité s'est penché sur la question de l'absence systématique de communication concernant les captures accidentelles de ces espèces, dans la mesure où l'aptitude du CSC à formuler des avis pertinents en la matière s'en trouvait réduite. La déléguée de l'Algérie, suivie par d'autres délégations, a évoqué la difficulté de recueillir concrètement ce type d'information au niveau national, sachant qu'une intervention directe des pêcheurs était nécessaire et que cela échappait donc à leur contrôle direct.

18. Les mesures prévues dans la stratégie à moyen terme en faveur des espèces vulnérables, en particulier le programme de surveillance des prises accessoires, étaient considérées comme offrant une occasion importante de réaliser des progrès dans ce domaine et les pays ont été invités à mettre en commun les pratiques les plus efficaces. À cet égard, la représentante de MedReact a proposé de procéder à une vérification par recoupement des constats d'infraction, qui pourraient constituer une source d'informations supplémentaire.

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

19. Les principales activités menées dans le cadre des projets régionaux de la FAO (AdriaMed, MedSudMed, CopeMed II et EastMed) pendant la période intersessions, notamment la coopération scientifique, les activités de recherche, les programmes de formation, ainsi que l'assistance technique (évaluation des stocks, appui au suivi des pêches, statistiques et systèmes d'information) ont été

présentées sur la base du document portant la cote CGPM:SAC19/2017/Inf.19. Il a également été rappelé aux participants qu'ils trouveraient des informations détaillées sur les activités et les produits des projets régionaux dans le rapport annuel du comité de coordination de chaque projet, disponible sur le site web correspondant.

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

21. Toutes les délégations des pays bénéficiant d'une aide au titre des projets régionaux ont pris la parole pour remercier les donateurs et mettre en avant la contribution importante de ces projets pour favoriser le dialogue concernant la gestion des pêches et de recueillir des données relatives aux pêches, notamment afin d'appuyer l'évaluation des stocks et la définition des limites des stocks.

22. Le délégué de l'UE s'est dit satisfait de la coopération et du dialogue fructueux qui avaient été établis dans le cadre de l'examen de différentes questions dans tous les pays méditerranéens. Il a souligné qu'il était important d'assurer un flux efficace d'informations sur les données et les résultats, avec les partenaires et les donateurs, notamment par l'intermédiaire des sites web.

23. Le Secrétariat de la CGPM s'est félicité des synergies créées entre la Commission et les projets régionaux de la FAO, soulignant que cette collaboration s'était encore renforcée ces dernières années et qu'elle avait permis de mettre en place un réseau solide grâce auquel les pays méditerranéens étaient à même de relever les défis pressants qui se posaient actuellement pour la durabilité des pêches. En particulier, la stratégie à moyen terme offrait une occasion concrète de renforcer les liens existants et de réaliser les objectifs ambitieux définis par la Commission.

PROGRÈS ACCOMPLIS DANS LA MISE EN ŒUVRE DE LA STRATÉGIE À MOYEN TERME, Y COMPRIS EN COOPÉRATION AVEC LES PARTENAIRES

24. Le Secrétariat de la CGPM a rappelé l'adoption et le lancement de la stratégie à moyen terme par la Commission, notamment les travaux entrepris pour affiner les activités et trouver les ressources et les partenariats pour leur exécution. Il a été rappelé qu'une coopération efficace, précisément avec le Département des pêches de la FAO et ses projets régionaux et avec les partenaires concernés, surtout ceux avec lesquels un protocole d'accord avait été conclu, était considérée comme un élément essentiel pour la bonne mise en œuvre de la stratégie à moyen terme. Il a aussi été souligné que la Cible 5 serait utile pour les quatre autres cibles car elle donnerait un cadre pour une coordination renforcée des parties prenantes et pour un renforcement des capacités.

25. Les délégués se sont dits très satisfaits du lancement rapide de plusieurs activités prioritaires au titre de la stratégie à moyen terme, reconnaissant que les objectifs de la stratégie étaient ambitieux mais devaient s'accompagner des actions nécessaires. À cette fin, les responsables des projets régionaux de la FAO ont dit soutenir pleinement la stratégie à moyen terme, et ont aussi exprimé le soutien du Département des pêches de la FAO dans son ensemble. En outre, ils ont insisté sur le fait qu'il fallait poursuivre une coordination fructueuse avec la CGPM afin d'optimiser l'utilisation des ressources.

26. Lors des débats qui ont suivi, les participants ont échangé leurs points de vue sur la présentation des activités à mener. Des informations ont été données sur les travaux visant à l'harmonisation des études scientifiques en mer qui permettrait de réaliser à l'avenir des études qui fourniraient des résultats comparables, utiles pour les évaluations régionales. Par ailleurs, les sessions thématiques du Forum CGPM sur les sciences halieutiques (Fish Forum), qui se tiendra fin 2018, ont été présentées, tout comme les contributions attendues au niveau des pays. La structure d'une enquête régionale ayant pour objet de recueillir des données socioéconomiques normalisées sur les pêches en Méditerranée, y compris la pêche artisanale, a aussi été exposée. Enfin, un projet de feuille de route visant à estimer les activités de pêche illicite, non déclarée et non réglementée (INDNR) a été présenté. Cette feuille de route comprend une approche par étapes pour évaluer puis estimer les incidences.

27. En ce qui concerne le renforcement des avis scientifiques, le délégué de l'UE a indiqué qu'il fallait agir rapidement sur des questions urgentes et a proposé que, dans certaines situations, on pourrait utiliser les évaluations des stocks produites par les groupes de travail sur l'évaluation des stocks avant qu'elles ne soient validées par le CSC. Le Secrétariat de la CGPM a précisé que tant les comités sous-régionaux pertinents que les ateliers sur l'évaluation des mesures de gestion (WKMSE) utilisaient déjà les évaluations des stocks produites par les groupes de travail sur l'évaluation des stocks, et ce, avant même que celles-ci ne soient validées par le CSC, puisqu'il serait autrement impossible de progresser dans la formulation d'avis sur les mesures de gestion entre les sessions.

28. Le délégué de Monaco s'est félicité de la diversité des questions qui seraient abordées par le Fish Forum et a noté que les réponses qui seraient apportées se rattachaient directement aux objectifs de développement durable (ODD) de l'Organisation des Nations Unies (ONU). Il a déclaré qu'en tant qu'organe des Nations Unies, la CGPM devait veiller à ce que les ODD soient systématiquement pris en compte lors du Fish Forum, compte tenu en particulier du fait que le Fish Forum a une visée plus large que l'ODD 14 (vie aquatique) puisqu'il concerne aussi des questions connexes, notamment les changements climatiques (ODD 13), la croissance économique (ODD 8) et l'égalité entre les sexes (ODD 5).

29. Suite à la demande d'éclaircissement du délégué de l'Égypte au sujet du rôle du Fish Forum, les objectifs de ce forum visant au renforcement des capacités et à l'élargissement des compétences en Méditerranée ont été mis en avant. Il a été rappelé que le forum respecterait essentiellement trois principes, à savoir: i) élargir la base de connaissances sur des sujets pertinents pour appuyer le travail technique de la CGPM dans plusieurs domaines tels que l'évaluation des stocks et l'élaboration des avis en matière de gestion; ii) mieux identifier les outils de recherche disponibles et élargir le réseau d'instituts de recherche qui contribuent au travail de la CGPM afin de renforcer l'expertise, notamment sur des sujets d'ordre socioéconomique, les aspects relatifs aux technologies des pêches et les questions environnementales; et iii) définir des priorités en matière de recherche sur les pêches pour orienter les efforts stratégiques à venir.

30. Les délégations ont suggéré un certain nombre de questions qui mériteraient d'être abordées dans le cadre des sessions thématiques du Fish Forum. On estimait en particulier que l'interface entre les sciences et les politiques – par exemple comment fournir des avis précis qui facilitent l'adoption de recommandations – en ce qui concerne les questions essentielles telles que la pêche artisanale ou encore l'impact environnemental, devait figurer parmi les points à aborder.

31. Les activités en cours visant à soutenir la pêche artisanale durable ont ensuite été présentées. Il a été expliqué que, pour contribuer à faire participer davantage les artisans-pêcheurs à la gestion, on recensait actuellement les organisations de pêche artisanale existantes afin d'évaluer les besoins en termes de capacités et d'élaborer une feuille de route pour renforcer les processus participatifs. Les travaux visant à évaluer la nature et les incidences de la pêche récréative en mer ont également été présentés. En vue de contribuer à la mise en œuvre des Directives volontaires visant à assurer la durabilité de la pêche artisanale dans le contexte de la sécurité alimentaire et de l'éradication de la pauvreté, la collaboration entre la CGPM et le Département des pêches de la FAO a été présentée lors d'une manifestation parallèle consacrée à l'élaboration d'une étude sur la protection sociale.

32. À cet égard, le délégué du Liban a souligné que les éventuelles répercussions de la situation géopolitique et de la crise des réfugiés sur la pêche côtière et sur les communautés d'artisans pêcheurs rendaient encore plus urgente la nécessité d'aborder la question de la protection sociale, particulièrement en Méditerranée orientale.

33. S'agissant de la pêche artisanale et de la pêche récréative, les délégués de Malte et du Maroc ont tous deux affirmé qu'il était nécessaire de définir ces activités de pêche de manière plus précise. Le Secrétariat de la CGPM a indiqué que l'on s'efforçait pour l'instant de comprendre comment ces activités étaient définies au niveau des pays, en vue de trouver une définition cohérente au niveau

régional. Ce sujet devrait de nouveau être abordé lors de la première réunion du groupe de travail sur la pêche artisanale et la pêche récréative (WGSSF) (septembre 2017).

34. La déléguée de l'Albanie a souligné le rôle important que jouait la pêche artisanale et, notant que son pays ne comptait actuellement aucune organisation pour cette forme de pêche, elle s'est félicitée des activités proposées dans la stratégie à moyen terme visant à favoriser les processus participatifs pour les artisans pêcheurs.

35. Le représentant du Conseil consultatif de la Méditerranée (MEDAC) a exprimé sa gratitude pour la collaboration en cours sur la pêche artisanale et la pêche récréative, a profité de l'occasion pour présenter le travail de son organisation et a offert le soutien du MEDAC ainsi que ses compétences spécialisées pour contribuer aux futures initiatives de la CGPM dans ce domaine.

36. Après la présentation, dans le cadre d'un événement parallèle, d'une étude sur la protection sociale des artisans pêcheurs, les délégués de l'Albanie, de l'Égypte, du Liban, du Maroc et de la Tunisie ont fait part de leur volonté de participer à la réalisation des études de cas dans leurs pays, avec l'appui de la CGPM. La déléguée de l'Algérie a également proposé d'élargir le champ d'application de l'étude, afin que celle-ci soit la plus complète possible, en distribuant un questionnaire général à tous les pays de la Méditerranée et de la mer Noire, y compris à ceux qui ne participent pas aux études de cas.

37. S'agissant du besoin de disposer de données plus exhaustives et de meilleure qualité sur les captures accessoires¹, le Secrétariat de la CGPM a présenté le champ d'application de programmes de surveillance spéciaux lancés actuellement en vue de recueillir des données sur les rejets et les captures accidentelles d'espèces vulnérables, au moyen d'observateurs scientifiques embarqués. Il a été expliqué que cette activité était menée en collaboration avec des partenaires pertinents, et que l'objectif était de trouver des mesures efficaces pour réduire les prises accessoires. Par ailleurs, la CGPM, le Département des pêches de la FAO et le Fonds mondial pour la nature (WWF) ont également organisé une manifestation parallèle sur l'évaluation des effets que le changement climatique pourrait avoir sur les pêches et les écosystèmes de la Méditerranée et de la mer Noire.

38. La déléguée de l'Albanie a insisté sur l'importance des données sur les captures accidentelles d'espèces vulnérables et a souligné le rôle que les mesures de surveillance et de contrôle pouvaient jouer dans la collecte de ces données.

39. Le Comité s'est félicité de l'intensification des efforts dans les domaines du changement climatique et de la pêche et a fait part de son appui à la feuille de route en vue d'une stratégie régionale qui a été présentée. Les délégués de l'Égypte et du Maroc ont souligné que le changement climatique était une réalité à laquelle il fallait faire face et qu'il était donc essentiel d'élaborer des mesures d'adaptation. Le délégué de l'UE a noté que, pour mettre en œuvre une feuille de route aussi ambitieuse, il était fondamental de recueillir des données fiables permettant de mieux comprendre la situation actuelle.

40. Le représentant de l'Accord sur la Conservation des Cétacés de la Mer Noire, de la Méditerranée et de la Zone Atlantique adjacente (ACCOBAMS) a félicité la CGPM pour le travail considérable qui avait été accompli, s'est félicité des activités conjointes déjà entreprises et a souligné que son organisation considérait la stratégie à moyen terme comme le fondement d'une collaboration future avec la CGPM sur les questions relatives à la conservation des cétacés et aux interactions entre les cétacés et la pêche. Il a aussi confirmé que le Secrétariat de l'ACCOBAMS était disposé à participer à l'organisation du Fish Forum. Le représentant du Programme des Nations Unies pour

¹ Les captures accessoires sont la partie des captures prélevées involontairement au cours d'une opération de pêche, en plus des espèces visées. Il peut s'agir d'autres espèces commerciales qui seront débarquées, d'espèces commerciales ne pouvant pas être débarquées (par exemple les individus sous-dimensionnés ou endommagés) ou d'espèces non commerciales; cela comprend également les espèces menacées, vulnérables ou rares (telles que les tortues, les requins, les mammifères marins, etc.) capturées accidentellement (DCRF, 2016).

l'Environnement/Plan d'action pour la Méditerranée (PNUE/PAM) a aussi confirmé la participation de son organisation.

41. La représentante de l'Union internationale pour la conservation de la nature (UICN) a confirmé elle aussi que l'UICN participerait à l'organisation du Fish Forum et a remercié la CGPM pour son travail sur les écosystèmes marins, soulignant son intérêt à voir la collaboration avec la CGPM sur les captures accidentelles d'espèces vulnérables s'étendre à d'autres espèces.

42. Enfin, le délégué du Liban a appelé l'attention sur la nécessité de disposer de ressources humaines importantes pour mener à bien le plan de travail proposé. En réponse à cette remarque, il a été souligné que la stratégie à moyen terme constituait un effort commun, auquel participait le personnel du Secrétariat de la CGPM, de la FAO et de ses projets régionaux, mais qu'elle était aussi tributaire des apports et des ressources des pays, et des synergies qui seraient trouvées avec les organisations partenaires. À cet égard, le délégué de la Tunisie a insisté sur le rôle important des points focaux nationaux s'agissant de la coordination et de la surveillance des activités menées au niveau des pays et a souligné qu'il était urgent de désigner rapidement ces points focaux afin que les activités soient lancées rapidement.

FORMULATION D'AVIS DANS LES DOMAINES DE LA GESTION ET DE LA RECHERCHE HALIEUTIQUES

État général des stocks en mer Méditerranée

43. Le Président du CSC a présenté une vue d'ensemble de l'état général des stocks en mer Méditerranée (reproduite à l'annexe 5), en s'appuyant sur les 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 (WGSASP) et du Groupe de travail CECPAI/CIEM/CGPM sur l'anguille européenne (WGEEL). Il a indiqué que, globalement, 20 pour cent des stocks évalués en 2016 étaient considérés comme étant exploités de manière durable, alors que 80 pour cent se trouvaient en situation de surexploitation, de surpêche, d'épuisement, de déséquilibre écologique ou dans une situation combinant ces conditions. Il a également rappelé que, dans le cadre de sa stratégie à moyen terme, la Commission avait adopté une liste des espèces prioritaires pour lesquelles un avis du CSC serait obligatoire. Enfin, il a évoqué les activités relatives aux indicateurs communs du bon état écologique des populations marines faisant l'objet d'une exploitation commerciale, dont le Comité devrait approuver le descriptif et les cibles.

44. S'agissant de l'évaluation des stocks d'espèces prioritaires, le Comité a noté que la couverture géographique était relativement bonne pour le merlu européen, la crevette rose du large et le rouget de vase (plus de 40 pour cent des sous-régions géographiques évaluées), alors qu'elle était moindre pour les petites espèces pélagiques (environ 20 pour cent pour la sardine et l'anchois). Il a également constaté que les stocks de dorade rose et d'allache n'avaient pas été évalués récemment dans les sous-régions pertinentes (Méditerranée occidentale et orientale, respectivement). La sous-région la mieux couverte (espèces prioritaires et sous-régions géographiques) était la mer Adriatique où 90 pour cent des stocks d'espèces prioritaires ont été évalués, suivie de la Méditerranée centrale (36 pour cent), la Méditerranée occidentale (32 pour cent) et la Méditerranée orientale (3 pour cent). L'accent a été mis sur la nécessité d'améliorer la couverture grâce à une participation accrue de l'ensemble des parties prenantes.

45. Le délégué du Maroc, appuyé par les projets régionaux de la FAO, a demandé si le pourcentage résultant des stocks exploités de manière durable correspondait à un ratio ou s'il était pondéré par la valeur des débarquements. Il a été précisé que ce pourcentage s'appuyait sur le nombre d'unités de stocks considérés comme étant exploités de manière durable divisé par le nombre total d'unités de stocks évalués. Il a également été rappelé au Comité que la pertinence de ce paramètre en tant qu'indicateur régional faisait encore l'objet d'un examen technique, l'espoir étant de parvenir à un accord sur ce point en vue de l'élaboration du rapport sur l'état des pêches en Méditerranée et en mer Noire (rapport SoMFI) 2018.

46. En ce qui concerne les objectifs proposés pour les captures accessoires, l'effort de pêche et les captures par unité d'effort (CPUE) en tant qu'indicateurs communs relatifs au bon état écologique, il a été souligné qu'à eux seuls, ces indicateurs pouvaient ne pas être suffisants pour décrire l'état de certains stocks ou de certaines pêches. Toutefois, en association avec d'autres indicateurs communs (biomasse du stock reproducteur, mortalité par pêche et débarquements), ils pouvaient donner une vision au niveau régional de l'état des populations faisant l'objet d'une exploitation. Il a également été suggéré d'utiliser d'autres indicateurs (par exemple, recrutement, état corporel et composition par âge) pour mieux tenir compte de la complexité de la pêche en Méditerranée. Le Comité a reconnu qu'il fallait continuer d'affiner tous les indicateurs recensés et a conseillé de préparer une proposition visant à regrouper ces indicateurs aux niveaux sous-régional et régional afin d'en évaluer l'efficacité.

47. Parmi les stocks se trouvant au-delà des limites biologiques de sécurité, l'attention a été appelée sur la situation du merlu européen, qui présente le taux de surexploitation moyen le plus élevé (actuellement, la mortalité par pêche était en moyenne 7,4 fois supérieure au taux considéré comme étant viable et avait encore augmenté depuis 2015). S'agissant des espèces de petits pélagiques, on a signalé les stocks de sardine et d'anchois dans la sous-région géographique 7, qui ont été considérés comme étant respectivement en situation de déséquilibre écologique et épuisés. Dans le cas de l'anguille d'Europe, il a été souligné que son état était considéré comme critique.

48. S'agissant du merlu européen, les recommandations étaient les suivantes: i) prendre des mesures de gestion immédiates afin de réduire la mortalité par pêche en adoptant des plans de gestion pluriannuels supplémentaires; ii) recenser de nouvelles zones de reproduction; iii) poursuivre la simulation de différents scénarios de gestion; et iv) mettre en place un projet de marquage visant à recueillir des données essentielles concernant la croissance, la mortalité naturelle, les schémas migratoires et la connectivité. Concernant l'anguille d'Europe, il a été recommandé de réduire – ou maintenir – à un niveau aussi proche de zéro que possible, la mortalité d'origine anthropique qui a des conséquences sur la production et l'échappement des civelles, et de recueillir des données conformément au DCRF, en vue de l'élaboration d'un plan régional pour la gestion adaptative de cette espèce en mer Méditerranée. S'agissant des espèces de petits pélagiques, il a été recommandé d'évaluer un plus grand nombre de stocks dans la région et de mettre en place, de toute urgence, un plan de reconstitution du stock d'anchois dans la sous-région géographique 7. Pour toutes les espèces prioritaires, il a été recommandé d'harmoniser les méthodes de lecture des otolithes.

49. Le délégué de la Croatie a souligné les difficultés que posait la détermination de l'âge des espèces démersales et de petits pélagiques, ainsi que les incertitudes relatives aux clés âge-longueur, ce qui l'amenait à s'interroger sur la qualité des évaluations des stocks basées sur l'âge pour ces espèces. Le coordonnateur du WGSASP a fait valoir les efforts déployés par le groupe de travail afin de déterminer la sensibilité des évaluations à ces incertitudes et qui avaient permis d'établir la fiabilité des avis donnés.

50. Après avoir signalé quelques incohérences dans le rapport du WGSAD concernant le niveau de biomasse relatif de quatre stock démersaux (qui ont ensuite été corrigées, telles que reproduites à l'annexe 5), le délégué de l'UE a reconnu que, même si un pourcentage important de stocks d'espèces démersales était soumis à une pression de pêche trop élevée, certains ne présentaient pas un faible niveau de biomasse dans les séries chronologiques prises en compte aux fins de l'évaluation (on a estimé que 8 stocks avaient un niveau de biomasse relative élevé, 4 un niveau moyen et 14 un faible niveau), si bien que la CGPM pouvait encore prendre des mesures pour gérer la pression de pêche afin d'éviter que le niveau de biomasse ne se détériore davantage. En revanche, certains stocks de petits pélagiques présentaient un niveau de biomasse faible ou très faible, même lorsque la mortalité par pêche était négligeable, ce qui pouvait indiquer qu'une période plus longue serait nécessaire pour permettre à ces stocks de se reconstituer.

Environnement et écosystèmes marins

51. Le Président du CSC a fait rapport sur les recommandations découlant des activités relatives à la définition et la gestion de la pêche en eaux profondes et à la protection des écosystèmes marins vulnérables, y compris les indicateurs correspondants, les protocoles y afférents et la cartographie des zones de pêche en eaux profondes. Il a également présenté les conclusions de l'atelier sur le corail rouge (WKREDCORAL), en particulier pour ce qui est de la possibilité de mettre en œuvre un plan de gestion régional adaptatif pour cette pêcherie, un document de réflexion relatif à un programme de recherche sur le corail rouge, ainsi que d'autres questions évoquées dans la Recommandation CGPM/40/2016/7, telles que l'utilisation de véhicules sous-marins télécommandés.

52. Plusieurs délégations ont demandé des précisions sur les éléments proposés pour la gestion de la pêche en eaux profondes et la protection des écosystèmes marins vulnérables, en particulier concernant la définition de la limite de profondeur. Il a été noté que les Directives internationales sur la gestion de la pêche profonde en haute mer de la FAO ne donnaient pas une définition précise de la pêche en eaux profondes et que les limites de profondeur utilisées pour définir les écosystèmes d'eaux profondes, ainsi que la pêche en eaux profondes en Méditerranée, allaient du rebord de la plateforme continentale jusqu'à la pente.

53. Compte tenu de ce qui précède, le Comité est convenu qu'aucune définition de la pêche en eaux profondes ne devait être ajoutée, pour l'instant, dans la formulation d'avis, ni dans le cadre des éléments techniques. Par ailleurs, il a été fait valoir qu'à l'heure actuelle, seuls les navires suivants devaient faire l'objet des mesures de gestion proposées dans ces éléments techniques: i) les navires de pêche d'une longueur hors-tout supérieure à 15 mètres qui utilisent des engins de pêche entrant en contact avec les fonds marins et visant *Aristaeomorpha foliacea*, *Aristeus antennatus* ou *Plesionika martia*; et ii) les navires de pêche d'une longueur hors-tout supérieure à 15 mètres qui utilisent des engins entrant en contact avec les fonds marins (chaluts de fond, palangres, filets maillants, nasses et pièges) à plus de 300 mètres de profondeur.

54. Le Comité a approuvé les éléments techniques mis à jour en vue de l'établissement d'un protocole en cas de rencontre imprévue avec des écosystèmes marins vulnérables, de la réalisation d'une cartographie des zones de pêche existantes en eaux profondes et de l'établissement d'un protocole exploratoire sur la pêche de fond en eaux profondes, éléments qui sont reproduits dans les annexes 6(A), (B) et (C) respectivement et seront présentés à la Commission pour examen.

55. La représentante d'Oceana s'est félicitée du travail accompli par le WGVME, en particulier de la collecte d'informations concernant les zones dans lesquelles se trouvaient des écosystèmes marins vulnérables. Elle a souligné qu'il importait de continuer de travailler aux protocoles en cas de rencontre imprévue avec des écosystèmes, en y incluant l'obligation de s'éloigner de ces écosystèmes ainsi que des évaluations d'impact. Elle a aussi souligné que le groupe de travail devait se réunir régulièrement, y compris en tant que forum, afin d'appuyer les débats techniques en vue de la préparation des propositions relatives à des zones de pêche réglementées.

56. S'agissant du corail rouge, le Comité a noté que des lacunes considérables subsistaient dans les informations et données qui étaient communiquées par les PCC et il a demandé instamment à la Commission de résoudre ce problème. Il a aussi recommandé que les pays renforcent leurs mesures de suivi, de contrôle et de surveillance et qu'ils assurent une mise en œuvre plus systématique des mesures indiquées dans les directives relatives à la gestion du corail rouge qui avaient été adoptées.

57. Enfin, le Comité a indiqué que, pour favoriser une meilleure compréhension de l'état de cette ressource, l'utilisation de véhicules sous-marins télécommandés à des fins scientifiques devait être autorisée et que toute recommandation concernant ces engins devait préciser que ceux-ci ne sont en aucun cas utilisés à d'autres fins. Reconnaisant qu'un programme de recherche sur le corail rouge permettrait d'obtenir des résultats utiles et complémentaires des avis fournis, le Comité a également approuvé les éléments d'un document de réflexion révisé relatif à un programme de recherche sur le

corail rouge. Ces éléments, qui sont reproduits à l'annexe 7, devront être développés puis présentés à la Commission pour examen.

Collecte de données et indicateurs de qualité

58. Le Président du CSC a rappelé que la Recommandation CGPM/40/2016/2 relative à la mise en œuvre progressive de la communication de données conformément au Cadre de référence pour la collecte de données de la CGPM (DCRF) avait été adoptée pour un an seulement, et que des activités avaient été entreprises pendant la période intersessions pour préparer son éventuelle mise en œuvre complète. Il a également évoqué les échanges de vues, au sein de la CGPM sur la définition et l'utilisation des indicateurs relatifs à la qualité des données.

59. Le Comité a salué la promptitude avec laquelle des mesures avaient été prises pour que tous les pays fassent part de leur expérience avec le DCRF, règlent les problèmes et trouvent ensemble des solutions pour garantir la transmission systématique des données sur les pêches par l'intermédiaire de la plateforme en ligne.

60. Sur la base des dispositions pertinentes de la Recommandation CGPM/40/2016/2 – aux termes desquelles les données communiquées conformément au DCRF doivent satisfaire aux spécifications concernant les segments de la flotte de la CGPM – le Comité a examiné les propositions de l'Italie, de la Slovénie et de l'Espagne, qui demandaient de regrouper certains des segments de la flotte proposés à l'origine dans la recommandation, et il a décidé de les approuver pour les années de référence 2015 et 2016. Il a été proposé d'organiser une réunion technique, lorsque la communication des données conformément au DCRF sera pleinement mise en œuvre, pour régler notamment cette question importante.

61. Le délégué du Monténégro s'est félicité des progrès accomplis en matière de facilitation de la communication des données. Il a précisé que des efforts avaient déjà été entrepris au niveau de son pays pour rendre la collecte des données conforme aux exigences du DCRF, et que son pays était prêt à communiquer ses données conformément auxdites exigences.

62. Le délégué de l'Italie, reprenant à son compte les interventions précédentes, s'est félicité du travail fructueux accompli s'agissant de la collecte de données sur les pêches et a confirmé que son pays communiquerait ses données nationales conformément au DCRF par l'intermédiaire de la plateforme en ligne.

63. Le délégué de la Libye a indiqué que son pays était en train de réviser ses lois pertinentes, concernant notamment les segments de la flotte, afin de les adapter aux dispositions du DCRF. Le Secrétariat de la CGPM s'est dit prêt à fournir à la Libye l'assistance technique dont elle pourrait avoir besoin à cet effet, en collaboration avec les projets régionaux.

64. La déléguée du Maroc a annoncé que son pays était maintenant disposé à soutenir la mise en œuvre complète de la communication des données conformément au DCRF, et qu'il demandait une assistance technique sur les procédures de transmission des données.

65. Le délégué de l'UE a rappelé l'engagement pris dans le cadre de la Déclaration de Malte MedFish4Ever afin d'assurer que, d'ici 2020, les principaux stocks fassent l'objet d'une collecte de données adéquate. À cet égard, il s'est félicité des avancées importantes obtenues pour la collecte de données sur les pêches et la qualité de ces données, grâce auxquelles la CGPM pouvait mieux accomplir sa mission, et a réaffirmé le soutien de l'UE pour que la collecte et la communication des données soient pleinement mises en œuvre conformément au DCRF. Enfin, il a souligné qu'il importait de sensibiliser les parties contractantes coopérantes à la qualité des données, afin de trouver, le cas échéant, des solutions en temps utile.

66. Le représentant du Centre d'Activités Régionales pour les Aires Spécialement Protégées (CAR/ASP) du PNUE/PAM s'est félicité des améliorations considérables que les pays avaient apportées à la collecte des données. Il a souligné que le DCRF pourrait être très utile au Programme de surveillance et d'évaluation intégrées (IMAP) de la Méditerranée, qui est fortement tributaire du suivi des objectifs écologiques.

67. Le Comité a recommandé de mettre pleinement en œuvre la communication des données conformément au DCRF et a invité la Commission à adopter une nouvelle recommandation fondée sur celle qui avait été adoptée en 2016, en remplaçant la matrice statistique de la Tâche 1.

68. Par ailleurs, le Comité est convenu d'adopter temporairement les indicateurs de conformité, de stabilité et de cohérence pour les vérifications de la qualité des données (avec seuils préliminaires), comme décrit à l'annexe 8. Les résultats préliminaires de la première phase de mise en œuvre de la communication des données par les PCC au moyen de la plateforme en ligne seraient présentés à la session suivante du CSC, afin qu'ils puissent être incorporés de façon permanente dans les protocoles de communication des données.

Conclusions et recommandations spécifiques au niveau sous-régional

69. Les conclusions et recommandations formulées par les quatre comités sous-régionaux ont été présentées. Elles se rapportaient aux plans mis en place pour la gestion des pêcheries de petits pélagiques en mer Adriatique et des pêcheries d'espèces démersales dans le canal de Sicile ainsi qu'aux travaux en cours en vue de la gestion de la dorade rose en Méditerranée occidentale et de la crevette rouge en Méditerranée orientale.

Mer Adriatique

70. Les questions les plus importantes concernant le plan de gestion de la pêche de petits pélagiques en mer Adriatique ont été passées brièvement en revue, en particulier les résultats des simulations de différents scénarios effectuées par l'Atelier WKMSE.

71. Le Comité a noté que, pour la plupart des scénarios testés, les stocks de sardines et d'anchois demeuraient en deçà des limites biologiques de sécurité et s'effondraient dans certains cas. À l'inverse, lorsque la simulation testait différentes variations de la Recommandation CGPM/37/2013/1, en moyenne, les stocks se reconstituaient et revenaient dans les limites biologiques de sécurité.

72. Le Comité a pris note de la suggestion faite par le WKMSE de réviser le plan de gestion prévu dans la Recommandation CGPM/37/2013/1, en substituant aux points de référence initiaux ceux proposés par l'évaluation de référence et repris dans le rapport de la dix-huitième session du Comité, et en appliquant un cadre temporel qui permette d'atteindre les points de référence B_{PA} (d'ici à 2018) et F_{MSY} (d'ici à 2020). En outre, le Comité conseillait de mettre en œuvre des mesures de gestion conformes à ces objectifs en tenant compte des caractéristiques des différents segments de la flotte, y compris leur part dans l'indicateur relatif à la mortalité par pêche.

73. La délégation de l'UE, soutenue par l'Albanie et la Croatie, a souligné le besoin urgent de procéder à d'autres travaux scientifiques sur l'évaluation des scénarios de gestion afin de prendre en compte les différents segments de la flotte, ainsi qu'à une évaluation de l'impact des périodes de fermeture spatiale et d'une analyse des effets socioéconomiques des scénarios précédemment testés. Le représentant du MEDAC a également soutenu cette proposition.

74. Le Comité a approuvé les recommandations relatives aux petits pélagiques en mer Adriatique, formulées par le WGSASP et le Comité sous-régional pour la mer Adriatique (SRC-AS), en particulier: i) la nécessité d'étudier les paramètres de croissance de la sardine avant la prochaine évaluation; ii) la récupération de données rétrospectives sur la pêche des alevins dans la sous-région géographique 18

comme indices du recrutement de la sardine; et iii) la nécessité de régler la question des différences de calendrier de prospection acoustique dans les secteurs occidental et oriental.

75. Une proposition visant à instaurer une zone de pêche réglementée au niveau de la fosse de Pomo Jabuka (sous-région géographique 17) a été présentée. Elle fait suite à une recommandation d'amélioration de l'état de plusieurs stocks (celui du merlu européen en particulier) et couvre une aire fondamentale quant aux habitats d'espèces de valeur et aux espèces vulnérables ainsi qu'aux écosystèmes marins vulnérables. La zone réglementée comprendrait un secteur central à l'intérieur duquel toutes les pêches démersales seraient définitivement interdites et un secteur tampon périphérique dans lequel des mesures restreignant le chalutage de fond seraient imposées.

76. Le Comité a réservé un accueil favorable à cette proposition et a reconnu qu'il importait de protéger des zones telles que la fosse de Pomo Jabuka. Le délégué de l'UE en particulier a appuyé cette proposition, sous réserve, d'une part, de la demande qu'une enquête soit programmée pour déterminer les effets de la fermeture sur la dynamique des stocks, l'objectif étant d'atteindre un niveau de mortalité compatible avec un rendement maximal durable (F_{MSY}).

77. La représentante d'Oceana s'est félicitée elle aussi de la proposition relative aux zones de pêche réglementées car elle contribuerait à la création d'ici à 2018, comme le prévoit la Déclaration de Malte MedFish4Ever, d'un réseau des habitats des organismes marins, qui serait essentiel. La représentante de l'UICN y a également adhéré; elle a en outre noté que cette zone faisait partie des aires marines d'importance écologique ou biologique (AMIEB) et a suggéré d'apporter des modifications mineures concernant les espèces figurant sur la liste de l'UICN.

78. Les délégations de la Croatie et de l'Italie ont informé le Comité que leurs pays avaient conclu un accord bilatéral sur des mesures nationales visant à gérer la pêche au niveau de la fosse de Pomo Jabuka au moyen d'une zone d'interdiction de la pêche au chalut de fond et d'une fermeture partielle des zones tampons contiguës à différents engins de pêche. L'ensemble de la zone couvre un secteur très analogue à celui envisagé dans la proposition de zone de pêche réglementée. Aux termes de cet accord, la fermeture devait durer trois ans et donner lieu à un suivi scientifique et à des mesures de gestion supplémentaires (registre des navires autorisés, par exemple).

79. Le délégué du Monténégro et les représentants du MEDAC et du WWF se sont vivement félicités de cette fermeture bilatérale. En particulier, le représentant du WWF a fait observer que, pour être efficaces, les mesures spatiales de cette nature nécessitaient une unité de vues entre les scientifiques, les pêcheurs et les administrations et a souligné que, dans un tel cas, un mécanisme de cogestion pourrait être approprié.

80. Par conséquent, le Comité a demandé que la Commission considère l'établissement d'une nouvelle zone de pêche réglementée de la CGPM dans la fosse de Pomo Jabuka en mer Adriatique centrale, sur la base des éléments techniques et des coordonnées fournis dans la proposition qui figure à l'annexe 14.

81. Étant donné que la proposition concernait des mesures de gestion des pêches, le délégué de l'UE a fait savoir que la possibilité d'élaborer une proposition à soumettre à l'attention de la Commission serait examinée.

82. Sur la question générale de la mise en œuvre des mesures de gestion de la pêche en mer Adriatique, le délégué du Monténégro a rappelé que, comme il l'avait déjà souligné précédemment, la flotte monténégrine était très réduite. Il a demandé un peu de souplesse et d'indulgence concernant la demande de communication de données sur la pêche, y compris la reconstruction des données rétrospectives.

83. La déléguée de l'Albanie a fait écho à cette demande de souplesse, indiquant que, par le passé, son pays avait eu des difficultés liées à des erreurs de déclaration des statistiques de capture et du

nombre de navires. Elle a en outre demandé que les caractéristiques des différents segments de la flotte, y compris leur contribution à la mortalité par pêche, soient prises en considération. Elle a indiqué que l'Albanie travaillait à la création d'un système de collecte des données, notamment en incorporant des données récupérées pour les cinq années précédentes, grâce à l'assistance technique fournie par la CGPM dans le cadre du protocole d'accord récemment signé entre la CGPM et le Gouvernement de l'Albanie.

Méditerranée centrale

84. Les questions les plus importantes concernant le plan de gestion des pêches démersales (merlu européen et crevette rose du large) dans le canal de Sicile (sous-régions géographiques 12-16) ont été présentées, en particulier les résultats du WKMSE. Au taux actuel de mortalité par pêche (status quo), les stocks de merlu européen et de crevette rose du large restaient tous les deux en situation de surpêche et, dans le cas du merlu européen, la biomasse continuait de diminuer. Avec une réduction de 30 pour cent de la mortalité par pêche, la biomasse de la crevette rose du large augmente à l'horizon 2020, tandis qu'avec une réduction de 80 pour cent les deux espèces présentent une forte augmentation de la biomasse, mais les captures de crevette rose du large ne reviennent pas aux niveaux actuels.

85. Le délégué de la Tunisie a demandé si des simulations pourraient prendre en compte la sélectivité des engins de pêche, qui constitue un aspect important de cette pêche, et si les effets socioéconomiques seraient examinés à l'avenir. Des éclaircissements ont été apportés sur le fait que, dans l'analyse effectuée, la sélectivité était indirectement simulée par la modification de la mortalité par rapport à l'âge, alors que les effets socioéconomiques n'étaient pris en compte que par l'évaluation des variations du niveau de capture.

86. Le Comité a adopté les recommandations formulées par le Comité sous-régional pour la Méditerranée centrale (SRC-CM) concernant le plan de gestion des pêches démersales dans le canal de Sicile. Le Comité a également approuvé les recommandations du SRC-CM qui visaient à améliorer les avis applicables à cette pêche, à savoir: i) utiliser des modèles d'évaluation fondés sur les flottilles comme modèles opérationnels d'évaluation de scénarios de gestion et adopter un cadre d'évaluation de la stratégie de gestion plus complet, qui tienne compte de facteurs d'incertitude et évalue les conséquences socioéconomiques des stratégies de gestion ainsi que les effets de la sélectivité des engins de pêche; cela devait s'accompagner d'une formation à l'évaluation de la stratégie de gestion; et ii) valider, au moyen d'observations directes, la présence des zones de reproduction prédites par les modèles dans la partie australe du canal de Sicile. En outre, le Comité a souligné que, pour que le WKMSE puisse étudier les aspects socioéconomiques et ceux relatifs aux segments de la flotte, les données devaient être communiquées à temps, c'est-à-dire avant l'atelier.

Méditerranée occidentale

87. Les principaux résultats de la session sur la dorade rose (*Pagellus bogaraveo*) dans le détroit de Gibraltar (sous-régions géographiques 1 et 3), tenue durant la première réunion du Comité sous-régional pour la Méditerranée occidentale (SRC-WM), ont été présentés. Il a été confirmé que les précédentes évaluations des stocks de cette espèce dans les sous-régions géographiques 1 et/ou 3 avaient été menées en 2007 et 2011 et qu'elles avaient mis en évidence que la ressource était surexploitée et présentait une faible biomasse. On a également rappelé aux participants que cette espèce avait été inscrite sur la liste des espèces prioritaires de la Méditerranée occidentale en 2016 et qu'à ce titre, l'évaluation de l'état des stocks constituait une priorité.

88. La délégation du Maroc a fourni des informations sur la gestion de la dorade rose mise en place par son pays dans le détroit de Gibraltar, soulignant que le Maroc mettait actuellement en œuvre la stratégie à moyen terme et le DCRF, et qu'il recueillait des indicateurs d'exploitation et effectuait des échantillonnages biologiques afin de procéder à des évaluations analytiques conformément aux

recommandations de la CGPM, le tout en collaboration avec l'Espagne et avec le soutien de CopeMed II.

89. La détermination des stocks étant l'un des besoins concernant la dorade rose, il a été demandé au délégué de l'Espagne si cette espèce pourrait être ajoutée à celles visées par le projet examiné par le Groupe de travail sur l'identification des stocks de CopeMed II. La représentante de CopeMed II a fait remarquer que le projet était prêt à soutenir l'Espagne et le Maroc en vue d'une évaluation conjointe de l'espèce dans les sous-régions géographiques 1 et 3. Cela étant, pour intégrer la dorade rose dans le projet d'identification des stocks, il fallait que l'on réfléchisse aux aspects techniques et scientifiques, étant donné que le projet était actuellement centré sur d'autres espèces (merlu européen et sardine).

90. Le délégué de l'UE a souligné que cette espèce hermaphrodite présentait un cycle biologique complexe, et qu'il était donc possible que la pêche produise sur ses populations des effets imprévus, par un prélèvement plus important de dorades mâles ou femelles selon la taille ciblée. Étant donné qu'il fallait envisager, pour le moment, que la gestion de cette espèce doive être menée sans évaluation des stocks, il a suggéré au Secrétariat de la CGPM de rassembler d'autres informations biologiques (taille à la première maturité et taille à l'inversion sexuelle, par exemple) susceptibles d'être utiles à la CGPM, pour que les avis puissent être émis sur la meilleure base scientifique possible (telles que reproduites à l'annexe 13).

91. La représentante d'Oceana s'est félicitée des discussions à ce sujet et a rappelé l'engagement pris dans le cadre de la stratégie à moyen terme et réitéré dans la Déclaration MedFish4Ever de mettre à jour l'évaluation des stocks pour cette espèce, étape fondamentale en vue d'un éventuel plan de gestion d'ici 2020.

92. Le Comité a recommandé: i) d'améliorer les données disponibles et les méthodes applicables pour l'évaluation des stocks de cette espèce; ii) de tenter de régler la question de l'identification des stocks pour 2018-2019; et iii) de constituer une synthèse des données biologiques disponibles qui pourraient lui être communiquées.

Méditerranée orientale

93. Une vue d'ensemble des questions relatives à l'état des stocks de la Méditerranée orientale ainsi que les recommandations du Comité sous-régional pour la Méditerranée orientale (SRC-EM) ont été présentées. Il a été rappelé que ce comité avait: i) souligné que les séries de données chronologiques disponibles étaient courtes et qu'il était nécessaire de poursuivre la collecte de données; ii) recommandé de réaliser une étude pilote spécialement conçue de manière à appliquer les méthodes d'évaluation des stocks de Méditerranée orientale au moyen de données limitées; et iii) recommandé également de rassembler les meilleures informations disponibles et de poursuivre l'analyse des données en vue d'une révision de la liste des espèces prioritaires.

94. En outre, au vu de la pertinence de la pêche de la crevette rouge du large, le SRC-EM avait conseillé: i) d'évaluer l'état des stocks de gambon rouge (*Aristeomorpha foliacea*) et de crevette rouge (*Aristeus antennatus*) à l'avenir, en tenant compte des particularités des différentes flottilles; et ii) d'avancer sur la voie d'un plan de gestion de cette pêche, en intégrant, entre autres, des aspects des Directives internationales sur la gestion de la pêche profonde en haute mer de la FAO, à savoir ceux figurant dans les recommandations du WGVME. Enfin, une proposition de programme de suivi conjoint CGPM-PNUE/PAM sur les espèces non indigènes en Méditerranée orientale a été présentée dans les grandes lignes et les principales finalités de ce programme pilote ont été décrites.

95. Le délégué de la Turquie a fait remarquer que la Middle East Technical University (Mersin) possédait quelques-unes des plus longues séries chronologiques de données pour la zone et a indiqué qu'il était disposé à contribuer aux travaux des organes subsidiaires du Comité en utilisant ces données. À cet égard, le délégué de l'Égypte a souligné que les séries chronologiques disponibles pour un certain nombre d'espèces (rouget de vase et crevette faucon, par exemple) étaient suffisamment longues pour

être utilisées dans les évaluations des stocks. Le représentant d'EastMed a exprimé la même opinion, faisant remarquer que le nombre des évaluations s'était accru ces dernières années. Il a aussi souligné que, dans la zone, l'évaluation de certaines espèces était effectuée à l'aide de méthodes nécessitant peu de données et qu'il fallait établir d'urgence, en vertu du principe de précaution, une procédure qui permette de se servir de ces évaluations pour émettre des avis.

96. En outre, le délégué de l'Égypte a rappelé les débats qui s'étaient tenus au sein du SRC-EM sur les espèces prioritaires de la sous-région, insistant sur la nécessité d'inscrire les crevettes rouges dans la liste de ces espèces prioritaires.

97. Les délégués de l'Égypte et de l'UE sont convenus de l'importance des espèces non indigènes dans la sous-région. Le délégué de l'Égypte a souligné que certaines de ces espèces étaient exploitées commercialement et que leur pêche devait donc être gérée, tandis que d'autres étaient susceptibles de menacer l'écosystème et devaient être traitées comme un problème de conservation.

98. La déléguée de Chypre s'est également félicitée de cette initiative et a souligné qu'une attention particulière devait être portée aux espèces envahissantes au vu des effets que celles-ci peuvent avoir sur l'écosystème.

99. Le Comité a approuvé les conclusions du SRC-EM, insistant sur la collecte de données, en particulier sur les espèces prioritaires, et a proposé d'ajouter le gambon rouge et la crevette rouge à la liste des espèces prioritaires pour la Méditerranée orientale. Il a également approuvé le programme de suivi conjoint PNUE/PAM-CGPM sur les espèces non indigènes dans la Méditerranée orientale.

MISE EN ŒUVRE DE L'APPROCHE SOUS-RÉGIONALE DU CSC

100. Le Secrétaire exécutif de la CGPM a rappelé les principales étapes de la mise en œuvre de l'approche sous-régionale, telle qu'elle figure dans l'accord portant création de la CGPM, en mentionnant que quatre comités sous-régionaux avaient été créés en tant qu'instances techniques du Comité au sein desquelles des experts et des parties prenantes se prononçaient sur des questions sous-régionales pertinentes, tandis que des ateliers techniques spéciaux et des groupes de travail permanents, de nature sous-régionale ou régionale, continuaient d'être organisés au cas par cas afin de traiter des aspects spécifiques définis par le Comité, comme les interactions entre la pêche et l'environnement.

101. Le Comité a noté que l'approche avait été efficace jusqu'à présent et qu'elle avait permis de traiter de manière plus systématique des sujets pertinents recensés par le Comité et demandés par la Commission. Des questions sous-régionales spécifiques, relatives à la gestion des pêches, étaient en outre traitées par des experts et par des administrations directement concernées par leur mise en œuvre, ce qui s'était traduit par une meilleure participation en termes d'expertise, de représentants des pays et de partenaires. Plus particulièrement, il a été reconnu que les comités sous-régionaux contribuaient au recensement des espèces prioritaires au niveau sous-régional, formulaient des avis qui étaient ensuite intégrés dans des recommandations de la CGPM et encourageaient de nouvelles initiatives, par exemple l'examen des zones de pêche réglementées.

102. Le délégué de l'UE, tout en notant qu'il faudrait peut-être encore un certain temps pour appréhender l'ensemble des effets de l'approche sous-régionale, s'est félicité des résultats très positifs obtenus à l'issue des deux premières années de l'expérience. Il a souligné que les questions thématiques les plus importantes, notamment les questions environnementales et socioéconomiques, devraient être régulièrement traitées au sein de groupes d'experts, et qu'il faudrait que ces groupes soient de nature permanente.

103. En réponse à une question du délégué du Liban sur le rôle joué par les projets régionaux de la FAO dans le cadre de l'approche sous-régionale du Comité, le Secrétaire exécutif de la CGPM a précisé que l'une des valeurs ajoutées de la nouvelle approche était un meilleur alignement sur les activités

menées par les projets régionaux. En effet, la Commission et les projets avaient bénéficié d'une synchronisation plus rigoureuse, tant en interne qu'avec les pays, tout en maintenant leurs rôles institutionnels respectifs, déjà bien définis. Il a ajouté que les unités techniques sous-régionales créées dans les pays qui avaient officiellement proposé de les accueillir (l'Espagne et la Bulgarie pour le moment) renforceraient encore la coordination. De même, il a été rappelé que le Liban et Malte avaient également présenté officiellement une offre pour accueillir des unités techniques.

104. À cet égard, la déléguée du Maroc a remercié l'Espagne de son aimable proposition d'accueillir l'unité technique pour la Méditerranée occidentale car il s'agissait d'une étape importante à l'appui d'une coopération renforcée et d'un meilleur échange de compétences spécialisées dans la zone. Elle a ajouté que son pays attendait avec intérêt de collaborer étroitement avec le modérateur désigné.

105. Le Comité est convenu que sa nouvelle structure, qui reposait sur l'association de comités sous-régionaux, de groupes spéciaux d'experts techniques et de groupes de travail permanents, était plus appropriée pour mettre en œuvre ses activités conformément au mandat confié par la Commission. Le mandat général des comités sous-régionaux a été actualisé et il a été convenu que chaque comité sous-régional élaborerait des objectifs spécifiques pour chaque réunion, le cas échéant.

PLAN DE TRAVAIL DU CSC POUR 2017-2019

106. Le Président du CSC a présenté la version préliminaire du plan de travail du CSC, qui se fonde sur les travaux réalisés pendant la période intersessions. Après avoir examiné les priorités concernant la prochaine période intersessions, le CSC a approuvé son plan de travail pour 2017-2019, tel qu'il figure ci-après.

Questions régionales

- Produire le rapport SoMFi 2018 en utilisant des données et informations aussi exhaustives, actualisées et complètes que possible (sur la base de la structure figurant à l'annexe 9).

Amélioration des connaissances et renforcement des avis

- Regrouper des informations pertinentes au niveau national sur les espèces prioritaires afin d'améliorer la couverture de l'évaluation des stocks de ces espèces.
- Étudier la possibilité d'utiliser des méthodes d'évaluation des stocks au moyen de données limitées, le cas échéant, et faire en sorte que des avis de précaution soient formulés sur les stocks pour lesquels les données sont partielles ou inexistantes.
- Définir une approche pour l'harmonisation de la lecture des otolithes pour les espèces prioritaires sélectionnées (anchois, sardine, merlu européen, rouget de vase).
- Tester de nouvelles méthodes d'évaluation, comme les statistiques de captures par âge et les analyses intégrées.
- Appuyer la mise en œuvre d'études scientifiques en mer harmonisées conformément au plan par étapes convenu (figurant à l'annexe 10), afin de fournir des informations pertinentes pour l'évaluation des stocks ainsi que des informations générales sur les écosystèmes de la Méditerranée.
- Rassembler des données socioéconomiques sur les pêches, y compris la pêche artisanale, conformément aux méthodes d'enquête et à la feuille de route visant la collecte de données convenus, en vue de fournir des données halieutiques de base fiables, complètes et en temps utile pour leur intégration dans les avis de gestion.
- Dans le cadre des groupes de travail sur l'évaluation des stocks, mesurer le travail accompli sur la définition et l'estimation des indicateurs et objectifs communs sélectionnés pour s'assurer du bon état écologique, et évaluer d'autres estimateurs (recrutement ou condition physique, par

exemple) ainsi que différentes méthodes d'agrégation permettant d'obtenir les estimateurs régionaux.

- Mettre en œuvre des contrôles de qualité en termes de conformité, de stabilité et de cohérence concernant les données communiquées au titre de la Recommandation CGPM/40/2016/2. Fournir des informations en retour aux PCC sur la qualité des données transmises, conformément aux indicateurs de qualité, et proposer des mesures correctives, selon que de besoin.
- Définir une méthode commune qui permette d'obtenir la production totale de corail rouge (par exemple en utilisant le poids vif ou sec) et de valider les informations consignées dans les journaux de bord, y compris au moyen d'observateurs à bord des navires et sur les sites de débarquement.

Pêche INDNR

- Appuyer la mise en œuvre de la feuille de route d'estimation de la pêche INDNR (disponible à l'annexe 11).

Interactions entre la pêche et le milieu marin

- Mener un examen régional de la situation actuelle en matière de captures accessoires dans la zone de compétence de la CGPM et élaborer des directives communes sur la collecte de données et le suivi des activités de captures accessoires.
- Mettre en œuvre, avec des partenaires pertinents, un programme de surveillance des captures accessoires, y compris la collecte de données représentatives, en faisant appel à des observateurs scientifiques embarqués.
- Élaborer des guides d'identification des principaux taxons indicateurs d'un écosystème marin vulnérable (sous la forme d'affiches et de dépliants notamment), en collaboration avec des partenaires pertinents, pour aider les pêcheurs à reconnaître ces taxons et à communiquer la présence d'un écosystème marin vulnérable, notamment au moyen du protocole proposé à cette fin.
- Rassembler des informations sur l'emplacement d'éventuels écosystèmes marins vulnérables en Méditerranée, à partir des données issues d'études en mer et produites par des experts, dans le but d'obtenir des informations de la part des observateurs scientifiques et des pêcheurs lorsque celles-ci seront disponibles, l'objectif étant de créer une base de données des écosystèmes marins vulnérables en Méditerranée.
- Amorcer les travaux de cartographie des activités de pêche en eaux profondes («impact de la pêche»).
- Avancer sur la voie de l'évaluation des effets potentiels du changement climatique sur la pêche et les écosystèmes, afin d'élaborer une stratégie d'adaptation régionale.
- Rassembler des informations sur la répartition et l'abondance des espèces non indigènes ainsi que sur leur impact sur les pêches et les écosystèmes en Méditerranée, et proposer une feuille de route préparant une stratégie d'adaptation régionale à la présence de ces espèces.
- Étudier des mesures d'atténuation concernant les interactions des prédateurs et espèces vulnérables avec les pêches, à l'occasion d'une réunion ad hoc à organiser en 2018 à laquelle participeront des experts régionaux et internationaux.

Questions sous-régionales

- Avancer dans la mise en œuvre d'un cadre d'évaluation plus complet de la stratégie de gestion, qui intègre des facteurs d'incertitude, des données socioéconomiques et des analyses fondées sur les flottilles. En particulier, les informations socioéconomiques devraient être communiquées et traitées de manière à élaborer des modèles socioéconomiques qui seront incorporés dans

l'évaluation des scénarios de gestion dans les sous-régions de la mer Adriatique et de la Méditerranée centrale.

- Conduire des activités de renforcement des capacités dans les sous-régions à des fins d'évaluation quantitative des scénarios de gestion, y compris sur l'utilisation de modèles socioéconomiques.

Méditerranée occidentale

- Organiser une réunion technique d'experts sur la dorade rose afin d'étudier les progrès accomplis en ce qui concerne les mesures suggérées dans le document d'information élaboré par le SRC-WM en 2017, y compris la participation du Maroc et de l'Espagne à des travaux techniques préparatoires au niveau bilatéral (en s'appuyant sur les activités menées au sein du CIEM et du COPACE).
- Organiser une deuxième formation sur l'évaluation des stocks dans cette sous-région.

Méditerranée centrale

- Dans le cadre de la mise en œuvre d'études en mer, étudier des zones de reproduction simulées pour le merlu européen et la crevette rose du large dans le canal de Sicile.

Méditerranée orientale

- Recenser des éléments à l'appui de la mise au point d'une stratégie d'adaptation visant à faire face aux effets potentiels des espèces exotiques sur la base des résultats de l'étude pilote du PNUE/PAM et de la CGPM sur les espèces exotiques, ainsi qu'en tenant compte des initiatives antérieures et en cours.
- Organiser une réunion consacrée à la mise à jour des éléments dont on dispose à l'appui de la gestion de la crevette rouge du large.
- Organiser une réunion consacrée aux espèces exotiques en s'appuyant sur les résultats de l'étude pilote.
- Organiser une réunion consacrée à la fourniture d'avis concernant les stocks pour lesquels on dispose de données limitées.
- Procéder à une analyse approfondie des captures et des informations par espèce en vue d'une révision de la liste des espèces prioritaires en Méditerranée orientale.

107. Le Comité a approuvé la liste des réunions ci-après. On trouvera à l'annexe 12 le projet de mandat de certaines réunions.

Réunion	Lieu/date
Groupe de travail sur la pêche artisanale et la pêche récréative	Siège de la FAO 14 et 15 septembre 2017 (à confirmer)
École d'été FAO/CGPM/CCR sur l'évaluation quantitative des stocks	Italie, 10-22 juillet 2017
Groupe de travail CECPAI/CIEM/CGPM sur l'anguille	Kavala (Grèce) 3-10 octobre 2017
Groupe de travail sur l'évaluation des stocks d'espèces démersales et Groupe de travail sur l'évaluation des stocks de petits pélagiques	Rome (à confirmer) Novembre 2017
Atelier sur l'évaluation des scénarios de gestion relatifs à des études de cas en Méditerranée, y compris une session spéciale sur les espèces de petits pélagiques en Méditerranée	Janvier 2018

Réunion	Lieu/date
Comité sous-régional pour la Méditerranée occidentale, y compris une séance consacrée à la dorade rose	Février 2018
Comité sous-régional pour la Méditerranée orientale, y compris des séances consacrées à la crevette rouge du large et aux espèces non-autochtones	Février 2018
Comité sous-régional pour la mer Adriatique	Mars 2018
Comité sous-régional pour la Méditerranée centrale	Mars 2018
Groupe de travail sur les écosystèmes marins vulnérables	Avril 2018
Vingtième session du CSC	Maroc Juin 2018
Cours de formation sur l'évaluation quantitative des scénarios de gestion	Juillet 2018
Deuxième formation sur les méthodes d'évaluation des stocks dispensée par le Comité sous-régional pour la Méditerranée occidentale	Septembre 2018
Réunion de haut niveau sur la pêche artisanale	Septembre 2018
Forum de la CGPM sur les sciences halieutiques	Décembre 2018
Atelier sur la communication de données conformément au Cadre de référence pour la collecte de données	À déterminer
Atelier visant à faciliter la mise en œuvre d'un plan de gestion pour l'anguille européenne en Méditerranée	À déterminer
Groupe de travail sur le corail rouge	À déterminer
Groupe d'experts sur l'évaluation de la pêche illicite, non déclarée et non réglementée	À déterminer

108. La première réunion du WGSSF étant prévue pour septembre 2017, le Comité est convenu de reporter jusqu'à la réunion les activités du plan de travail relatives à la pêche artisanale et à la pêche récréative. Il a donc invité le groupe de travail à évaluer, dans le cadre de ses travaux, l'incidence de ces deux types de pêche sur les espèces côtières et à transmettre un rapport au CSC, pour examen.

109. Le Comité a pris note de certaines activités que les partenaires pertinents avaient déjà planifiées et qui étaient perçues comme un excellent moyen de progresser quant à la mise en œuvre de plusieurs mesures figurant dans le plan de travail du CSC. Il s'agit notamment du groupe d'étude AdriaMed sur les otolithes des espèces démersales, mis en place dans le cadre des projets régionaux de la FAO, qui pourrait contribuer aux travaux sur l'harmonisation des méthodes de lecture des otolithes. À cet égard, le délégué de l'Espagne a offert l'aide de l'Institut espagnol d'océanographie.

110. Il a été proposé d'organiser une réunion spéciale sur l'évaluation de la stratégie de gestion des petits pélagiques en mer Adriatique afin de poursuivre les travaux réalisés par le WKMSE en 2017, donnant suite à la Recommandation GFCM/40/2016/3. Le délégué de l'UE a estimé qu'il serait plus judicieux d'attendre les nouveaux avis du WGSASP, qui seront communiqués en 2017. La prochaine

édition annuelle du WKMSE étant prévue pour le début de l'année 2018, la Commission a été invitée à envisager la possibilité de fusionner les deux réunions.

111. Le délégué de l'UE a expliqué que les captures de l'UE représentaient 99 pour cent des captures de petits pélagiques en mer Adriatique et qu'un plan de gestion européen pour les espèces de petits pélagiques en mer Adriatique était actuellement à l'examen. Ce processus nécessitait un mécanisme scientifique souple dans le cadre du Comité scientifique, technique et économique de la pêche (CSTEP), qui devrait être aligné sur celui du CSC. À cet égard, il considérait que des changements dans les données d'entrée seraient susceptibles de modifier les points de référence convenus par le CSC à sa dix-huitième session, et proposait de tenir une réunion mixte CSC-WGSASP-CSTEP sur l'évaluation des espèces de petits pélagiques en mer Adriatique en vue de parvenir à une convergence sur les avis scientifiques.

112. Le Secrétariat de la CGPM a précisé que la décision consistant à modifier ou non des méthodes et/ou hypothèses d'évaluation des stocks ainsi qu'à réviser les points de référence et en proposer de nouveaux au CSC devrait s'appuyer sur une évaluation scientifique réalisée par les experts dans le cadre des groupes de travail sur l'évaluation des stocks de la CGPM. Dans ce contexte, il a été rappelé que, dans la mesure du possible et à moins que les groupes de travail sur l'évaluation des stocks ne relèvent des preuves de violations importantes des hypothèses du modèle ou des changements conséquents dans les données d'entrées susceptibles d'affecter les résultats du modèle, les modèles d'évaluation des stocks ainsi que les points de référence devraient rester stables pendant une période, de manière à éviter une variabilité supplémentaire dans les avis fournis. Il a été noté que l'évaluation en profondeur des modèles d'évaluation des stocks et des données d'entrée mentionnée ci-dessus, de même que l'estimation des points de référence pour ce stock, avaient été réalisés au cours d'une session spécifique d'évaluation de référence en 2015.

113. Suite aux observations formulées par le délégué du Monténégro, le Comité a pris note de la requête du délégué de l'UE et a souligné que, quoi qu'il en soit, les réunions techniques de la CGPM étaient ouvertes et que les experts du CSTEP étaient invités à participer aux réunions ordinaires du WGSASP. Le Comité a demandé au Secrétaire exécutif de la CGPM de se pencher sur la question et de faire rapport à la Commission, à sa prochaine session, sur la faisabilité de l'organisation de la prochaine session du WGSASP en prenant en compte les propositions faites par le délégué de l'UE, au vu des procédures applicables.

114. Tous les pays ont été invités à participer activement en veillant à ce que le plan de travail convenu soit suivi scrupuleusement, en mettant à disposition les ressources nécessaires, en apportant une réponse complète aux demandes d'informations et en communiquant les données pertinentes en temps voulu.

QUESTIONS DIVERSES

115. Le représentant du Marine Stewardship Council (MSC) a présenté un événement parallèle sur les résultats et la progression du projet MedFish, qui vise à mener une analyse exhaustive de quatorze pêches françaises et espagnoles en Méditerranée en utilisant le référentiel du MSC comme critère de durabilité. Les trois étapes de ce projet, qui s'étendra sur deux ans, comportent une phase de scannage et de cartographie, des évaluations préliminaires par rapport au référentiel et l'élaboration de plans d'action. Compte tenu de l'approche utilisée, il a été souligné que le concept pouvait être reproduit dans d'autres zones du bassin méditerranéen. Le Comité s'est félicité de cette initiative, qui était pleinement conforme aux objectifs de durabilité de la stratégie à moyen terme et pouvait contribuer à évaluer les progrès accomplis dans la réalisation des objectifs stratégiques. Le délégué de l'Italie a signalé que certaines pêcheries italiennes participaient au programme du MSC. Il a été précisé qu'on envisageait de couvrir aussi la pêche artisanale.

116. Le représentant d'ACCOBAMS a donné au Comité des informations sur l'ACCOBAMS Survey Initiative (ASI) décidée dans le cadre de cet Accord, qui vise principalement à évaluer la

répartition et l'abondance des cétacés à l'échelle régionale, notant qu'une campagne de relevé serait menée au cours de l'été 2018 à l'aide d'un protocole commun, avec la participation de scientifiques de tous les pays de la Méditerranée. Il a indiqué que le Secrétariat de l'Accord informerait le CSC des avancées et des résultats susceptibles d'aider à évaluer l'état de conservation des populations de cétacés et les taux de capture accidentelle.

117. Le Comité a remercié le Gouvernement slovène d'avoir accueilli la session et salué le dévouement des membres du personnel, l'excellente organisation, et les parfaites conditions de travail offertes pendant la session. Le soutien et l'accueil chaleureux dont ont bénéficié les délégués et participants ont été très appréciés.

118. Le Président du CSC et les délégués ont félicité le Secrétariat de la CGPM pour l'excellent travail et pour les efforts déployés en vue de la préparation et du bon déroulement de la session. Les délégués ont également été remerciés pour leurs contributions au succès des activités intersessions du CSC.

DATE ET LIEU DE LA PROCHAINE SESSION

119. Le Comité est convenu que sa vingtième session se tiendrait en principe en juin 2018. Une décision sur les dates exactes serait prise lors de la quarante et unième session de la Commission.

120. Le Comité a pris note de l'aimable invitation de la délégation du Maroc, qui s'est proposé d'accueillir la vingtième session, sous réserve de la confirmation officielle des autorités compétentes.

ADOPTION DU RAPPORT

121. Le rapport, y compris ses annexes, a été adopté le vendredi 19 mai 2017.

Agenda

- 1. Opening and arrangements for the session**
- 2. Adoption of the agenda**
- 3. Intersessional activities**
- 4. Progress in the implementation of the mid-term strategy, including in cooperation with partners**
- 5. Formulation of advice in the field of fishery management and research**
- 6. Implementation of the SAC subregional approach**
- 7. SAC work plan for 2017–2019, including by subregion**
- 8. Any other matter**
- 9. Date and place of the next session**
- 10. Adoption of the report**

Ordre du jour

- 1. Ouverture de la session et organization des travaux**
- 2. Adoption de l'ordre du jour**
- 3. Activités intersessions**
- 4. Progrès accomplis dans la mise en oeuvre de la stratégie à moyen terme, y compris la coopération avec les partenaires**
- 5. Formulation d'avis dans les domaines de la gestion et de la recherche halieutiques**
- 6. Mise en oeuvre de l'approche sous-régionale du Comité consultatif scientifique des pêches**
- 7. Plan de travail du Comité consultatif scientifique des pêches pour 2017-2019, y compris par sous-région**
- 8. Questions diverses**
- 9. Date et lieu de la prochaine session**
- 10. Adoption du rapport**

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List of documents

GFCM:SAC19/2017/1	Provisional agenda and timetable
GFCM:SAC19/2017/2	Executive report of SAC intersessional activities, recommendations and work plan
GFCM:SAC19/2017/Inf.1	List of documents
GFCM:SAC19/2017/Inf.2	List of participants
GFCM:SAC19/2017/Inf.3	Report of the fortieth session of the General Fisheries Commission for the Mediterranean (GFCM) (Malta, 30 May – 3 June 2016)
GFCM:SAC19/2017/Inf.4	Report of the eighteenth session of the Scientific Advisory Committee on fisheries (SAC) (Cyprus, 21–23 March 2016) (bilingual)
GFCM:SAC19/2017/Inf.5	National reports to the SAC by member countries
GFCM:SAC19/2017/Inf.6	Report of the first meeting of the Working Group on Vulnerable Marine Ecosystems (WGVME) (Spain, 3–5 April 2017) (Available in English only)
GFCM:SAC19/2017/Inf.7	Report of the second meeting of the Subregional Committee for the Central Mediterranean (SRC-CM) (Tunisia, 9–10 March 2017) (Available in English only)
GFCM:SAC19/2017/Inf.8	Report of the Workshop on Red Coral (Tunisia, 7–8 March 2017) (Available in English only)
GFCM:SAC19/2017/Inf.9	Report of the second meeting of the Subregional Committee for the Adriatic Sea (SRC-AS) (FAO headquarters, 24–25 February 2017) (Available in English only)
GFCM:SAC19/2017/Inf.10	Report of the first meeting of the Subregional Committee for the Eastern Mediterranean (SRC-EM) (FAO headquarters, 24–25 February 2017) (Available in English only)
GFCM:SAC19/2017/Inf.11	Report of the Workshop on the assessment of management measures (FAO headquarters, 20–23 February 2017) (Available in English only)
GFCM:SAC19/2017/Inf.12	Report of the first meeting of the Subregional Committee for the Western Mediterranean (SRC-WM) (Morocco, 20 January 2017) (Available in English only)
GFCM:SAC19/2017/Inf.13	Report of the Working Group on Stock Assessment of Demersal Species (FAO headquarters, 7–12 November 2016) (Available in English only)
GFCM:SAC19/2017/Inf.14	Report of the Working Group on Stock Assessment of Small Pelagic Species (FAO headquarters, 7–12 November 2016) (Available in English only)
GFCM:SAC19/2017/Inf.15	Report of the meeting on GFCM fisheries data requirements (FAO headquarters, 3–4 November 2016) (Available in English only)
GFCM:SAC19/2017/Inf.16	Report of the intersessional meeting of the Commission on the mid-term strategy (FAO headquarters, 22–23 September 2016) (Available in English only)
GFCM:SAC19/2017/Inf.17	Report of the EIFAAC/ICES/GFCM Working Group on Eels (Spain, 15–22 September 2016) (Available in English only)

GFCM:SAC19/2017/Inf.18	Report of the FAO/GFCM Workshop on the Management of Deep-sea Fisheries (DSF) and Vulnerable Marine Ecosystems (VMEs) in the Mediterranean (FAO headquarters, 18–20 July 2016) (Available in English only)
GFCM:SAC19/2017/Inf.19	Major activities of the FAO regional projects (Available in English only)
GFCM:SAC19/2017/Inf.20	Good Environmental Status indicators (Available in English only)
GFCM:SAC19/2017/Inf.21	Summary document on GFCM actions towards a Mediterranean management plan on European eel (Available in English only)
GFCM:SAC19/2017/Dma.1	Mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries (Available in English and French)
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CGPM:SAC19/2017/1	Ordre du jour et calendrier provisoires
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CGPM:SAC19/2017/Inf.1	Liste des documents
CGPM:SAC19/2017/Inf.2	Liste des participants
CGPM:SAC19/2017/Inf.3	Rapport de la quarantième session de la Commission générale des pêches pour la Méditerranée (CGPM) (Malte, 30 mai–3 juin 2016)
CGPM:SAC19/2017/Inf.4	Rapport de la dix-huitième session du SAC (Chypre, 21–23 mars 2016) (bilingue)
CGPM:SAC19/2017/Inf.5	Rapports nationaux des États membres au CSC
CGPM:SAC19/2017/Inf.6	Rapport de la première réunion du Groupe de travail sur les écosystèmes marins vulnérables (WGVME) (Espagne, 3–5 avril 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.7	Rapport de la deuxième réunion du Comité sous-régional pour la Méditerranée centrale (Tunisie, 9–10 mars 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.8	Rapport de l'Atelier sur le corail rouge (Tunisie, 7–8 mars 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.9	Rapport de la deuxième réunion du Comité sous-régional pour la mer Adriatique (siège de la FAO, 24–25 février 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.10	Rapport de la première réunion du Comité sous-régional pour la Méditerranée orientale (siège de la FAO, 24–25 février 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.11	Rapport de l'Atelier sur l'évaluation des mesures de gestion (siège de la FAO, 20–23 février 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.12	Rapport de la première réunion du Comité sous-régional pour la Méditerranée occidentale (Maroc, 20 janvier 2017) (en anglais uniquement)
CGPM:SAC19/2017/Inf.13	Rapport du Groupe de travail sur l'évaluation des stocks d'espèces démersales (siège de la FAO, 7–12 novembre 2016) (en anglais uniquement)
CGPM:SAC19/2017/Inf.14	Rapport du Groupe de travail sur l'évaluation des stocks de petits pélagiques (siège de la FAO, 7–12 novembre 2016) (en anglais uniquement)
CGPM:SAC19/2017/Inf.15	Rapport de la réunion sur les prescriptions de la CGPM en matière de données sur les pêches (siège de la FAO, 3–4 novembre 2016) (en anglais uniquement)
CGPM:SAC19/2017/Inf.16	Rapport de la réunion intersession de la Commission sur la stratégie à moyen terme (siège de la FAO, 22–23 septembre 2016) (en anglais uniquement)
CGPM:SAC19/2017/Inf.17	Rapport du Groupe de travail mixte CECPAI/CIEM/CGPM sur les anguilles (Espagne, 15–22 septembre 2016) (en anglais uniquement)

CGPM:SAC19/2017/Inf.18	Rapport de l'atelier FAO/CGPM sur la gestion des pêches en eau profonde et les écosystèmes marins vulnérables en Méditerranée (siège de la FAO, 18–20 juillet 2016) (en anglais uniquement)
CGPM:SAC19/2017/Inf.19	Activités principales des projets régionaux de la FAO (en anglais uniquement)
CGPM:SAC19/2017/Inf.20	Indicateurs de suivi du bon état écologique (en anglais uniquement)
CGPM:SAC19/2017/Inf.21	Document de synthèse sur les travaux de la CGPM pour la mise en place d'un plan de gestion de l'anguille européenne (en anglais uniquement)
CGPM:SAC19/2017/Dma.1	Stratégie à moyen terme en faveur de la durabilité des pêches en Méditerranée et mer Noire (2017-2020) (en anglais et français)
CGPM:SAC19/2017/Dma.2	Cadre de référence de la CGPM pour la collecte des données (DCRF)

Opening speeches

Opening address by Mr Marjan Podgoršek

State Secretary of the Ministry of Agriculture, Forestry and Food of Slovenia

Distinguished Mr Srou, dear ladies and gentlemen,

Allow me to welcome you here in Ljubljana and Slovenia. We are honoured to have this opportunity to host the 19th session of the Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM).

The General Fisheries Commission for the Mediterranean (GFCM) is the only regional fisheries organization that Slovenia is a member of. Its decisions have a direct impact on the management of Slovenian fisheries.

Moreover, due to the smallness of Slovenian fisheries sector, Slovenia has to cooperate internationally as regards fisheries management therefore fisheries management provisions arising from the General Fisheries Commission for the Mediterranean are crucial for us.

As the scientific body of the GFCM, Scientific Advisory Committee (SAC) provides scientific bases for recommendations on fisheries management adopted by the GFCM.

This means that the work of the Scientific Advisory Committee, your work, is very important for Slovenia, Slovenian fisheries and our fishermen as well.

Slovenian fishermen fish mostly the shared stocks of fisheries organisms in the North Adriatic Sea.

This means that scientific advice emanating from cooperative research and assessment of fish stocks, and shared stock assessments agreed by bodies such as SAC, is of central importance to the management of Slovenian fisheries.

This is also because, on its own, and due to the small size of our fisheries sector, Slovenia has limited capacity to prepare fish stock assessments and we rely on the work of bodies such as Scientific Advisory Committee.

Thus, we are very grateful that our experts have been able to cooperate in the work of international bodies and organizations such as SAC and the GFCM so far.

Also in the future, it will be important for us that your work continues to progress as it has, and that our experts will continue to cooperate in the work of SAC as well as the General Fisheries Commission for the Mediterranean.

Secondly, in addition to the biological dimension, fisheries has an equally important socio-economic dimension.

With regard to the socio-economic perspective, I need to emphasize that although Slovenian fisheries sector is small, our main aim for its future is to preserve Slovenian fisheries tradition and our traditional fleet segments and traditional fishing gears which do not have a negative impact on the marine environment.

Fisheries represents a vital tradition particularly on the Slovenian coast, where it is integrated with other parts of our coastal economy, such as tourism. It also adds a valued layer to the identity of Slovenia as a maritime country.

Taking this into account, it is very important for us that fisheries management provisions that are adopted at international level take into account specific characteristics of all fisheries sectors that are impacted by those decisions, including the smallest sectors.

It is thus important that advice and management measures that are adopted for the Adriatic and the Mediterranean are proportional, among others with regard to the actual exploitation of fisheries resources by individual countries.

Moreover, advice as well as management recommendations need to take into account the need to avoid disproportionate administrative and financial burdens, particularly for small fisheries sectors.

Dear ladies and gentlemen, all of these considerations underline the importance of the work you are about to perform, from the perspective of sustainable management of fisheries in the Mediterranean, as well as from the perspective of the livelihoods of the fishermen and others involved in the continuation of the fisheries tradition in the Mediterranean, the Adriatic, and in Slovenia.

With this, I wish you successful work and also that you will enjoy your stay in Slovenia. On this note, I would like to invite you to the social dinner I am hosting tomorrow and to the excursion for you on Friday morning to the lake Bled.

Thank you for your attention.

**Opening address by Mr Othman Jarboui
SAC Chairperson**

Excellencies,
Distinguished Delegates,
FAO and GFCM Colleagues,
Ladies and Gentlemen,

It is a great pleasure for me to welcome you to the nineteenth session of the Scientific Advisory Committee on Fisheries of the GFCM. First and foremost, I would like to express my thanks to the hosting country, Slovenia, for accommodating us for this week of important discussions. I would also like to take this opportunity to commend all of our Member countries, as well as our partners, for their active involvement in the activities of this committee.

This year has seen extraordinary strides made in the transition towards a more modern and effective SAC. Building on the progress made last year, we now enter the second year of the two-year feasibility study to transition from a thematic to a subregional approach. Indeed, this intersessional period marked the first year that meetings of each of the four SAC Subregional Committees were held, with the Eastern Mediterranean and the Western Mediterranean Subregional Committees being held for the first time. The work carried out in these committees has already improved the SAC's ability to address specific issues of relevance to the subregions and to better address the requests of the Commission in relation to existing management plans.

Not only has this year seen the SAC supported by stronger and more modern subregional framework, but it has also seen the launching of a mid-term strategy which aligns our region's goals and sets forth a clear and ambitious path towards the sustainability of our region's fisheries. The "Mid-term strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries" is not only a powerful tool to ensure that the work carried out in the Mediterranean and Black Sea region is in line with international commitments, such as UN Sustainable Development Goal 14, but it's also a practical tool by which to measure progress being made.

The Mid-term strategy also puts emphasis on the work of the SAC, putting forward the need for a more comprehensive and more precise advice as a requirement to achieve the strategy goals. In this sense, the SAC has already anticipated these needs, and have been enlarging and enhancing its advice on recent years. However important challenges still lay ahead including the execution of ambitious activities such as the implementation of scientific surveys-at-sea, improving socio-economic data collection and establishing a regional Forum on Fisheries Science. Important activities are also being launched within the context of the strategy to improve support for small-scale fisheries, reduce IUU fishing, address interactions between fisheries and marine ecosystems (including improving knowledge on bycatch activity), as well as reinforce technical assistance and capacity building. We enthusiastically look forward to the fruits that these efforts will bear and the strong support they will provide to the work of the SAC.

Another notable development that has occurred this year is the provisional implementation of the recommendation on data submission in line with the DCRF, that was put forward by the SAC as a way to compile required information for the advice as requested by the Commission. I am very pleased to report the progress made by the GFCM Secretariat in creating the new online submission platform and I congratulate the collaborative spirit of the member countries, who are making important efforts to begin working with these tools in order to overcome any challenges they may face, with a view to submitting data in line with the DCRF in the very near future. These data will represent a tremendous resource towards improving advice and effectively managing our fisheries.

Working on the success of our report on *The Status of Mediterranean and Black Sea Fisheries* (or SoMFi), whose first edition was published last year, work has also begun towards the next edition, envisaged to be published in 2018. Efforts are underway to identify improved ways to present the analyses therein and to ensure that the next edition will be an even better and more useful reference tool in support of decision making within the GFCM.

While a tremendous amount of work has been done this year, and much has been accomplished, if we are to meet our goals, we must not lose sight of the enormous and essential tasks ahead. We must

solidify our community of experts and make every effort to improve the provision of high-quality advice that the GFCM needs in order to take appropriate actions to address the priorities of the region.

As we must accomplish much over these coming days, I don't wish to take up any more of your time. In closing I wish to remind you all of the urgency of providing clear, sound and precise advice upon which the Commission can take swift action to address the pressing issues facing our fisheries. We need to be able to identify those areas in which priority actions should be taken, as well as provided clear replies to the Commissions on matters on which our opinion was requested.

I thank you all in advance for your participation in this committee and I wish you my best for fruitful discussions and successful work over the coming days.

Status of Mediterranean stocks

Table 1: Scientific advice on the status of the assessed demersal stocks

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	$B_{\text{MSY}} * B_{\text{pa}}$ $**B_{\text{lim}}$	B/B_{MSY} $*B/B_{\text{pa}}$ $**B/B_{\text{lim}}$	Stock status	Scientific advice	WGSAD comments
Western Mediterranean													
1	01&03	European hake <i>Merluccius merluccius</i>	XSA	2002-2014	$F_{(2013-2015)} = 1.7$	$F_{0.1(2013)} = 0.2$	8.5	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	To continue assessing this stock jointly in these GSAs.
2	05	European hake <i>Merluccius merluccius</i>	XSA	1980-2015	$F_{(2013-2015)} = 1.34$	$F_{0.1(2013)} = 0.17$	7.9	-	-	-	In overexploitation with relative intermediate biomass	Reduce fishing mortality	No specific comments on this stock assessment.
3	06	European hake <i>Merluccius merluccius</i>	XSA	2002-2015	$F_{(2013-2015)} = 1.60$	$F_{0.1} = 0.2$	8	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	No specific comments on this stock assessment.
4	07	European hake <i>Merluccius merluccius</i>	XSA	1998-2015	$F_{(2013-2015)} = 1.92$	$F_{0.1(2013)} = 0.15$	12.8	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	No specific comments on this stock assessment.
5	09	European hake <i>Merluccius merluccius</i>	SS3	1985-2015	$F_{(2013-2015)} = 1.08$	$F_{0.1} = 0.24$	4.5	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	In 2015 this assessment was performed with XSA.

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	$B_{\text{MSY}} * B_{\text{pa}}$ $**B_{\text{lim}}$	B/B_{MSY} $*B/B_{\text{pa}}$ $**B/B_{\text{lim}}$	Stock status	Scientific advice	WGSAD comments
6	06	Red mullet <i>Mullus barbatus</i>	XSA	1996-2015	$F_{(2012-2014)} = 0.5$	$F_{0.1} = 0.45$	1.1	-	-	-	In overexploitation with relative high biomass	Reduce fishing mortality	F value for 2015 resulted to be overestimated from the retrospective analysis and therefore was not included in the average estimation of the F_{current} . The group advised to continue assessing this stock with the ProdBiom (before 2009) M vector.
7	07	Red mullet <i>Mullus barbatus</i>	XSA	2004-2015	$F_{(2013-2015)} = 1.13$	$F_{0.1} = 0.35$	3.2	-	-	-	In overexploitation with relative high biomass	Reduce fishing mortality	The group advised to continue assessing this stock with the ProdBiom M vector and fast growth parameters.
8	05	Striped red mullet <i>Mullus surmuletus</i>	XSA	2000-2015	$F_{(2013-2015)} = 0.50$	$F_{0.1 (2015)} = 0.13$	3.8	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The revision the growth parameters for this stock in 2015-2016 with the otolith reading did not give the expected results (especially for t_0). The WGSAD recommended to use <i>back calculation</i> to better estimate growth parameters. In alternative, ALKs could be used.
9	01	Blue and red shrimp <i>Aristeus antennatus</i>	XSA	2002-2015	$F_{(2013-2015)} = 0.90$	$F_{0.1 (2015)} = 0.51$	1.8	-	-	-	In overexploitation with relative intermediate biomass	Reduce fishing mortality	The group advised to continue assessing this stock with the ProdBiom M vector.

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	$B_{\text{MSY}} * B_{\text{pa}}$ $**B_{\text{lim}}$	B/B_{MSY} $*B/B_{\text{pa}}$ $**B/B_{\text{lim}}$	Stock status	Scientific advice	WGSAD comments
10	05	Blue and red shrimp <i>Aristeus antennatus</i>	XSA	1993-2015	$F_{(2013-2015)} = 0.34$	$F_{0.1} = 0.31$	1.1	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	No specific comments on this stock assessment.
11	06	Blue and red shrimp <i>Aristeus antennatus</i>	XSA	1996-2015	$F_{(2013-2015)} = 0.86$	$F_{0.1} = 0.40$	2.1	-	-	-	In overexploitation with relative high biomass	Reduce fishing mortality	The group advised to start assessing this stock with M vector (ProdBiom, before 2009) and not with the scalar value.
12	09	Deep-water rose shrimp <i>Parapenaeus longirostris</i>	XSA	2006-2015	$F_{(2012-2014)} = 0.67$	$F_{0.1} = 0.67$	1.0	--	-	-	Sustainably exploited with relative high biomass	Not to increase fishing mortality	Possibly, to review the growth parameters used in this assessment.
13	09	Giant red shrimp <i>Aristeomorpha foliacea</i>	XSA	2006-2015	$F_{(2013-2015)} = 0.24$	$F_{0.1} = 0.59$	0.4	-	-	-	Sustainably exploited with relative intermediate biomass	Not to increase fishing mortality	The group advised to continue assessing this stock with the ProdBiom M vector.
14	09	Blue and red shrimp <i>Aristeus antennatus</i>	XSA	2005-2015	$F_{(2013-2015)} = 0.42$	$F_{0.1} = 0.32$	1.3	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The group advised to continue assessing this stock with the ProdBiom M vector.
Ionian Sea													

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	$B_{\text{MSY}} * B_{\text{pa}}$ $**B_{\text{lim}}$	B/B_{MSY} $*B/B_{\text{pa}}$ $**B/B_{\text{lim}}$	Stock status	Scientific advice	WGSAD comments
15	12-16	European hake <i>Merluccius merluccius</i>	XSA	2007-2015	$F_{(2013-2015)} = 0.83$	$F_{0.1} = 0.12$	7.5	-	-	-	In overexploitation with relative intermediate biomass	Reduce fishing mortality	The stock assessment was carried out with the model settings agreed in the benchmark session for this stock in 2015. Continue assessing the stock with those biological parameters in the future.
16	12-16	Deep-water rose shrimp <i>Parapenaeus longirostris</i>	XSA	2007-2015	$F_{(2013-2015)} = 1.21$	$F_{0.1} = 0.83$	1.46	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The stock assessment was carried out with the model settings agreed in the benchmark session for this stock in 2015. Continue assessing the stock with those biological parameters in the future.
17	19	Deep-water rose shrimp <i>Parapenaeus longirostris</i>	XSA	2007-2015	$F_{(2012-2014)} = 1.36$	$F_{0.1} = 0.89$	1.5	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	No specific comments on this stock assessment.
18	13-14	Red mullet <i>Mullus barbatus</i>	XSA	2008-2014	$F_{(2012-2014)} = 1.55$	$F_{0.1} = 0.44$	3.5	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The reference year for this assessment was 2014, as 2015 data had not yet made available to the experts.
19	15-16	Red mullet <i>Mullus barbatus</i>	XSA	2008-2014	$F_{(2013-2015)} = 0.55$	$F_{0.1} = 0.45$	1.22	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The group advised to continue assessing this stock with the Gislason M vector.
Adriatic Sea													

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	$B_{\text{MSY}} * B_{\text{pa}}$ $**B_{\text{lim}}$	B/B_{MSY} $*B/B_{\text{pa}}$ $**B/B_{\text{lim}}$	Stock status	Scientific advice	WGSAD comments
20	17-18	European hake <i>Merluccius merluccius</i>	SS3	1998-2015	$F_{(2013-2015)} = 0.48$	$F_{0.1} = 0.21$	2.3	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	2016 is the first year in which a joint assessment for this species was run in 17-18. In 2015, the assessment in GSA 18 was presented to the WGSAD.
21	17	Red mullet <i>Mullus barbatus</i>	SS3	2000-2016	$F_{(2013-2015)} = 0.39$	$F_{0.1} = 0.3$	1.3	-	-	-	In overexploitation with relative high biomass	Reduce fishing mortality	In 2015 the WGSAD advised to use the data from surveys in the 1980s; however after a revision these were not considered reliable and not included in this assessment.
22	18	Red mullet <i>Mullus barbatus</i>	SS3	2003-2015	$F_{(2013-2015)} = 0.3$	$F_{0.1} = 0.42$	0.7	-	-	-	Sustainably exploited with relative high biomass	Not to increase fishing mortality	The group advised to continue assessing this stock with the Chen & Watanabe M vector.
23	17	Common sole <i>Solea solea</i>	SS3	2006-2015	$F_{2015} = 0.35$	$F_{0.1} = 0.26$	1.35	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	The group advised to explore alternative selectivity patterns.
24	17-18	Deep-water rose shrimp <i>Parapenaeus longirostris</i>	SS3	1998-2015	$F_{(2013-2015)} = 2.2$	$F_{0.1} = 0.9$	2.4	-	-	-	In overexploitation with relative low biomass	Reduce fishing mortality	2016 is the first year in which a joint assessment for this species was run in 17-18. In 2015, the assessment in GSA 18 was presented to the WGSAD. The group advised to continue assessing this stock with the Chen & Watanabe M vector.

N	GSA	Species	Methods	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current}	B_{MSY} * B_{pa} ** B_{lim}	B/B_{MSY} * B/B_{pa} ** B/B_{lim}	Stock status	Scientific advice	WGSAD comments
Eastern Mediterranean													
25	25	Red mullet <i>Mullus barbatus</i>	XSA	2005-2015	$F_{(2013-2015)} = 0.26$	$F_{0.1} = 0.32$	0.8	-	-	-	Sustainably exploited with relative high biomass	Not to increase fishing mortality	The group advised to continue assessing this stock with the ProdBiom M vector. Considering that the scientific survey used as tuning fleet for the model was not carried out for one year (2014), the group advised that in the future assessments the 2014 values are estimated, or preferably an integrated assessment method is used allowing the use of not continuous time series of tuning fleets.
26	25	Picarel <i>Spicara smaris</i>	SS3*, XSA	2005-2015	$F_{(2013-2015)} = 0.05$	$F_{0.1} = 0.36$	0.14	-	-	-	Sustainably exploited with relative high biomass	Not to increase fishing mortality	No specific comments on this stock assessment.
27	26	Peregrine shrimp <i>Metapenaeus stebbingi</i>	VIT (LCA), Y/R	2012-2015	$F_{(2012-2014)} = 1.91$	$F_{0.1} = 0.75$	2.6	-	-	-	In overexploitation	Reduce fishing mortality	No specific comments on this stock assessment.
28	27	Sand steenbras <i>Lithognathus mormyrus</i>	VIT (VPA), Y/R	2015	$F_{(2015)} = 0.62$	$F_{0.1} = 0.18$	3.4	-	-	-	Preliminary assessment	No advice	No specific comments on this stock assessment.
29	27	Common pandora <i>Pagellus erythrinus</i>	VIT (VPA), Y/R	2015	$F_{(2015)} = 0.53$	$F_{0.1} = 0.23$	2.3	-	-	-	Preliminary assessment	No advice	No specific comments on this stock assessment.

Table 2: Scientific advice on the status of the assessed small pelagic stocks

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{li} m	B/B_{MSY} * B/B_{pa} ** B/B_{li} m	Stock status	Scientific advice	WGSASP comments
Western Mediterranean												
1	Anchovy	XSA				--			--	<u>Uncertain</u>	Not to increase fishing mortality	Catches are highly variable and mainly based on recruitment. The population is very small and often restricted to one bay. The use of acoustic survey for stock assessment poses some difficulties. Attempts to run XSA were performed but were deemed unsatisfactory.
1	Sardine	XSA				1.26			--	<u>In overexploitation</u>	Reduce fishing mortality	A catch-at-age model has been run for the first time. The consistencies between cohorts are very high. Unfortunately, due to methodological problems in the acoustic survey, CPUE had to be used as a tuning index, so that no fishery independent data were used. Nonetheless, the model is very coherent in terms of retrospective analysis and the WG decided to validate this assessment.

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{lim}	B/B_{MSY} * B/B_{pa} ** B/B_{lim}	Stock status	Scientific advice	WGSASP comments
3	Sardine	XSA				0.71 * (0.47)				<u>Sustainable exploitation</u>	Not to increase fishing mortality	<p>A catch-at-age model has been run for the first time and has been validated. Nonetheless, it should be considered with caution as the time series is short. Moreover, the use of F and E reference points gives different perspectives on the stock status ($F < F_{0.1}$, $E > E_{0.4}$) and biomass models provide mortality estimates slightly above reference points. All of this suggests that the stock is close to maximum sustainable exploitation rates.</p> <p>The WG recommends, for next year, trying to run statistical catch-at-age or separable VPA in order to make use of the entire time series.</p>
1-3	Sardine	XSA				0.90				<u>Sustainable exploitation</u>	Not to increase fishing mortality	The assessment relies mostly on GSA 3 data, as most of the biomass and landings occur in this area. As a consequence, the status and recommendations are similar to that of GSA 3. The WG recommends, for next year, to decide at which spatial scale the stock should be assessed (combined or separate GSAs).
6	Anchovy	XSA				--			--	<u>Uncertain</u>	Not to increase fishing mortality	Catches are increasing, acoustic biomass estimates as well. However, the different attempts at running analytical models (XSA) showed that the fishing mortality could be too high. No model was validated due to

GSA	Species	Methodology used	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current} (SSB)	B_{MSY} * B_{pa} ** B_{li} m	B/B_{MSY} * B/B_{pa} ** B/B_{li} m	Stock status	Scientific advice	WGSASP comments
												discrepancies in the retrospective or to high residuals.
6	Sardine	XSA				4.7			--	<u>In overexploitation</u>	Decrease fishing mortality	Both catches and acoustic estimates have been decreasing steadily and current estimates are 88 % lower than those on 1992. Body conditions, growth, and size have also been decreasing. A catch-at-age model has been run for the first time and it showed very good consistency both in the retrospective and in the results using MEDIAS acoustic survey or CPUE as tuning indices. The fishing mortality is very high (nearly 5 times the reference point).

GSA	Species	Methodology used	Time series of catches used in the final model	F_{current} (E_{current})	F_{unique} ($E_{0.4}$)	$F_{\text{curr}}/F_{\text{unique}}$ ($E/E_{0.4}$)	B_{current} (SSB)	B_{MSY} * B_{pa} ** B_{li} m	B/B_{MSY} * B/B_{pa} ** B/B_{li} m	Stock status	Scientific advice	WGSASP comments
7	Sardine	Direct acoustic estimate & Indirect method (two-stage biomass model)				*0.004			--	<u>Ecologically unbalanced</u> Very low fishing mortality	Fishing mortality should not be allowed to increase	<p>The biomass in the survey is intermediate but the age composition is still unbalanced.</p> <p>The situation is very similar to that of previous years apart from an increase in body condition observed in the 2016 survey.</p> <p>A two-stage biomass model has been performed, combining acoustic biomass and catches from 1993 to 2015 confirming the very low fishing mortality.</p> <p>The WG recalls that the low fishing effort is due to the small size of sardine and an absence of market for them. Management measures need to ensure that if size increases again, fishing activity would not increase too much to allow the stock to recover.</p>
7	Anchovy	Direct estimate from acoustics				--			*0.50 **0.99	<u>Depleted</u>	Implement a recovery plan immediately	<p>The biomass decreased again and is right below B_{lim}. Fish size slightly increased as did the proportion of age 2. Due to the absence of recruitment index and to the very low number of age classes and very low catches, no analytical models are currently available to further assess this stock.</p>

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{li_m}	B/B_{MSY} * B/B_{pa} ** B/B_{li_m}	Stock status	Scientific advice	WGSASP comments
Ionian Sea												
16	Anchovy	XSA				--			--	<u>Uncertain</u>		An important work has been performed to improve ALK and read again past otoliths from 2009 to 2015 and to start using catch-at-age models. Unfortunately, this was not enough to run a full aged structure analytical stock assessment. The WG recommends that this work be pursued to increase the time series on the 2004-2008 period. It also recommends to increase the historical perspective by recovering the entire acoustic biomass time series and reviewing older catch estimates.
Adriatic Sea												
17-18	Sardine	Indirect method (SAM)	1975-2015	1.486		2.08	183873		*0.73 **1.46	<u>Overexploited and in overexploitation</u>	Reduce fishing mortality	This is an updated assessment from the benchmark of last year. Reference points remained the same as last year. Biomass has decreased compared to last year and the fishing mortality has increased.

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{li_m}	B/B_{MSY} * B/B_{pa} ** B/B_{li_m}	Stock status	Scientific advice	WGSASP comments
17-18	Anchovy	Indirect method (SAM)	1975-2015	0.99		1.79	86595		*0.94 ** 1.88	<u>Overexploited and in overexploitation</u>	Reduce fishing mortality	Some errors have been detected in the benchmark input data (error in M at age 4 and in the Italian catch distribution of 2014). The correction in M did not affect the assessment. However, changes in 2014 catch-at-age resulted in a small modification in the recent years, so that last year benchmark assessment was re-run with the corrected input data and settings. Reference points remained the same. This benchmark has then been updated, adding a new year of data (2015).

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{li_m}	B/B_{MSY} * B/B_{pa} ** B/B_{li_m}	Stock status	Scientific advice	WGSASP comments
Eastern Mediterranean												
26-27	Sardinella	Indirect method (VIT)				--			--	<u>Uncertain</u>		<p>The WG welcomes the effort and the rapid increase of information in this subregion. Separate VITs have been presented as a preliminary study for 3 areas: GSA 27 Lebanon catch, GSA 26 Egypt catch and GSA 27 Palestine catch, with age information from different studies covering different parts of the region.</p> <p>Differences in growth parameters as well as their effect on estimating catch-at-age were found, and the WG noted the need for further exploration on growth parameters for this stock.</p> <p>The WG strongly encourages pursuing data collection to be able to i) compute an appropriate ALK and ii) increase the length of the time series.</p>

GSA	Species	Methodology used	Time series of catches used in the final model	$F_{current}$ ($E_{current}$)	F_{unique} ($E_{0.4}$)	F_{curr}/F_{unique} ($E/E_{0.4}$)	$B_{current}$ (SSB)	B_{MSY} * B_{pa} ** B_{li_m}	B/B_{MSY} * B/B_{pa} ** B/B_{li_m}	Stock status	Scientific advice	WGSASP comments
All Mediterranean												
	Common dolphinfish	Monthly depletion estimator based on exponential decay										The assessment was based on GSAs 5, 12, 13, 14, 15 and 16. The exercise used a new promising method. However, this was considered a preliminary analysis, as further research needs to be done to validate the use of CPUE from FAD fisheries. The WG also recommends to include data from Libya and other potential countries involved in these fisheries.

Technical elements for the protection of VMEs in the GFCM area of application

A – Technical elements for the establishment of a VME encounter protocol in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004³, 2006⁴ and 2009⁵ call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objective

Further implement the precautionary approach for managing deep-sea fisheries (DSF) with respect to VMEs, due to the difficulty in acquiring data on VMEs location and extent and with a view to avoiding the risk of significant adverse impacts (SAIs) by fisheries, GFCM should adopt a VME Encounter Protocol for the DSF operating in its area of application.

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) should consider, as necessary, applying additional management measures to their flagged vessels undertaking DSF to avoid overexploitation of resources and to avoid SAIs on VMEs.

3. Definitions

The list of VME Indicator Features, Habitats and Taxa for the Mediterranean Sea is given in Annex I.

4. Scope

Geographical coverage: Mediterranean Sea (GSAs 01 to 28)

Fisheries

The following fisheries shall be considered:

- i. all fishing vessels above 15 m (LOA) operating with bottom contact fishing gear fishing for *Aristaeomorpha foliacea*, *Aristeus antennatus*, or *Plesionika martia*
- ii. all fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) at depths deeper than 300 m;

5. Encounter protocol

Encounter: an encounter with VME Indicator Taxa is defined as any catch of VME Indicator Taxa obtained by any DSF.

Encounter rule: following an encounter with VME Indicator Taxa during DSF, the vessel captain shall immediately report the encounter to the flag State, on the form provided in Annex II, including the following information:

- i. the position of the vessel, either by the start and end point of the tow or set, or by another position that is closest to the exact encounter location;
- ii. the fishing characteristics of the vessel;
- iii. the groups of the VME Indicator Taxa encountered and the best estimates of their live weight (kg).

6. Reporting to GFCM Secretariat

Upon notification by the vessel captain, as described above, relevant CPCs shall forward, within 30 days, the encounter information reported by the vessel captain, to the GFCM Secretariat, including by electronic means.

³ A/RES/59/25

⁴ A/RES/61/105

⁵ A/RES/64/72

7. Review of the information gathered by mean of the VME Encounter Protocol

The GFCM Secretariat shall compile the data received with the encounter protocols and set up maps of the distribution of encounters with VME Indicator Taxa, including their abundance by group. The GFCM Secretariat shall regularly inform the SAC about the reported catches of VME Indicator Taxa in Mediterranean fisheries. The SAC shall review this information and, based upon the best scientific evidence available, evaluate the occurrence of VMEs and propose to the Commission, as appropriate, the establishment of new management measures, including FRAs, to ensure the protection of these ecosystems.

8. Observers

The use of scientific observers to assist the crew in data collection is encouraged in order to allow the identification of the VME Indicator Taxa to the lowest taxonomic level and to obtain information on bycatch composition.

9. CPCs responsibilities

CPCs should consider adopting temporary closures and apply these to their flagged vessels if they consider that the encounter has identified a VME. Any measure adopted in this sense should be reported to the GFCM Secretariat for further notification to the SAC.

Mediterranean VME indicator features, habitats and taxa

(a) Mediterranean VME indicator features

The following features potentially support VMEs:

- Seamounts and volcanic ridges
- Canyons and trenches
- Steep slopes
- Submarine reliefs (*slumped blocks, ridges, cobble fields, etc.*)
- Cold seeps (*pockmarks, mud volcanoes, reducing sediment, anoxic pools, methanogenetic hard bottoms*)
- Hydrothermal vents

(b) Mediterranean VME indicator habitats

The following habitats potentially support VMEs:

- Cold-water coral reefs
- Coral gardens
 - Hard-bottom coral garden
 - Soft-bottom coral gardens
- Sea pen fields
- Deep-sea sponge aggregations
 - “Ostur” sponge aggregations
 - Hard-bottom sponge gardens
 - Glass sponge communities
 - Soft-bottom sponge gardens
- Tube-dwelling anemone patches
- Crinoid fields
- Oyster reefs and other giant bivalves
- Seep and vent communities
- Other dense emergent fauna

(c) Mediterranean VME indicator taxa

Phylum	Class	Subclass (Order)
Cnidaria	Anthozoa	Hexacorallia (Antipatharia, Scleractinia)
		Octocorallia (Alcyonacea, Pennatulacea)
		Ceriantharia
	Hydrozoa	Hydroidolina
Porifera (sponges)	Demospongiae	
	Hexactinellida	Amphidiscophora
		Hexasterophora
Bryozoa	Gymnolaemata	
	Stenolaemata	
Echinodermata	Crinoidea	Articulata
Mollusca	Bivalvia	Gryphaeidae (<i>Neopycnodonte cochlear</i> , <i>N. zibrowii</i>)
		Heterodonta* (Lucinoida) (e.g. <i>Lucinoma kazani</i>)
		Pteriomorphia* (Mytiloida) (e.g. <i>Idas modiolaeformis</i>)
Annelida*	Polychaeta	Sedentaria (Canalipalpata) (e.g. <i>Lamellibrachia anaximandri</i> , <i>Siboglinum</i> spp.)
Arthropoda*	Malacostraca	Eumalacostraca (Amphipoda) (e.g. <i>Haploops</i> spp.)

*only chemosynthetic species that indicate the presence of a cold seep or hydrothermal vent are considered

Appendix 6(A)/Annex 2

VME encounter protocol in the GFCM area of application

Separate forms to be completed for each deployment of the fishing gear (haul/set) in which VME Indicator Taxa are caught.

A. Fishing Trip Information	
Country:	
Vessel name:	
Captain (name and last name):	
Date of encounter (dd/mm/yyyy):	
B. Fleet and gear information⁶	
Fleet segment:	
Fishing gear:	
C. VME Encounter coordinates	
GSA:	Statistical grid:
Point 1 (Start)	Point 2 (End)
Latitude:	Longitude:
Latitude:	Longitude:
Fishing depth (average or range, m):	
VME Feature and/or Habitat (Annex I a and b)	
D. VME Indicator Taxa catch information (Annex I c)	
Total live weight of corals in the haul/set (kg):	
Total live weight of sponges in the haul/set (kg):	
Total live weight of other vulnerable benthic taxa in the haul/set (kg):	
E. VME Indicator Taxa (by trained observers on board)	
<i>Identify VME Taxa to lowest taxonomic level (species if possible) and provide comments.</i>	
F. Pictures of VME Indicator Taxa (by fishers and/or observers on board)	
<i>Take pictures of the different VME Indicator Taxa and submit them as an attachment to the current form.</i>	

⁶ Refer to: GFCM, 2016. GFCM Data Collection Reference Framework (DCRF) (<http://www.fao.org/gfcm/data/dcrf/en/>)

B - Technical elements for mapping existing deep-sea fishing areas in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004⁷, 2006⁸ and 2009⁹ call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objectives

The deep-sea bottom fisheries of the Mediterranean target only a few species that are fished on specific habitats. In order to manage these fisheries sustainably, and prohibit any significant adverse impacts they may cause on non-target species and VMEs, it is necessary to map the distribution of the existing deep-sea bottom fishing areas.

3. Definitions

“Existing deep-sea bottom fishing areas”, means that portion of the GFCM area of application where deep-sea bottom fishing has occurred up to and including 2019.

“Exploratory (or new) deep-sea bottom fishing” occurs during the initial development phase of a DSF when the DSF operates in areas that have not been previously fished or in fished areas following significant changes in the gear or effort, as described in paragraphs 23, 55, 61 and 65 of the *FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas*.

4. Scope

Geographical coverage: Mediterranean Sea (GSAs 01 to 28)

Fisheries

The following fisheries shall be considered:

- i. bottom trawlers above 15 m (LOA) fishing for *Aristaeomorpha foliacea*, *Aristeus antennatus*, or *Plesionika martia*;
- ii. all fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) at depths deeper than 300 m;

5. Management measure

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) with vessels involved in “deep-sea bottom fisheries” shall submit to the extent possible and no later than 31 December 2019 comprehensive maps of existing deep-sea bottom fishing areas to the GFCM Secretariat. Maps shall be based on VMS/AIS data and/or other available geo-reference data and be expressed in as precise spatial and temporal resolution as possible. The submission of the detailed gear deployment position information will facilitate the mapping process. Priorities should be given to bottom trawling below 300 m, but it is highly desirable to map other types of fishing gears that contact the seafloor during normal use, e.g. bottom set longlines, gillnets, trammel nets, and pots. Contracting Parties may, in the future, consider the possibility of refining these maps on the basis of haul-by-haul information, if available. GFCM Secretariat shall compile a composite map, preferably by gear type, of the existing deep-sea bottom fishing areas within the GFCM area of application. The SAC shall review this information and based upon the scientific evidence available, adopt the map defining the existing fishing areas in the GFCM area of application.

⁷ A/RES/59/25

⁸ A/RES/61/105

⁹ A/RES/64/72

C - Technical elements for management elements for the establishment of an exploratory deep-sea bottom fishing protocol in the GFCM area of application

1. Introduction

Resolutions of the United Nations General Assembly on sustainable fisheries of 2004¹⁰, 2006¹¹ and 2009¹² call upon regional fisheries management organizations (RFMOs) to take urgent action to protect vulnerable marine ecosystems (VMEs) from significant adverse impact in areas beyond national jurisdiction.

2. Objectives

To ensure that exploratory or new deep-sea fishing activities are only allowed to expand at a rate consistent with the knowledge and management of that fishery. This will avoid overexploitation of targeted deep-sea fish stocks. Further, great care needs to be taken to ensure that VMEs are mapped and known, and suitable mitigation measures applied to ensure their protection from significant adverse impacts resulting from any new fishery.

3. Definitions

“Existing deep-sea bottom fishing areas”, means that portion of the GFCM area of application where deep-sea bottom fishing has occurred up to and including 2019.

“Exploratory (or new) deep-sea bottom fishing” occurs during the initial development phase of a DSF when the DSF operates in areas that have not been previously fished or in fished areas following significant changes in the gear or effort, as described in paragraphs 23, 55, 61 and 65 of the *FAO International Guidelines for the Management of Deep Sea Fisheries in the High Seas*.

4. Scope

Geographical coverage: Mediterranean Sea (GSAs 01 to 28)

Fisheries: All fishing vessels above 15 m (LOA) operating with bottom contact gears (bottom trawls, longlines, gillnets and pots and traps) are considered undertaking Exploratory (or new) deep-sea bottom fishing when operating:

- i. On VME Indicator Features (see Annex I a)
- ii. Outside of the existing bottom deep-sea fishing areas
- iii. Inside of existing bottom fishing areas with bottom-contact fishing gears not previously used or when significant increases of effort are planned or when a new fishery is developing

5. Management measure

GFCM Contracting Party or Cooperating non-Contracting Party (CPCs) of flagged fishing vessels undertaking exploratory (or new) deep-sea bottom fishing shall be required to complete the Exploratory deep-sea bottom fishing protocol provided in Annex I, including the following information:

- i. the start and end point of each tow or set;
- ii. the fishing characteristics of the vessel including the gear used;
- iii. the GSA area and the Statistical Grid where the exploratory deep-sea fishing occurred;
- iv. the catch, the bycatch and fishing effort;
- v. VME Indicator Taxa (if any) through the VME Encounter Protocol.

6. Reporting to GFCM Secretariat

Upon notification by the vessel captain, as described above, relevant CPCs shall forward, within 30 days, the exploratory deep-sea bottom protocol form reported by the vessel captain, to the GFCM Secretariat, including by electronic means.

¹⁰A/RES/59/25

¹¹A/RES/61/105

¹²A/RES/64/72

7. Review of the information gathered through the exploratory deep-sea bottom protocol

The GFCM Secretariat shall compile the data received with the exploratory deep-sea bottom protocol and shall regularly inform the SAC. The SAC shall review this information.

8. Observers

The use of scientific observers to assist in data collection and reporting is highly desirable according to the GFCM DCRF¹³.

¹³Refer to: GFCM, 2016. GFCM Data Collection Reference Framework (DCRF) (<http://www.fao.org/gfcm/data/dcrf/en/>).

Exploratory deep-sea fishing protocol in the GFCM area of application (Mediterranean Sea)

Separate forms must be completed for each new exploratory deep-sea fishing trip

A. Fishing Trip Information
Country:
Vessel name:
Captain (name and last name):
Dates of exploratory fishing trip (dd/mm/yyyy format):

B. Fleet and gear information¹⁴
Fleet segment:
Fishing gear:

Area information	
GSA:	Statistical grid¹⁵:
Area fished (coordinates-attach map):	
VME Indicator Feature (if any):	
Depth range fished (m):	
Fishing effort:	

C. Catch summary
<i>List main commercial species and quantities caught during the exploratory deep-sea bottom fishing</i>

D. Bycatch summary
<i>Provide details of bycatch species</i>

D. VME Indicator Taxa
<i>Use the provided VME Encounter Protocol for any catch of VME Indicator Taxa</i>

E. Comments (by fishing crew)

¹⁴ Refer to: GFCM, 2016. GFCM Data Collection Reference Framework (DCRF) (<http://www.fao.org/gfcm/data/dcrf/en>)

¹⁵ Refer to: Appendix M - Geographic statistical grid for red coral, DCRF. GFCM, 2016. GFCM Data Collection Reference Framework (DCRF)

Elements for a revised concept note on a research programme on red coral in the Mediterranean Sea

INTRODUCTION

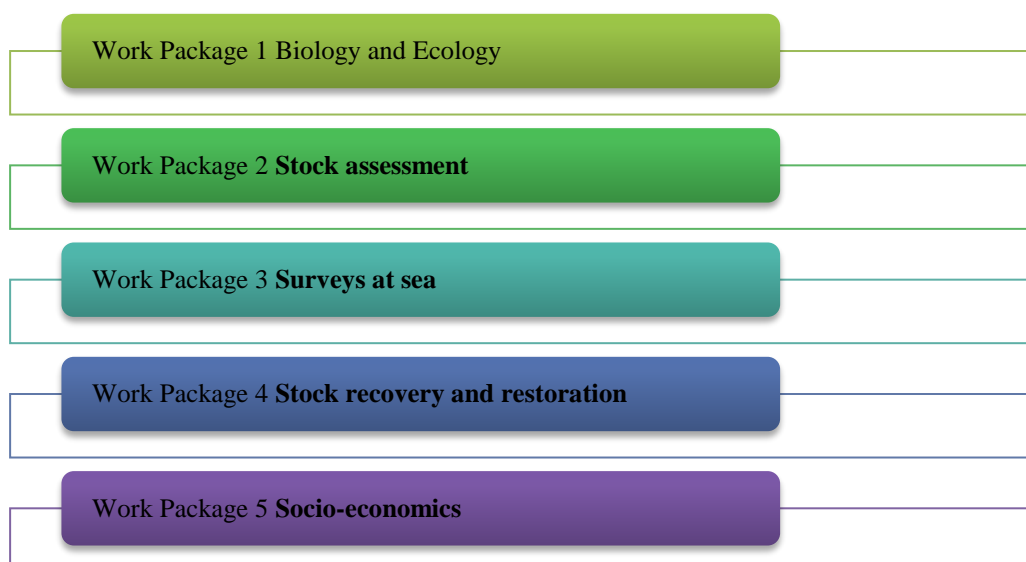
There is an urgent need of Mediterranean scientific projects aimed to fill several gaps of knowledge on the different traits of red coral life history, because they represent essential data in support of the red coral management.

MAIN FEATURES OF A RESEARCH PROGRAMME ON RED CORAL IN THE MEDITERRANEAN SEA

- Clear objectives defined in advance
- Priority given to the collection of data useful for the provision of advice in support of management, especially in regards adopted recommendations
- Combination of fishery dependent (e.g. analysis of catch) and fisheries independent (e.g. surveys to be done on multiannual basis) sources of information to ensure the regular monitoring of the resource
- All the countries where the commercial harvesting of red coral occurs should be involved; countries where red coral populations are known to exist are also invited to participate
- The Mediterranean research programme should also provide guidelines and facilitate harmonization, standardization of protocols, coordination and comparison of results obtained by ongoing and future national, regional and international research programmes addressing red coral

WORK PACKAGES

Work packages are designed to address the main issues required to implement the adopted Guidelines, as well as to address the need to evaluate the social and economic aspects of the fishery as requested by the Commission for the implementation of management plans.



MAIN OBJECTIVES OF EACH WORK PACKAGE

WP 1 Biology and Ecology of red coral, including

Demography: Studies on size/branching pattern, density, abundance, biomass, recruitment, growth, reproduction, physiology, environmental parameters, habitat and biodiversity surveys.

Ecology of red corals: Genetics - connectivity, interactions with other species, effects of pollution, climate change: Use of existing and new genetic markers to investigate the connectivity among red coral populations and the possible effects of fisheries genetic erosion due to harvesting (fisheries genetics) and to assess the geographic origin of red coral (genetic traceability). Connectivity studies could also be implemented with numerical simulations of oceanic currents as well as with studies on the larval stage.

WP 2 Stock assessment: Investigation on methodologies for assessing the status of these populations, including by compiling historical data.

WP 3 Surveys at sea: Development of large and small-scale bathymetric surveys to map Mediterranean red coral populations through standardized methodologies.

WP 4 Stock recovery and restoration: Study of the dynamics of recovery of fished colonies, Development of restoration techniques.

WP 5 Socio-economics: Socio-economic analysis on the sector and development of economic indicators. External aspects affecting the fishery

IMPLEMENTATION OF THE RESEARCH PROGRAMME

The GFCM should:

1. Assess progress in the different work packages;
2. Identify the most urgent data needed for management purposes;
3. Define standardized methods as well as research protocols
4. Organize capacity building activities

Data quality indicators

INDICATORS*	DEFINITION	OPERATIONAL INDICATORS**	DEFINITION	VALIDATION CHECKS
TIMELINESS	Length of time between the transmission of the data to GFCM and the deadline as defined by the laydown recommendations. The establishment of the desirable timeliness targets is based on needs and on the typical practices of Contracting Parties			
COMPLETENESS	Extent to which the expected data, as requested by the laydown recommendations, is transmitted to GFCM. It is measured as percentage of reported data fields against the expected ones.			
CONFORMITY	Extent to which the transmitted data adheres to GFCM standards (codifications and format). It is measured as percentage of data fields as properly reported (right codification and format) against the total ones.	Conformity	Check of individuals values against codelist or value range regarding the variable type (numeric, codelist, category)	<ul style="list-style-type: none"> Number of invalid value for each data table
CONSISTENCY	The extent to which submitted data is within a range of plausible values and consistent to previous data submission as well as to other official data sources. These data analyses include the identification of possible outliers, meaning values out of predefined bounds of statistical control as well as of changes in the time series that could imply changes in the methodology or errors in the data submission.	Stability	Check if values vary within acceptable borders around a level that is considered as good enough on the basis of values of the same variables in the recent past	<ul style="list-style-type: none"> Number of values outside the range for each data table
		Coherency	Crosschecks between values of same or similar variables as reported in different data tables within the same reference year	<ul style="list-style-type: none"> Number of incoherent values between data tables
		Accuracy (precision and bias)	Check the degree to which values vary from a true or expected value (precision and bias checks)	<ul style="list-style-type: none"> Number of stratum with low sampling effort Number of stratum with high dispersion indices Number of outliers
ADEQUACY	The extent to which the transmitted data allows the SAC to provide its scientific advice on the requests of the Commission. The adequacy of data will be regularly evaluated at both national and regional levels. The SAC shall advance proposals to improve the data adequacy standards that are needed for the scientific advice to the Commission.			

*presented at the intersessional meeting of the GFCM Compliance Committee (January 2016)

** defined at the Meeting on GFCM fisheries data requirements (November 2016)

Proposed roadmap and structure for SoMFi 2018

ROADMAP TOWARDS THE PUBLICATION OF SOMFI 2018:

The second edition of *The State of Mediterranean and Black Sea fisheries* (SoMFi, 2018) is expected to contain new data submitted by countries throughout 2017 and part of 2018, including some new information gathered in the frame of activities of the mid-term strategy. In order to facilitate accurate reporting, as requested by the SAC, countries will be given a chance to validate data to be reported.

Data submitted through official channels to the GFCM (i.e. DCRF/Task 1) will be considered validated. If no data are received, other reliable sources will be used. An email will be sent to each country in early 2018 to allow time for validation.

Data received through official channels (DCRF/Task 1 data submission) by May 2018 will be included. Publication of SoMFi 2018 is envisaged by the forty-second session of the Commission.

PROPOSED TABLE OF CONTENTS – SOMFI 2018:

Part 1 – Overview of the status and trends of Mediterranean and Black Sea fisheries

1. Fishing fleet

- 1.1 Introduction and sources of information
- 1.2 Size of the fishing fleet
- 1.3 Fishing capacity
- 1.4 Age of vessels
- 1.5 Fleet segments

**The structure of this chapter is foreseen to remain the same. Data to populate come from official data submissions (DCRF/Task 1) and, where data are missing, attempts will be made to complete the analysis using alternative reliable sources.*

2. Capture fisheries

- 2.1 Introduction and sources of information
- 2.2 Historical trends of catches in the Mediterranean and Black Sea
- 2.3 Main species and groups contributing to Mediterranean and Black Sea catches
- 2.4 Subregional trends in landings in the Mediterranean and Black Sea

**The structure of this chapter is foreseen to remain the same. Data to populate come from official data submissions (DCRF/Task 1) and, where data are missing, attempts will be made to complete the analysis using alternative reliable sources.*

3. Socio-economics

- 3.1 Introduction and sources of information
- 3.2 Socio-economic importance of Mediterranean and Black Sea fisheries: valuing fisheries
- 3.3 Value at first sale
- 3.4 Employment
- 3.5 Productivity
- 3.6 Trade
- 3.7 Conclusion

**The structure of this chapter is foreseen to remain the same, however, stronger emphasis is expected to be put on sub-regional analyses (rather than by country) and an analysis of trends (comparing with data presented in SoMFi 2016). Data to populate this chapter will come from official socio-economic data submissions*

(DCRF/Task 1) and, where data are missing, attempts will be made to complete the analysis using alternative reliable sources.

4. Bycatch

- 4.1 Introduction and sources of information
- 4.2 Overview of discards by fishery in the GFCM area of competence
- 4.3 Overview on incidental catches of vulnerable species

**The structure of this chapter is foreseen to remain the same. Data that should populate this chapter should come both from the “Discards questionnaires” sent to riparian states and from the regional review that should be conducted in the frame of the “incidental catch of vulnerable species” project, with information provided by the project’s partners (ACCOBAMS, Birdlife International, IUCN, MEDASSET, UN Environment/MAP RAC/SPA, WWF). Results will be always presented at subregional scale with a short focus by country (depending on the availability of data).*

5. Status of stocks

- 5.1 Introduction and sources of information
- 5.3 Spatial and temporal coverage on stock status advice
- 5.4 Overview of status of stocks in the Mediterranean and Black Sea
- 5.5 Final remarks

**The structure of this chapter is foreseen to remain the same. In section 5.4, regional indicators on the status of stocks, based on the indicators proposed in the context of the GES process are expected to be used. Also, specific overviews will be provided for the regional and subregional status of priority species. Information in SoMFi 2018 is expected to include the status of stocks as assessed by the WGs up to 2017.*

6. Insights on small-scale fisheries

- 6.1 Introduction
- 6.2 Distribution of SSF fleet
- 6.3 SSF catches
- 6.4 Socio-economic value

**A box on the impact of recreational fisheries, including catches and socio-economic impact is foreseen to be added to this chapter, based on the results of the recreational fisheries questionnaire.*

Part 2: Management of Mediterranean and Black Sea Fisheries: the mid-term strategy towards fisheries sustainability

** Part 2 of SoMFi is modified at each issue to focus on new management measures and relevant milestones, such as in this case the first phase of the mid-term strategy towards the sustainability of Mediterranean and Black Sea fisheries adopted by the Commission in 2017.*

6. GFCM management measures

7. The mid-term strategy towards the sustainability of Mediterranean and Black Sea fisheries

Conclusions from the coordination meeting on the implementation of scientific surveys in the Mediterranean

Comprehensive studies of the biological status of most of demersal and pelagic fish stocks in some Mediterranean areas are lacking and there is a need for survey data for tuning the application of analytical models for stock assessment. To address this issue, the GFCM within its mid-term strategy promotes such studies and one way of doing so is by establishing international surveys covering the main demersal and pelagic stocks.

The coordination meeting for the implementation of scientific surveys in the Mediterranean area was held in Ljubljana, Slovenia on 15 May 2017. The meeting was attended by 26 experts from GFCM CPCs, representatives of the FAO Regional Projects, the chair of the MEDIAS Working Group and a representative of the MEDITS Working Group.

The meeting:

- reviewed initiatives and protocols in place in the Mediterranean, at both national and regional levels, for surveys-at-sea;
- agreed on common protocols towards harmonized surveys in the Mediterranean;
- identified areas for conducting coordinated surveys and a potential timeframe for their execution;
- preliminarily identified needed resources (e.g. gear, equipment, vessels) and support by GFCM to ensure the implementation of the surveys;
- discussed the joint analysis and use of data obtained from harmonized surveys;
- agreed on a chronogram for the execution of surveys.

MAIN CONCLUSIONS

Common protocols

Participants presented the various demersal and acoustic pelagic surveys in place in the Mediterranean and agreed that standardized protocols were needed among Mediterranean countries to facilitate the analysis of results and the achievement of common objectives at regional scale.

The meeting agreed on the need to prepare GFCM common protocols for the execution of regional pelagic/acoustic and demersal/trawl surveys. These protocols should elaborate on the existing ones as reviewed during the meeting, including the international MEDIAS and MEDITS protocols, which are already implemented to some extent in a large number of countries in the Mediterranean. It was also stressed that the GFCM protocols should also be applicable to those areas in which acoustic and/or trawl surveys are not regularly carried out, and therefore should contain the minimum requirements to fulfill the objectives at regional scale. Furthermore, it was agreed that the protocols should address the priorities as identified by the SAC and the Commission, in particular in relation to the data collection needs included in the DCRF and expressed by the GFCM Working Groups on Stock Assessment (WGSAs).

Participants agreed that the GFCM protocols should be based on the following principles:

Target species and sampling

Although the survey should aim to collect basic information on all species caught, the level of sampling requirements shall be different for the different species observed in the survey, in line with the requirements expressed in the DCRF (Group I, Group II and Group III species), as well as with priority species as set by the Commission. For target species (Group I and priority species) observations should ensure basic data to allow for the estimation of distribution, abundance and key biological parameters (e.g. length, sex and maturity). For all the other sampled species of fish, crustaceans, molluscs and invertebrates, at minimum the total number and total weight should be reported.

Sampling gear

For demersal surveys, the sampling gear should correspond to the MEDITS bottom trawl, including all the material and its rigging from the doors to the codend of the net. For acoustic surveys, an echo-sounder of at least 38 khz transducer should be used.

Period of the survey

The surveys should be conducted during spring and summer (May to September). Each country should select the best month during this period to carry out the survey based on the main biological aspects of the selected species (e.g. recruitments and spawning periods).

In addition to the above, the common protocols should clearly describe other information, such as the treatment of the catch, additional environmental information to be collected, description of the sampling process, etc.

Use of the data

Participants highlighted that the outcomes of surveys should feed different data requirements within the GFCM; information useful to reply to existing recommendations should be reported to the GFCM by CPCs, information in support to stock assessment should be reported to the WGSAs through the Stock Assessment Forms, and other information useful for a regional analysis should be discussed in dedicated expert groups.

It was also highlighted that data emanating from national surveys should remain property of the Country executing the survey, and that data and information transmitted by countries will be treated by the GFCM Secretariat in accordance with all necessary measures to comply with GFCM security and confidentiality provisions. Data put at disposal of dedicated expert groups shall be treated in a similar way as the data used on the WGSAs: all participants should have access to the data needed to address the objectives of the meeting, while the use of the shared data outside the framework of the GFCM will need the permission from the original data sources (i.e. the CPCs participating in the surveys).

Participants also agreed on the need to clearly define the Terms of Reference of the future expert groups that will analyse the outputs of the surveys.

Chronogram

Scientific surveys are expected to be conducted in Morocco, Algeria and Tunisia in 2018, and in Egypt, Turkey and Lebanon in 2019-2020. Each selected country should nominate a national focal point who will ensure effective liaison with the GFCM Secretariat, the local and national authorities and key partners in the preparation and execution of the surveys (e.g. identify and flag difficulties in the implementation and execution of the surveys; availability of country resources; requirements and needs).

Draft roadmap for the assessment of IUU fishing in the Mediterranean and the Black Sea

1. Introduction

The United Nations Division for Ocean Affairs and the Law of the Sea (UNDOALOS) and the Food and Agriculture Organization of the United Nations (FAO) have been acting at the global level to promote responsible fishing practices and to curb IUU fishing. Among the instruments available are FAO Code of Conduct for Responsible Fisheries and the FAO International Plan of Action to Prevent, Deter and Eliminate IUU fishing (IPOA-IUU).

On a regional scale, the General Fisheries Commission for the Mediterranean (GFCM), too, has been acting to curb IUU through numerous recommendations, resolutions and decisions¹⁶. The work done to date has concentrated mainly on aspects related to Monitoring, Control and Surveillance (MCS), while little progress has been made towards the development of a scientific plan of action for the quantification/estimation of IUU. Two roadmaps have been adopted by the GFCM in 2013 and 2014 for the purpose of fighting IUU fishing in the Black Sea (GFCM 37th annual session, Croatia, May 2013), and in the Mediterranean Sea (GFCM 38th annual session, FAO Headquarters, May 2014). These roadmaps express the need to develop, and agree on, standard methodologies to evaluate IUU catches and trade of fishing products in support of scientific advice.

Among the 17 Sustainable Development Goals (SDGs) included in the 2030 Agenda for Sustainable Development, adopted by world leaders at the UN Sustainable Development Summit 2015 (New York, 25–27 September), is SDG 14.4 whose aim is to end IUU fishing by 2020. To support the achievement of UN targets, including the FAO Strategic Objective 2, towards the global implementation of the UN SDGs, in 2017, the GFCM launched the mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Seas fisheries. Target 3 of the GFCM mid-term strategy is of particular relevance to IUU: Curb IUU Fishing, through a Regional Plan of Action (RPOA). Specific supporting recommendations from the GFCM and the RPOA-IUU for the GFCM region are included as Annex A.

To launch the activities towards the achievement of the objectives mentioned above, this appendix includes a first draft of a roadmap for the assessment of IUU Fishing in the Mediterranean and Black Seas. The roadmap is based on a stepwise framework to quantify and assess IUU based on an agreed methodology tailored for the GFCM area. This roadmap has been developed to specifically addresses Output 3.1.a of the mid-term strategy (assessment of the quantity, magnitude and characteristics of IUU fishing) thus proposing a framework towards bridging the gap between MCS and the quantification of IUU in support of scientific advice using standard methodologies as endorsed by the GFCM 37th and 38th annual sessions. It has also been designed considering other targets in the mid-term strategy, such as the move towards increased spatial management to address impacts of fishing on marine ecosystems (mid-term strategy, Output 4.2) as well as capacity building in a number of areas identified by the Compliance Committee (Outputs 5.1.b.ii, 5.1.b.iv and Output 5.1.b.v).

Finally, the roadmap was thought in synergy with the FAO IPOA-IUU, taking into account the advances towards a methodology to assess IUU done within it.

2. Key challenges

With respect to the quantification and assessment of IUU, the GFCM area presents several important challenges which are taken into due consideration in the proposed roadmap:

¹⁶ Recommendation GFCM/40/2016/1; Mid-term strategy (2017–2020) Resolution GFCM/40/2016/2; Recommendation GFCM/39/2015/3; Resolution GFCM/38/2014/1; Recommendation GFCM/35/2011/1; Recommendation GFCM/33/2009/5; Recommendation GFCM/33/2009/6; Recommendation GFCM/33/2009/7; Recommendation GFCM/33/2009/8; Two roadmaps which have been adopted by the GFCM for the purpose of fighting IUU fishing in the Black Sea (GFCM 37th annual session, Croatia, May 2013), and in the Mediterranean Sea (GFCM 38th annual session, FAO Headquarters, May 2014).

- i. Addressing the variation generated by differing levels of MCS across the littoral countries in the region: the approach developed will necessarily have to be able to function at the regional scale (independent of country level capacity).
- ii. Addressing the variation related to the differing levels of attention devoted to IUU in the data collection systems in place within each country: the methodology will have to be adaptable to both data-rich and data-limited contexts.
- iii. Addressing the variation in the range of possible behaviours that contravene regulations, stemming from the differences in fisheries regulations across countries and fisheries (e.g. closed areas, gear restrictions etc). This will require the development of a dataset and potentially a geodatabase on legal requirements imposed on operators by each littoral state.
- iv. Addressing the variation stemming from the fact that relative importance of IUU related issues will likely vary in space and time, indicating that context will be very important for establishing estimates and developing priorities.
- v. Understanding the distribution of effort, compliance behaviour, and other factors driving IUU levels in the small-scale sector (~80% of fisheries in the region).

3. Proposed roadmap

The proposed draft roadmap seeks to balance short-term and readily achievable activities that will provide some information on IUU, with more in-depth and resource intensive approaches, which are likely to provide better estimates but require more time, focus and resources. The six activities suggested lend themselves to a staged approach (Figure 1), with Activities 1 and 2 possible in the near term, supporting the development of Activity 3. Activities 4 and 5 can then proceed to some extent independently, building on the information gained in the first three. Activity 6 can be integrated throughout the process, beginning with the development of the quantitative survey in Activity 3 and carrying forward through building spatial models and developing an independent estimate of effort. Finally, as important case studies are identified, Activity 6 can continue, potentially addressing economic values of IUU landings or possibly creating automated risk assessment models based on integration of VMS, logbook, and observer data.

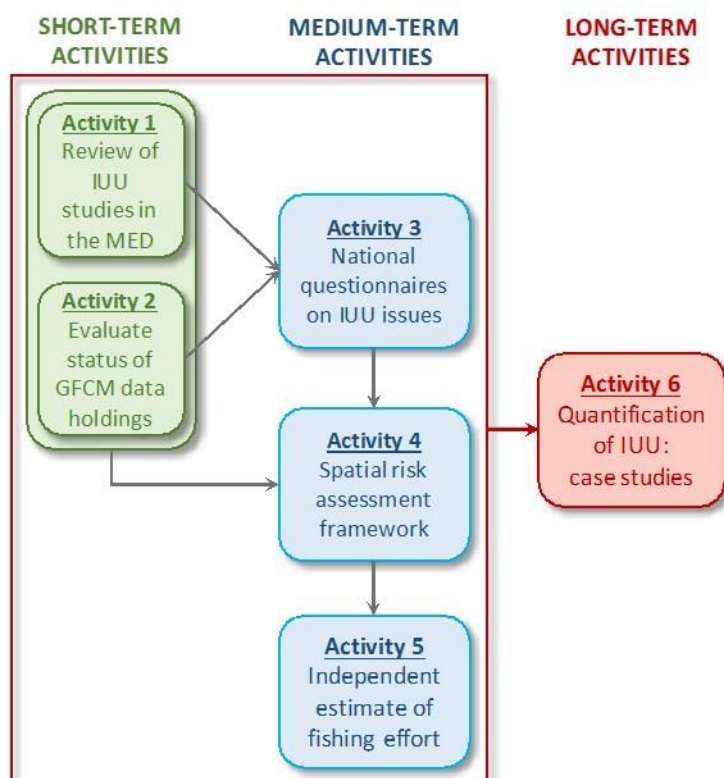


Figure 1. Schematic representation of the proposed activities towards the quantification of IUU

Activity 1 – Compile and review existing published and unpublished studies and reports on IUU-related issues in the Mediterranean and Black seas.

A number of the littoral countries have research efforts ongoing on IUU-related issues. Countries such as Morocco were identified in a survey implemented in 2013 by the GFCM (see Appendix C of the GFCM Workshop on IUU Fishing in the Mediterranean Sea, Tunis, Tunisia, 3-4 October, 2013) as having ongoing research on IUU activities. In combination with reports to the GFCM Compliance Committee (CoC) Working Group on IUU (WGIUU), these records form a useful picture of the current state of knowledge on IUU issues in the region. This information will provide a picture of regional progress in addressing IUU and could be used to evaluate overall trends as well as to address specific questions, such as shifts in IUU effort in the region in response to increased interdictions in some countries.

Activity 2 – Evaluate the current status of data holdings by GFCM on IUU related issues, including vessel lists (see Recommendation GFCM/33/2009/8) and other reports

The GFCM holds a variety of records that could be of use in making qualitative or quantitative assessments of IUU:

- IUU vessel lists,
- National fleet sizes and composition,
- National catch levels, enforcement activities and outcomes,
- Logbook and observer records,
- Landings.

A complete assessment of available information, including its coverage and quality, would be a key piece of information in designing subsequent analyses.

Activity 3 – Development and administration of a quantitative survey covering IUU related issues at the national level

Quantitative surveys covering IUU-related issues across littoral countries in the Mediterranean and Black seas could provide information on both key targets for estimation by country, and useful data for making those estimates. This survey should aim to update the information collected in the survey delivered in 2013. One key outcome of the survey would be a clear picture, by country, of the relative priorities in tackling the various components of IUU fishing: strictly illegal behaviors, those related to issues with reporting, and those related to a lack of regulation on particular activities. Three components are envisaged:

- i. Targeting higher-level fisheries officials, familiar with national policy directions and priorities, in a workshop setting.
- ii. Focussing on IUU-related issues in the field, targeting responses from fisheries officers within each of the littoral countries, attempting to get a representative sample across each of the fisheries agencies.
- iii. Understanding organizational and institutional aspects of IUU activity in the countries.

The survey would be structured using quantitative and semi-quantitative methods, allowing an estimation of the relative importance of IUU issues by target species, gear and vessel size. These types of surveys, when combined with robust statistical methods to control for respondent bias and estimate IUU metrics and uncertainty, could provide a useful tool for establishing broad baselines on IUU levels by country, gear, target species, and vessel characteristics using a uniform method across all countries.

Activity 4 – Create an IUU spatial risk assessment framework applicable to the Mediterranean and the Black Sea

There are a number of characteristics that could be used to estimate the likelihood of vessels fishing in a given location and thus predict IUU risk, even in the absence of information from GFCM member states:

- target species ranges,
- relative species abundance,
- locations of ports, coastal populations, vessel services, fish processors, and a variety of other spatial information,
- governance quality, corruption levels, and other similar variables,
- information contained in inspection databases,

This spatial information can then be combined with information provided by littoral states on attempted and successful interdictions, vessel behavioral patterns inferred from VMS, spatial and temporal restrictions on fishing activities, and other relevant information for identifying high and low risk contexts for IUU. These data on behaviors can then be used to estimate statistical relationships between observed IUU events and the spatial variables available for all countries. In turn, those statistical relationships can be used to predict IUU events at times and locations where there is currently no data available (e.g. transshipment of fish between vessels; see Appendixes C and D). This spatial analysis and the resulting risk assessment could be used to (i) evaluate regional progress in addressing IUU activities, based on integration country level reports on detections, (ii) answer questions about shifts in IUU effort as interdiction improves in some jurisdictions in the GFCM region.

Information from the surveys developed in Activity 3, along with background data from Activities 1 and 2 could also readily inform the risk assessment models developed in the framework.

Activity 5 – Obtaining an independent estimate of fishing vessel activity

Compilation of an independent estimate of fishing vessel activity at the regional scale using electronic monitoring (VMS and AIS) and remote sensing. VMS and AIS can be used to directly construct the at sea distribution of vessel fishing locations, transit routes, and ports utilized. A key issue in the Mediterranean and Black Seas however is the absence of either VMS or AIS in some countries, and the lack of coverage for smaller vessels, in particular those under 12 meters. These shortcomings in coverage could be addressed via a remote sensing approach, using medium resolution satellite imagery. Satellite remote sensing is costly, but it would be possible to use the spatial database developed in Activity 4 to design a stratified random sampling approach to target vessels operating on fishing grounds and in ports. Key variables to consider in stratification include target species distributions, distance from ports, intensity of MCS, proximity to borders, proximity to reserves and other areas with high catch rates. The challenge would be to be able to identify vessels and estimate their movement. Alternatively, for an easier solution, using paired sites inside and outside fishing grounds would allow estimation of fishing vessel densities. Similarly, temporal variation in vessels in ports and at landing sites can be used to estimate trip frequency and vessel latency. It would be possible to supplement the data using ground-based observations of vessel activities in ports and coastal regions, where available from port authorities or other sources, as has already been done in Chile. The output of the analysis would be a map of vessel density (and hence fishing effort) across the GFCM region, potentially with information on relative importance of ports and transit routes, which would include small-scale operators in a uniform manner across all countries.

Activity 6 – Case studies

Based on the survey method outlined in Activity 3 and the risk model in Activity 4, a number of key issues will likely be identified. These could form the basis for case studies, in which more detailed methods are applied to estimate IUU metrics such as expected catch, areas of high non-compliance, profiles for potential non-compliant operators, lost value to national governments, or other issues of interest. These case studies could be targeted to cover the diverse range of data quality and issue complexity in the GFCM fisheries, ranging from fully quantitative assessments using electronic monitoring data to semi-quantitative analyses based on projection from similar cases and/or elicitation techniques with industry or managers. This activity could provide two key outputs, 1) the development of analytic frameworks and supporting methods which can be transferred to other cases by GFCM parties, and 2) a vehicle for capacity building with the parties through participatory research with technical support from the GFCM as envisioned in Output 5 of the mid-term strategy.

Draft terms of reference for selected meetings

Joint EIFAAC/ICES/GFCM Working Group on Eels (WGEEL) (terms of reference for 2017)

- Report on developments in the state of the European eel (*Anguilla anguilla*) stock, the fisheries on it and other anthropogenic impacts.
- Produce the first draft of the ICES annual eel advice, and other advisory documents as requested.
- Report on updates to the scientific basis of the advice, including any new or emerging threats or opportunities.
- Address the generic expert group (EG) ToRs from ICES, and any requests from EIFAAC or GFCM.

Working groups on stock assessment for demersal and small pelagic species (WGSAD and WGSASP)

The main objective of the annual meetings of the WGSAs is to provide advice on the status of the main commercial stocks in the Mediterranean Sea. In order to do that, the WGSAs shall:

- compile basic information on the main stocks and fisheries (length frequency time series, age structures, commercial and surveys data, etc.) as provided by participants on standard formats, following the requirements by the SAC and the Commission;
- run alternative assessment models and agree on scientific advice for a given assessment.
- run, when possible, short-time simulations;
- identify, when possible, biological reference points (BRP); in case where BRP cannot be obtained, the WGSAs should attempt to use empirical approaches based on standing stock as stock status indicator, the harvest ratio (catch/biomass from survey) as fishing impact, and environmental stress indicators (e.g. SST, chlorophyll), etc.;
- provide information on fishing mortality relative ratios when, on a given stock, fishing mortality is computable to various fleets (multifleet data methods);
- attempt to provide advice based on precautionary principles, when information based on analytical models is not sufficient for a given priority stock;
- discuss the use of Data Limited Stock assessment methods to provide advice on priority stocks for which information to perform a full analytical assessment is not sufficient; and
- assess the work done on the definition and estimation of the common indicators and targets identified to ensure GES. Work towards the proposal to aggregate these indicators at the subregional and regional levels in order to assess their performance.

In addition to the generic terms of reference of the WGSAs, the following is proposed for the 2017–2018 intersession:

WGSAD

- Organize a session to introduce the use of integrated analysis models for stock assessment.
- Perform an analytical assessment of *Pagellus bogaraveo* in GSAs 1&3.

Generic terms of reference for the SAC Subregional Committees (SRC) (updated)

The main expected benefit of the subregional approach is to achieve better integration of subregional actors and required disciplines towards advice on shared stocks and to effectively underpin subregional management plans.

In order to achieve this, the Subregional Committees (SRCs) will:

- compile relevant information on the status of subregional fisheries and provide scientific advice to the SAC;
- appraise the outcomes of the SAC technical activities relevant for the management of fisheries in the subregion, including from the workshop on management strategy evaluation (WKMSE), where applicable;
- follow-up on the implementation of technical measures within relevant GFCM recommendations;
- identify priority topics for the subregion, including in relation to data collection, provision of advice and implementation of management measures; and
- prepare a draft workplan to address identified priority issues, including in the context of the adopted mid-term strategy towards the sustainability of Mediterranean and Black Sea fisheries, for the consideration of the SAC.

The SRCs will be technical in nature, composed of scientists and administration experts from the countries within the subregions as well as relevant partners.

Each SRC is invited to provide specific *ad hoc* terms of reference for their next meeting.

SRC-WM

The SRC-WM will include a session on Blackspot seabream with the following proposed terms of reference:

- Overview of the work carried out towards the standardization of biological sampling and fishing effort, including harmonized sampling plans addressing spatial and fishing activity heterogeneity.
- Overview and discussion of key parameters of the fishery, including biological parameters and sampling coverage.
- Stock identification/stock boundaries, including through genetic studies.
- Identify and discuss environmental effects on the stock/fishery.

Workshop on management strategy evaluation (WKMSE)

WKMSE main objective will be to address the requests of the SAC and the Commission in relation to the biological and socio-economic implications of the implementation of alternative management scenarios, and report its technical advice to the relevant SAC subsidiary bodies (e.g. Subregional Committees) and the SAC itself. In order to do that, WKMSE should meet regularly to

- Develop a Management Strategy Evaluation (MSE) framework for each of the fisheries addressed, including:
 - Identify the adequate Operational Model, including the stock assessment model, stock-recruitment relationship and related input parameters.
 - Identify and list the management scenarios to be tested, taking into account scenarios previously proposed by the Commission or agreed with relevant stakeholders.
 - Identify the performance statistics to be used for the analysis of simulation results.
- Run the MSE simulations and discuss the outcomes.
- Prepare a draft advice on the biological and socioeconomic implications of alternative management scenarios, to be submitted to the SAC.

The WKMSE should ideally be composed of experts in both stock assessment and socio-economics, and should meet for a sufficient amount of time in order to address the ToRs proposed. Scenarios to be tested should be discussed with all stakeholders of the subregion involved in the management process.

Workshop towards the implementation of a Mediterranean management plan for European eel

- Review background information on European eel habitat distribution, its stock state (exploitation – catch/effort, time series, existing assessment, anthropogenic impacts) in the Mediterranean area, also based on previous work done within the GFCM Eel Pilot Action.
- Address the European eel life cycle distinctive features for subpopulations in the Mediterranean.
- Review exploitation typologies in the main habitat where European eel is present, identifying the main strengths and weaknesses of such exploitation patterns.
- Review the existing frameworks for European eel management in the Mediterranean area, by examining all management measures and assessing their suitability. The need to harmonize existing management plans such as those within EU Regulation 1100/2007 or other existing frameworks will be also taken into account if possible.
- Review the provisions for data collection on European eel according to the GFCM-DCRF.
- Identify the key issues for a sustainable management of European eel local stocks in the Mediterranean, also by listing possible management measures to be considered for each issue, within a comprehensive management plan.
- Identify management targets towards which the management plan shall focus.
- Define requirements to evaluate the effectiveness of management measures to be put in place.

Workshop on the implementation of fisheries data collection in line with the DCRF

- Analyze the collection and submission of national data according to the DCRF provisions.
- Report on the implementation of conformity, stability and consistency data quality checks.
- In the context of the DCRF mechanism for the selection of fleet segment, evaluate any requests of countries for the aggregation of length classes.
- Report on the assessment of data quality control process carried out at national level.

Training activities on integrated assessment models

The course will provide an introduction to Integrated Assessments, covering the following topics:

- Integrated Assessment models vs other assessment models;
- Pros and cons of Integrated Assessment methods;
- Model complexity: multifleet, multisex, multiarea;
- Fitting models to data;
- Modeling recruitment;
- Modeling selectivity;
- Data weighting;
- Estimation of uncertainty and time-varying parameters; and
- Examples of integrated assessment models, e.g. Stock Synthesis.

The course will be both theoretical and practical. Participants should be familiar with the basics of population dynamics and the R programming language.

Training activities on quantitative assessments of management scenarios, including on the use of socioeconomic models

The course will provide an entry-level introduction to MSE, covering the following topics:

- MSE philosophy and framework
- Operating models:
 - The population
 - The stock recruitment relationship
 - Fleets
- Harvest Control rules

- Uncertainty
- Risk
- Data poor *vs.* data rich situations
- Bioeconomics

The course will be both theoretical and practical with a variety of examples from all over the world. Participants should be familiar with the stock assessment and the R programming language.

Maturity information for Blackspot seabream (*Pagellus bogaraveo*)

Blackspot seabream are protandrous hermaphrodites, changing sex from male to female at some point of their life.

It has been estimated that, in the Strait of Gibraltar, males start maturing at a L50% around 30 cm. Around 33 cm an important percentage of individuals change sex and become females, maturing at L50% around 36 cm (Gil, 2006, ICES 2013) (Table 1)

Table 1. Length at maturity of *Pagellus bogaraveo*. Size are total length in cm, were applicable original estimates in fork length (FL) were converted to total length (TL) using the relationship $TL=1.13*FL-0.04$ (Krug, 1989). Modified from 2016.

Stock	Maturity of females L50% Females (TL, cm)	Maturity of males L50% males (tl, cm)	Source
Cantabrian Sea	30 – 34 TL	25 – 29 TL	Alcaraz et al. (1987) in Gil (2010)
Azores	36.47 – 38.88 TL	29.84 – 31.87 TL	Krug (1994) in Gil (2010)
Azores	32.96 TL	29.57 TL	Mendonça et al. in 1998
Strait of Gibraltar	36 TL	30 TL	Sobrino and Gil (2001); Gil and Sobrino (2001)
Strait of Gibraltar	28.2 TL	24.4 TL	Jiménez (2010) in Gil (2010)

References

- Gil, J. and I. Sobrino. 2001. Studies on reproductive biology of the Red (blackspot) seabream [*Pagellus bogaraveo* (Brünnich, 1768)] from the Strait of Gibraltar (ICES IXa/SW Spain). NAFO SCR Doc. 01/86.
- Gil J., 2010. Spanish information about the red seabream (*Pagellus bogaraveo*) fishery in the Strait of Gibraltar region. A CopeMed II contribution to the SRWG on shared demersal resources. Ad hoc scientific working group between Morocco and Spain on *Pagellus bogaraveo* in the Gibraltar Strait area (Málaga, Spain. 22 July, 2010). GCP/INT/028/SPA-GCP/INT/006/EC. CopeMed II Occasional Paper N° 2: 30 pp.
- ICES. 2013. Report of the Working Group on Biology and Assessment of Deep-sea Fisheries Resources (WGDEEP), 14–20 March 2013, Copenhagen, Denmark. ICES CM 2013/ACOM:17. 963 pp.
- Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) - Minimum conservation size for Red Seabream (*Pagellus bogaraveo*) (STECF-16-09). 2016. Publications Office of the European Union, Luxembourg, EUR 27758 EN, JRC 101980, 16 pp.
- Sobrino, I. and J. Gil. 2001. Studies on age determination and growth pattern of the red (blackspot) seabream [*Pagellus bogaraveo* (Brünnich, 1768)] from the Strait of Gibraltar (ICES IXa/SW Spain): Application to the species migratory pattern. NAFO SCR 01/87.

**PROPOSAL FOR A GFCM FISHERIES RESTRICTED AREA (FRA)
ESSENTIAL FISH HABITATS IN THE CENTRAL ADRIATIC JABUKA/POMO PIT**

Revised by SAC technical group/subregional committee: SRC – Adriatic Sea

Date of endorsement:

**STANDARD FORM FOR THE SUBMISSION OF PROPOSALS FOR GFCM FISHERIES
RESTRICTED AREAS (FRA)
IN THE MEDITERRANEAN AND BLACK SEA**

Name of the FRA:
Essential Fish Habitats in the Central Adriatic Jabuka/Pomo Pit

MEDREACT with the scientific input of the Polytechnic University of Marche and Stanford University. This proposal is submitted on behalf of the Adriatic Recovery Project.

MEDREACT
Via Urbana 143, 00184 Rome
www.medreact.org



Date of submission:
March 31, 2017

1. EXECUTIVE SUMMARY

The Adriatic is one of the most productive seas of the Mediterranean. Adriatic assessed fish stocks are overexploited and fisheries management has failed to reverse these trends. In particular, demersal fisheries in the Adriatic have overexploited commercial fish and invertebrate stocks, altered Essential Fish Habitats (EFHs) and caused the loss of Vulnerable Marine Ecosystems (VMEs). Promoting the recovery of essential fish habitats and ecosystems is a key priority for rebuilding fish stocks and supporting sustainable fisheries.

The GFCM has the authority to adopt spatial management measures to effectively manage fisheries and limit their ecological impacts. Spatial management can support the recovery of depleted fish populations and degraded habitats by protecting Vulnerable Marine Ecosystems and Essential Fish Habitats, thus ensuring a sustainable use of marine resources in the Adriatic Sea.

The Fisheries Restricted Area (FRA) proposed herein is located in the Pomo/Jabuka Pit, in the central Adriatic Sea (GSA17). The area has been clearly identified as (1) a site of unique physical features influencing the dynamics of waters circulation in the whole Mediterranean basin; (2) one of the most important EFHs for European hake (*Merluccius merluccius*) and others valuable species such as horned octopus (*Eledone cirrhosa*), monkfish (*Lophius budegassa*) and Norway lobster (*Nephrops norvegicus*); (3) a key area for cetaceans, sea turtles and sea birds; and (4) an area containing VMEs that are significantly impacted by bottom trawling.

The Pomo/Jabuka Pit has a long history of overfishing. AdriaMed and Croatia have long called for its protection but it was only in July 2015 that an area of approx. 2700 Km² within the Pit was temporarily closed to Italian and Croatian bottom trawling. This area was reopened to trawling in October 2016 against scientific advice. Data from the Vessel Monitoring System (VMS) and Automatic Identification System (AIS) show a high level of compliance with the trawl ban, suggesting that a FRA in this area could be effectively monitored and enforced. Moreover, AIS data indicate that the trawl ban affected a small segment of the Adriatic demersal fisheries, which is indicative of its limited socioeconomic impact.

MedReAct, with the scientific input of the Polytechnic University of Marche and Stanford University and on behalf of the Adriatic Recovery Project, is submitting a proposal to establish a Fisheries Restricted Area (FRA) in the Pomo/Jabuka Pit. The FRA proposed core area reflects the area closed to bottom trawling in 2015 by Italy and Croatia. The core area is surrounded by a proposed buffer zone where important nursery areas, spawning ground and complex and heterogeneous habitats are present. The goals of this proposed FRA are to protect EFHs and VMEs, and support the recovery of depleted key demersal stocks, in particular European hake and Norway lobster. The establishment of this FRA would contribute to the long-term sustainability of these fisheries, meet the management objectives of GFCM, and is based on the best available scientific information.

2. AREA IDENTIFICATION

2.1 GFCM GEOGRAPHICAL SUBAREA

<http://www.gfcm.org/gfcm/topic/16162/en>

GSA 17

2.2 NAME OF THE FRA

Essential Fish Habitats in the Central Adriatic Jabuka/Pomo Pit

2.3 GEOGRAPHIC LOCATION

2.3.1 General location

Location of the proposed FRA (Fig 1.)

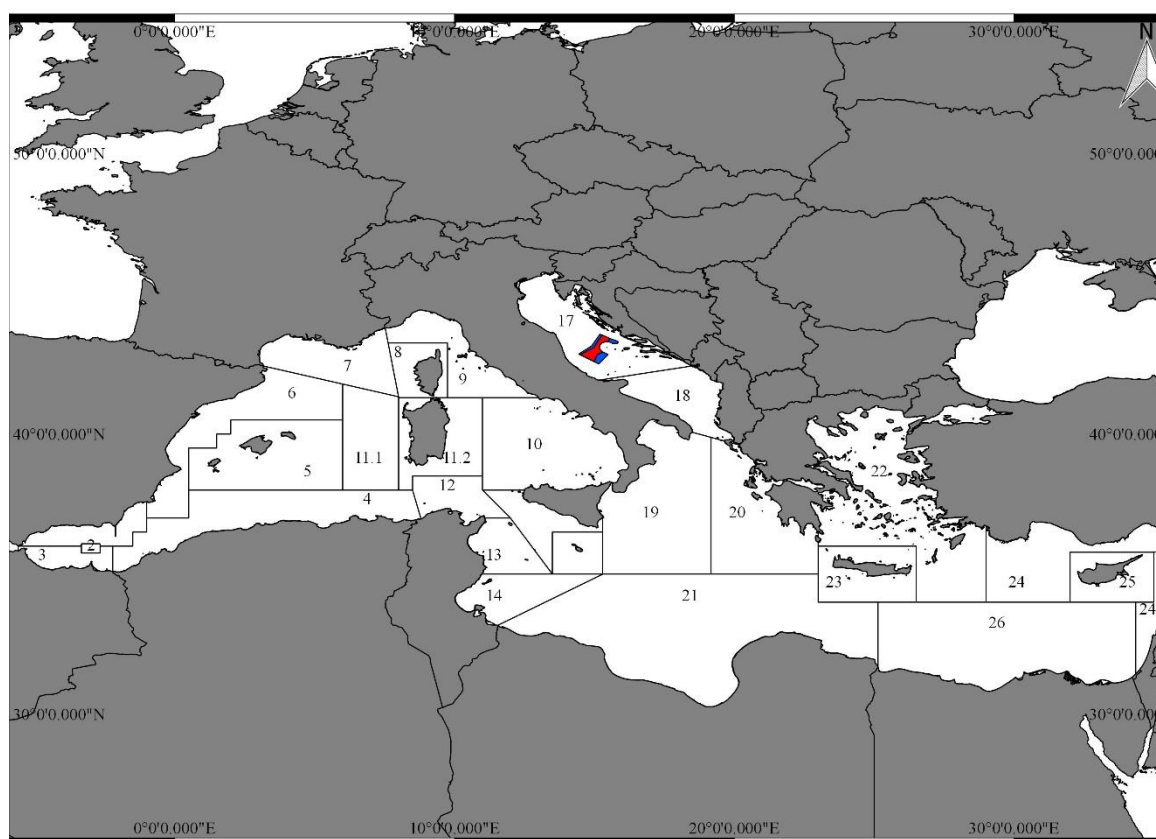


Fig. 1: Map of the Mediterranean Sea and location of the proposed FRA in the Adriatic Sea, zone GSA17

2.3.2. Precise location of the proposed core area

Provide geographical coordinates (latitude and longitude in degrees, minutes and seconds) for the vertex of a polygonal area.

The core area is delimited by the vertices having the following coordinates (GCS WGS 1984):

Latitude	Longitude
43°32'2.4"N	15°16'29.9" E
43°5'24.0" N	14°58'37.2" E
42°49'47.9" N	14°29'31.2" E
42°35'9.5" N	14°59'34.8" E
42°49'37.19" N	15°5'45.59" E
42°55'37.2" N	15°18'10.8" E
43°17'24.0" N	15°29'27.6" E
43°24'43.2" N	15°33'10.8" E

2.3.3. Buffer area (if applicable)

Provide geographical coordinates (latitude and longitude in degrees, minutes and seconds) for the vertex of a polygonal area.

The buffer area is delimited by the vertices having the following coordinates (GCS WGS 1984) (Fig. 2):

Latitude	Longitude	Vertex
43°32'2.4" N	15°16'29.9"E	1
43°33'50.4" N	15°11'52.8" E	2
43°8'45.6" N	14°54'7.2" E	3
42°51'10.8" N	14°26'13.2" E	4
42°30'3.6" N	15°9'32.4" E	5
42°50'16.8" N	15°29'24.0" E	6
42°55'37.2" N	15°18'10.8" E	7
43°17'24.0" N	15°29'27.6" E	8
43°13'12.0" N	15°48'36.0" E	9
43°16'48.0" N	15°51'0.0" E	10
43°24'43.2"N	15°33'10.8" E	11

2.3.4. Location Map

Include geographical coordinates of the core and buffer areas, bathymetry, and the boundary of international waters. Add a global reference map of the Mediterranean with the location of the site.

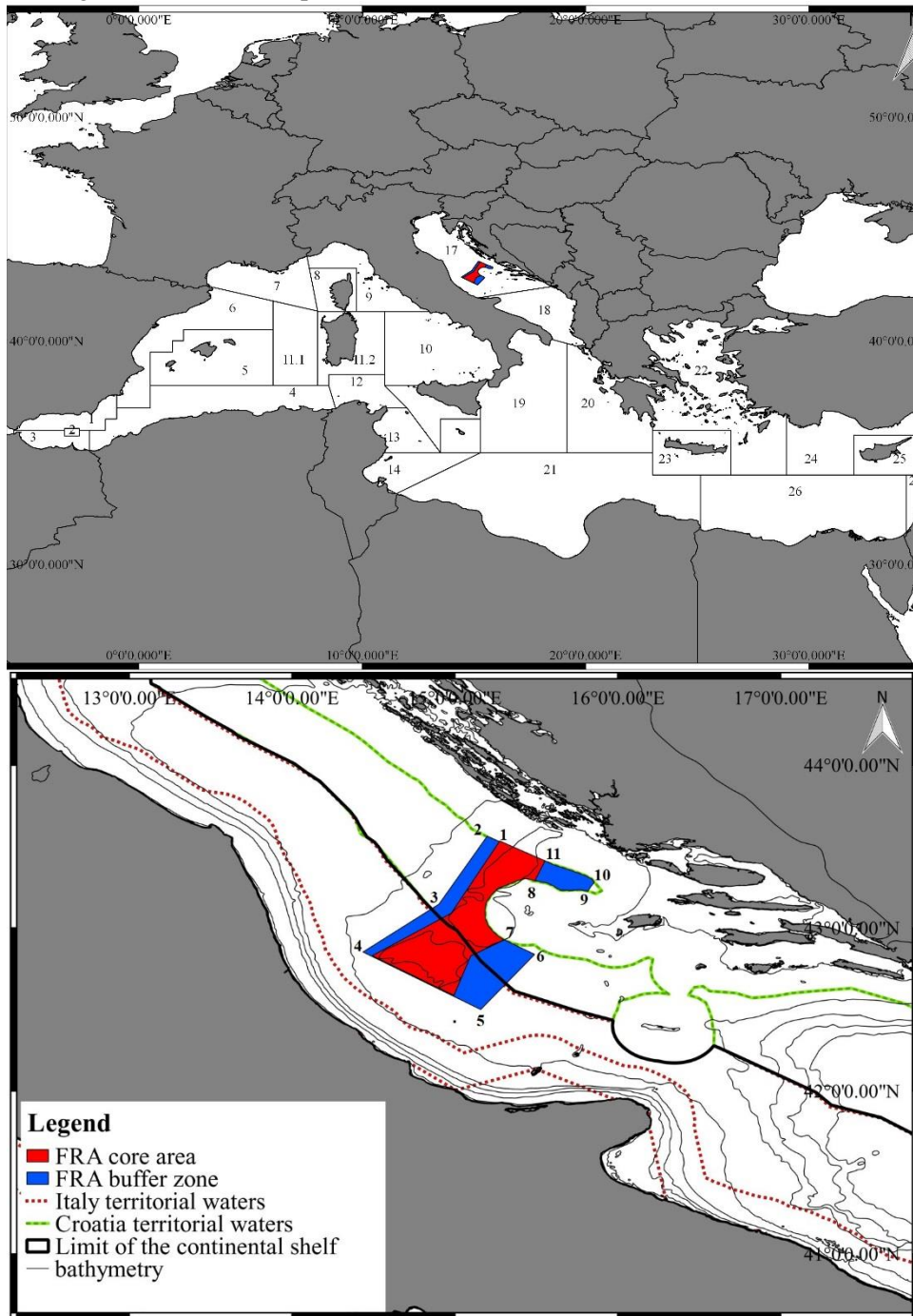


Fig. 2: Top: Location of the proposed FRA on Mediterranean reference map. Bottom: Detailed position of the proposed FRA in the Adriatic Sea, GSA17. The numbers indicate the corresponding vertex of the buffer area.

2.3.5. Depth range (in m; specify core and buffer area, if applicable)

Core area		Buffer area	
Min. depth (m)	Max. depth (m)	Min. depth (m)	Max. depth (m)
140	270	110	200

2.4 SURFACE AREA (in ha and km²; specify core and buffer area, if applicable)

Core area		Buffer area	
Surface (km ²)	Surface (ha)	Surface (km ²)	Surface (ha)
2700	270000	2097.08	209708

3 SITE DESCRIPTION**3.1 MAIN PHYSICAL FEATURES****3.1.1. Geology/Geomorphology**

Give a brief description of the geological aspects; processes of sedimentation and erosion observable in the area and other geomorphologic features or geological risks. Indicate bibliographical sources.

The Adriatic Sea is a semi-enclosed and elongated basin (about 200 x 800 Km) with the major axis in the northwest–southeast direction, located between the Italian and the Balkan peninsulas. It is divided into three sub-basins showing clear morphological differences (Artegiani et al., 1997). The north Adriatic is a wide and shallow (average bottom depth of about 35 m) continental shelf, extending from the northernmost part to the 100 m bathymetric line (in front of Giulianova, Italy). The middle part is a transition zone from the shallower northern basin to the open sea condition of the south basin, and it spans from the 100 m contour to the Palagruža Sill (about 170 m depth), located around the line connecting Vieste and Split. The south Adriatic reaches a depth of 1200 m delimited by a rugged and steep continental shelf (Russo and Artégiani, 1996; Trincardi et al., 1996; Maselli et al., 2011; Spagnoli et al., 2014).

The Adriatic Sea level has undergone considerable changes during geological time. In the Pliocene, the basin was wider than the present. Its entire continental shelf was emerged and subjected to erosion by rivers which generated a great input of fluvial sediments into the basin. A large delta modelled the northern side of the middle Pomo/Jabuka Adriatic depression (van Straaten, 1970).

The Pomo/Jabuka Pit is the most prominent feature of the central Adriatic basin. It is a complex transverse depression, forming the “Meso-Adriatic Trench”, reaching depths of 240-270 m (van Straaten, 1970). In particular, the slope of the Pomo/Jabuka Pit was shaped by the ancient delta, leading to a complex geomorphology. It is a depression separated by two sills, leading to the development of three small subareas. It is located in the central offshore areas of the Adriatic Sea extending from the area off Pescara on the western Italian coast to the small Croatian island Žirje on the eastern coast, covering a surface of about 11.500 km². South of the depression, the morphological elevation known as Palagruža Sill, formed during the Quaternary, represents the shelf break for the Adriatic Sea (Russo and Artégiani, 1996).

The bottoms of the Pomo/Jabuka Pit are composed mainly of clay-loamy sediments (<0.01 mm), mostly of organic origin, derived from pelagic organisms (van Straaten, 1970). Gas-related morphologies such as pockmarks, mud volcanoes, and mud-carbonates mounds, have also been described in the Pomo/Jabuka Pit area (Geletti et al, 2008; Panieri 2003; Conti et al., 2002).

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3.1.2. Other interesting physical or chemical features such as hydrodynamics, frontal areas, upwelling, etc. that support the proposal.

The Adriatic basin is characterized by the sinking of cold, dense waters during the winter, by a relevant surface warming during the summer, and heavy rainfalls and run-off (in particular by the Po River) during spring and autumn (Artegiani et al., 1997; Cushman-Roisin et al., 2001). Deep-water production in the Adriatic Sea is an important process (Cushman-Roisin et al., 2001) that plays a crucial role in the thermohaline system of the Eastern Mediterranean (Gačić et al., 2010). The Adriatic supplies up to one-third of the freshwater flow received by the entire Mediterranean.

It is estimated that the Adriatic's entire water volume is exchanged into the Mediterranean Sea through the Strait of Otranto every three to four years, a very short period likely due to the combined contribution of rivers and submarine groundwater discharge (Franić, 2005).

The Pomo/Jabuka Pit is influenced by the Mid Gyre and by the presence of the middle Adriatic deep water (MAdDW), which determines the circulation of the waters inside the basin and between the Adriatic and Ionian seas (Artegiani et al., 1997). The MAdDW with its low average temperature (around 11.6°C) and high salinity (average around 38.4 psu) represents the coldest bottom waters of the whole basin from spring to autumn (Artegiani et al., 1997). Cold seawater temperature with slight “up-welling” effects, positively affect organic production and the presence of important commercially pelagic and demersal stocks.

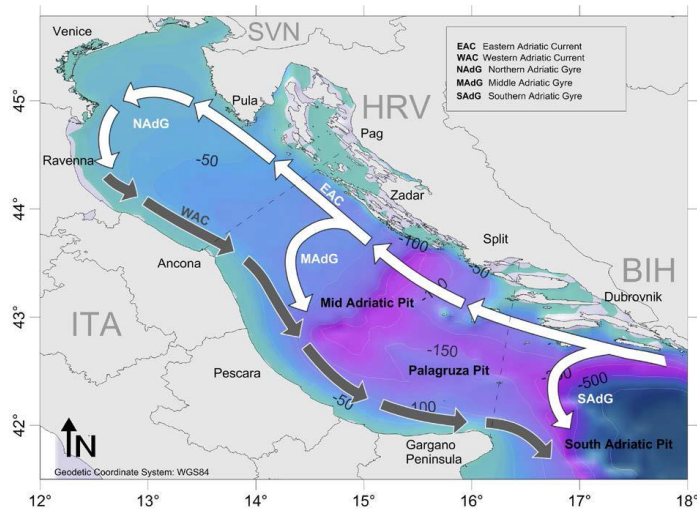


Fig. 3: Adriatic Sea: main bathymetries, morphology and surface circulation. UNEP/MAP-RAC/SPA, 2015.

The Pomo/Jabuka Pit is fundamental in the route of Dense Water (DW) from the North to South Adriatic basin (Marini et al., 2016). The bottom morphology, formed by a set of depressions and sills located in the Mid Adriatic Depression, temporarily traps the DW formed on the continental shelf. After substantial chemical and biological activity, modified DW is released and flows towards the Southern Adriatic basin along the bathymetric morphology (Fig. 4).

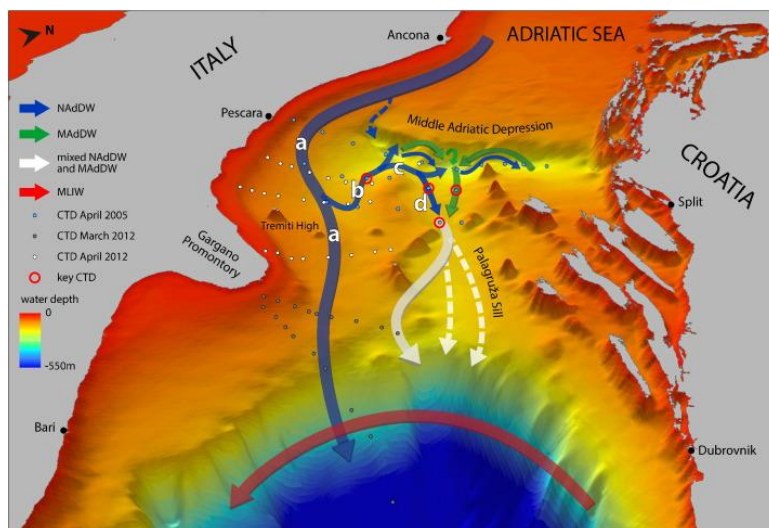


Fig.4: 3D view of Central Adriatic bathymetry showing the routes of NAdDW, MAdDW, and LIW as blue, green and red arrows. The white line represents NAdDW and MAdDW mixing over Palagruža Sill. White dashed lines: presumed MAdDW branches sp. (Figure from Marini et al., 2016).

3.2 BIOLOGICAL FEATURES

3.2.1. Habitats

Brief description of the dominant marine habitats including pelagic ones if applicable.

Predominant habitats and biocenosis present in the Pomo/Jabuka Pit as listed in the priority habitats of the SPA/BIO Protocol of the Barcelona Convention

IV. 1. 1. Biocenosis of costal terrigenous muds

IV. 1. 1. 1. Facies of soft muds with *Turritella communis*

IV. 1. 1. 2. Facies of sticky muds with *Virgularia mirabilis* and *Pennatula phosphorea*

IV. 1. 1. 3. Facies of sticky muds with *Alcyonium palmatum* and *Stichopus regalis*

IV.2. 2 Biocenosis of the costal detritic bottom

IV. 2. 2. 7. Association with *Laminaria rodriguezii* on detritic and hard bottoms

V.1.1. Biocenosis of bathyal mud

V. 1. 1. 1. Facies of sandy muds with *Thenia muricata*

V. 1. 1. 2. Facies of fluid muds with *Brissopsis lyrifera*

V. 1. 1. 3. Facies of soft muds with *Funiculina quadrangularis*

3.2.2. List of regionally important species

List here those marine species protected by international agreements (specify the agreement) and/or included in the GFCM priority list. If applicable, give the IUCN category. Any other species may be listed if it is clearly considered of regional importance given its high representation in the area. For each species state:

a) its relative abundance as Common (C), Uncommon (U) or Occasional (O), b) Its regional status as rare (r), endemic (e) and/or threatened (t), and c) its status as an important resident population (R), or important for its breeding (B), feeding (F), wintering (W) or migratory passage (M)

SPECIES	Rel. Abundance (C) (U) (O)	Regional STATUS (r) (e) (t)	Local STATUS (R) (B) (F) (W) (M)	Note
<i>Eledone cirrosa</i>	C		R	GFCM priority list
<i>Eledone moschata</i>	C	e		GFCM priority list
<i>Loligo vulgaris</i>	C	e	R	GFCM priority list
<i>Lophius budegassa</i>	C		R, B	GFCM priority list
<i>Lophius piscatorius</i>	U		R, B	GFCM priority list
<i>Merluccius merluccius</i>	C	t	R, B, F	GFCM priority list; IUCN Vulnerable
<i>Micromesistius poutassou</i>	C		R, B	GFCM priority list
<i>Mullus barbatus</i>	C		R	GFCM priority list
<i>Nephrops norvegicus</i>	C		R, B, F	GFCM priority list
<i>Parapenaeus longirostris</i>	C		R	GFCM priority list
<i>Caretta caretta</i>	C	e/t		IUCN Vulnerable
<i>Mobula mobular</i>	Unknown	e/t	R	IUCN Endangered; Annex II SPA/BD protocol
<i>Lamna nasus</i>	Unknown	r/t	Possible B/F	IUCN Critically Endangered; Annex II SPA/BD protocol
<i>Dalatias licha</i>	Unknown	t	Unknown	IUCN Vulnerable

<i>Aetomylaeus bovinus</i>	O	r/t	Possible B	IUCN Critically Endangered
<i>Bathytoshia centroura</i>	C	t	Unknown	IUCN Vulnerable
<i>Mustelus asterias</i>	U	t	Unknown	IUCN Vulnerable
<i>Dipturus oxyrinchus</i>	U	r/t	Unknown	IUCN Near Threatened
<i>Dasyatis pastinaca</i>	Unknown	t	R	IUCN Vulnerable
<i>Leucoraja melitensis</i>	O	e/r/t	Unknown	IUCN Critically Endangered
<i>Rostroraja alba</i>	O	r/t	R	IUCN Endangered
<i>Oxynotus centrina</i>	Unknown	r/t	Unknown	IUCN Critically Endangered
<i>Balaenoptera physalus</i>	Unknown	e	F	IUCN Vulnerable
<i>Dendrophyllia cornigera</i>	Unknown	t	R	IUCN (in process)
<i>Funiculina quadrangularis</i>	Unknown	t	R	IUCN Critical Endangered
<i>Laminaria rodriguezii</i>	Unknown	r/t		Proposed as IUCN Endangered

3.2.3. Occurrence of biological and ecological processes relevant to fish resources (essential fish habitats)

Although the surface of the Pomo/Jabuka Pit covers less than 10 percent of the Adriatic total surface, it represents one of the most productive areas of the Adriatic Sea and encompasses important spawning and nursery areas for key demersal fish stocks.

With regards to its benthic community, the Pomo/Jabuka Pit has not been exhaustively studied, but the composition of the bottom is likely complex to provide refuge to juvenile fish and invertebrates (Silva et al., 2014). The Pomo/Jabuka Pit hosts communities classified as sensitive and essential marine habitats (GFCM, 2008):

- Facies with *Pennatula phosphorea*;
- Facies with *Funiculina quadrangularis* and *Thena muricata*
- Association with *Laminaria rodriguezii* (Žuljević et al., 2016)

A considerable quantity of white corals, mainly large, thick morphotypes of *Lophelia pertusa* and *Madrepora oculata*, extremely well preserved but all dead and covered by a thin layer of mud, were recorded in the Pomo/Jabuka Pit (HERMES, 2009). Some specimens of *Dendrophyllia* corals, with subordinate *Desmophyllum dianthus* and *Caryophyllia smithii*, heavily bioeroded and encrusted by living epifauna, including polychaetes and *Neopycnodonte* oysters, were recovered in this area. This suggests that live yellow coral colonies still exists at this location (HERMES, 2009). Finally, the presence of pockmarks and mud-volcanoes also increases the heterogeneity of sandy-muddy bottoms of the Pomo/Jabuka Pit supporting local biodiversity.

It is likely that these habitats provide feeding, recruitment and nursery habitats for a range of species including commercially valuable fisheries species. For example, towed gears fisheries commonly have sea pens in their by-catch (Edinger et al., 2007; Doyle et al., 2015) suggesting habitat association between these harvested species and sea pens habitats. In the Pomo/Jabuka Pit, as also reported in others areas, *Nephrops norvegicus* shares the same habitat of *Funiculina quadrangularis* (Greathead et al., 2007; Martinelli et al., 2013).

The Pomo/Jabuka Pit is one of the most important nursery areas for European hake (*Merluccius merluccius*) supplying the entire Adriatic hake stock. The species is the most productive demersal resource of the Adriatic in terms of commercial fish landings. In 2014, European hake landings in GSA 17 and GSA 18 by Italy accounted for 3,682 tonnes and by Croatia for 1,673 tonnes (STEFC, 2016). Italy is the country that mainly exploits *M. merluccius* representing more than 80 percent of the total landings of GSA 17 and GSA 18 (SAC-WGSAD, 2016).

Spawning of European hake in the central Adriatic occurs throughout the year with two peaks: in winter, in waters down to 200 m in the Pomo/Jabuka Pit, and, in summer, in shallower waters (Jukic-Peladic and Vrgoc, 1998).

The presence of early demersal juveniles (16–30 mm LT, c. 40 days old) has been reported in the Pomo/Jabuka Pit by several studies (Županović and Jardaš, 1986; Arneri and Morales-Nin, 2000; Druon et al., 2015).

The largest Adriatic population and nursery of the high-value Norway lobster (*Nephrops norvegicus*) is located in the area of Pomo/Jabuka Pit (Fig.5; AdriaMed, 2010). Moreover, recent studies highlighted that *Nephrops* inhabiting the Pomo/Jabuka Pit appear to be a “subpopulation” of GSA 17 stock, distinct respect that found elsewhere in GSA 17. Therefore, it may be treated as a separate stock (SAC-WGSAD, 2016). The Pomo/Jabuka Pit is also a nursery for the horned octopus (*Eledone cirrhosa*), monkfish (*Lophius budegassa*) and broadtail shortfin squid (*Illex coindetii*). It is also important for the deep sea fishery targeting the deep-water rose shrimp – *Parapenaeus longirostris* (Bensch et al., 2008).

The Pomo/Jabuka Pit also represents a key area for cetaceans, sea turtles and birds feeding during migration due to its high productivity (UNEP-MAP-RAC/SPA, 2014).

The importance of the Pomo/Jabuka Pit area for a suite of benthic and demersal species is linked to its physical and oceanographic characteristics, which support the presence of EFH in this location. The water circulation in the Pomo/Jabuka Pit (Fig. 4) is involved in fundamental processes of nutrient fluxes between northern and southern Adriatic sub-basin. The Pomo/Jabuka Pit area is an up-welling region with bottom waters that are cooler and richer in nutrients than surface waters because of a mineralization processes that occur during the water residence (at least 1 year) inside the pits. The Dense Water then flows through the Gargano-Split transect (Grilli et al., 2013). Around 19 percent of DW volumes flow southward, while the remaining volumes mix with less dense, warmer waters or recirculate in the mid-Adriatic (Benetazzo et al., 2014).

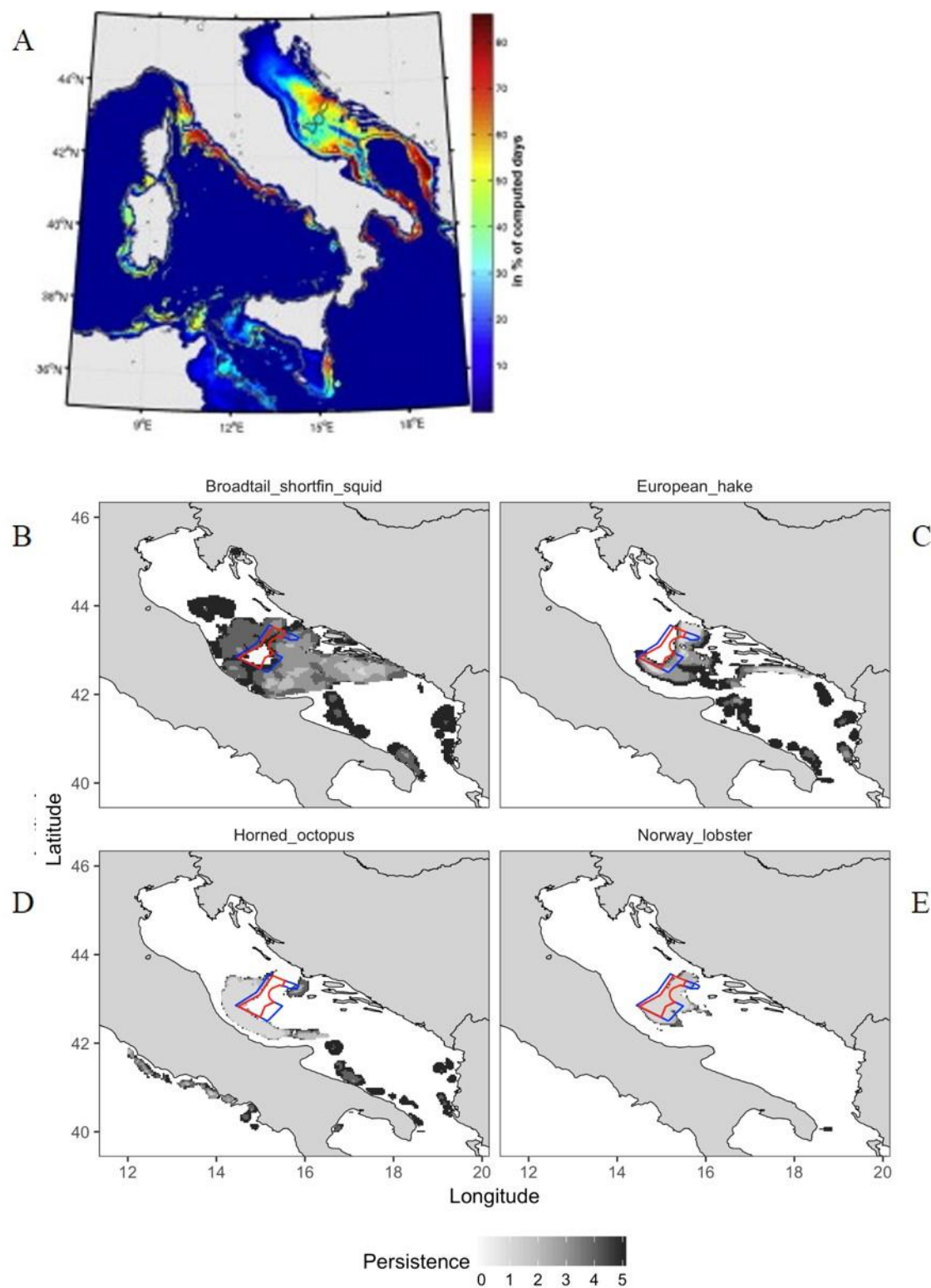


Fig. 5: Distribution maps of nursery areas for commercially important species. A) Mean occurrence of potential hake nurseries from February to June 1998–2012 in percent of available habitat detection (map from Duron et al., 2015) B–E) Persistence index of nursery areas of commercial species from analyses of MEDITS data (May–June 1994–2010; Colloca et al. 2015). B) broadtail shortfin squid (*Illex coindetii*); C) European hake (*Merluccius merluccius*); D) horned octopus (*Eledone cirrhosa*); E) Norway lobster (*Nephrops norvegicus*).

3.3 USE OF NATURAL RESOURCES

3.3.1. Current human use and development of fisheries

a) Briefly describe the current use of the area by artisanal, industrial and recreational fishing, including information on:

- Number of vessel by fishery operating in the area
- Total annual catches by species of each fishery in the area
- Percentage of total catches fished in the area with respect to the total
- Value of this catches
- Percentage with respect to the total
- By-catch rates of vulnerable species in the area
- Number of fishers involved in the fisheries operating in the area
- Name(s) of base port(s)

Number of vessel by fishery operating in the area

The Adriatic Sea is one of the most important fishing grounds in the Mediterranean Sea, due to the predominance of shallow and soft bottom habitat amenable to trawling, and it forms the largest and the best-defined area of shared fish stocks in the Mediterranean (Vrgoč et al., 2004). Most of the Adriatic fleet (68 percent) is composed by small-scale vessels. However, the proposed FRA lies in international waters, therefore restrictions for demersal fisheries would not affect the small-scale fleet.

Demersal resources in the Pomo/Jabuka Pit are exposed to high fishing pressure, primarily from bottom trawlers from Italy and Croatia (Fig. 6).

With 1,505 trawlers Italy has the largest trawl fleet in the Adriatic, of which 800 vessels between 12 m – 40 m are registered in GSA 17. The fishing effort on European hake of this fleet segment was assessed as being in overcapacity in 2012-2014. To ensure a balance between fishing capacity and fishing opportunities, Italy committed to cut capacity of the national trawl fleet by 7 percent (GT) and of purse seiners and pair-trawlers in GSA 17-18 by 10 percent, by the end of 2017. Beyond vessels scrapping, Italy identified other capacity reduction measures such as reduction in fleet activity and “banning of towed gear from biological protection areas (BPAs) where juvenile and/or breeding fish are concentrated”¹.

¹ Annual Report on Italy’s efforts during 2014 to achieve an enduring balance between fishing capacity and fishing opportunities (in accordance with Article 22 of regulation (EU) 1380/2013).

Croatia has the second largest demersal trawl fleet of the Adriatic with 487 special fishing authorizations for bottom trawlers issued since 2014, of which 257 relating to vessels between 12 m and 40 m (STECF, 2016). Croatia is giving priority to fishing capacity reduction measures for trawlers and purse seiners, such as scrapping and effort reduction measures.

The fishing fleet of Slovenia consists of about 170 vessels, represented primarily by small vessels (86 percent).

Total annual catches by species of each fishery in the area

The Pomo/Jabuka Pit features a multispecies fishery, with demersal and pelagic catches composed of more than one hundred species (fish, crustaceans and cephalopods), the majority of which are commercially important (e.g. *Merluccius merluccius*, *Nephrops norvegicus*, *Parapenaeus longirostris*, *Eledone cirrhosa*, *Illex coindetti*, *Trachurus trachurus*, *Lophius budegassa*, *Micromesistius poutassou*). Catches display considerable seasonal and annual variation, but young individuals (age 0+, 1 and 2), especially of European hake, are concentrated in the Pomo/Jabuka Pit (AdriaMed, 2006).

Croatia landings of demersal species have been quite stable since 1998. Trawls landing accounts for approximately 5,000 tons (STECF, 2016). It should be noted that most of Croatia trawl catches are from coastal areas, with only 0.6 percent of total catches from areas beyond territorial waters (Croatia management plan for trawl fisheries, 2013). In 2014, the catch composition in Croatia demersal trawl segments 18m-24m and 24m-40m mainly included: hake (16 percent), deep-water rose shrimp (14 percent and 17 percent respectively), Norway lobster (9 percent and 19 percent), red mullet (20 percent and 10 percent), squid (6 percent and 11 percent) and horned and musky octopuses (6 percent and 5 percent). In the demersal trawl segment 12m-18m the main species landed were red mullet (30 percent), hake (15 percent) and musky octopus (15 percent). In 2014, European hake catches in GSA 17 and GSA 18 by Croatian bottom trawlers (OTB) amounted to 1,554 tons, and by Croatian longliners (LLS) to 61 tons. Whereas, catches by Italian OTB amounted to 3,373 tons and by Italian LLS to 279 tons (STECF 2016). Croatia's landings of Norway lobster amounted to 3.7 tons (STECF, 2016).

Percentage of total catches fished in the area with respect to the total

Not available

Value of this catches

Landings in GSA 17 and GSA 18 accounted the highest value in 2006 and the lowest value in 2014 (SAC-WGSAD, 2016). The Adriatic provides half of Italy's fish landings (STEF, 2016) but declines in catch, in both biomass and price value underlie the overall deterioration in the economic performance of the Italian fleet over the past ten years. For example, between 2008 and 2014, the landed weight of Norway lobster decreased by 56 percent. Landings of the European hake - the species with the highest landing value (€64 million) – and European anchovy (€52 million) have dropped by ~35 – 40 percent over 10 years. In Croatia, European hake landing value accounted for €3.1 million (or 4.38 percent of total landing value) and Norway lobster landing value accounted for €5.1 million or 7 percent of total landing value in 2014 (STEF AER 2016).

By-catch rates of vulnerable species in the area

Adriatic catches display considerable seasonal and annual variation, but young individuals (age 0+, 1 and 2), especially of European hake, are concentrated in the Pomo/Jabuka Pit (AdriaMed, 2006). In the Adriatic Sea, mean discard rate in bottom trawl fisheries ranges between 20 percent and 67 percent of total catches, with a rate that varies according to fishing intensity. In the north Adriatic, the ratio between discard and landing in bottom trawls are higher in Croatian fishing grounds (17:1) than in Italian fishing grounds (4:1) (FAO-GFCM, 2016). In 2014, European hake discards in GSA 17 and GSA 18 – by Italy and Croatia – amounted to 728 tons (STEF, 2016). In the Central Adriatic, approximately 35,000 t y^{-1} of discard is produced by fleet targeting *Nephrops* (55 percent - 80 percent of the total catch). The majority of discards returned to the sea are moribund or dead. About 20 percent

of material discarded is consumed by surface-feeding and diving seabirds (Report to the European Commission, 1999).

Studies on by-catch of cetaceans and other species of conservation concern, such as sea turtles, sharks and rays, are scant in the Adriatic Sea (Fortuna et al., 2010). Results come mainly from pelagic trawl fisheries and suggested that further work is needed to evaluate the real impact that pelagic trawlers on a number of vulnerable species.

Name(s) of base port(s)

The Pomo/Jabuka Pit is approximately 40 nautical miles from the Italian coast and it extends in Croatian territorial waters. Thus, the area can be reached easily by the Italian fishing fleets based in ports between Ancona and Termoli, and by the Croatian fleets between Zadar and Makarska.

No data are available for recreational fishing. In the Mediterranean Sea, it is estimated to account for more than 10 percent of the total fish catch (Randone, 2016).

Number of fishers involved in the fisheries operating in the area

The number of fishers employed in the trawling fishing sectors in Italy and Croatia are reported in Table 1.

Table 1: People employed in the trawling fishing sectors in Italy and Croatia (STECF, 2016; Croatian Management Plan 2013).

Country	Average number of working days at sea per vessel	Average number additional days (e.g. preparing activities)	Number of employers on bottom trawlers					Ref. Year
			vessels <12m	vessels 12-15 m	vessels 15-18 m	vessels 18-24 m	vessels >24 m	
Croatia	136.86 in 2013	84.61	240 people (22.43% of tot)	400 people (37.38% of tot)	180 people (16.82% of tot)	150 people (14.02% of tot)	100 people (9.35% of tot)	2013
Italy	132 in 2008	not available				2423 FTEs	1125 FTEs	2014

Our analysis of AIS data from January to December 2014 (Fig. 6) indicate that – prior to the establishment of the no-trawl area in the Pomo/Jabuka Pit – 660 trawlers operated in the Adriatic Sea.

Of these:

- 121 Italian trawlers, 41 Croatian and 1 Slovenian vessels operated inside the FRA proposed core area (Fig.6, Fig.7). Of these, only 17 percent (27 Italian and 1 Croatian) spent more than 25 percent of their annual fishing hours in the proposed core area (Fig. 7A).
- 145 Italian, 43 Croatian and 1 Slovenian vessels operated in the proposed FRA (around 4,700 km²); of these, 29 percent (50 Italian and 4 Croatian) spent more than 25% of their annual fishing hours in the proposed FRA (Fig. 7B).

Fishing hours, 2014

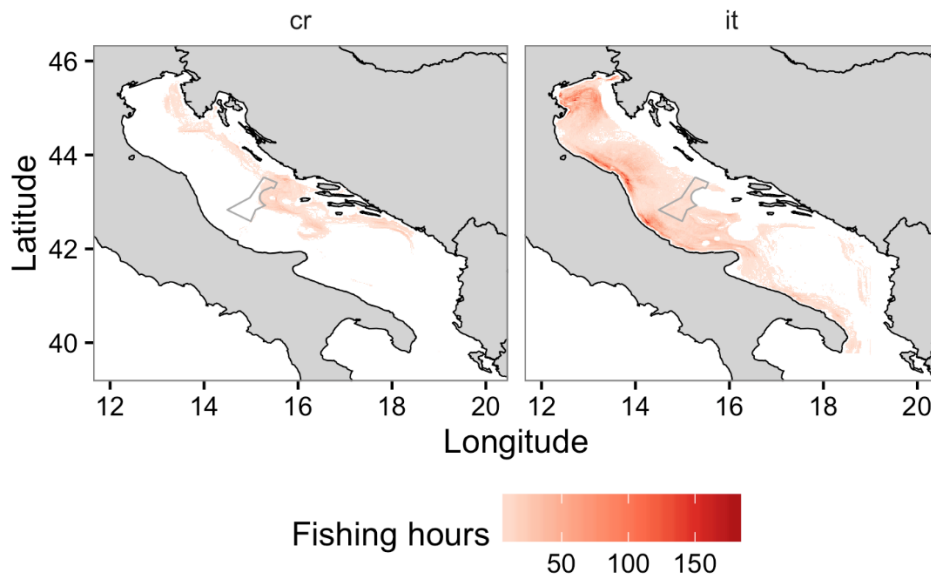


Fig. 6: Estimated fishing hours (Jan. 2014 – Dec. 2014), using AIS data, for Croatian (left panel) and Italian (right panel) trawlers. The

A Percentage of hours inside Pomo closure (August 2014 - July 2015)

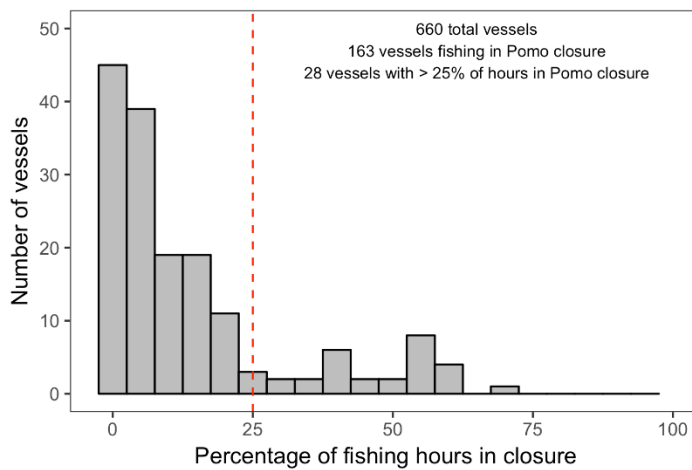
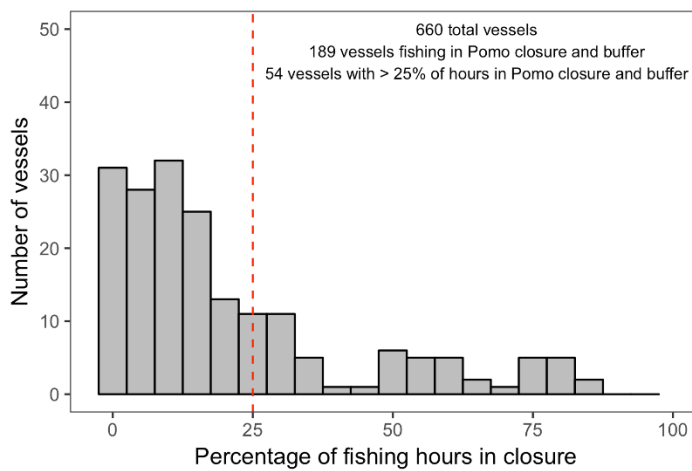


Fig. 7: Frequency distribution of fishing time per vessel from August 2014 to July 2015 A) inside the core area of the FRA; B) in the whole FRA area (both core and buffer area).

B Percentage of hours inside Pomo closure and buffer (August 2014 - July 2015)



b) Enter how many of the users depend on these resources, seasonality, and assessment of the social and economic importance of their use and of the perceived impact on the conservation of the area, in a score of 0-1-2-3 (meaning null, low, medium, high).

ACTIVITY AND CATEGORY	ASSESS IMPORTANCE OF SOCIO-ECONOMIC CONSERV. IMPACT		ESTIMATED No. of USERS	SEASONALITY
FISHING	Small-scale fishing would not be affected	0	Data not available	
Artisanal				
Industrial	Some impact for demersal fishing vessels	3	145 Italian, 43 Croatian and 1 Slovenian vessels operated in the proposed FRA in 2014	
Other:	No aquaculture activities in the area			
• Aquaculture				

3.3.2. Current human use and development (except for fisheries)

a) Briefly describe the current use of the area for other economic sectors.

In addition to fishing, a suite of marine sectors supports the marine economies of the Adriatic region. The most valuable economic sector of the Adriatic is coastal and maritime tourism (€8 billion). Maritime transportation is also generally considered a key economic sector (€5.2 billion) for the presence of important industrial centers, especially along the western Adriatic coast, and for the presence of important shipping ports (such as Trieste, Venice, Koper and Rijeka) to other countries in Central Europe (Fig. 8) (Randone, 2016; EU, 2014).

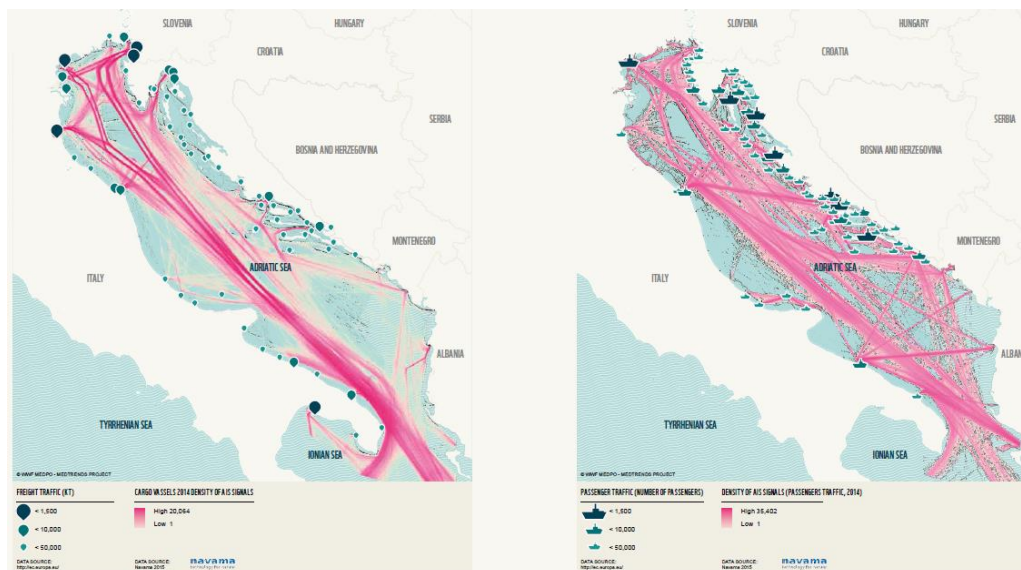


Fig.8: In the left panel Adriatic Sea freight traffic and ports (2014); right panel passenger traffic (2014). Randone, 2016

Gas and oil extraction activities, in particular offshore, are also considered important for the Adriatic economies (€2.2 billion). Italy has 67 active concessions for extraction, while Croatia currently has 3 active offshore gas exploitation fields (Randone, 2016).

No mining and dredging activities currently affect the area (Randone, 2016).

The proposed buffer zone touches a military area (Sea – Land; area T 842.; Fig. 9).

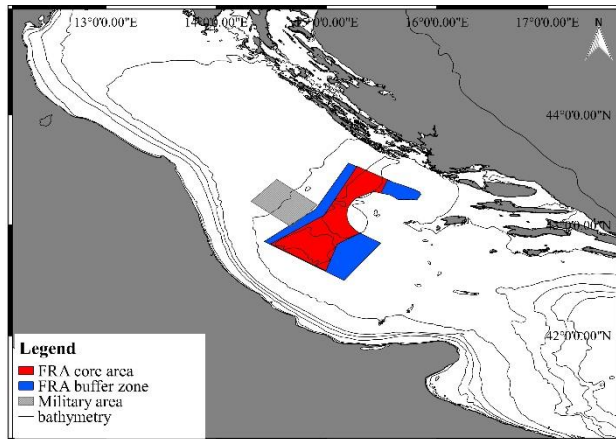


Fig.9: Map of the proposed FRA, showing the borders of the buffer area and the military area (in grey).

- b) Enter how many of the users depend on these resources, seasonality, and assessment of the social and economic importance of their use and of the perceived impact on the conservation of the area, in a score of 0-1-2-3 (meaning null, low, medium, high).

ACTIVITY AND CATEGORY	ASSESS IMPORTANCE OF SOCIO-ECONOMIC CONSERV. IMPACT		ESTIMATED No. of USERS	SEASONALITY
OTHER ACTIVITES				
Tourism	0	0		
Transport	0	2		
Mining	0	0		

4. REGIONAL IMPORTANCE OF THE SITE

This Section aims at stressing the importance of the site for conservation at the regional scale.

4.1 PRESENCE OF ECOSYSTEMS/HABITATS OF PARTICULAR IMPORTANCE IN THE MEDITERRANEAN

The Pomo/Jabuka Pit hosts species and habitats that deserve protection on the basis of their rarity, vulnerability and functional/ecological role. These include:

- Vulnerable Marine Ecosystems that comprise extensive soft bottom habitats hosting unique oases of megabenthic communities and habitat forming species, such as sponges, sea pens (*Funiculina quadrangularis*, *Pennatula phosphorea*), hydrozoans (*Lytocarpia myriophyllum*), deep-water kelps (*Laminaria rodriguezii*), and a rich infauna involved in fundamental ecological roles (impact on benthic-pelagic coupling, nutrient regeneration, facilitation of surrounding communities) (Fig. 10).
- Geomorphological features such as mud volcanoes, pockmarks, in addition to a set of depressions and sills located in the Mid Adriatic Depression (Fig. 10).
- Presence of Essential Fish Habitat, such as key nursery grounds, for European hake (*Merluccius merluccius*), horned octopus (*Eledone cirrhosa*) and monkfish (*Lophius budegassa*), and critical habitats for Norway lobster (*Nephrops norvegicus*) (Fig. 5).

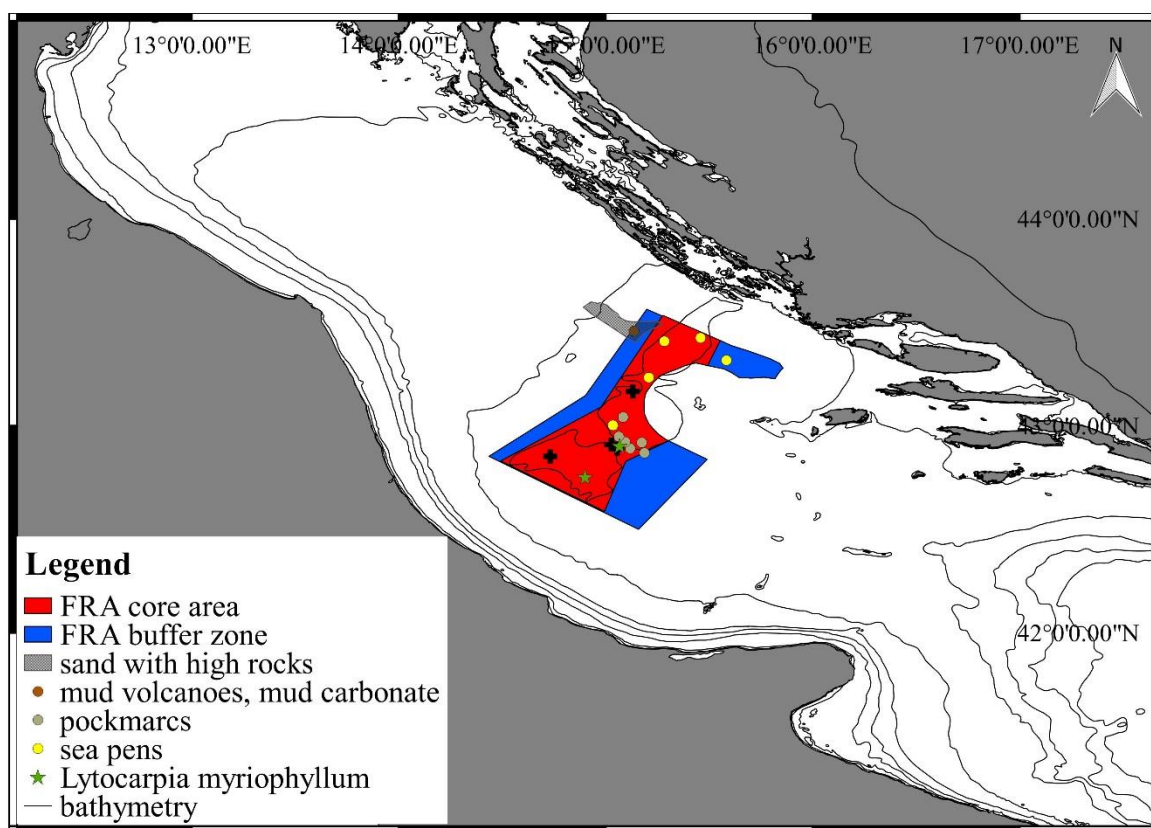


Fig. 10: Current known distribution of some of the habitat forming species, VMEs and geomorphological feature in the proposed FRA area (Bastari et al., unpublished data).

4.2 PRESENCE OF HABITATS THAT ARE CRITICAL TO ENDANGERED, THREATENED OR ENDEMIC SPECIES

Name the habitat types and the species linked to it. Give information about its status (IUCN classification, etc.).

Essential Fish Habitats (EFHs) located in the Pomo/Jabuka Pit area have been recognised as vulnerable sites due to habitat degradation, mainly as a consequence of trawling activities (De Juan and Leonart 2010).

Species resident, occasionally or frequently observed in the Pomo/Jabuka Pit area that are listed as Endangered or Threatened in the Mediterranean Sea include:

- Elasmobranchs such as the Giant Devil Ray *Mobula mobular* (Endangered, IUCN), which has been recorded with a seasonal distribution in the area, with a peak in summer, when food resources (plankton, small pelagic fishes) are highest. *M. mobular* is listed on Annex II of the Protocol for Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol). Moreover, the Pit is a favourable environment for some key life history stages of the porbeagle shark (*Lamna nasus*), which is critically endangered (IUCN, 2007), and listed on Annex II SPA/BD Protocol (Scacco et al., 2012). In 1948, scientific bottom trawl surveys showed that this area hosted a rich and abundant assemblage of vulnerable demersal elasmobranchs (Ferretti et al. 2013).
- Cetaceans such as the common bottlenose dolphin *Tursiops truncatus* (Vulnerable, IUCN), and fin whale *Balaenoptera physalus* (Vulnerable, IUCN) regularly enter in the south and central Adriatic, mainly in relation with krill abundances.
- Sea turtles such as the loggerhead (*Caretta caretta*) and leatherback turtle (*Dermochelys coriacea*) (both species classified as Vulnerable, IUCN) transit in the area for feeding.

Rare habitats/assemblages, recognized as possible VMEs and EFHs, are found in the Pomo/Jabuka Pit such as facies of the sea pens *Funiculina quadrangularis* (also classified as Critical Endangered species, IUCN), that share the same habitats of Norway lobster. Thick fossil coral frameworks, *Neopycnodonte* oysters beds, scattered occurrences of live corals are also reported at many sites in the Jabuka/Pomo Pit (Angeletti et al., 2014). Historical analysis revealed the presence of important deep-water kelps in the Pomo/Jabuka Pit. From 1950s, the Adriatic population of *Laminaria rodriguezii* declined of 85% and now it is present only around the small offshore island of Palagruža. Bottom trawling activities have been considered responsible for the disappearance of *Laminaria rodriguezii* elsewhere (Žuljević et al., 2016).

Species that were once present in the Adriatic Sea but are now extremely rare or potentially extinct, and for which the Pomo/Jabuka Pit may have represented suitable habitat include:

Angel shark (*Squatina squatina*) classified by IUCN as Critically Endangered
 Smoothback Angel Shark (*Squatina oculata*) classified by IUCN as Critically Endangered
 Common skate (*Dipturus batis*) classified by IUCN as Critically Endangered
 Sandy Skate (*Leucoraja circularis*) classified by IUCN as Critically Endangered
 Spiny butterfly ray (*Gymnura altavela*) classified by IUCN as Critically Endangered
 Sand bar shark (*Carcharhinus plumbeus*) classified by IUCN as Endangered
 Blackchin guitar fish (*Glaucostegus cemiculus*) classified by IUCN as Endangered
 Rough skate (*Raja radula*) classified by IUCN as Endangered
 Common guitar fish, Violinfish (*Rhinobatos rhinobatos*) classified by IUCN as Endangered
 Bramble shark (*Echinorhinus brucus*) classified by IUCN as Endangered
 Shagreen skate (*Leucoraja fullonica*) classified by IUCN as Vulnerable
 Tope shark (*Galeorhinus galeus*) classified by IUCN as Vulnerable
 Black spotted smooth-hound (*Mustelus punctulatus*) classified by IUCN as Vulnerable
 Undulate ray (*Raja undulata*) classified by IUCN as Near threatened

4.3 OTHER RELEVANT FEATURES

4.3.1. Educational Interest

E.g. particular values for activities of environmental education or awareness

The area could represent a pilot project for the implementation of the ecosystem-based approach in the Mediterranean and for fostering cooperation amongst coastal states on marine resources conservation and management.

4.3.2. Scientific Interest

Explain if the site represents a particular value for research.

The Pomo/Jabuka Pit area is a critical area of the Adriatic basin that has long attracted the interest of science due to the:

- High productivity of commercial stocks living in the area (MEDITS; AdriaMed).
- Presence of Essential Fish Habitats for depleted fish stocks such as European hake and for Norway lobster (MEDITS, AdriaMed; MEDISEH).
- Presence of VMEs (CBD; FAO, 2009).
- Processes related to the formation of the Adriatic Dense Water.

The area is also relevant for deep-sea exploration.

5 IMPACTS AND ACTIVITIES AFFECTING THE AREA

5.1 IMPACTS AND ACTIVITIES WITHIN THE SITE

5.1.1. Exploitation of natural resources

Assess if the current rates of exploitation of natural resources within the area (e.g. fishing, sand and mineral exploitation) are deemed unsustainable in quality or quantity, and try to quantify these threats, e.g. the percentage of the area under threat, or any known increase in extraction rates.

Most of the assessed fish stocks of the Adriatic Sea are overfished. European hake is subject to a fishing effort 5.5 times higher than the sustainable level (STEF, 2016). The exploited stock in the Adriatic sea of European hake is mainly composed by young individuals from age 0+ to age 2+ (GFCM, 2013).

The Pomo/Jabuka Pit area is the main trawling ground for the Adriatic fleet exploiting Norway lobster. The high by-catch rates of *Nephrops* fishing gear are a concern for the management of other species. A large fraction of the trawl catch is composed of juvenile individuals of other commercial species (Fig. 11). European hake spawners aggregate in the Pomo/Jabuka Pit area with the earliest spawning occurring in winter in deeper water (up to 200 m) (GFCM 2013). The periods of maximum trawling effort for Norway lobster in Pomo/Jabuka Pit coincides with the presence of significant quantities of juvenile hake (Morello et al., 2007; 2009).

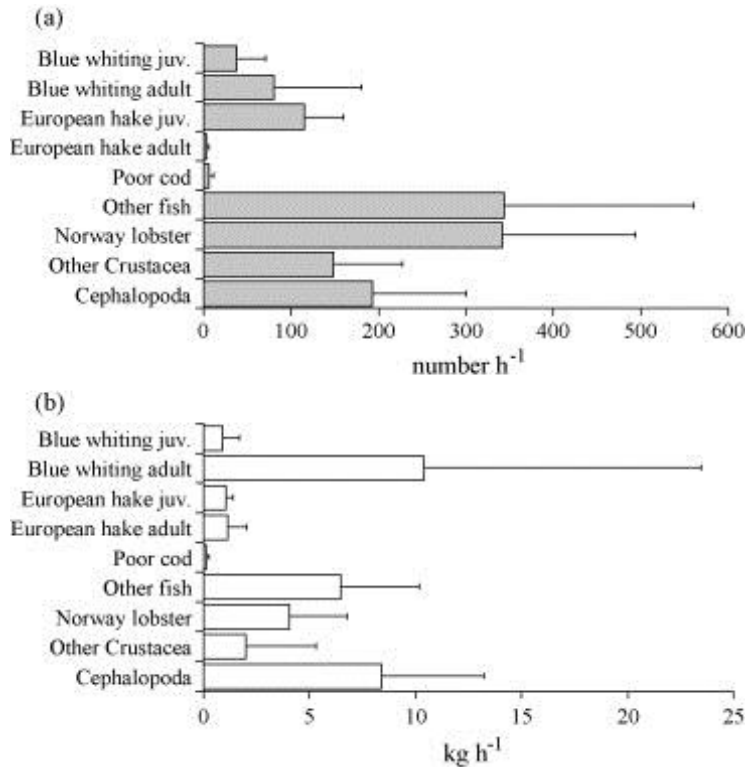


Fig. 11: Bottom trawl catch in Pomo/Jabuka Pit. (a) Mean hourly abundance (+S.D.); (b) mean hourly biomass (+S.D.); $n = 10$ hauls. Figures from Morello et al., 2009.

Oil and gas exploration activities have been conducted in the Pomo/Jabuka Pit by air-gun testing (Santulli et al., 1999). These exploration activities and the related impacts on EFHs may increase with the growing interest in oil and gas exploitations (see section 6.1).

5.1.2. Threats to habitats and species

Mention any serious threats to the habitat (e.g. modification, disturbance, pollution) or to species (e.g. disturbance, poaching, introduced alien species) within the area.

Fishery: bottom trawling is one of the most impacting activities both for species and habitats. Bottom trawling and dredging have radically altered many epibenthic communities of the central and northern Adriatic Sea, with consequent habitat loss (such as oyster reefs), and reduction of ecosystem services (Bastari et al., 2016).

About 85% of Mediterranean and Black Sea stocks assessed are fished at biologically unsustainable levels (FAO-GFCM, 2016). Studies conducted in the north-central Adriatic Sea (including the Pomo/Jabuka Pit area) showed declining trends in biomass catches over time (Coll et al., 2009).

Invasive alien species: alien species are an important stressor for the whole Adriatic basin, causing alteration of the original Adriatic biodiversity and ecosystem functioning. Recent estimates revealed that the Adriatic Sea counts more than 190 non-indigenous species (Zenetos et al., 2012).

5.2 IMPACTS AND ACTIVITIES AROUND THE SITE

5.2.1. Pollution

Name and describe sources of pollution.

Being a semi-enclosed sea with limited water circulation, the Adriatic is extremely vulnerable to pollution events (Fig. 12).

Eutrophication with consequent anoxic crisis: Coastal pollution from excessive nutrient inflow, typically from agricultural and municipal runoff, has been one of the main factors affecting the Adriatic waters and coastal areas (Randone, 2016).

Oil spills are also a major concern in terms of potential environmental impacts. Italy has 67 active concessions for extraction, while Croatia has 3 active offshore gas exploitation fields. Small oil spills are a regular occurrence, especially from the ships in transit. Moreover, a few reported accidents have occurred along the Italian coast, such as the one on the platform “Rospo di Mare” that reportedly lost 1,000 liters of oil in 2009 (Randone, 2016). An additional risk is presented by oil refineries in the Po River basin, where oil spills have occurred before (Randone, 2016).

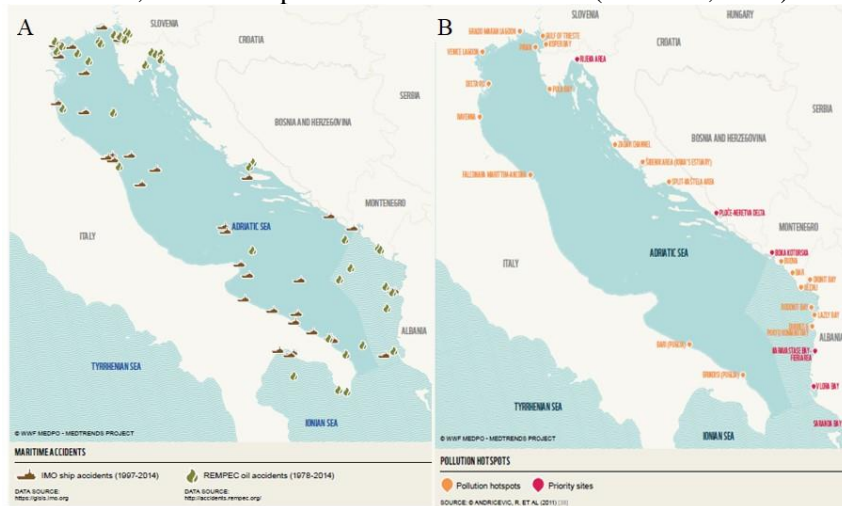


Fig.12: Maritime accidents (A) and (B) overview of the pollution hotspot in the Adriatic Sea. The red priority sites have been resulted to be sites that require immediate actions (maps from Randone, 2016).

5.2.2. Other external threats, natural and/or anthropogenic

Briefly describe any other external threat to the ecological, biological, aesthetic or cultural values of the area (such as unregulated exploitation of natural resources, serious threats on habitats or species, pollution problems) likely to influence the area in question.

Dredging (i.e. “extraction of marine aggregates”): dredging is a relatively common activity in the Adriatic Sea. From 1994 to 2012, an estimated 9,962,808 m³ of relict sands have been dredged for the nourishment of coastal zones from the Adriatic Sea’s sediments (Randone, 2016).

Tourism: The Adriatic Sea is among the top touristic destinations in the Mediterranean Sea, with touristic activities mainly concentrated in Italy and Croatia. Tourism in the region can be divided into three main categories: coastal tourism, cruise tourism and nautical tourism. Tourism in the Adriatic is strongly seasonal and generally peaks in July and August (Randone, 2016).

Deep sea mining and dredging: Currently there are no deep sea mining projects in the Adriatic Sea.

5.2.3. Sustainable development measures

Comment whether the area is covered by a management plan, or bordering upon a zone under such a plan.

The area is covered by the Italian and Croatian national management plans for trawl fisheries and by the Slovenian national management plans for trawl nets, boat seines, surrounding nets and dredges adopted according to Article 19 of Council Regulation 1967/2006.

The Croatian Management Plan for Bottom Trawl Fisheries (2013) recommends, among other conservation measures, the establishment of an area closed to trawling in the Pomo/Jabuka Pit based on the AdriaMed 2010 proposal submitted to the Croatian and Italian administrations. According to the Plan, *“cooperation on the area of the Pomo/Jabuka Pit and the establishment of a protected fishing area, should serve as a pilot project for future joint activities in the entire Adriatic”*.

The Italian Management Plan for Trawl Fisheries in the Northern-Central Adriatic (2011) aims to achieve a 25% reduction in fishing effort by a combination of scrapping, and the temporary suspension of fishing activities. The Plan specifically recalls the ban for trawling in the Zone of Biological Protection (ZTB) of the Pomo/Jabuka Pit established in 1998 as one of the management measures for the area (see paragraph 7.1.1).

The multiannual management plan for fisheries on small pelagic stocks in GSA17 and on transitional conservation measures for fisheries on small pelagic stocks in GSA18 (GFCM/37/2013/1), and related recommendations GFCM/40/2016/3, GFCM/39/2015/1 and GFCM/38/2014/1.

The European Commission Regulation (EU) 2017/86 of 20 October 2016 on a discard plan for certain demersal fisheries in the Mediterranean Sea. In GSA17 and GSA18 the plan introduced a landing obligation for European hake, red mullet and common sole fisheries, where the total landings per vessel of all species in 2014 and 2015 consist of more than 25 % of either hake, red mullet, or deep-water rose shrimp, and *de minimis* exceptions. The discard plan required Member states to submit the list of all vessels targeting hake, red mullet, common sole and deep water shrimp by December 31st, 2016.

6 EXPECTED DEVELOPMENT AND TRENDS¹

This is not always easy to assess and thus, it is not obligatory to fill in this Section.

6.1 EXPECTED DEVELOPMENT AND TRENDS OF THREATS TO AND PRESSURES UPON THE AREA

Deal briefly with the development of economic activities within the area

Oil and gas production in the Adriatic Sea is expected to increase rapidly in the near future with possible development of oil and gas exploration also in parts of the Pomo/Jabuka Pit (Fig.13). Slovenia has been always protesting against the potential economic activities related to the exploitation of carbohydrates in the Adriatic Sea.

Maritime traffic: Trends in the development of maritime shipping activities will likely lead to an increased density of traffic in the future. Specifically, a significant increase in the volume of transport of oil and other harmful substances is expected, including liquefied natural gas (LNG). In the future, the Northern Adriatic ports are expected to further increase their importance in the freight traffic. As an important route, the risks for the area of Pomo/Jabuka Pit will remain high (Fig. 13)

¹ By expected development and trends are meant the development, which is thought most likely to occur in the absence of any deliberate intervention to protect and manage the site.

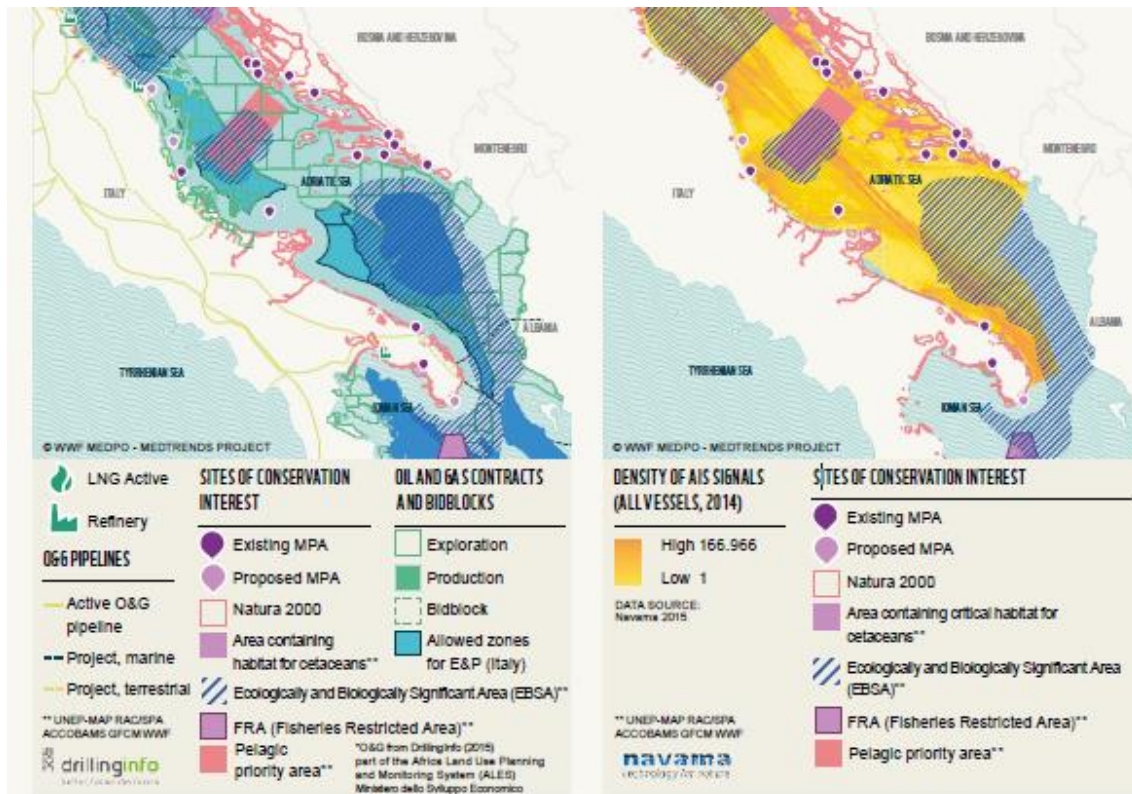


Fig.13. Left panel: Offshore oil and gas contracts and potential concessions in the Adriatic Sea and in Pomo/Jabuka Pit area. Right panel: Maritime traffic density in the Adriatic Sea and in Pomo/Jabuka Pit pelagic priority area (as defined by UNEP-MAP RAC/SPA ACCOBAMS GFCM WWF). Randone, 2016.

Fishery: Trawling in the no-trawl area of the Pomo/Jabuka Pit resumed in October 2016 after the temporal closure (see paragraph 7.1.1). Analysis of AIS data indicates that area as mainly exploited by Italian trawlers (Fig. 5). This analysis also showed that there was a clear reduction of trawling in the no-trawl area during the closure period (Fig. 14). The total fishing effort did not decrease but shifted to other fishing grounds.

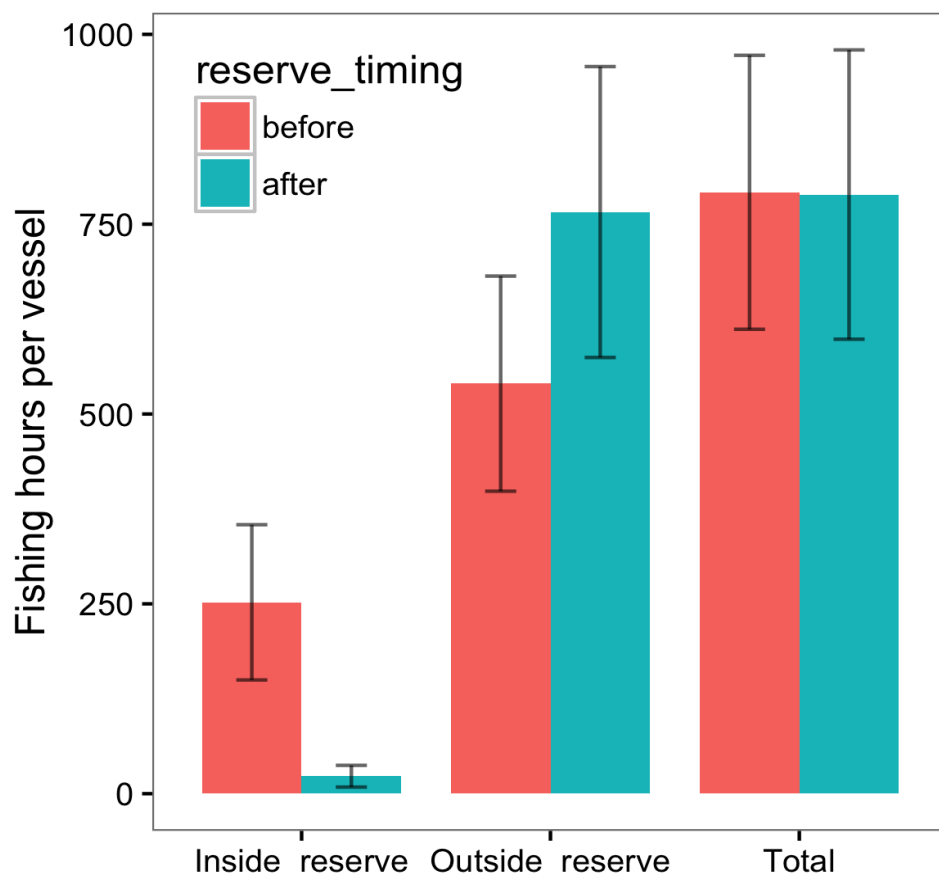


Fig. 14: Comparison of trawling effort before and after the 2015 establishment of the no trawl area in the Pomo/Jabuka Pit, inside and outside the closed area.

7 MANAGEMENT AND PROTECTION REGIME

7.1 LEGAL STATUS (if applicable)

7.1.1. Historical background of the management related to the area

In 1998, Italy established a Zone of Biological Conservation (Zona di Tutela Biologica, ZTB) in the Pomo/Jabuka Pit. The ZTB extended until the external limit of Croatia territorial waters and was closed to all Italian commercial and recreational fisheries¹. In 2003, the fishery closure in the ZTB was abolished² and then reintroduced in 2009³ (Fig. 15).

In July 2015, Italy and Croatia jointly agreed on a 12 months closure to demersal otter trawls (OTB), beam trawls (TBB) and twin trawls fisheries (OTT) in an area of 2.500 km² inside the Pomo/Jabuka Pit⁴ (no-trawl area; Fig. 15). In July 2016, the fishing closure was extended for an additional three months⁵, and then reopened to trawling.

In October 2016, Italy introduced specific management measures in the former no trawl area which: introduced a smaller no take area closed to all commercial and recreational fisheries; abolished the Pomo/Jabuka ZTB; and required vessels with twin trawls, otter trawls and beam trawls to operate in the area only with a special fishing authorization. Furthermore, fishing activity for these vessels was reduced to two days per week, except for twin trawlers, which were allowed to fish one day per week. Commercial fishing with set longlines and recreational fishing with set and/or drifting longlines in the restricted zone was prohibited until August 31st, 2017⁶. In December 2016, Italy issued implementing measures for the special fishing authorization, for the establishment of a record of authorized fishing

vessels, and for the no-take area (Scalata del Fondaletto; Fig. 15)⁷.

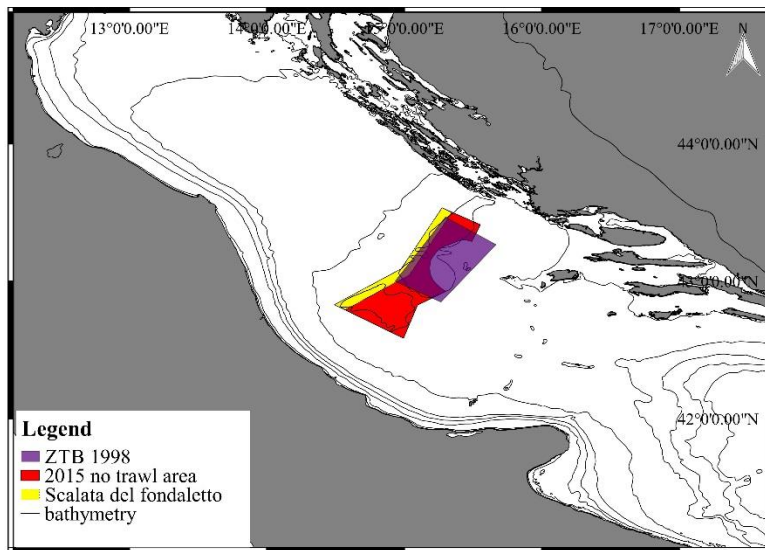


Fig. 15: Map showing the different management areas in the Pomo/Jabuka Pit.

¹ Decree of the Ministry of Agriculture Policies. June 16th, 1998.

² Decree of the Ministry of Agricultural, Food and Forestry Policies. June 19th, 2003.

³ Decree of the Ministry of Agricultural, Food and Forestry Policies. January 22nd, 2009.

⁴ Decree of the Ministry of Agricultural, Food and Forestry Policies. July 3rd, 2015.

⁵ Decree of the Ministry of Agricultural, Food and Forestry Policies. July 20th, 2016.

⁶ Decree of the Ministry of Agricultural, Food and Forestry Policies. October 19, 2016.

⁷ Directorial Decree, Ministry of Agricultural, Food and Forestry Policies. December 7th, 2016

7.1.2. Regulatory measures currently ruling the management on the site

Mention if the area, or part of it, has been designated and on what date, with an international conservation category.

- Council Regulation (EC) No. 1967/2006 of 21 December 2006 which introduced technical and conservation measures including the prohibition to fishing with trawl nets over coralligenous habitats and maërl beds in the Mediterranean Sea, and cod-end mesh size of trawl nets of 40 mm square mesh or 50 mm diamond mesh.
- GFCM Resolution 40/2016/5 establishing a minimum conservation reference size for European hake in the Mediterranean Sea.
- GFCM Resolution 33/2009/1 on the management of demersal fisheries in the GFCM area.
- GFCM Resolution 37/2013/2 on the management of fishing capacity in the GFCM area.
- GFCM Resolution 33/2009/2 on the minimum mesh size in the cod-end of demersal trawl nets.
- Croatia regime of temporal and spatial closures for bottom trawlers by which trawl fisheries is permanently prohibited in approximately 30% of its territorial waters, with an additional 10% prohibited between 100 and 300 days annually, covering in total a surface of 12.324 Km². Croatia annual report on the balance between fishing capacity and fishing opportunities for 2014, notes that: *“Given the importance of Jabuka Pit (central Adriatic) as a spawning and a nursery area for demersal species, consideration for a specific management regime in this area is underway. Management regime in question concerns bottom trawl activities and implies possible closures of the area (spatial regulation)”*.
- Italy temporal suspension for trawl fisheries 45 days per year in summer².

¹ Annual report on balance between fishing capacity and fishing opportunities for 2014- Croatia

² D.M. 21 luglio 1988 attuativo della legge 19 luglio 1988 n. 278

7.1.3. Objectives

Name in order of importance the objectives of the area as stated in its legal declaration.

Part of the area is under a specific Italian management regime. Although no objectives are stated, the importance of the Pomo/Jabuka Pit for fish recovery and the need for urgent management measures is acknowledged¹.

“Tenuto conto della rilevanza dal punto di vista biologico e ai fini della ripopolazione ittica, della zona denominata Fossa di Pomo, che richiede ulteriori urgenti misure di gestione”. Decreto ministeriale - Misure per la pesca nella Fossa di Pomo. 19 ottobre 2016.

7.2 LEGAL BACKGROUND

Briefly mention if the area or part of it is subject to any legal claim, or to any file open in that connection within the framework of an international body.

None

7.3 LEGAL PROVISIONS FOR MANAGEMENT

7.3.1. Zoning regulating the area

Briefly state if the legal text protecting the area provides for different zones to allocate different management objectives of the area (e.g. core and scientific zones, fishing zones, etc.) and in this case the surface area of these zones. Include a map as an annex.

Part of the area which is under the Italian Pomo Pit management regime (Fig. 16), provides for:

- temporal suspension of commercial fishing with bottom longlines and of recreational fishing with bottom and/or drifting longlines until August 31st, 2017¹ (surface 2000 km²) and
- a no-take area closed to all commercial and recreational fishing (surface 700 km²).

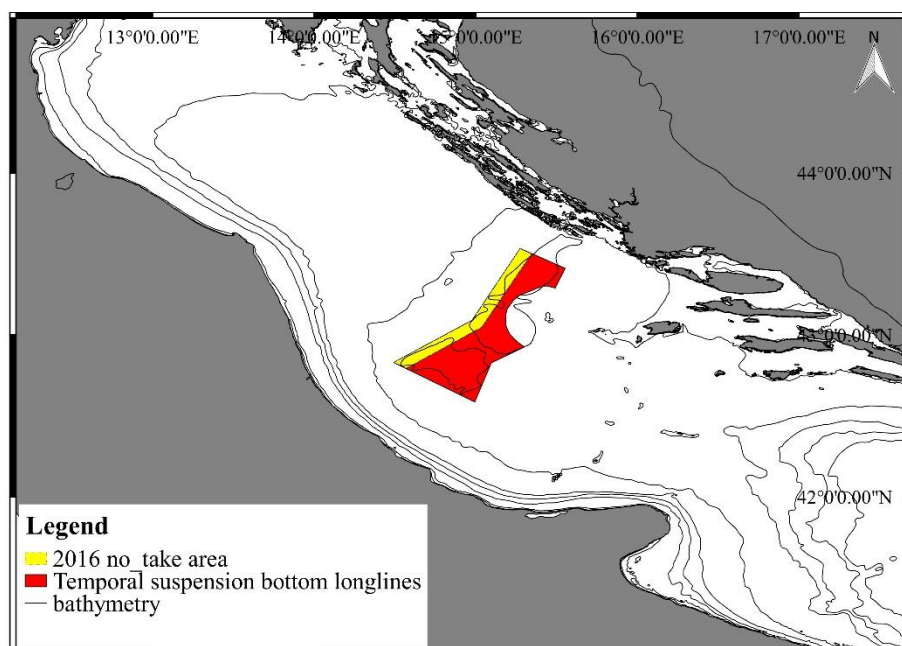


Fig. 16: Areas under the Italian Pomo Pit management regime

¹ Decree of the Ministry of Agricultural, Food and Forestry Policies. October 19, 2016.

7.3.3. Legal competencies

Legal competence and responsibility with regard to administration and implementation measures

The proposed FRAs include fisheries for GFCM priority stocks (European hake; Norway lobsters) and others species such as horned octopus and monkfish.

These stocks are shared by GFCM CPs (Italy, Croatia, Slovenia, Montenegro, Albania).

7.3.4. Other legal provisions

Describe any other relevant legal provisions, such as those requiring a management plan or any other significant measures concerning the protection and management of the area.

The Convention on Biological Diversity identified the Pomo/Jabuka Pit as an Ecological or Biological Significant Area (EBSA) reporting the presence of coralligenous communities, maërls beds and sand-muddy biocoenosis (MEDISEH, 2013), and the giant devil ray (*Mobula mobular*) (Fortuna et al., 2014), which is listed on Annex II of the Protocol for Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol).

The Convention on Biological Diversity Aichi Targets (ABT), in particular Target 11.

The GFCM Agreement on the establishment of fisheries restricted areas for the protection of vulnerable marine ecosystems, including but not limited to nursery and spawning areas (Article 8).

GFCM Resolution 40/2016/2 for a mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries, particularly Target 4, Output 4.2 a) on “The promotion of the identification and establishment of new FRAs to protect priority areas within ecologically or biologically significant marine areas (EBSAs), VMEs, etc. from harmful fishing activities, and the implementation of monitoring and control systems to ensure the efficiency of these spatial measures, also in relation to Target 3. This action should aim to achieve at least the protection of 10% of the coastal and marine areas, as expressed in Aichi Target 11. The CPCs should be closely involved in the definition of new FRAs “.

The UN General Assembly resolutions calling on high seas fishing nations and RFMO to take urgent action to protect VMEs from destructive fishing practices, including bottom trawl fishing (UNGA Resolutions 59/25, 61/105, 64/72, 66/68).

The UN Sustainable Development Summit 2015 (New York, 25–27 September), which includes a set of 17 Sustainable Development Goals (SDGs) The SDG 14.5 specifically calls to conserve at least 10 percent of coastal and marine areas, consistent with national and international law and based on the best available scientific information.

8 OBJECTIVES OF THE FRA AND PROPOSED MANAGEMENT MEASURES

8.1 OBJECTIVES OF THE FRA

State the reasons that justify the designation of the FRA

GFCM assessments for demersal stocks in GSA17 indicated that stocks are overexploited. Scientific advice is calling for a reduction in fishing mortality and for an improvement in exploitation pattern, especially for bottom trawlers, which mainly exploit juveniles of commercial fish stocks (GFCM, 2013). The Pomo/Jabuka Pit area constitutes a key Essential Fish Habitat, for European hake, Norway lobster and other commercially valuable species (see section 3). Thus, permanent conservation measures should be considered for the Pomo/Jabuka Pit area. In 2010, AdriaMed recommended that: “*Hake is a long-lived species therefore short periods of fishing closure are not expected to produce substantial effects (as it is the case for red mullet *Mullus barbatus*, along the western coast of the Adriatic). Norway lobster is also a relatively long-lived species (up to 5 years) which is not vulnerable to the fishing gear during the entire first year of its life, because it remain inside the burrows and cannot be taken by bottom trawl. So also Norway lobster will not be affected by a short term temporal closure*”.

In 2016, the GFCM WGSAD stock assessment for European hake in GSA 17 and GSA 18 recommended that “*particular management measures can be considered for the Pomo/Jabuka Pit area since it constitutes a nursery area for hake, supporting the entire hake stock and in the eastern part a persistency area for spawners*”. Furthermore the WGSAD recommended to consider the request to establishing a GFCM FRA to close the Pomo Pit area to trawlers and invited proposals for the 2017 meeting of the SRC-AS.

Past fisheries management has not been effective in ensuring the sustainable use of marine resources, and the current management regime is not expected to promote recovery of depleted fish stocks (Fouzai et al., 2012). The development and implementation of an Ecosystem Based Management approach, which includes an overall reduction of fishing effort and spatial measures, is therefore urgently needed. Empirical studies revealed the benefits of permanently restricting fishing activities, particularly trawling, for nursery and spawning grounds. They included increase of spawning- stock biomass and of demersal stocks, which could support increases in total catches (Murawski et al., 2000; Pipitone et al., 2002; Whitmarsh et al., 2002).

The proposed FRA is a key measure for the protection and recovery of depleted commercial stocks and of Essential Fish Habitats, critical to the long-term sustainability of Adriatic fisheries.

8.2 PROPOSED PROTECTION MANAGEMENT MEASURES FOR THE FRA

8.2.1. Management measures

Suggest management measures to be implemented in the FRA

Core area of the FRA:

- Permanent closure of the area to any demersal fisheries including towed nets, bottom set nets, bottom and mid-water longlines and of recreational fishing with bottom and/or drifting longlines.

Buffer area of the FRA:

1. Any demersal fishing activity shall be subject to a special fishing authorization. Members and cooperating non-members of the GFCM shall compile and transmit to the GFCM Executive Secretary the list of authorized vessels. Vessels not complying with the GFCM conservation and management measures, shall not be authorized to fish in the FRA buffer area.
2. The authorized vessels shall be allowed to fish for a maximum of two days per week.

Fishing vessels without a special fishing authorization can transit inside the area exclusively by keeping a direct course, at a speed exceeding 7 knots and with VMS and AIS active onboard. Transit in the core area shall be prohibited to any vessel carrying on board bottom longliners or recreational bottom or drifting longliners.

The GFCM shall define mechanisms to ensure control and enforcement of the FRA, 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 the FRA.

Members and cooperating non members of the GFCM shall ensure that the area is protected from the impact of any other human activity jeopardising the conservation of the EFHs and VMEs.

The GFCM shall conduct fishery independent assessments on the presence and status of EFHs and VMEs in the area.

Boundaries of the area and conditions to fish therein as referred to in previous paragraphs may change on the basis of SAC advice.

8.2.2. Monitoring, control and surveillance measures

Suggest measures to effectively enforce the FRA

The analysis performed using AIS data before and after the establishment of the no-trawl area in 2015 revealed that the trawl ban was largely respected (Fig. 17), with some cases of non compliance with the trawl ban reported to the national authorities.

Monitoring, Control and Surveillance (MCS) measures in the proposed FRA could therefore include:

- VMS onboard and transmitting position data at regular intervals in line with Recommendation MCS-GFCM/33/2009/7 and EU Regulation 1224/2009 for fishing vessels operating or transiting in the FRA;
- Automatic Identification System (AIS) onboard and transmitting for fishing vessels operating or transiting in the FRA.
- At sea inspections and possibly aerial controls by Flag states of vessels operating in the area, including.

The GFCM Compliance Committee shall regularly review and assess the level of enforcement and compliance in the FRA and provide relevant recommendations.

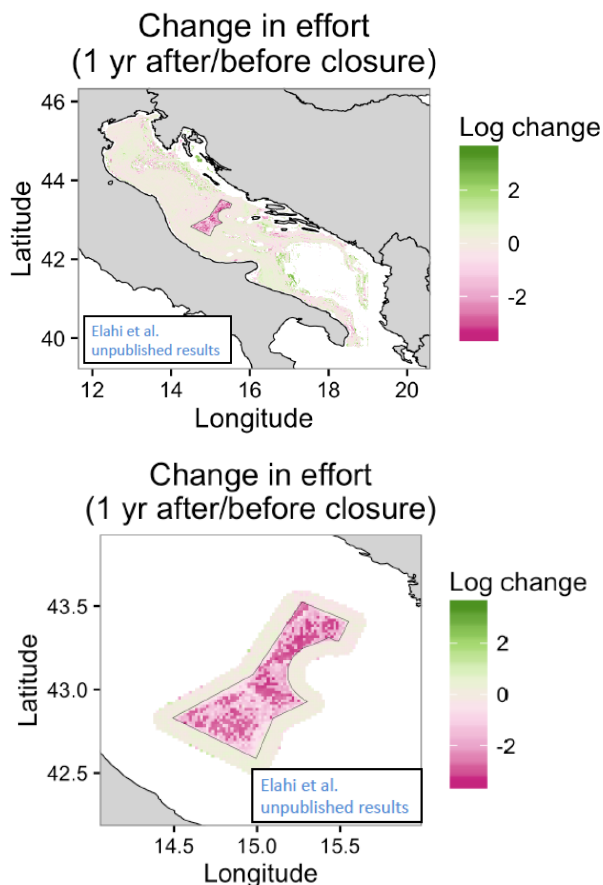


Fig. 17: Before-after control impact analysis of AIS data. The maps represent the changes of fishing effort inside the 2015 no-trawl area relative to the previous year. The negative log scale means that during the 2015 closure there was a clear reduction of fishing effort inside the area compared with fishing effort of the previous year. The bottom panel shows that there was not a 'fishing the line' effect. Fishing effort displacement did not occur in areas around the no trawl area.

8.2.3 Socioeconomic impact(s) of the FRA

Prevision of the socioeconomic impact(s) of the proposed measures

Predicting the long-term effects of the proposed FRA is difficult because relevant socioeconomic studies are limited. Instead, we used data on recent fishing effort to estimate the short-term consequences of the proposed area by estimating the displacement of fishing effort (e.g., Chollett et al. 2016). Predicted displacement was calculated as the annual effort within the closure divided by the total annual effort, on a per vessel basis. We used fishing effort (in hours) for the year prior to the temporary closure of the Pomo Pit (August 2014 – July 2015) to calculate displacement for vessels expected to operate in the Pomo/Jabuka Pit. That is, we calculated mean vessel displacement for ports between Ancona and Termoli on the Italian coast, and between Zadar and Makarska on the Croatian coast (AdriaMed, 2008). Estimated displacement is presented for the core area (Fig. 18A), and the combined core and buffer area (Fig. 18B).

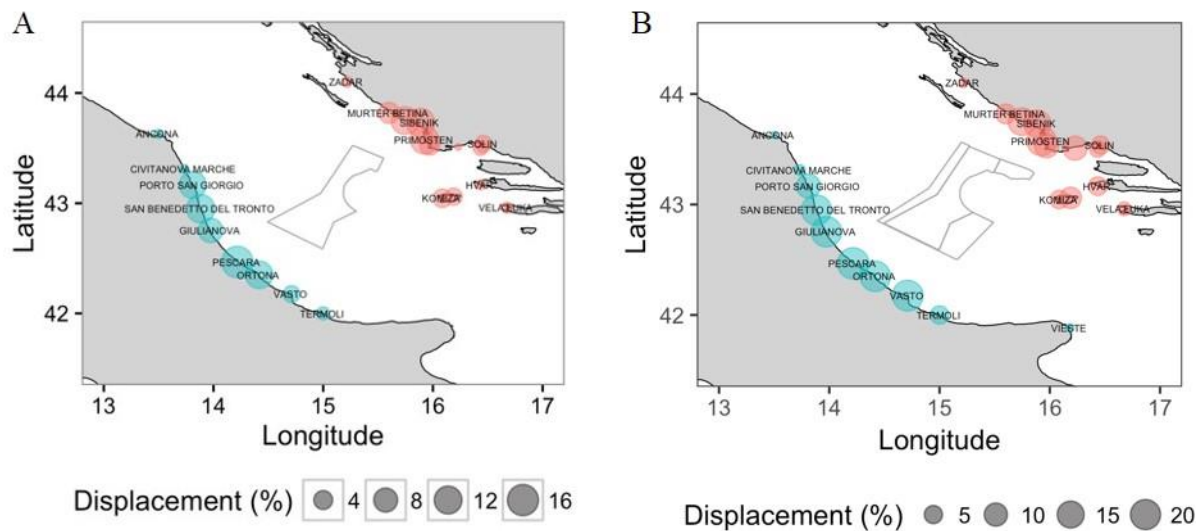


Fig. 18: Predictions for mean vessel displacement due to restrictions on trawling in A) the proposed core area of the Pomo/Jabuka Pit, and in B) the whole area of the proposed FRA. These predictions are based on empirical data (vessel fishing hours) for an entire year before the temporary closure in August 2015.

These results illustrate the extent to which ports are likely to be most affected by the proposed FRA. In 2015, the total volume landings of the Italian fleet was around 188,000 tons for a total economic value of around 889 million of euros. Of these, the 33.6% of the national volume landings and the 51.8% of their economic values came from trawling fishery (<http://www.ita fishstat.it/>). The volume of landings from Abruzzo, Marche and Molise regions, that are the Italian regions which ports mainly may be affected by the FRA closure (Fig. 18), accounted respectively for around 5.4%, 13.3% and 0.7% of the national volume landings (<http://www.ita fishstat.it/>). The income from landings of the Abruzzo, Marche and Molise regions accounted for the 3.6%, 8.2% and 1.4% of the landings' value at national levels (<http://www.ita fishstat.it/>). In 2015, the average prices of European hake and Norway lobsters from Italian fleet were 7.66 €/kg and 20.85 €/kg respectively. Finally, the main costs sustained by the fleets of the Abruzzo, Marche and Molise regions in 2015, were fuels costs, which accounted for the 76.9%, 70.8% and 88.4% on the total costs respectively (<http://www.ita fishstat.it/>).

8.2.4 Economic evaluation of the ecosystems services (not only marketable)

The bottom trawling fleet participates in the total catches of Croatia with some 10-15% at first sales, whereas the value of this catch accounts for more than 45% of value at first sale. Around the 60% of the of the bottom trawl catches is exported as fresh product. Croatian fishermen obtain an average price of 3.5-6 €/kg from bottom trawling catches (Croatia management plan, 2013).

Because we lack information on the landings or value derived specifically from the proposed FRA, the potential costs and benefits of effort reallocation remain unclear, and warrant further investigation. However, the socio-economic impact of the proposed FRA should be sustainable for both Italian and Croatian fleets considering the relatively low number of vessels engaged in the area. Additionally both Italy and Croatia will have access to EMFF funding to ease the impact.

It's worth noting that Italy's capacity reduction objective in GSA17 includes scrapping by 2017 of 56 trawl vessels between 12 m - 40 m LOA at a cost of € 17.3 million and of 43 purse seines and/or pair trawling between 12 m – 40 m LOA at a cost of €14.9 million. Italy also plans to cut an additional 10% in fishing capacity through “*banning of towed gear from biological protection areas (BPAs) where juvenile and/or breeding fish are concentrated.*”

In order to support the recovery of the Adriatic key commercial species such as European hake and Norway lobsters, socio-economic measures should be put in place by the national administrations to ensure a smooth transition towards sustainable fisheries.

Economic value of the goods and services that the ecosystem supports

The permanent closure of the core area of the proposed FRA is expected to provide an overall increase of ecosystem good and services.

The protection of nursery and spawning grounds is key to promoting the recovery of depleted target populations and can benefit adjacent fishing grounds and fisheries through larval, juvenile and adult spillover. An increase of the total stock biomass and of total fisheries catches is expected in the first 3-4 years of closure, based on what observed in other no-trawls areas (Pipitone et al., 2000; Whitmarsh et al., 2002; Beukers-Stewart et al., 2005).

An increased value of the catch is also expected. Fishes may reach larger sizes, resulting in greater commercial value and increased reproductive output (Giacalone et al., 2010). The reduction of fishing effort can reduce fishing mortality for juveniles of commercially exploited stocks and for vulnerable marine megafauna, and consequently promote an increase in abundance, biomass and diversity of target and by catch species (Collie et al., 1997; Murawski et al., 2000).

A bottom trawl ban in an area, where habitat-forming species, VMEs are present, may provide additional benefits beyond fisheries. The macrofauna of soft bottoms communities, in fact, play key ecological roles such as controlling eutrophication by filtering large water volumes and stabilizing sediments, and ensuring nutrient cycling and in benthic-pelagic coupling (Bastari et al., 2016).

9. OTHER RELEVANT INFORMATION

References cited:

- Adriamed (2006). 8th Meeting of the AdriaMed Coordination Committee Tirana, Albania 12th and 13th December 2006 Jabuka/Pomo Pit: a critical area for the Adriatic demersal fisheries resources. Scientific issues and management options
- Adriamed (2011). Preliminary information on the additional collection of data by means of trawl survey in the Central Adriatic Sea (Jabuka/Pomo Pit area). 13th Meeting of the AdriaMed Coordination Committee Tirana, Albania, 26-28 March 2012. GCP/RER/010/ITA.GCP/RER/021/EC.
- Angeletti, L., Taviani, M., Canese, S., Foglini, F., Mastrototaro, F., Argnani, A., ... and Mačić, V. (2014). New deep-water cnidarian sites in the southern Adriatic Sea. *Mediterranean Marine Science*, 15(2), 1-11.
- Arneri, E., and Morales-Nin, B. (2000). Aspects of the early life history of European hake from the central Adriatic. *Journal of Fish Biology*, 56(6), 1368-1380.

- Artegiani, A., Paschini, E., Russo, A., Bregant, D., Raicich, F., and Pinardi, N. (1997). The Adriatic Sea general circulation. Part I: Air–sea interactions and water mass structure. *Journal of physical oceanography*, 27(8), 1492-1514.
- Bastari, A., Micheli, F., Ferretti, F., Pusceddu, A., and Cerrano, C. (2016). Large marine protected areas (LMPAs) in the Mediterranean Sea: The opportunity of the Adriatic Sea. *Marine Policy*, 68, 165-177.
- Benetazzo, A., Bergamasco, A., Bonaldo, D., Falcieri, F.M., Sclavo, M., Langone, L., and Carniel, S., 2014. Response of the Adriatic Sea to an intense cold air outbreak: dense water dynamics and wave-induced transport. *Progress in Oceanography*, 128, 115–138.
- Bensch, A., Gianni, M., Gréboval, D., Sanders, J.S., & Hjort, A. Worldwide review of bottom fisheries in the high seas. *FAO Fisheries and Aquaculture Technical Paper*. No. 522. Rome, FAO (2008). 145p.
- Beukers-Stewart, B. D., Vause, B. J., Mosley, M. W., Rossetti, H. L., and Brand, A. R. (2005). Benefits of closed area protection for a population of scallops. *Marine Ecology Progress Series*, 298, 189-204.
- Chollett, I., Box, S. J., and Mumby, P. J. (2016). Quantifying the squeezing or stretching of fisheries as they adapt to displacement by marine reserves. *Conservation Biology*, 30(1), 166-175.
- Clark, M.R., Rowden, A.A., Schlacher, T.A., Guinotte, J., Dunstan, P.K., Williams, A., et al., (2014). Identifying ecologically or biologically significant areas (EBSA): a systematic method and its application to seamounts in the south pacific ocean. *Ocean & Coastal Management*, 91, 65–79.
- Coll, M., Santojanni, A., Palomera, I., Tudela, S., and Arneri, E. (2007). An ecological model of the Northern and Central Adriatic Sea: analysis of ecosystem structure and fishing impacts. *Journal of Marine Systems*, 67(1), 119-154.
- Collie, J. S., Escanero, G. A., & Valentine, P. C. (1997). Effects of bottom fishing on the benthic megafauna of Georges Bank. *Marine Ecology Progress Series*, 155, 159-172.
- Conti, A., Stefanon, A., and Zuppi, G. M. (2002). Gas seeps and rock formation in the northern Adriatic Sea. *Continental Shelf Research*, 22(16), 2333-2344.
- Croatia Management plan for bottom trawl fisheries, 2013.
- Cushman-Roisin, B., Gačić, M., Poulain, P.-M., Artegiani, A. (Eds.), (2001). *Physical oceanography of the Adriatic Sea: Past, present and future*. Kluwer Academic Publishers.
- de Juan S and Lleonaart J. (2010). Conceptual framework for the protection of vulnerable habitats impacted by fishing activities in the Mediterranean high seas. *Ocean & Coastal Management* 53, 717–723.
- Doyle, J., Lordan, C., Fitzgerald, R., O'Connor, S., Fee, D., Butler, R., Stokes, D., Ni Chonchuir, G., Sheridan, M. and Simpson, S. (2015). Aran, Galway Bay and Slyne Head Nephrops Grounds (FU17) 2015 UWTV Survey Report and catch options for 2016. Marine Institute UWTV Survey report.
- Druon, J. N., Fiorentino, F., Murenu, M., Knittweis, L., Colloca, F., Osio, C., ... and Sbrana, M. (2015). Modelling of European hake nurseries in the Mediterranean Sea: an ecological niche approach. *Progress in oceanography*, 130, 188-204.
- Edinger, E. N., Wareham, V. E., and Haedrich, R. L. (2007). Patterns of groundfish diversity and abundance in relation to deep-sea coral distributions in Newfoundland and Labrador waters. *Bulletin of Marine Science*, 81(3), 101-122.
- European Commission - Maritime affairs – Blue Growth (2014). http://ec.europa.eu/assets/mare/infographics/#_Adriatic_and_Ionian_Seas.
- FAO, (2016). *The State of Mediterranean and Black Sea Fisheries*. General Fisheries Commission for the Mediterranean. Rome, Italy.
- Ferretti, F., Osio, G. C., Jenkins, C. J., Rosenberg, A. A. and Lotze, H. K. (2013). Long-term change in a meso-predator community in response to prolonged and heterogeneous human impact *Sci. Rep.*, 3
- FAO (2009). *International Guidelines for the Management of Deep-sea Fisheries in the High Seas*. Directives internationales sur la gestion de la pêche profonde en haute mer. Directrices Internacionales para la Ordenación de las Pesquerías de Aguas Profundas en Alta Mar. Rome/Roma, 73p.
- Fortuna, C. M., Vallini, C., Filidei Jr, E., Ruffino, M., Consalvo, I., Di Muccio, S., ... and Mazzola, A. (2010). By-catch of cetaceans and other species of conservation concern during pair trawl fishing operations in the Adriatic Sea (Italy). *Chemistry and Ecology*, 26(S1), 65-76.

- Fortuna, C. M., Kell, L., Holcer, D., Canese, S., Filidei Jr, E., Mackelworth, P., and Donovan, G. (2014). Summer distribution and abundance of the giant devil ray (*Mobula mobular*) in the Adriatic Sea: Baseline data for an iterative management framework. *Scientia Marina*, 78(2), 227-237.
- Fouzai, N., Coll, M., Palomera, I., Santojanni, A., Arneri, E., and Christensen, V. (2012). Fishing management scenarios to rebuild exploited resources and ecosystems of the Northern-Central Adriatic (Mediterranean Sea). *Journal of Marine Systems*, 102, 39-51.
- Franić, Z., (2005). Estimation of the Adriatic Sea water turnover time using fallout ^{90}Sr as a radioactive tracer. *Journal of Marine Systems*, 57(1-2), 1-12.
- Gačić, M., Borzelli, G.L.E., Civitarese, G., Cardin, V., Yari, S., 2010. Can internal processes sustain reversals of the ocean upper circulation? The Ionian Sea example. *Geophysical Research Letters*, 37(9), L09608.
- Garofalo G., Fortibuoni T., Gristina M., Sinopoli M., and Fiorentino F. (2011). Persistence and co-occurrence of demersal nurseries in the Strait of Sicily (central Mediterranean): Implications for fishery management. *Journal of Sea Research*, 66, 29-38
- Geletti, R., Del Ben, A., Buseti, M., Ramella, R., and Volpi, V. (2008). Gas seeps linked to salt structures in the Central Adriatic Sea. *Basin Research*, 20(4), 473-487.
- GFCM:SAC11/2008/Inf.20. (2008). Criteria for the identification of sensitive habitats of relevance for the management of priority species.
- Greathead, C. F., Donnan, D. W., Mair, J. M., and Saunders, G. R. (2007). The sea pens *Virgularia mirabilis*, *Pennatula phosphorea* and *Funiculina quadrangularis*: distribution and conservation issues in Scottish waters. *Journal of the Marine Biological Association of the United Kingdom*, 87(05), 1095-1103.
- Grilli, F., Marini, M., Book, J.W., Campanelli, A., Paschini, E., and Russo, A., (2013). Flux of nutrients between the middle and southern Adriatic Sea (Gargano-Split section). *Marine Chemistry*, 153, 1-14.
- HERMES-Hotspot Ecosystem Research on the Margins of European Seas. News update Issue 15 Spring 2009. www.eu-hermes.net
- Jukic-Peladic, S. and Vrgoc, N., (1998). Problems and dilemmas in applying different techniques in fish population dynamics studies, in: *Dynamique des populations marines*. Lleonart, J. (Ed.). Cahiers Options Mediterranennes (CIHEAM), Zaragoza 35, pp 335-345.
- Lotze, H. K., Coll, M., and Dunne, J. A. (2011). Historical changes in marine resources, food-web structure and ecosystem functioning in the Adriatic Sea, Mediterranean. *Ecosystems*, 14(2), 198-222.
- Marini, M., Maselli, V., Campanelli, A., Foglini, F., and Grilli, F. (2016). Role of the Mid-Adriatic deep in dense water interception and modification. *Marine Geology*, 375, 5-14.
- Martinelli, M., Morello, E. B., Isajlovic, I., Belardinelli, A., Lucchetti, A., Santojanni, A., ... and Arneri, E. (2013). Towed underwater television towards the quantification of Norway lobster, squat lobsters and sea pens in the Adriatic Sea. *Acta Adriatica*, 54(1), 3-12.
- Maselli, V., Hutton, E. W., Kettner, A. J., Syvitski, J. P., and Trincardi, F. (2011). High-frequency sea level and sediment supply fluctuations during Termination I: an integrated sequence-stratigraphy and modeling approach from the Adriatic Sea (Central Mediterranean). *Marine Geology*, 287(1), 54-70.
- MEDISEH - Mediterranean Sensitive Habitats (2013). Edited by Giannoulaki M., A. Belluscio, F. Colloca, S. Fraschetti, M. Scardi, C. Smith, P. Panayotidis, V. Valavanis M.T. Spedicato. DG MARE Specific Contract SI2.600741, Final Report, 557 p.
- Morello, E. B., Frogli, C., and Atkinson, R. J. A. (2007). Underwater television as a fishery-independent method for stock assessment of Norway lobster (*Nephrops norvegicus*) in the central Adriatic Sea (Italy). *ICES Journal of Marine Science: Journal du Conseil*, 64(6), 1116-1123.
- Morello, E. B., Antolini, B., Gramitto, M. E., Atkinson, R. J. A., and Frogli, C. (2009). The fishery for *Nephrops norvegicus* (Linnaeus, 1758) in the central Adriatic Sea (Italy): preliminary observations comparing bottom trawl and baited creels. *Fisheries Research*, 95(2), 325-331.
- Murawski, S. A., Brown, R., Lai, H. L., Rago, P. J., and Hendrickson, L. (2000). Large-scale closed areas as a fishery-management tool in temperate marine systems: the Georges Bank experience. *Bulletin of Marine Science*, 66(3), 775-798.

- Panieri, G. (2003). Benthic foraminifera response to methane release in an Adriatic Sea pockmark. *Rivista Italiana di Paleontologia e Stratigrafia* (Research In Paleontology and Stratigraphy), 109(3).
- Piano di gestione (ex art.24 del Reg. (CE) n.1198/2006) strascico Italia GSA 17 (Maggio, 2011). Mar Adriatico centro-settentrionale.
- Pipitone, C., Badalamenti, F., D'Anna, G., and Patti, B. (2000). Fish biomass increase after a four-year trawl ban in the Gulf of Castellammare (NW Sicily, Mediterranean Sea). *Fisheries Research*, 48(1), 23-30.
- Randone, M. 2016. MedTrends Project: Blue Growth Trends in the Adriatic Sea - the challenge of environmental protection. WWF Mediterranean.
- Report to the European Commission (1999). Wieczorek, S. K., Campagnuolo, S., Moore, P. G., Frogia, C., Atkinson, R. J. A., Gramitto, E. M., and Bailey, N. 1999. The composition and fate of discards from Nephrops trawling in Scottish and Italian waters. Final Report to the European Commission. Contract 96/092. Study Project in support of the Common Fisheries Policy (XIV/96/C75). 323 pp.
- Russo, A., and Artegiani, A. (1996). Adriatic Sea hydrography. *Scientia Marina*, 60, 33-43. SAC-WGSAD, (2016). Scientific Advisory Committee on Fisheries (SAC) Working Group on Stock Assessment of Demersal Species (WGSAD) GFCM and FAO headquarters, Rome, Italy , 7-12 November 2016.
- Sánchez, P., Sartor, P., Recasens, L., Ligas, A., Martin, J., De Ranieri, S., and Demestre, M., (2007). Trawl catch composition during different fishing intensity periods in two Mediterranean demersal fishing grounds. *Scientia Marina*, 71, 765–773.
- Santulli, A., Modica, A., Messina, C., Ceffa, L., Curatolo, A., Rivas, G., ... and D'Amelio, V. (1999). Biochemical responses of European sea bass (*Dicentrarchus labrax* L.) to the stress induced by off shore experimental seismic prospecting. *Marine Pollution Bulletin*, 38(12), 1105-1114.
- Scacco, U., Consalvo, I., DiMuccio, S., and Tunesi, L. (2012). On the by-catch of two porbeagle sharks *Lamna nasus* in the central Adriatic Sea. *Marine Biodiversity Records*, 5, e61.
- Silva, J.P., Hamza, C., Martinos, H., (2014). Strategic environmental assessment Adriatic-Ionian operational programme 2014-2020. MetisGmbH, Vienna, 90 pp.
- Spagnoli, F., Dinelli, E., Giordano, P., Marcaccio, M., Zaffagnini, F., and Frascari, F. (2014). Sedimentological, biogeochemical and mineralogical facies of Northern and Central Western Adriatic Sea. *Journal of Marine Systems*, 139, 183-203.
- STECF-16-11. Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2016 Annual Economic Report on the EU Fishing Fleet 2016. Publications Office of the European Union, Luxembourg, EUR XXXX EN, JRC XXX, 470 pp. Printed in Italy
- Tsagarakis, K., Palialexis, A., and Vassilopoulou, V. (2013). Mediterranean fishery discards: review of the existing knowledge. *ICES Journal of Marine Science: Journal du Conseil*, fst074.
- Trincardi, F., Cattaneo, A., Asioli, A., Correggiari, A., Langone, L., (1996). Stratigraphy of the late-Quaternary deposits in the central Adriatic basin and the record of short-term climatic events. *Memorie dell'Istituto italiano di idrobiologia*, 55, 39-70.
- van Straaten, L.M.J.U., (1970). Holocene and late-Pleistocene sedimentation in the Adriatic Sea. *Geologische Rundschau*, 60(1), 106-131.
- Vrgoč, N., Arneri, E., Jukić-Peladić, S., Krstulović Šifner, S., Mannini, P., Marčeta, B., Osmani, K., Piccinetti, C., and Ungaro, N. (2004). Review of current knowledge on shared demersal stocks of the Adriatic Sea. FAO-MiPAF Scientific Cooperation to Support Responsible Fisheries in the Adriatic Sea. GCP/RER/010/ITA/TD-12. *AdriaMed Technical Documents*, 12: 91 pp.
- Whitmarsh, D., Pipitone, C., Badalamenti, F., and D'Anna, G. (2003). The economic sustainability of artisanal fisheries: the case of the trawl ban in the Gulf of Castellammare, NW Sicily. *Marine Policy*, 27(6), 489-497.
- Zenetos, A., Gofas, S., Morri, C., Rosso, A., Violanti, D., Raso, J. G., ... and Ballesteros, E. (2012). Alien species in the Mediterranean Sea by 2012. A contribution to the application of European Union's Marine Strategy Framework Directive (MSFD). Part 2. Introduction trends and pathways. *Mediterranean Marine Science*, 13(2), 328-352.
- Žuljević, A., Peters, A. F., Nikolić, V., Antolić, B., Despalatović, M., Cvitković, I., ... and Canese, S. (2016). The Mediterranean deep-water kelp *Laminaria rodriguezii* is an endangered species in the Adriatic Sea. *Marine biology*, 163(4), 1-12.

Zupanovic, S., and Jardas, I. (1986). A contribution to the study of biology and population dynamics of the Adriatic hake, *Merluccius merluccius* (L). Acta Adriatica, 27, 97-146.

RELEVANT ADDRESSES

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National reports

ALBANIA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 18 – Southern Adriatic Sea
B. Total landings: 4206 tonnes (2016); 3808 tonnes (2015);
C. Fleet: 564 vessels (2017); 599 (2016)

Section 2 - Status of stocks of priority species

Section 3 - Status of statistics and information system

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

The National programme for the collection, management and use of data is created by law 64/2012 "On fisheries" and DCM No.301, dated 10.4.2013 "On the establishment of a National framework for the collection, management and use of data in the fisheries sector and supporting for scientific advice according the Albanian Fisheries Policy". The multiannual National Programme for the collection, management and use of biological, technical, environmental and social-economic data is established together with the methodology to be applied. The multiannual National Programme for the collection, management and use of biological, technical, environmental and social-economic data includes data regarding Commercial fishing activity carried out by fishing vessels in territorial waters, outside territorial waters, fishing activity in inland waters, including eel fishing, recreational/sports fishing, fish products processing industry. This programme for the collection, management and use of data includes multiannual sampling programmes, control system of commercial and recreational/sports fishing, scientific research campaigns at sea, a system for the management and use of data for scientific analysis. In structural point of view is Fishery & Aquaculture supporting agency that through Fishery Inspectorate in the field that collect data from fishery and aquaculture and send them to Fishery Directorate for further elaborating and analyses.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI – Socio-Economic Data	Task VII - Biological Information
The directorate of fishery & aquaculture supporting, Fishery Directorate, MoARDWA	The directorate of fishery & aquaculture supporting, Fishery Directorate, MoARDWA	The directorate of fishery & aquaculture supporting, Fishery Directorate, MoARDWA	Fishery Directorate, MARDWA	Fishery Directorate, MARDWA	Fishery Directorate, MARDWA and scientific entities	Fishery Directorate, MARDWA and scientific entities

Section 4 - Status of research in progress (or recently concluded)

Section 5 - Involvement in activities of FAO regional projects

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
"On adherence of Republic of Albania to the FAO Agreement on Port State Measures (PSMA)"	REC.MCS-GFCM/40/2016/1
"On commercial fishing capacities and some adjustments on the modalities of Fishery Fleet Registry functionality"	REC.CM-GFCM/40/2016/3
National Strategy on Fisheries and Aquaculture, 2016-2021	RES-GFCM/40/2016/2
"On further management measures for small pelagic fisheries in the Adriatic Sea"	REC.CM-GFCM/39/2015/1
"On Aquaculture"	RES-GFCM/36/2012/1

Section 7 - Environment protection measures

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

Notes

No reports and information regarding incidental catches of cetaceans by Albanian fishery vessels.

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

Notes

No reports and information regarding any incidental, target or bycatch of sharks and rays by Albanian fishery vessels. Some shark species are protected by fisheries law.

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

Notes

No incidental catch of sea turtles is reported by fishing vessels.

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

Notes

Albania prepared a law amendment adding the protection of seabirds species. This amendment is in parliament for final approval.

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

Notes

This species is protected by Albanian fishery legislation.

Section 13 - Proposals for future research programmes

An depth study on vulnerability of SSF and problematics related this fishing sector in Albania
Implementation of an efficient system of data collection on fishery and aquaculture of Albania
Monitoring of main fishery resources status in close collaboration with AdriaMED programme
Support for fully implementation and operative of VMS-MCS system in Albania

ALGERIA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 04 – Algeria
B. Total landings: 88420 tonnes (2015); 85234 tonnes (2014);
C. Fleet: 5024 vessels (2015); 4777 (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?
<i>Parapenaeus longirostris</i>	2016	In sustainable exploitation	04	N	N
<i>Merluccius merluccius</i>	2016	In overexploitation	04	N	N

Section 3 - Status of statistics and information system

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

Les données statistiques sectorielles sont collectées quotidiennement aux niveau des ports algériens selon deux méthodologies :

1- DIRECTE: L'enquêteur assiste aux débarquements et relève les données directement.

2- INDIRECTE: L'information est obtenue par le biais d'un intermédiaire (les agents des gardes côtes, les mandataires, ou les professionnels).

Le cheminement de la données statistique suit le schéma suivant :

Port --> Directions régionales (des Wilayas) --> Administration centrale (SDSEP)

Les données sont collectées par les enquêteurs au niveau des ports de pêche (plus de 75 enquêteurs permanents) via des fiches d'enregistrement sont transmises à la Direction de pêche territorialement compétente.

Des données journalières sur les prix de quelques espèces de large consommation sont également collectées et transmises directement chaque jour à la SDSEP (sous format Excel).

Les données relatives aux débarquements et à l'effort de pêche (flottille et nombre de sorties) sont transmises par la direction de wilaya à la SDSEP, par email, chaque fin de mois selon un canevas type fixé par un arrêté ministériel (depuis 2006).

Les fichiers transmis sont intégrés automatiquement dans une base de données centrale (sous Access).

L'analyse se faisant sur Excel et SPSS pour les enquêtes socioéconomiques.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Sous-direction des systèmes d'information - MADRP	Sous-direction des systèmes d'information - MADRP	Sous-direction des systèmes d'information - MADRP	Sous-direction des systèmes d'information - MADRP	Sous-direction des systèmes d'information - MADRP	Sous-direction des systèmes d'information - MADRP	Centre National de Recherche et de Développement de la Pêche et de l'Aquaculture - MADRP

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Evaluation des stocks de petits pélagiques de la mer d'Alboran (sardine, anchois et sardinelle)	Stock assessment	2015	2020
Evaluation des stocks de petits pélagiques par méthode directe (acoustique)	Stock assessment	2015	2020
Analyses des débarquements d'espèces démersales de la pêche chalurière et estimation des biomasses exploitées	Stock assessment	2015	2020

Research or Project title	Subject	From	To
Programmes de campagnes de chalutage pour l'évaluation des stocks démersaux	Stock assessment	2015	2020
Ichtyoplancton de la côte Algérienne	Stock assessment		
Etude des indicateurs socio-économiques des pêcheries Algériennes	Socio economics	2015	2020
Suivie de la qualité physicochimique des milieux marins côtiers	Marine environment and conservation	2015	2020
Surveillance des espèces toxiques et introduites et leur impact sur la biodiversité	Marine environment and conservation	2015	2020
ALPHyNet	Marine environment and conservation	2016	2018

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Groupe de travail sur les petits pélagiques de la mer d'Alboran	COPEMED	2016	Stock assessment
Groupes de travail sous régionaux en appui à la CGPM sur l'évaluation des stocks de petits pélagiques et des poissons démersaux (WGSASP WGSAD)	COPEMED	2017	Stock assessment
Projet d'étude des effets de la mise en œuvre de la maille carrée de 40 mm dans la pêche au chalut	COPEMED	2015	Stock assessment Marine environment and conservation
Indicateurs socio-économiques du secteur des pêches	COPEMED	2017	Socio-economics
Standardisation des methodologies communes	COPEMED	2016	Data collection and statistics
Renforcement des capacités statistiques nationales	COPEMED, EASTMED	2017	Stock assessment Data collection and statistics

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Décret exécutif n° 04-86	REC.CM-GFCM/36/2012/1
Décret exécutif n° 01-56	REC.CM-GFCM/40/2016/3
Décret Présidentiel n° 07-95	RES-GFCM/40/2016/2
Décret exécutif n° 04-86	REC.CM-GFCM/39/2015/1
Arrêté ministériel du 19/04/2010	RES-GFCM/36/2012/1
Arrêté du 16 avril 2006 fixant le journal de pêche	REC.MCS-GFCM/35/2011/1
Décret n° 83-509 du 20 août 1983 relatif aux espèces animales non domestiques protégées	REC.CM-GFCM/35/2011/5
Décret présidentiel n 07-95	REC.CM-GFCM/36/2012/2
Décret exécutif n 07-208	REC.DIR-GFCM/35/2011/6

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year
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Îles Habibas	Marine Protected Area (MPA)	2003
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Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area

Notes

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 en cours. Par ailleurs, des cycles de formation et sensibilisation des professionnels de la pêche à la collecte d'information sur les prises accidentelles sont en cours.

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

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

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

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

Section 13 - Proposals for future research programmes

Cartographie et caractérisation des zones sensibles à la pêche (Zones de ponte et nurseries)
Evaluation bioéconomique des mesures de gestion
Evaluation socio-économique de la pêche professionnelle Algérienne
Socio-économie de la pêche artisanale en Algérie

CROATIA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 17 - Northern Adriatic; 18 - Southern Adriatic Sea
B. Total landings: 70 924 tonnes (2015); 79 396 tonnes (2014)
C. Fleet: 7 494 vessels (2017); 7 705 vessels (2016)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
<i>Sardina pilchardus</i>	2015	In overexploitation	17	Y	N
<i>Engraulis encrasicolus</i>	2015	In overexploitation	17	Y	N
<i>Solea solea</i>	2015	In overexploitation	17	Y	N
<i>Merluccius merluccius</i>	2015	In overexploitation	17	Y	N
<i>Mullus barbatus</i>	2015	In overexploitation	17	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

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. 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. Linking of databases with the Institute of Oceanography and Fisheries databases is underway in order 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. All data collection is implemented according to the National data collection programmer in accordance with the Data Collection Framework (DCF) as well as obligations under the GFCM and ICCAT. Reports are made using DCF data and according to procedures and methodologies set out by DCF, GFCM and ICCAT.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Ministry of Agriculture - Directorate of Fisheries	Ministry of Agriculture - Directorate of Fisheries	Ministry of Agriculture - Directorate of Fisheries	Ministry of Agriculture - Directorate of Fisheries	Ministry of Agriculture - Directorate of Fisheries	Ministry of Agriculture - Directorate of Fisheries	Institute of Oceanography and Fisheries

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
National programme for data collection in fisheries	Data collection and statistics	2013	2019
MEDITS and MEDIAS	Data collection and statistics	2012	2019
SOLEMON	Stock assessment	2016	2016

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
FAO Adriamed	ADRIAMED	2016	Stock assessment

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Ordinance on time and spatial restrictions for fishing with purse seine net "srdelara" in 2017	REC.MCS-GFCM/40/2016/3
Ordinance on amendments of ordinance on time and spatial restrictions for fishing with purse seine "srdelara" in 2017	REC.CM-GFCM/40/2016/3

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year
Jabuka pit area	Marine management area (MMA)	2015

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

No by-catches of cetaceans were recorded in 2015/16.

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

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.

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

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 2016.

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

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 2015/16.

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**Notes**

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 2016, 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
Monitoring of demersal resources in Jabuka Pit
Monitoring of small pelagic fish

CYPRUS

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 14 - Gulf of Gabes; 15 - Malta Island; 21 - Southern Ionian Sea; 22 - Aegean Sea; 24 - North Levant; 25 - Cyprus Island; 26 - South Levant
- B. Total landings:** 1479 (2016); 1326 tonnes (2014)
- C. Fleet:** 768 (2016); 840 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?
<i>Mullus barbatus</i>	2015	In sustainable exploitation	25	Y	N
<i>Spicara smaris</i>	2015	In sustainable exploitation	25	Y	N
<i>Boops boops</i>	2015	In overexploitation	25	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

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. 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. 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.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Department of Fisheries and Marine Research	Department of Fisheries and Marine Research	Department of Fisheries and Marine Research	Department of Fisheries and Marine Research	Department of Fisheries and Marine Research	Department of Fisheries and Marine Research	Department of Fisheries and Marine Research

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
National Fisheries Data Collection Programme	Data collection and statistics	2005	2016
Marine environmental studies in progress	Marine environment and conservation	2014	2016

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Involvement in activities of FAO Regional Projects	EASTMED	2016	Stock assessment Socio economics

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (Ninth Modification of Annexes of Law - Decree 51/2014)	REC.MCS-GFCM/40/2016/3
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	REC.CM-GFCM/40/2016/3
Κ.Δ.Π. 138/2009 - Διάταγμα - Ο περί της εφαρμογής Κοινοτικών Αποφάσεων και Κοινοτικών Κανονισμών που αφορούν θέματα αλιείας Νόμος του 2006 - 3η Τροποποίηση των Παραρτημάτων του Νόμου	REC.MCS-GFCM/40/2016/1
Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (Seventh Modification of Annexes of Law - Decree 344/2012	REC.CM-GFCM/40/2016/7
Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (Ninth Modification of Annexes of Law - Decree 30/2010)	REC.MCS-GFCM/35/2011/1
Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (Seventh Modification of Annexes of Law - Decree 344/2012)	REC.DIR-GFCM/35/2011/6
Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006	REC.MCS-GFCM/34/2010/2, REC.MCS-GFCM/33/2009/6, REC.MCS-GFCM/33/2009/7, REC.MCS-GFCM/33/2009/8, REC.MCS-GFCM/32/2008/1, REC.CM-GFCM/30/2006/2, REC.CM-GFCM/30/2006/3, REC.CM-GFCM/36/2012/3, REC.CM-GFCM/36/2012/2, REC.CM-GFCM/29/2005/1
FISHERIES ACT	REC.CM-GFCM/35/2011/4

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year
MPA LIMASOL	Marine Protected Area (MPA)	2014
MPA PARALIMNI	Marine Protected Area (MPA)	2014
MPA AMATHOUNTAS	Marine Protected Area (MPA)	2014
MPA AYIA NAPA	Marine Protected Area (MPA)	2015
MPA GEROSKIPOU	Marine Protected Area (MPA)	2015

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

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

Species	N specimen	Weight (Kg)	Date	GSA	Fleet Segment	Fishing Gear	Main Target Species
Prionace glauca (Blue shark) [Annex III]	1	8	09/12/2016	22 - Aegean Sea	I - Long liners (> 6 metres)	Drifting longlines	Thunnus thynnus (Atlantic bluefin tuna)
Prionace glauca (Blue shark) [Annex III]		9	25/02/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		39	13/01/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		36	22/01/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		73	02/02/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		67	17/02/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		11	21/04/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		145	22/01/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		22	02/02/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		50	22/01/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		83	30/01/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Prionace glauca (Blue shark) [Annex III]		39	09/02/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Isurus oxyrinchus (Shortfin mako) [Annex II]	1		01/04/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Isurus oxyrinchus (Shortfin mako) [Annex II]	1		09/12/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Xiphias gladius (Swordfish)
Galeorhinus galeus (Tope shark) [Annex II]	1	2	21/01/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)		Pagellus erythrinus (Common pandora)

Species	N specimen	Weight (Kg)	Date	GSA	Fleet Segment	Fishing Gear	Main Target Species
Galeorhinus galeus (Tope shark) [Annex II]		23	21/04/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)		
Galeorhinus galeus (Tope shark) [Annex II]		5	15/01/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)		

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

Species	N specimen	Date	GSA	Fleet Segment	Fishing Gear	Main Target Species	N discarded dead	N released alive
Caretta caretta (Loggerhead turtle)	4	27/09/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Trammel nets			4
Caretta caretta (Loggerhead turtle)	2	23/08/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Trammel nets	Sepia officinalis (Common cuttlefish)		2
Chelonia mydas (Green turtle)	1	23/08/2016	25 - Cyprus Island	C - Polyvalent small-scale vessels with engine (6-12 metres)	Trammel nets	Sepia officinalis (Common cuttlefish)	1	
Caretta caretta (Loggerhead turtle)	1	20/05/2016	25 - Cyprus Island	I - Long liners (> 6 metres)	Drifting longlines	Thunnus alalunga (Albacore)	1	

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

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

Section 13 - Proposals for future research programmes

EGYPT

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 26 - South Levant
B. Total landings: 57602 tonnes (2015); 62746 tonnes (2014)
C. Fleet: 2997 vessels (2015); 2903 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?
<i>Sardinella aurita</i>	2016	in sustainable exploitation	26	N	Journal
<i>Trachurus mediterraneus</i>	2016	in overexploitation	26	N	International conference
<i>Metapenaeus stebbingi</i>	2016	in overexploitation	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. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
GAFRD	GAFRD	GAFRD	GAFRD	GAFRD	GAFRD	GAFRD

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Deep Sea fisheries in Egyptian Mediterranean water	Stock assessment	2016	2017
Discards of the bottom trawl fisheries	Marine environment and conservation	2017	2018

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Scientific and Institutional Cooperation to Support Responsible Fisheries in the Eastern Mediterranean	EASTMED	2016	Stock assessment Data collection and statistics Socio-economics, EAF - management plan

Section 6 - Management measures taken in direct response to GFCM decisions

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year
Gulf of Sallum	Marine Protected Area (MPA)	2010

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

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

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

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

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

Section 13 - Proposals for future research programmes

Clam fisheries in Egypt
Acoustic survey for pelagic fisheries

FRANCE

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 07 – Gulf of Lion; 08 – Corsica Island
B. Total landings: 11203 (2016)
C. Fleet: 1460 vessels (2016); 1455 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?
<i>Merluccius merluccius</i>	2015	In overexploitation	07	Y	STECF
<i>Mullus barbatus</i>	2015	In overexploitation	07	Y	N
<i>Engraulis encrasicolus</i>	2016	Overexploited	07	Y	N
<i>Sardina pilchardus</i>	2016	In sustainable exploitation	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

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 écosystèmes 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 2015, 29 chalutiers sur les 56 (soient 118 marées sur 10161) 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" (8, Medits_Handbook_2016_version_8_042016, site du SIH-IFREMER). 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 et illicii pour les baudroies). Depuis 2015, des informations supplémentaires sont collectées pour la DCSMM, à savoir les gélatineux, les macrodéchets marins et pour certaines espèces (merlu, rousette, encornet rouge, merlan bleu, bucarde rouge, moule, pectinidae, ascidie rose, Microcosmus sp.) les isotopes, contenus stomacaux et contaminants. En 2016, 18 stations WP2 et CTD ont été réalisées (8 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, chlorophylle) et des données concernant les autres compartiments biologiques sont également collectées à l'aide de CTD, filets à zooplancton, bouteille Niskin et de protocoles d'observation des prédateurs supérieurs.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI – Socio- Economic Data	Task VII - Biological Information
Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)	Direction des pêches maritimes et de l'aquaculture. Ministère de l'environnement de l'énergie et de la mer, avec l'appui de l'IFREMER (Institut de Recherche pour l'Exploitation de la MER)

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
EcoPelGol (Ecologie de l'Ecosystème Pélagique du Golfe du Lion)	Marine environment and conservation	2012	2016
MONALISA (Recherches sur les fortes MORTalités NATurelles et Les Indicateurs pour la gestion des stocks de Sardines et d'Anchois de Méditerranée)	Marine environment and conservation	2017	
DiscardLess (H2020 - Strategies for the gradual elimination of discards in European fisheries)	Marine environment and conservation	2015	2018

Research or Project title	Subject	From	To
Galion (Gestion Alternative de la ressource du Golfe du Lion)	Marine environment and conservation	2016	2018
SELPAL (sélectivité de la flottille palangrière ciblant le thon rouge dans le golfe du Lion)	Marine environment and conservation	2015	2017
RéPAST (Raie pastenague)	Marine environment and conservation		
IPEP (Impact de la pêche sur les espèces protégées)	Marine environment and conservation		
SB-TAG (Étude de la dynamique spatiale de la daurade dans les étangs méditerranéens)	Marine environment and conservation	2016	2018

Section 5 - Involvement in activities of FAO regional projects

Section 6 - Management measures taken in direct response to GFCM decisions

Section 7 - Environment protection measures

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

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

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

Notes

Bilan des captures de tortues marines (et mortalité) enregistrées par type d'engins de pêche sur la côte française entre 2000 et 2016 (Sources : Réseau tortues marines de Méditerranée Française (RTMMF) et Ifremer (Programmes Obsmer, SELPAL), CestMed : Centre d'études et de sauvegarde des tortues marines en Méditerranée, et autres données bibliographiques)-données partielles pour 2016

Espèce/Engin Nombre d'individus

Caretta caretta 384

chalutage 123

filet calé 168

filet piège 2

Flot maillant dérivant 21

engin indéterminé 54

ligne 3

palangre 3

palangre pélagique 10

Chelonia mydas 2

filet calé 2

Dermochelys coriacea 4

filet calé 1

ligne 1

palangre 1

palangre pélagique 1

Espèce non identifiée 7

chalutage 1

filet calé 5

ligne 1

Lepidochelys kempii 1

filet calé 1

Total général 398

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

Notes

Programme de suivi mis en place.

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

Section 13 - Proposals for future research programmes

ITALY

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 9 - Ligurian and North Tirrenian Sea; 11.1 - Sardinia (west); 16 - South of Sicily; 18 - Southern Adriatic Sea
- B. Total landings:** 192 212 tonnes (2015); 176 778 tonnes (2014)
- C. Fleet:** 12 426 vessels (2015); 12 681 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?
<i>Merluccius merluccius</i>	2015	In overexploitation	12-13-14-15-16	Y	
<i>Parapenaeus longirostris</i>	2015	In overexploitation	12-13-14-15-16	Y	
<i>Merluccius merluccius</i>	2015	In overexploitation	09	Y	
<i>Parapenaeus longirostris</i>	2015	In overexploitation	09	Y	Y - STEFC
<i>Aristaeomorpha foliacea</i>	2015	In sustainable exploitation	09	Y	
<i>Aristeus antennatus</i>	2015	In overexploitation	09	Y	
<i>Parapenaeus longirostris</i>	2015	In overexploitation	19	Y	
<i>Mullus barbatus</i>	2015	In overexploitation	15-16	Y	
<i>Merluccius merluccius</i>	2015	In overexploitation	17-18	Y	
<i>Mullus barbatus</i>	2015	In overexploitation	17	Y	
<i>Mullus barbatus</i>	2015	In sustainable exploitation	18	Y	
<i>Solea solea</i>	2015	In overexploitation	17	Y	
<i>Parapenaeus longirostris</i>	2015	In overexploitation	18	Y	
<i>Nephrops norvegicus</i>	2015	In overexploitation	11.1-11-2	N	Y - STEFC
<i>Nephrops norvegicus</i>	2015	In overexploitation	17-18	N	Y - STEFC
<i>Mullus surmuletus</i>	2015	In sustainable exploitation	09	N	Y - STEFC
<i>Mullus surmuletus</i>	2015		11.1-11-2	N	Y - STEFC
<i>Nephrops norvegicus</i>	2015	In overexploitation	09	N	Y - STEFC
<i>Parapenaeus longirostris</i>	2015		09-10-11.1-11-2	N	Y - STEFC
<i>Sardina pilchardus</i>	2015	In overexploitation	17-18	Y	Y - STEFC
<i>Engraulis encrasicolus</i>	2015	In overexploitation	17-18	Y	Y - STEFC
<i>Engraulis encrasicolus</i>	2015	In overexploitation	09	N	Y - STEFC
<i>Engraulis encrasicolus</i>	2015		10-11.1-11-2	N	Y - STEFC
<i>Sardina pilchardus</i>	2015		10-11.1-11-2	N	Y - STEFC
<i>Trachurus trachurus</i>	2015	In overexploitation	09-10-11.1-11.2	N	Y - STEFC
<i>Trachurus trachurus</i>	2015	In sustainable exploitation	17-18-19-20	N	Y - STEFC

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.

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, 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.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI – Socio-Economic Data	Task VII - Biological Information

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Status of research in progress	Research		
Other main research activities	Research		

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Involvement in activities of FAO Regional Projects	ADRIAMED, EASTMED, MEDSUDMED		Stock assessment, Data collection and statistics, Socio-economics, Marine environment and conservation

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Decreto Ministeriale 25 gennaio 2016 recante misure per la pesca dei piccoli pelagici nel Mar Mediterraneo e misure specifiche per il Mare Adriatico	REC.CM-GFCM/39/2015/1
Decreto Assessoriale n. 54 del 29.07.2016 inerente la durata e la decorrenza del periodo di interruzione temporanea obbligatoria delle attività di pesca nell'anno 2016 per le navi da pesca, iscritte nei Compartimenti Marittimi della Regione Siciliana	REC.CM-GFCM/39/2015/2
Decreto Ministeriale 19 ottobre 2016 relativo alla disciplina dell'attività di pesca nell'area della Fossa di Pomo	REC.CM-GFCM/40/2016/5

Section 7 - Environment protection measures

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

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

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

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

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

Section 13 - Proposals for future research programmes

LEBANON

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 27 - Levant
B. Total landings: 4273 tonnes (2016); 3652 tonnes (2015)
C. Fleet: 1963 vessels (2016); 2005 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?
<i>Pagellus erythrinus</i>	2016		27	Y	N
<i>Sardinella aurita</i>	2016		27	Y	N
<i>Lithognathus mormyrus</i>	2015		27	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

DCRF Data collection:

- Department of Fisheries & Wildlife – Ministry of Agriculture DFW/MOA :
 - o Fleet data: through Fishing Licensing System FLS
 - o Catch Data by utilizing Flouca Utility
 - o Catch data on census basis for Purse seine Fishery
 - o Socio-economic data
- Lebanese National Council for Scientific Research CNRS:
 - o Biological data

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
DFW/MOA	DFW/MOA	N/A (tentatively DFW/MOA & CNRS)	DFW/MOA	DFW/MOA	DFW/MOA	CNRS

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Diversity of pelagic fish assemblages in purse seine landings along the Lebanese coast	Stock assessment	2016	2017
Population biology of the common Pandora, <i>Pagellus erythrinus</i> (Linnaeus, 1785), along the Lebanese coast	Stock assessment	2016	2018
Fishery-independent assessment of distribution and abundance of fisheries resources in northern Lebanese marine waters	Stock assessment	2014	2015
Contribution to improve and implement the national biological data collection programme. CNRSL/FAO	Data collection and statistics	2015	2017
Evaluation of the ecological role of some key Lessepsian fish species in marine Lebanese Waters. CNRSL/NRC Italian	Marine environment and conservation		
ENVIMED : Ecologie d'espèces de poissons LESSEPSiennes exploitées par la pêche artisanale. Etude de cas au Liban (LESSEPS)	Marine environment and conservation	2016	2017
Age and growth of the Gulper Shark, <i>Centrophorus granulosus</i> (Bloch and Schneider 1801), and the Common Guitarfish, <i>Rhinobatos rhinobatos</i> (Linnaeus, 1758) in the Lebanese marine waters, Eastern Mediterranean	Marine environment and conservation	2016	2017

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
FAO EastMed Project	EASTMED	2016	Stock assessment Data collection and statistics Socio-economics

Section 6 - Management measures taken in direct response to GFCM decisions
Section 7 - Environment protection measures
Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area
Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area
Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area
Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area
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
Notes

There is one species of seal in Lebanon: *Monachus monachus* or monk seal. It is a sedentary species that lives in caves along the quiet coasts. Urbanization and socio-economic development of the Lebanese coast had a detrimental effect on the presence of this species. The NGO "Big Blue" report that it is often observed in Raoucheh either individually or in groups of three, one of which one is a juvenile. One individual was also observed in Batroun in 2015. No individuals were caught incidentally.

Section 13 - Proposals for future research programmes

Collecting discard data
Collecting fish data from all parts of the Eastern Mediterranean for differentiation of stocks of the same species
Collecting otolith data from several commercially exploited fish in order to constitute reliable age-length keys from stock assessment and management
Initiating genetic studies to decrease fish identification problems that occur due to visual identification. This will also aid in stock differentiation.
Initiating the use of logbooks to record direct and incidental catches of marine fish, mammals and turtles
Studying the growth pattern of several commercially exploited species for better understanding of the stock

LIBYA**Section 1 - Description of fisheries**

- A. Fishing grounds (GSAs):**
B. Total landings: 8011 (2016); 15048 tonnes (2015)
C. Fleet: 3962 vessels (2017); 3951 vessels (2016)

Section 2 - Status of stocks of priority species**Section 3 - Status of statistics and information system****Section 4 - Status of research in progress (or recently concluded)****Section 5 - Involvement in activities of FAO regional projects**

Activity	FAO regional project	Year	Type
Working Group on Small pelagic data analysis meeting, Tunis 10 - 12 January 2017	MEDSUDMED	2017	Stock assessment
Working Group on Demersal Fisheries Resources, Palermo 24 - 28 October 2016	MEDSUDMED	2016	Stock assessment
Working Group on Small Pelagic Fisheries Resources, Capo Granitola 19 - 23 September 2016	MEDSUDMED	2016	Stock assessment
Management strategy evaluation, Rome, February 2017	MEDSUDMED	2017	
Training course on fish gonad investigations, Capo Granitola 4 - 7 October 2016	MEDSUDMED	2016	Training course
Elasmobranchs age determination, IAMC-CNR Mazara del Vallo, 27-30 September 2016	MEDSUDMED	2016	Training course
Training course on fish age determination by otolith reading, Capo Granitola 24 - 30 May 2016	MEDSUDMED	2016	Training course

Section 6 - Management measures taken in direct response to GFCM decisions**Section 7 - Environment protection measures****Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area****Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area****Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area****Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area****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****Section 13 - Proposals for future research programmes**

MALTA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 15 – Malta Island
B. Total landings: 1832 tonnes (2016); 2437 tonnes (2015)
C. Fleet: 913 vessels (2016); 1001 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?
<i>Merluccius merluccius</i>	2016	In overexploitation	15	Y	N
<i>Parapenaeus longirostris</i>	2016	In overexploitation	15	Y	N
<i>Mullus barbatus</i>	2016	In overexploitation	15	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

For all tasks, the 'Department of Fisheries and Aquaculture' is responsible for the data collection of the GFCM DCRF. 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 in 2016 was in line with the EU Data Collection Multi-annual Programme (DC-MAP) Council Regulation EC 199/2008 and EC 93/2010.

In 2016, 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 2016 Malta submitted data collected within the framework of the 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) Working Group on Stock Assessment of Demersal Species (WGSAD)

Malta has developed and implemented a Fisheries Information System (FIS). The FIS has an integrated system whereby the databases related to the fleet register, sales and logbooks, are consolidated. For submission obligations in connection with GFCM, EC and ICCAT, the relevant data is exported from the FIS, manually processed for the end user's needs using either Excel or R. A copy of the data sent is stored on an online shared folder with restricted 'read/write' access.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI – Socio-Economic Data	Task VII - Biological Information
Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC	Department of Fisheries and Aquaculture, MSDEC

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Strengthening regional cooperation in the area of fisheries data collection in the Mediterranean and Black Sea	Data collection and statistics	2015	2016
Marine protected Areas Network Towards Sustainable fisheries in the Central Mediterranean (MANTIS)	Data collection and statistics	2015	2017

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
14th MedSudMed Coordination Committee Meeting	MEDSUDMED	2016	Data collection and statistics
9th CopeMed Coordination Committee meeting	COPEMED	2016	Data collection and statistics
MedSudMed technical meeting towards the development of management measures in the south-central Mediterranean Sea demersal fisheries	MEDSUDMED	2016	Data collection and statistics
MedSudMed preparatory meeting for joint stock assessment focusing on the use of the extended survivors analysis	MEDSUDMED	2016	Stock assessment
MedSudMed Study group for stock assessment in the south-central Mediterranean Sea	MEDSUDMED	2016	Stock assessment
MedSudMed Working Group on Demersal Fishery Resources	MEDSUDMED	2016	Stock assessment
CopedMed II-MedSudMed technical workshop on <i>Coryphaena hippurus</i> in the Western-Central Mediterranean	COPEMED, MEDSUDMED	2016	Stock assessment, Data collection and statistics
CopedMed II-MedSudMed workshop on stock assessment of <i>Coryphaena hippurus</i> in the Western-Central Mediterranean	COPEMED, MEDSUDMED	2016	Stock assessment

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Management measures in conjunction with the GFCM establishing a multiannual plan for the fisheries exploiting European hake and deep-water rose shrimp in the Strait of Sicily (GSAs 12 to 16)	REC.CM-GFCM/40/2016/4

Section 7 - Environment protection measures

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

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

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

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

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

Section 13 - Proposals for future research programmes

DC-MAP/DCRF

MONTENEGRO

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 18 - Southern Adriatic Sea
B. Total landings: 525 tonnes (2015); 603 tonnes (2014)
C. Fleet: 134 (2015); 128 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?
<i>Sardina pilchardus</i>	2015	In overexploitation	17-18	Y	N
<i>Engraulis encrasicolus</i>	2015	In overexploitation	17-18	Y	N
<i>Merluccius merluccius</i>	2015	In overexploitation	17-18	Y	N
<i>Mullus barbatus</i>	2015	In sustainable exploitation	17-18	Y	N
<i>Parapenaeus longirostris</i>	2015	in overexploitation	17-18	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

Regarding the catch in Montenegrin waters, Statistical Office of Montenegro has determined the quantity of catches by species of fish and other marine organisms using the approximate method for years, until 1 April 2017. This method has many disadvantages, so the data are not in accordance with the actual situation. At the end of 2016, Montenegro has established a framework for data collection in marine fisheries through the adoption of the document "Montenegrin fisheries data collection programme (DCF-DCRF)" which is in full compliance with the Common Fisheries Policy. Institute of Marine Biology started a pilot version of the implementation of the annual program of data collection in the fisheries sector, on 1 April 2017.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development	Ministry of Agriculture and Rural Development	Institute for Marine Biology

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Biodiversity and structure of eastern Adriatic coastal fish and other marine organisms communities: case studies of Croatia and Montenegro	Transfer of data and knowledge	2015	2016
Development of a new methodological approach to study the recruitment dynamics of fish and crustaceans in the Kotor bay (Montenegro)	Data collection and statistics	2015	2017
Monitoring of water, soil and biodiversity in special nature reserve Tivat Salina	Data collection and statistics	2016	2016
Biological and ecotoxicological surveys of coastal areas of Croatia and Montenegro- BIOECO-CROMON	Marine environment and conservation	2015	2017

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
FAO Adriamed	ADRIAMED	2015	Stock assessment Data collection and statistics Socio-economics Marine environment and conservation

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Law on port state measures to prevent, deter and eliminate illegal, unreported and unregulated fishing	REC.MCS-GFCM/40/2016/3
Order on prohibition of catch and trade in fish juveniles, undersized fish and other marine organisms	REC.CM-GFCM/39/2015/1
Order on the closed season for age classes of fish and other marine organisms	REC.CM-GFCM/36/2012/2; REC.CM-GFCM/36/2012/3; REC.CM-GFCM/35/2011/3; REC.CM-GFCM/35/2011/4; REC.CM-GFCM/35/2011/5; REC.CM-GFCM/36/2012/1

Section 7 - Environment protection measures
Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area
Notes

There were no incidental catches of cetaceans in Montenegro in 2015.

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

There were no incidental catches of protected species of sharks and rays in Montenegro in 2015.

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

There were no incidental catches of sea turtles in Montenegro in 2015.

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

There were no incidental catches of seabirds in Montenegro 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
Notes

There were no incidental catches of Monk seal in Montenegro in 2015..

Section 13 - Proposals for future research programmes

Ageing of Elasmobranchs in the Adriatic Sea
Anguilla anguilla - European eel

MOROCCO

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 03 – Southern Alboran Sea
B. Total landings: 22380 tonnes (2016)
C. Fleet: 3500 vessels (2016); 3383 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?
<i>Sardina pichardus</i>	2015	In sustainable exploitation	03	Y	N
<i>Merluccius merluccius</i>	2015	In overexploitation	03	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**
B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Département des pêches Maritimes, Office National des Pêches	Département des pêches Maritimes, Office National des Pêches	Institut National de Recherche Halieutique	Département de la pêche Maritime, Office National des Pêches, Institut National de Recherche Halieutique	Institut National de Recherche Halieutique	Département des pêches Maritimes, Office National des Pêches, Institut National de Recherche Halieutique	Institut National de Recherche Halieutique

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Programme de suivi de la pêche crevettière	Stock assessment	2014	2018
Programme de suivi des ressources littorales	Stock assessment	2014	2018
Programme de suivi de la pêche demersale	Stock assessment	1998	2017
Suivi de la pêche merluçière	Stock assessment	2014	2017
Suivi de la pêche céphalopodière	Stock assessment	2014	2018
Programme national de suivi de la pêche des petits pélagiques	Data collection and statistics	2016	2016
Suivi de la pêche palangrière	Data collection and statistics	2015	2017
Structure, dynamique et performances socio-économiques des systèmes d'exploitation et des filières halieutiques	Socio-economics	2015	2017
Etude pilote « Pêche à la senne coulissante en Méditerranée marocaine : atténuation de la prédation provoquée par le Grand Dauphin sur la senne en Méditerranée marocaine »	Data collection and statistics	2016	2017
Projet de l'étude des interactions entre l'Orque et la pêche artisanale au thon rouge.	Socio-economics	2015	2016
Observatoire Halieutique et Environnemental de la Pêche Artisanale (OHEPA) : phase « Identification et formulation »	Marine environment and conservation	2016	2018
Programme cadre de suivi de l'activité de pêche artisanale	Socio-economics	2014	2017
Suivi de la pêche côtière	Data collection and statistics	2016	2016
Suivi des pêcheries des requins	Data collection and statistics	2017	2020

Suivi des pêcheries des Grands Pélagiques	Data collection and statistics		
Suivi des échouages	Marine environment and conservation	2004	2017

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Evaluation du stock partagé de la sardine dans la mer d'Alboran	COPEMED	2015	Traitement et analyse de données par l'application des modèles globaux et analytiques
WEBGR Projet régional de lecture d'âge de la sardine	COPEMED	2017	Réalisation de la lecture d'âge sur les otolithes de la sardine et échange de résultats entre les pays partenaires dans ce projet
Projet d'identification des stocks (sardine et merlu) en mer d'Alboran et zones avoisinantes	COPEMED	2017	Réalisation des actions sur la morphométrie des corps et des otolithes, la méristic et la génétique

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Le Maroc a déjà entamé la procédures de ratification de l'Accord FAO sur les mesures de l'Etat du port	REC.MCS-GFCM/40/2016/1
Procédures de traçabilité informatisée et les textes d'application de la loi n° 15-12 INN en cours de publication	REC.DIR-GFCM/40/2016/2
- Arrêté du ministre de l'agriculture et de la pêche maritime n° 4195-14 du 25 novembre 2014 réglementant la pêche de certaines espèces de merlu	REC.CM-GFCM/40/2016/5
- Arrêté du ministre de l'agriculture et de la pêche maritime n° 1176-13 du 8 avril 2013 réglementant la pêche de l'espadon ; - Arrêté du ministre de l'agriculture et de la pêche maritime n° 1654-12 du 9 avril 2012 relatif à l'interdiction temporaire de p	REC.CM-GFCM/36/2012/2
Arrêté du ministre de l'agriculture et de la pêche maritime n° 1654-12 du 9 avril 2012 relatif à l'interdiction temporaire de pêche de certaines espèces de requins.	REC.CM-GFCM/36/2012/3
- Décret n°2-04-2 6 du 1 7 janvier 2005 fixant les modalités de pêche du corail ; - Arrêté n° 2409-1 0 du 1 8 août 201 0 relatif à l'interdiction temporaire du corail rouge dans certaines zones maritimes de la Méditerranée	REC.CM-GFCM/35/2011/2
Procédures de traçabilité informatisée	RES-GFCM/35/2011/1
Loi n° 15-12 relative à la prévention et la lutte contre la pêche INDNR 12-05-2014 et les arrêtés des plans d'aménagement	REC.MCS-GFCM/35/2011/1
Le processus est entamé par le Maroc car il y a une procédure réglementaire à suivre. Il est à préciser que ces individus ne sont pas capturés o u pris accidentellement dans les filets ou les lignes des navires marocains exerçant en Méditerranée.	REC.CM-GFCM/35/2011/3
Loi 19-07 interdisant l'utilisation des filets maillants dérivants, publié en août 2010 ; - Décret n°2-10-341 du 11 avril 2011 pris pour l'application de la loi 19-07 interdisant l'utilisation des filets maillants dérivants	REC.CM-GFCM/35/2011/4
Arrêté du ministre de l'agriculture et de la pêche maritime n°2806-09 du 10 novembre 2009	REC.CM-GFCM/35/2011/5
Dahir n°1-10-201 du 18 février 2011 portant promulgation de la Loi n° 52-09	REC.DIR-GFCM/35/2011/6

Décret n° 2-07-230 du 5 kaada 1429 (4 novembre 2008) fixant les conditions et les modalités de pêche des petits pélagiques ; - Les arrêtés des plans d'aménagement	REC.MCS-GFCM/34/2010/2
Loi n° 15-12 relative à la prévention et la lutte contre la pêche INDNR 12-05-2014 et les arrêtés des plans d'aménagement	REC.MCS-GFCM/33/2009/8
Décret n°2-09-674 du 30 rabii I 1431 (17 mars 2010) fixant les conditions et les modalités d'installation et d'utilisation à bord des navires de pêche d'un système de positionnement et de localisation continue utilisant les communications par satellite po	REC.MCS-GFCM/33/2009/7

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year	Type of closure (nFRA only)	Fleet segment (nFRA only)	Objective (nFRA only)
Alboran	Marine Protected Area (MPA)	2014			
La zone récifale au large des côtes de Martil	National Fisheries Restricted Area (nFRA)	2016	Permanent	All	Protection des zones récifales

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

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

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

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

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

Section 13 - Proposals for future research programmes

Etude de l'impact des changements climatiques sur les stocks de la Méditerranée (financement : FAO/CGPM/Copemed II), - Etude de l'effet des facteurs environnementaux sur les cycles biologiques des espèces (financement : FAO/CGPM/Copemed II).

SLOVENIA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 17 - Northern Adriatic
B. Total landings: 195 tonnes (2015); 254 tonnes (2014)
C. Fleet: 171 vessels (2017); 169 vessels (2016)

Section 2 - Status of stocks of priority species

Species/Stock	Ref. year	Stock status	GSA	Presented to GFCM WGs?	Presented to any other forum?
<i>Sardina pilchardus</i>	2016	In overexploitation	17-18	Y	N
<i>Engraulis encrasicolus</i>	2016	In overexploitation	17-18	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

Data collection at the national level is organised by the Ministry of Agriculture, Forestry and Food. Specific data collection tasks in the context of the performance of a public fisheries service are performed by the Fisheries Research Institute of Slovenia in accordance with maritime fisheries legislation. In Slovenia there are five information systems in place. 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 fourth 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 stored in the Fisheries Research Institute database. InfoRib is interconnected with the VMS data base and 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 is performed regularly. It includes also all the preparation work for different reports, for national and international end users.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information
Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia	Ministry of Agriculture Forestry and Food, Fisheries Research Institute of Slovenia

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Socio-economics	Socio-economics	2008	2015
MEDIAS	Stock assessment	2007	2016
MEDITS	Stock assessment	1996	2016
SOLEMON	Stock assessment	2009	2016

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Regional stock assessment	ADRIAMED	2016	Stock assessment
Research survey	ADRIAMED	2016	Stock assessment

Section 6 - Management measures taken in direct response to GFCM decisions

Title/Reference to National Law	Related GFCM Decision(s)
Ministerial Decision issued in accordance with the Marine Fisheries Act (Official Gazette of the Republic of Slovenia, No 115/06 and 76/15)	REC.CM-GFCM/40/2016/3
Reporting obligation under paragraphs 22 and 24 of the concerned Recommendation	REC.CM-GFCM/37/2013/1

Section 7 - Environment protection measures
Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area
Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area
Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area
Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area
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
Section 13 - Proposals for future research programmes

Support the implementation of the Daily Egg Production Method

SPAIN

Section 1 - Description of fisheries

- A. **Fishing grounds (GSAs):**
- B. **Total landings:** 59784 tonnes (2015); 68571 tonnes (2014)
- C. **Fleet:** 2287 vessels (2016); 2743 vessels (2014)

Section 2 - Status of stocks of priority species

Section 3 - Status of statistics and information system

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

The Spanish fisheries statistics and information system is based on the data from three different sources: sales notes, logbooks/ERS 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/ERS 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 European 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.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio- Economic Data	Task VII - Biological Information

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
DISCARDLESS project	Marine environment and conservation	2015	2018
CLIFISH project	Marine environment and conservation	2016	2018

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Active participation in COPEMED activities as agreed in the annual Coordination Committee	COPEMED	2016	Stock assessment Data collection and statistics Socio-economics Marine environment and conservation

Section 6 - Management measures taken in direct response to GFCM decisions

Section 7 - Environment protection measures

Name of the area	Type of spatial restriction	Year	Type of closure	Fleet segment	Objective
Canal de Menorca	National Fisheries Restricted Area (nFRA)	2016	Permanent	D - Trawlers (<12 metres); F - Trawlers (> 24 metres); E - Trawlers (12 - 24 metres)	Protection of sensitive benthic habitats
Emile Baudot	National Fisheries Restricted Area (nFRA)	2014	Permanent	D - Trawlers (<12 metres); F - Trawlers (> 24 metres); E - Trawlers (12 - 24 metres)	Protection of sensitive benthic habitats
Ausiàs March	National Fisheries Restricted Area (nFRA)	2014	Permanent	D - Trawlers (<12 metres); F - Trawlers (> 24 metres); E - Trawlers (12 - 24 metres)	Protection of sensitive benthic habitats
Fort d'en Moreu	National Fisheries Restricted Area (nFRA)	2014	Permanent	D - Trawlers (<12 metres); F - Trawlers (> 24 metres); E - Trawlers (12 - 24 metres)	Protection of sensitive benthic habitats

Section 8 - Recommendation GFCM/36/2012/2 on mitigation of incidental catches of cetaceans in the GFCM area
Section 9 - Recommendation GFCM/36/2012/3 on fisheries management measures for conservation of sharks and rays in the GFCM area
Section 10 - Recommendation GFCM/35/2011/4 on the incidental by-catch of sea turtles in fisheries in the GFCM competence area
Section 11 - Recommendation GFCM/35/2011/3 on reducing incidental by-catch of seabirds in fisheries in the GFCM Competence Area
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
Section 13 - Proposals for future research programmes

Study of ecological considerations for the implementation of EAF-impact of environmental changes-effect of other anthropogenic impacts apart from fisheries (marine pollution, drilling, transport, invasive species...)-Definition/assessment of shared stocks

TUNISIA

Section 1 - Description of fisheries

- A. Fishing grounds (GSAs):** 12, 13, 14
B. Total landings: 131 705 (2015); 126 512 tonnes (2014)
C. Fleet: 14 000 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?
<i>Merluccius merluccius</i>	2015	In overexploitation	12-13-14	Y	N
<i>Parapenaeus longirostris</i>	2015	In overexploitation	12-13-14	Y	N
<i>Mullus barbatus</i>	2015	In overexploitation	13-14	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

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 des agents de la DGPA pour les données statistiques des pêches et des enquêteurs et des chercheurs pour la collectes des données scientifiques et biologiques.

B. National entities or authorities in charge for the collection of data pertaining the GFCM DCRF Tasks

Task I - Global Figures of National Fisheries	Task II - Catch	Task III - Bycatch	Task IV - Fleet	Task V - Effort	Task VI - Socio-Economic Data	Task VII - Biological Information

Section 4 - Status of research in progress (or recently concluded)

Research or Project title	Subject	From	To
Evaluation des stocks et aménagement des pêcheries tunisiennes (benthique et pélagiques) et mise au point d'engins de pêche sélectifs	Stock assessment	2016	2019

Section 5 - Involvement in activities of FAO regional projects

Activity	FAO regional project	Year	Type
Evaluation des stocks et aménagement des pêcheries	COPEMED, MEDSUDMED	2016	Stock assessment Data collection and statistics Socio-economics Marine environment and conservation

Section 6 - Management measures taken in direct response to GFCM decisions

Section 7 - Environment protection measures

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

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

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

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

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

Section 13 - Proposals for future research programmes

Lancement de 3 Projets de recherche durant la période 2016-2019: Evaluation des stocks et aménagement des pêcheries tunisiennes (benthiques et pélagiques) et mise au point d'engins de pêche sélectifs

The Scientific Advisory Committee on Fisheries (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its nineteenth session in Ljubljana, Slovenia, from 16 to 19 May 2017. The session was attended by delegates from 18 Mediterranean contracting parties and one cooperating non-contracting party, nine observers, representatives of the FAO, including its regional projects, the GFCM Secretariat and invited experts. The Committee reviewed the work carried out during the 2016–2017 intersession, including within its four new subregional subsidiary bodies (Subregional Committee for the Adriatic Sea, Subregional Committee for the Central Mediterranean, Subregional Committee for the Eastern Mediterranean and Subregional Committee for the Western Mediterranean) which all met during the intersession. In relation to the recent adoption and launch of the mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries, the Committee welcomed the swift launch of multiple priority activities, recognizing that the strategy objectives were ambitious but that related action was necessary. In this respect, it discussed the main activities already launched or foreseen as well as the major issues to be tackled by the GFCM Forum on Fisheries Science (Fish Forum), due to be held at the end of 2018. Furthermore, the Committee formulated advice on the following aspects: i) overall status of Mediterranean stocks; ii) marine environment and ecosystems; and iii) data collection and quality indicators. In line with the subregional approach implemented and based on the conclusions of the four subregional committees, the SAC also provided specific advice for each subregion. At the Mediterranean level, the Committee discussed: i) the indicators of good environmental status; ii) the status of the stocks, in particular European hake; iii) the management of red coral populations (*Corallium rubrum*, L.) and of European eel (*Anguilla anguilla*); iv) the fight against illegal, unreported and unregulated (IUU) fishing; v) interactions between fisheries and marine environment, including deep-sea fisheries and vulnerable marine ecosystems; and vi) data collection and data quality. At the subregional level, based on the priority species identified for each subregion, specific conclusions were related to the management of i) small pelagic species in the Adriatic Sea, including the establishment of a fisheries restricted area; ii) demersal species in the Strait of Sicily; iii) blackspot seabream in the western Mediterranean; and iv) deep sea fisheries and non-indigenous species in the eastern Mediterranean. In addition, the Committee discussed the implementation of the SAC subregional approach. Finally, the Committee agreed upon its work plan for 2017–2019.

Le Comité scientifique consultatif des pêches (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa dix-neuvième session à Ljubljana, Slovénie, du 16 au 19 mai 2017. Ont participé à la session les délégués de 18 parties contractantes de Méditerranée et une partie non contractante coopérante, neuf observateurs, des représentants de la FAO, y compris ses projets régionaux, le Secrétariat de la CGPM et des experts invités. Le Comité a passé en revue les travaux réalisés pendant la période intersessions 2016-2017, notamment dans le cadre de ses quatre nouveaux organes subsidiaires sous-régionaux (Comité sous-régional pour la mer Adriatique, Comité sous-régional pour la Méditerranée centrale, Comité sous-régional pour la Méditerranée orientale et Comité sous-régional pour la Méditerranée occidentale) qui ont tous tenu des réunions durant la période intersessions. S'agissant de l'adoption et du récent lancement de la stratégie à moyen terme (2017-2020) en faveur de la durabilité des pêches en Méditerranée et en mer Noire, le Comité s'est félicité de la mise en route rapide de plusieurs activités prioritaires, reconnaissant que les objectifs fixés par cette stratégie étaient ambitieux mais qu'il était nécessaire de prendre des mesures pour les accompagner. À cet égard, il a examiné les principales activités déjà lancées ou prévues ainsi que les questions principales qui devraient être traitées par le Forum CGPM sur les sciences halieutiques (Fish Forum), prévu fin 2018. Par ailleurs, le Comité a formulé des avis portant sur les aspects suivants: i) état général des stocks en Méditerranée; ii) environnement et écosystèmes marins; et iii) collecte de données et indicateurs de qualité. Conformément à l'approche sous-régionale mise en œuvre et à partir des conclusions des quatre comités sous-régionaux, le CSC a également fourni des avis spécifiques à chaque sous-région. À l'échelon de la Méditerranée, le Comité a examiné: i) les indicateurs du bon état écologique; ii) l'état des stocks, en particulier le merlu européen; iii) la gestion des populations de corail rouge (*Corallium rubrum*, L.) et d'anguille européenne (*Anguilla anguilla*); iv) la lutte contre la pêche illicite, non déclarée et non réglementée (pêche INDNR); v) les interactions entre la pêche et le milieu marin, y compris la pêche en eaux profondes et les écosystèmes marins vulnérables; et vi) la collecte et la qualité des données. À l'échelon sous-régional, compte tenu des espèces prioritaires identifiées pour chaque sous-région, des conclusions spécifiques ont été tirées concernant la gestion i) des espèces de petits pélagiques en mer Adriatique, y compris l'établissement d'une zone de pêche réglementée; ii) des espèces démersales dans le canal de Sicile; iii) de la dorade rose en Méditerranée occidentale; et iv) de la pêche en eaux profondes et des espèces non indigènes en Méditerranée orientale. En outre, le Comité a examiné la mise en œuvre de l'approche sous-régionale du CSC. Enfin, le Comité est convenu de son programme de travail pour 2017-2019.

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