

CopeMed II Technical Documents N°58
GCP/INT/028/SPA; GCP/INT/362/EC

**REPORT OF THE THIRTEENTH MEETING OF THE
COPEMED II COORDINATION COMMITTEE**

8 February 2021

February 2021

The conclusions and recommendations given in this document and in other documents in the *Co-ordination to Support Fisheries Management in the Western and Central Mediterranean* CopeMed II Project series are those considered appropriate at the time of preparation. They may be modified in the light of further knowledge gained in subsequent stages of the Project. The designation employed and the presentation of material in this publication do not imply the expression of any opinion on the part of Food and Agriculture Organization of the United Nations, FAO, the Government of Spain or the Commission of the European Union concerning the legal status of any country, territory, city or area, or concerning the determination of its frontiers or boundaries. This document has been financed by the European Union and the Government of Spain. The views expressed herein can in no way be taken to reflect the official opinion of the European Union or the Government of Spain.

Preface

The CopeMed II Project on *Co-ordination to Support Fisheries Management in the Western and Central Mediterranean* is executed by the Food and Agriculture Organization of the United Nations (FAO) and funded by the Government of Spain, represented by the Secretaría General de Pesca (M^o de Agricultura, Alimentación y Medio Ambiente, MAGRAMA), and the European Union, represented by the European Commission (EC). The premises of the project at the Subdelegación del Gobierno in Málaga (Spain) are part of the Spanish contribution included in the agreement with the FAO.

The objective of the project is to maintain the sustainability of the marine fisheries in the central and western Mediterranean Sea and its ecosystem, taking into consideration environmental, biological, economic, social and institutional issues. In addition, the project will continue to reinforce the collaboration among the participating countries of the sub-region by facilitating their participation in the activities of the Scientific Advisory Committee (SAC) and in the General Fisheries Commission for the Mediterranean (GFCM).

Regions covered by CopeMed II are the western and central sub-regions of the Mediterranean. Participating countries are Algeria, France, Italy, Libya, Malta, Morocco, Tunisia and Spain. The main beneficiaries are the fishery policy-makers, managers and fishery administrations in the western and central Mediterranean countries. The project is also contributing to the strengthening of regional collaboration by supporting the participation of the countries in relevant regional scientific organizations, such as the FAO's General Fisheries Commission for the Mediterranean (GFCM). Secondary beneficiaries include the national research institutes, fishers and fishers' associations, and industrial organizations.

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CopeMed II (GCP/INT/028/SPA – GCP/INT/362/EC) Publications

CopeMed II project publications are issued in the CopeMed Technical Documents series and are related to meetings, missions and research organized or conducted within the framework of the CopeMed II Projects.

Comments on this document would be welcomed and should be sent to the Project premises:

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Preparation of this document

This document is the final adopted version of the report of the 13th meeting of the Coordination Committee of the FAO-Project CopeMed II, held online on 8 February 2021.

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ABSTRACT

The thirteenth meeting of the CopeMed II Coordination Committee was held online on 8 February 2021. The annual meeting was attended by representatives from Algeria, Libya, Malta, Spain and Tunisia, by staff of the FAO Fisheries Division, FAO Subregional Office for North Africa (FAOSNE), FAO Regional Projects and the GFCM Secretariat. The Committee reviewed the activities implemented during the intersession period, covering the three project objectives: strengthen capacity in the identification of fisheries management strategies according to the ecosystem approach to fisheries; improve capacity for fisheries monitoring, research and provision of scientific advice; and enhance cooperation and coordination for fisheries management, research, and capacity development. The Committee discussed the ongoing changes in the provision of technical assistance and capacity development in the sub-region in view of the new mid-term strategy for the sustainability of fisheries in the Mediterranean. A plan of work for 2021 was agreed considering the priorities identified in the previous Coordination Committee meeting and the planned transition to a new framework for technical assistance under the GFCM

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Report of the 13th Coordination Committee meeting of CopeMed II

8th February 2021

Opening of the meeting and adoption of the Agenda

1. The thirteenth meeting of the Coordination Committee of the FAO CopeMed II Regional Project “Co-ordination to Support Fisheries Management in the Western and Central Mediterranean” was held online on February 8th, 2021.
2. The meeting was attended by representatives from Algeria, Libya, Malta, Spain and Tunisia, by staff of the FAO Fisheries Division, FAO Subregional Office for North Africa (FAOSNE), FAO Regional Projects AdriaMed, EastMed and MedSudMed and the GFCM Secretariat. The list of participants is given in Annex I.
3. The meeting was opened by the Coordinator of the FAO-CopeMed II Project, who welcomed the participants on behalf of FAO. He informed the Committee that the representative from Morocco could not attend the meeting because of the sudden sad demise of his father. All members of the Committee offered heartfelt condolences to the family members.
4. The meeting was chaired by the project Coordinator. The Agenda presented and adopted by the Coordination Committee is provided in Annex II.

Report on the CopeMed II Project’s Progress

5. The Coordinator introduced this agenda item and the document “Report on the Intersessional Activities of the FAO – CopeMed II Project (Annex III) in which the main activities carried out by CopeMed II from November 2019 to January 2021 were described. The activities carried out correspond to the prioritized work programme and recommendations of the 12th Meeting of the Coordination Committee, Malaga, Spain 28-29 November 2019.
6. In relation to the objective of strengthening capacity in the identification of fisheries management strategies according to the ecosystem approach to fisheries (EAF), the presentation summarized the progress made in the different pilot studies launched in Tunisia, Algeria and Morocco to develop and implement fisheries management plans through an ecosystem approach. The Committee was also informed of the outcomes of the workshop “Transition towards an ecosystem

approach to fisheries in the Mediterranean: lessons learned through selected case studies”, co-organized by the FAO Regional Projects in December 2020. The workshop analysed and compared the progress made and the challenges for EAF implementation in case studies across the Mediterranean. The presentation also highlighted the progress made with the assessment of vulnerability of fisheries to the effects of climate change and the ongoing preparation of a synthesis document that will additionally discuss the types of adaptation options available to cope with the main priority impacts.

7. In relation to the objective of strengthening capacity for fisheries monitoring, research and provision of scientific advice, the presentation highlighted the following activities: the support to the consolidation of biological data collection for selected fisheries and areas in Tunisia, Algeria and Morocco; the organization of sub-regional working groups in support of the assessment of Coryphaena, blackspot seabream, small pelagics and demersal resources; and the advances on the research program on stock boundaries in the Alboran Sea (TRANSBORAN).
8. The presentation finally summarized the activities aimed at enhancing cooperation and coordination for fisheries management, research, and capacity development. In particular, it was described the series of online webinars, workshops and events that were organized by the project, in collaboration with the other FAO Regional Projects and the GFCM, with a view to enhance knowledge on specific topics and methods of interest to the network of experts in the sub-region. The list of events included: Webinar on Local Ecological Knowledge based monitoring (June 2020); Online workshop on Empirical Indicators for Fisheries Management Advice (October 2020); Introduction to integrated stock assessment using Stock Synthesis (October, 2020); Stock assessment model: GADGET (November 2020); and the Small-Scale Fisheries University Day (10 November 2020).
9. The Coordination Committee congratulated the project for the work carried out in the intersession, despite all the difficulties imposed by the pandemic.
10. The representative from Tunisia remarked the successful experience with the implementation of EAF pilots in Tunisia, which has sparked interest to expand the approach to other areas in the country. He expressed the willingness to share the experiences in Tunisia with other countries in the sub-region interested in similar approaches. With regards to Coryphaena, he congratulated the project for the work towards the assessment of the stock, which he hoped could contribute to the development of a sub-regional management plan for the species. Finally, he remarked the importance of the work carried out in the Transboran project, which is attempting to tackle the difficult issue of identifying stock boundaries for small pelagic and demersal resources. He

proposed the possibility of expanding the positive experience with the Transboran project to other areas of the Mediterranean.

11. The representative from Algeria congratulated the project for the impressive work done in this difficult year. He expressed the interest to continuing working with the project on all activities currently in progress in Algeria, including the biological data collection for priority species, the contribution to the Transboran research program, the experimental trials and studies on *Coryphaena* and EAF. He noted in particular the intention to finalize the EAF pilot case study in Bejaia and the willingness to extend the experience to coastal lagoons in the East of Algeria. He also expressed the interest in sharing experiences with Tunisia regarding the implementation of EAF pilots in the sub-region. Further support was also requested to improve research capacity on climate change impacts on fisheries and the monitoring of NIS.
12. The staff of the MedSudMed project remarked the good level of collaboration with the CopeMed II project in the organization of joint events, training courses and working groups that contributed to the progress made on issues of common interest to participating countries.
13. The representative from the FAOSNE informed the Committee of the continuation of the activities of the FAO TCP Blue Hope in the Mediterranean in Algeria and Tunisia, and invited participants to reinforce the collaboration between projects in their respective pilot sites. Responding to the request from Tunisia concerning the status of the GFCM research program on the European eel, he informed the Committee on the ongoing efforts by FAO SNE and GFCM to recruit two national consultants to oversee the implementation of the program in Tunisia.

GFCM activities for the next intersessional period

14. The GFCM Secretariat delivered a presentation that introduced the subregional technical unit for the Western Mediterranean (STU-WM), hosted in Malaga, Spain. The technical unit will provide the subregion with strategic and technical assistance while implementing GFCM policies and activities. The Secretariat gave an overview of the work foreseen by the GFCM for the 2021 intersession relevant to the Western Mediterranean, dividing it into regular SAC activities, mid-term strategy activities and other activities. Regular SAC activities included i) the working groups on stock assessment and subregional committee (SRC) meetings, ii) essential fish habitats (EFH) and vulnerable marine ecosystems (VMEs), iii) research programmes for red coral, European eel and Blue crab in the Mediterranean, iv) the implementation of priority actions in the RPOA-SSF, and v) working group on fishing technology. On the other hand, mid-term strategy activities will cover i) the bycatch programme, ii) fishing surveys at sea, iii) data collection on recreational fisheries, iv) the regional survey on socio-economic characteristics of fisheries, v) advances towards an adaptation strategy for climate change and non-indigenous species. Finally, other activities included i) the provision of technical assistance and capacity building to countries in the

sub-region, ii) the new strategy (2021 - 2030) towards sustainable fisheries and aquaculture, and iii) the Fish Forum and UN Decade of Ocean Science for Sustainable Development (2021-2030). The presentation ended with a list of relevant meetings for 2020/2021 of relevance for the western Mediterranean / regional activities.

15. Responding to the questions from the Tunisian representatives regarding the involvement of Tunisia in the activities concerning *Coryphaena*, blue crab and NIS, the Secretariat explained that Tunisia is an active partner in all these activities and that the work in the country will be coordinated through the technical unit and SRC for the Central Mediterranean. With regards to the work on *Coryphaena*, a recommendation for the species was approved in the last Commission with some requirements for 2020, but because of the pandemic and the postponement of the SAC meeting in 2020, the discussion on the work plan for the species had to be postponed. A specific meeting is being planned to discuss the needed follow up action concerning the different recommendations adopted in the last Commission, including on *Coryphaena*. The preliminary results of the stock assessment presented at the last Working Group on Stock Assessment were very promising but there are still some data gaps, such as fishing effort data from Tunisia, which will need to be addressed in the work program for the species. Concerning blue crab, a concept note for a research program on blue crab is being developed with the assistance of an international consultant and national focal points. The draft will be sent to national fisheries administrations for internal consultations before the organization of a dedicated meeting on the research program. Finally, concerning the monitoring of NIS, the Secretariat explained that the Eastern and Western Mediterranean had been the focus of attention due to their geographical location in relation to the main entry points for NIS, but that all countries need to ensure that the occurrence and spread of these species is adequately monitored. To this end the GFCM has been working on the harmonization of guidelines and surveys and required countries to submit data, which will contribute to the development of the regional strategy to cope with the effects of climate change and NIS.

Strategy for strengthening technical assistance and capacity development

16. The CopeMed II Coordinator introduced the agenda item that was intended to provide an update on the status of the project, describe the changes that occurred in the past year and discuss the outline of a new strategy for technical assistance and capacity development in the sub-region. The presentation first recalled the discussions held in the 12th Coordination Committee meeting concerning the future integration of the project under the framework of the GFCM. As discussed by the Committee, the integration would be in line with the mandate, capacities and sub-regional approach of the GFCM and would create the administrative conditions for a smooth operation of the project. At that time, the Coordination Committee was also informed of the favorable view of one of the project donors (EU DG MARE) to start the integration in 2021. He noted that the

Committee remarked the importance of maintaining the essence of the Project and ensuring that the process of integration did not lessen the capacity of the project to work on different issues identified by its Committee. The Coordination Committee finally suggested that FAO and GFCM prepare a concept note detailing how the integration would work in practice and explaining the pros and cons of the integration in view of current situation of the Projects.

17. The Coordinator then updated the Coordination Committee on the main events and changes that happened during 2020. In particular, he noted that the COVID-19 pandemic affected the capacity of the project to deliver the agreed plan of activities resulting in the interruption of some field activities and the cancellation of missions and meetings. Despite the progress made in advancing technical discussions remotely, some activities could not be accomplished. To enable the finalization of the plan of activities FAO requested the EU DG MARE to extend the termination date of the 2020 grant to December 2021. The extension was approved in January 2021. In the same period, FAO was informed of the decision by the EU DG MARE to shift the support towards FAO regional projects under the GFCM, in view of the future GFCM strategy for 2021-2027.
18. Regarding the future of the project, the Coordinator first recalled that FAO developed the Regional Projects, along an extended period and upon the request of countries, to address an existing demand for mechanisms of capacity development and technical/scientific cooperation. The projects were designed to span for multiple years, conditional on the availability of funds, and until more sustainable mechanisms became available and functional. In this regard, he noted the various changes that occurred in past years that resulted in the strengthening of the technical and institutional capacity of the GFCM, particularly the development of sub-regional management plans, the adoption of the subregional approach during the fourth amendment of the GFCM Agreement (2014) and the enhanced mandate for capacity development and technical assistance entrusted by the 2017 Malta MedFish4Ever Declaration. He added that the post-2020 strategy for the GFCM was expected to consolidate these achievements and establish a new framework for the provision of technical assistance and capacity development. In view of these changes, he concluded that 2021 will be a transition year for the project towards a transfer of activities to the GFCM.
19. The Coordination Committee was invited to i) provide inputs regarding the changes towards a new framework to strengthen technical assistance and capacity development; ii) discuss the steps to be taken to ensure a smooth transition to a new framework and iii) agree on the preparation of a joint work programme (CopeMed II-GFCM) for the transition phase in 2021.
20. The representative from the GFCM noted that the organization has been evolving and enhancing its capacity to provide technical assistance to countries. He expressed his appreciation for the work that the regional projects have been carrying out, which greatly helped the GFCM to achieve

the advancements made until now. The changes that were occurring were an evolution of the mechanism used by FAO for the provision of technical assistance to countries, from the regional projects to the established fisheries management organization for the Mediterranean (GFCM). He noted that the Secretariat is already working in tight coordination with the project to ensure that this transition is as smooth as possible and ensuring the continuation of activities identified as priorities by the countries. He explained the role of the Subregional Committee as a tool for the identification of management priorities for the sub-region and that there were plans in place to establish a specific mechanism of consultation with countries for the provision of technical assistance and capacity development actions. In this regard, he noted that the GFCM will initiate soon strategic discussions with countries to shape the exact mechanisms for technical assistance to be included in the new strategy of the GFCM.

21. The representative from Spain and co-donor of the project noted that the changes occurring now are a logical evolution of the work of the project when it was launched years ago. The project provided a great support to the work of the GFCM in past years and contributed to the modernization of the organization. She remarked that co-funding from Spain has been already secured to contribute to the continuation of project activities during the transition phase in 2021. She expected that the new GFCM strategy will define the issues, measures and mechanisms towards the reinforcement of capacities, according to the views and priorities of the countries. She finally remarked the importance of ensuring that all the work carried out by the project, documented in technical reports and databases, is adequately saved and shifted to other more permanent structures or repositories during the transition phase to serve as reference for future work.

22. The representative from the FAO Fisheries Division and Leader of the Assessment and Management Team explained that the changes are due to a confluence of factors. On the one hand there was the decision of the main donor (DGMARE) to transfer funds for technical assistance and capacity development to the GFCM. At the same time FAO had already concluded that time was mature to transfer the responsibilities of the regional projects to GFCM, in view of substantial improvements in the capacities of the GFCM and the countries in the different sub-regions. The extension of the project until the end of 2021 would give time to steer the project towards that direction. He finally added that FAO will find a way to safeguard the materials produced by the project in a central repository with adequate links to the GFCM. The same will be done to ensure the continuous availability of the information now stored in the project webpage. He further noted the importance of making sure the knowledge and lessons learned throughout the history of the project is adequately documented, as these experiences are invaluable not only for the Mediterranean but also for other areas of the world.

23. The representative from Tunisia agreed on the validity of the sub-regional approach initiated through the projects and now adopted by the GFCM. He added that independently of the type of mechanism for technical assistance to be adopted, it was important to ensure a smooth transition to avoid interruption in the different ongoing activities. In this regard he agreed with the proposal for a transition program of assistance during 2021.
24. The representative from GFCM added that the decision to strengthen the role of the GFCM in the provision of technical assistance and capacity development through a sub-regional approach came from the countries, for instance through the adoption of the Mid-term strategy. The EU DG MARE decision to move funds previously allocated to the regional projects to GFCM will further strengthen this role, in all sub-regions of the Mediterranean and also in the Black Sea. A decision has to be taken now by the countries on how this work will be done in the next 10 years, under the new strategy. He also noted the importance of avoiding the interruptions of project activities, which are in their majority supporting the implementation of GFCM decisions, and ensuring that the knowledge and network of experts involved in the project are maintained to enable a successful transition to a new framework.
25. The representative from FAO Fisheries Division remarked that the most valuable achievements of the project were the networks established and the goodwill and trust developed for scientific cooperation in the sub-region. In this regard, he acknowledged the visionary idea of the Spanish authorities when the project was created many years ago. Finding mechanisms to maintain this climate of trust will be essential to the future of technical cooperation in the sub-region.
26. The representative from GFCM further clarified that there will be several opportunities for discussing with countries the new framework for technical assistance. The technical unit in Malaga will have a key role in communicating with all countries in the subregion. At the SRC-WM there will be space to discuss the future priorities for technical assistance. At a strategic level, GFCM will be discussing directly with national focal points the operationalization of the framework for technical assistance within the GFCM, which will be an integral part of the new strategy.

Work Plan for 2021

27. The coordinator introduced the work plan for 2021 and invited the Coordination Committee to consider: i) demands and priorities identified in the previous year that could not be fully accomplished because of the pandemic; ii) that the likely continuation of a “pandemic” scenario for most of 2021 will impact the capacity to organize field work and in person meetings; iii) the need to prepare a joint work programme with the GFCM for 2021 to ensure a smooth transition. A summary of the planned activities and meetings is reported in Table 1.

28. The Coordination Committee agreed for the project to maintain the main priority activities identified and initiated in the previous period, working in coordination with the GFCM, and to use the upcoming meeting of the SRC-WM to present the outcomes of some of the key activities and discuss follow up actions and other priorities for the future.

29. In terms of priority areas of work, participants highlighted: the continuation of support to the monitoring and assessment of priority species, including the blackspot seabream, hake, sardine and Coryphaena; the finalization of the analysis of the Transboran research program; the consideration of external impacts on fish stocks and fisheries, including the impact from climate change, pollution and NIS; training on stock assessment methodologies and the continuation of support to EAF pilots.

Adoption of the report

30. The report was adopted by e-mail on the 26th of February 2021.

Table 1. Proposed plan of activities for 2021 in relation to plan of activities agreed in the 12th Coordination Committee meeting, Malaga, Spain, November 2019.

Priorities identified and implemented since 12 th Coordination Committee	Plan of work for 2021
<i>Objective 1. Fisheries management according to EAF</i>	
1. Support case study for implementation of EAF management plans in Bejaia, Algeria	Continue supporting the preparation of draft management plan, in close collaboration with FAO TCP Blue Hope in the Mediterranean.
2. Support new case study for implementation of EAF management plan in the M'Diq bay in Morocco -	Continue with the implementation of the work plan agreed under the LoA with INRH
3. Support the Implementation and monitoring of the Management Plan in El Bibane and the EAF Case study in Djerba, Tunisia	Continue supporting the two pilot studies, in close collaboration with FAO TCP Blue Hope in the Mediterranean. Organization of a meeting to exchange experiences with EAF management planning among Tunisia, Algeria and Morocco
4. Assessment of the vulnerability of fisheries to climate change and identification of adaptive measures	Final draft of VA to be presented at SRC-WM
<i>Objective 2. Fisheries monitoring, research and scientific advice</i>	
5. Biological sampling program for priority species in the East of Algeria	Continue the support to biological sampling of priority species
6. Biological sampling program for blackspot seabream in the Strait of Gibraltar	Continue with the implementation of biological sampling, according to plan of work agreed under the LoA with INRH
7. SG on stock assessment for demersal species in the Alboran sea (GSAs 01, 02, 03 and 04-W).	Organize joint data preparation meetings with GFCM
8. SG on stock assessment for the small pelagic in the Alboran sea (GSAs 01, 02, 03 and 04-W)	Organize joint data preparation meetings with GFCM, including meeting on comparison of acoustic surveys in GSA 1, 3 and 4.

Priorities identified and implemented since 12 th Coordination Committee	Plan of work for 2021
9. CopeMed-MedSudMed Workshop for follow up on stock assessment of <i>Coryphaena hippurus</i>	Organize joint data preparation meetings with GFCM and MedSudMed. Support analysis of data on <i>Coryphaena</i> collected in Libya.
10. Technical assistance for experimental fishery on <i>Coryphaena</i> in Algeria	Continue supporting further trials and analysis of data obtained in experimental fisheries
11. Finalize analytical work of the three species of TransBoran	Finalization of analysis. Organization of final workshop to elaborate conclusions and recommendations for future work.
12. Ichthyoplankton survey to test larval dispersion models in Alboran	Support to the analysis of data collected during the survey conducted in February in 2020.
<i>Objective 3. Regional cooperation and coordination for capacity development</i>	
13. Summer School on quantitative fisheries stock assessment methods organized by FAO Regional projects- GFCM-JRC	Continue with ad hoc online training on stock assessment methods, including a4a and SS3.
14. Training Workshop on tools for otoliths readings in collaboration with the IEO	Organization of online training on otolith reading tool.
15. Training workshop on the use of LEK methodology to collect information on NIS in collaboration with the Regional Projects	Organization of online training on LEK methodology and protocol
16. Facilitate attendance of national experts to the relevant meetings of GFCM and its subsidiary bodies	Continue facilitating the participation of national experts in face-to-face and online meetings organized by GFCM.
17. Promote publications of fishery related information produced by scientist in the CopeMed sub-region	Continue supporting the preparation of technical reports and publications. Ensure that project documents, technical reports are adequately stored in a permanent repository and that the contents of website are kept in a more sustainable platform.

Annex I. List of Participants

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Annex II. Annotated Agenda

9:00 – 9:15	<p>Opening of the meeting</p> <p>Adoption of the agenda</p>
9:15 – 10:15	<p>Report on the Project’s progress</p> <p>Presentation on the progress and achievements of the project since the last Coordination Committee Meeting in November 2019. The presentation will be followed by open discussion.</p>
Break 15’	
10:30 – 11:00	<p>GFCM activities for the next intersessional period</p> <p>Presentation of the GFCM planned scientific and technical activities of relevance to the Western Mediterranean sub-region.</p>
11:00 – 12:00	<p>Strategy for strengthening technical assistance and capacity development: 2021 and beyond.</p> <p>The CC will be briefed on the situation of the project. The CC will be invited to provide inputs to the outline of a new framework for technical assistance and capacity development for 2021 and beyond.</p>
12:30 – 13:30	<p>Programme of work for 2021</p> <p>The CC will discuss and elaborate a plan of work for 2021, considering the achievements in the previous period and the identified priorities for 2021.</p>
13:30	<p>Any other matters</p> <p>Closure of the meeting</p>

Annex III. Report of the intersessional activities of the Project

Report on the Intersessional Activities of the FAO – CopeMed II Project (November 2019 - January 2021)

This document summarizes the main activities carried out by the FAO-CopeMed II Project since the last Coordination Committee meeting (Malaga, Spain 28-29 November 2019), covering the period from November 2019 to January 2021. The activities carried out during the inter-committee period comply with the methodological framework of the project and its mandate for this phase. Activities and outputs are organized according to the main project objectives:

Objective 1. Strengthen national sub-regional and regional capacity (administration, stakeholders, and research institutions) in the identification of fisheries management strategies in accordance with the ecosystem approach to fisheries and aquaculture (EAF/EAA)

Objective 2. Improve capacity for fisheries monitoring, research and the preparation of scientific advice for fisheries management

Objective 3. Enhance regional cooperation and coordination for shared fisheries management, research, and capacity development

1. Strengthen national sub-regional and regional capacity (administration, stakeholders, research institutions) in the identification of fisheries management strategies in accordance with the ecosystem approach to fisheries and aquaculture (EAF/EAA)

Activities under this objective include meetings, analysis and case studies in support of the identification and development of management strategies and plans for priority species and fisheries, following an ecosystem approach to fisheries.

1.1. Support pilot case studies for the development and implementation of fisheries management plans, following the ecosystem approach to fisheries (EAF)

Since 2016, CopeMed has supported capacity building in participating countries to implement the Ecosystem Approach to Fisheries (EAF) through case studies for the development of management plans in selected fisheries operating in national waters. After a first training workshop held in 2016, a number of case studies were proposed in different countries, one of which has already been carried out by INSTM between 2017-2018 in El Bibane lagoon, Tunisia. The Plan was approved by the Tunisian authorities and is in the process of being implemented. During the reporting period the Project supported the organization of a meeting of the monitoring committee on 26 June 2020 and continued with the study on the biology and migration of species in and out of the lagoon. Data are being collected regularly on the bordigue and artisanal fishing inside the lagoon. The preliminary results of the study were presented and discussed during a virtual meeting (November 13, 2020) between

INSTM, CopeMed and the international expert (Elena Barcala). A bibliographic review of the available biological parameters of the main target species in the lagoon was completed to be used in the assessment of the status of the populations in the next phase of the case study. Finally, the experience and achievements with the case study in El Bibane was presented during the online technical workshop “Transition towards an ecosystem approach to fisheries in the Mediterranean Sea: lessons learned from selected case studies”, organized by the FAO Fisheries Division in collaboration with the FAO Mediterranean Regional Projects, from 9 to 10 December 2020 (see below).

Following the success of case study in El Bibane, Tunisia has called for a second case study on the island of Djerba, this time in collaboration with FAO's "Blue Hope in the Mediterranean" Interregional Technical Cooperation Programme (TCP). The first mission was carried out in June 2019, two subsequent consultations with all the stakeholders involved (fishermen, scientists, administration, civil society) during the second half of 2019 have allowed the preparation of the corresponding basic technical report with a general description of the environmental characteristics of the study area and the social and economic context of the fisheries in the island of Djerba. In addition, the document examines the scientific and traditional knowledge of the island's fishery resources and outlines the institutional and regulatory context of fisheries management in Tunisia and on the island of Djerba. Finally, the authors were able to identify and list the main problems and challenges that could threaten the sustainability of artisanal fisheries in the study area. The baseline report was published and disseminated as an FAO-CopeMed technical document and is available on the project website. The third stakeholder consultation meeting was held on July 28, 2020, at the premises of the School of Tourism in Houmt-Souk (Djerba), Tunisia. Participants discussed and agreed on a list of priority issues to be addressed in the management plan. After the meeting, a first draft of the management plan was prepared and is being reviewed by the project coordination team before being presented for discussion and finalization at the next consultation meeting.

In Algeria, another pilot study on the EAF was initiated in 2018 in the coastal area of Western Bejaia with the aim of supporting the development of a management plan for fishing and other economic activities in the area that already has a Land National Park. Since then, a total of four stakeholder consultations have been held with stakeholders, which have enabled the preparation of the baseline report which has been completed during this reporting period and is in the advanced phase of publication. For the first quarter of 2020, a risk assessment workshop was scheduled but ultimately postponed due to travel restrictions related to the COVID-19 pandemic. This pilot study is conducted by CNRDPA and is also linked to FAO's TCP "Blue Hope in the Mediterranean."

Morocco also requested the implementation of a pilot study in M'Diq Bay. A first mission to M'Diq was carried out in July 2019 to identify context, problems and the area of study. It was agreed to focus the study on the eastern part of the bay, where different fisheries and different economic activities (aquaculture, tourism, industry, maritime transport) interact and may be a potential source of conflict. In close collaboration with INRH scientists, a detailed work plan was prepared for 2020 that included the establishment of the EAF project team, the preparation of the baseline report and three meetings with stakeholders. None of these activities could be carried out during the year due to the difficulties related to the pandemic. The continuation of the action is postponed to 2021.

The project organized, in collaboration with the FAO Fisheries Division and the other FAO Regional Projects, an online workshop from 9 to 10 December 2020 on the “Transition towards an ecosystem

approach to fisheries in the Mediterranean: lessons learned through selected case studies”. Selected experiences with the implementation of EAF-like approaches to fisheries management in the Mediterranean Sea were compared and analyzed with a view to contribute to global efforts by FAO to identify lessons regarding enabling factors and main challenges to strengthen EAF implementation. The workshop discussed 10 case study fisheries from different sub-regions of the Mediterranean, selected for their recognized attempts to change management practices in line with some of the basic principles of EAF, including participatory and adaptive fisheries management. Four case studies from the Central-Western Mediterranean presented the lessons with the implementation of EAF-like approaches in Spain (Mallorca and Catalonia), Malta and Tunisia. Participants agreed on a roadmap to the preparation of a technical report that will document the case studies and the main lessons emerging from their comparative analysis.

In preparation to the workshop detailed above, the project supported an evaluation of the progress made with the implementation of EAF in the FAO-supported case studies using the EAF Implementation Monitoring Tool (IMT) developed in the framework of the FAO-EAF Nansen project. The IMT is based on a set of standard questions and criteria covering all the EAF components. The tool was presented and used in practical exercises during two online workshops with national experts from Egypt, Lebanon, Tunisia and Turkey on 16 November and 2 December 2020. The preliminary results of the exercise were presented at the workshop in 9-10 December 2020. The most valuable outcome from the exercise was the discussions that the scoring process generated, which enabled national partners to identify the current limitations and achievements in the management of the case study fisheries.

1.2. Assessment of the vulnerability of fisheries to climate change and the identification of adaptation measures to cope with climate-related impacts on fisheries

Within the framework of the GFCM Mid-Term Strategy and with the aim of advancing the development of a regional plan to address the effects of climate change on fisheries, a roadmap has been established providing for fisheries vulnerability assessment studies in each of the Mediterranean subregions. At the 20th session of the SAC, the roadmap and methodology were adopted with which the project implemented a testing phase in the western Mediterranean. This phase of testing identified the main expected factors and impacts on fisheries, as well as risk assessment. This preliminary assessment was carried out by a CopeMed II consultant, in close collaboration with GFCM. The results were sent to the national focal points for validation and subsequently presented at both the GFCM Fisheries Forum in December 2018 and the Subregional Committee on the Western Mediterranean (SRC-WM), Sete, France, in April 2019. In the first quarter of 2020, risk matrices and proposals for adaptation measures were sent to experts in the sub-region in order to have a consolidated summary document to be circulated at the next SRC-WM meeting (now postponed to 2021). Results from the vulnerability assessment from all sub-regions are being jointly analyzed and will be integrated in a common synthesis document about the vulnerability and adaptation options to the effects of climate change on fisheries in the Mediterranean, prepared in collaboration with other FAO Regional Projects.

A summary progress report with a description of the methodology was published as part of the GFCM SOMFI 2020.

2. Improve capacity for fisheries monitoring, research and the preparation of scientific advice for fisheries management.

This objective includes all the activities related to fisheries data collection (biological and socioeconomic) as well as the research activities and stock assessment of specific fisheries resources including the priority species for the sub-region.

2.1. Technical support to countries on statistics and information related issues.

CopeMed II continued to support the CNRDPA (Algeria) in the regular collection of biological data for hake, sardine and red mullet in a pilot study in the Eastern part of the country (Annaba). Due to the difficulties caused by the pandemic, part of the plan for data collection in 2020 could not be accomplished, including the extension of the coverage of the sampling area to the port of Algiers. In total over 36 months of biological data has been collected in Eastern part of Algeria. Part of the data has been used by the CNRDPA for the assessment of hake in GSA 04. Another component of the pilot study in Eastern Algeria was the collection and analysis of socioeconomic data from the main fleet segments. A technical report with the results of the socioeconomic survey is in the final stages of publication as an FAO technical document.

During the reporting period, the Project prepared a new Letter of Agreement with INRH (Morocco) to continue the biological sampling program for *Pagellus bogaraveo* in the port of Tangier and artisanal fishing sites in the Strait of Gibraltar. Unfortunately, due to administrative delays caused by the pandemic, work could not be started in 2020 and has been postponed to 2021.

2.2. Subregional research activities related with shared stocks

- Follow up on *Coryphaena hippurus*:

In view of the importance of the dolphinfish fishery, *Coryphaena hippurus*, for several countries in the Western-Central Mediterranean, the project, in collaboration with MedSudMed, continued to support subregional research activities on the species. The CORY-WG Working Group met from 30 September to 1 October 2019 aboard the training and cooperation vessel Internares of the General Secretariat of Fisheries in the port of Cadiz. The most recent data of the fishery were reviewed, and knowledge about the biology of the species was updated. The report of the meeting has been published as Technical Document CopeMed N. 54 "Workshop on the status of *Coryphaena hippurus* fisheries in the Western-Central Mediterranean", Cadiz, Spain, 8-9 October 2019 and is available on the project website. In addition, a scientific paper has been published in the journal Reviews in Fisheries Science & Aquaculture, with a review on species biology and fisheries in the Mediterranean based on the progress made by the Working Group from 2004 to the present day (see section on publications).

To continue with the evaluation of this shared stock, the CORY-WG agreed to test a new model developed in R (CatDyn), originally developed for short-lived species such as cephalopods. During the reporting period, the Project recruited the CatDyn developer to adapt and test the llampuga model using available data from participating countries. On July 27, 2020, a first online meeting was held between the modeler and national experts to define the data needs. The data made available by Spain, Italy, Malta and Tunisia was used in a preliminary assessment of stock using the adapted version of CatDyn. The results have been presented during the GFCM Stock Assessment Working Groups (WGSAs) in January 2021 for review and feedback by regional experts.

Also in relation of *Coryphaena*, the project continued to support Algeria in the implementation of experimental fishing trials for the species with FADs, following the standards set out in the recent GFCM Recommendation GFCM/43/2019/1. During the fishing season (September-December 2019) CopeMed II offered technical support to test experimental fishing and pilot data collection in Algeria, with the assistance of a Tunisian expert. To advance with the action, a feasibility study was included as part of the Letter of Agreement signed with the CNRDPA in November 2019. The study designed and prepared 32 FAD prototypes using wood and palm trees, which were deployed during the 2020-fishing season. The data collected during the experiments are being analysed by the CNRDPA to inform the next phases of the project.

- Follow up on *P. bogaraveo*

Following the extensive data preparatory work carried in 2019, the project worked together with the GFCM to organize successive online meetings for the benchmark assessment of *P. bogaraveo* in the Strait of Gibraltar. These online meetings were held in April and May 2020 at which the quantitative assessment could be concluded. The meetings were attended by experts from Spain and Morocco and carried out with the assistance of independent stock assessment experts. Conservation and management benchmarks and relevant scientific advice for the sustainability of fisheries in this important stock were obtained, thus contributing to the implementation of Recommendation GFCM/43/2019/2 on a management plan for the blackspot seabream in the Alborán Sea (GSA 1-3). During the last quarter of 2020, the Project supported the organization of ad hoc virtual meetings between national experts to update the stock assessment of the species to be presented at the GFCM WGSAs (January 2021). Finally, responding to the request of experts participating in the benchmark assessment, the project organized an online training workshop on the use GADGET, 23-27 November 2020. During the training workshop, the updated data of 2019 were provided by the two countries (Morocco and Spain), they were analysed and further incorporated to the updated assessment that has been presented to the WGSAD in January 2021(see section on training courses).

- Study Groups on stock assessment of demersal and small pelagics in GSAs 01, 03, 04

The Small Pelagic Working Group met online between November 7-11, 2020 in a joint session with the GFCM. The focus of the meeting was to update the sardine assessment in GSAs 1, 3 and 4 taking into account the new data available since the last benchmark of the species. The meeting was attended by experts from Spain, Morocco and Algeria. Technical support was provided by an international consultant previously involved in benchmarking the species. The WG made progress with data

preparation and updated assessment of the populations in each GSA individually. The results showed overexploitation status in the three areas and were presented during the GFCM WGSA in January 2021.

The Demersal Working Group met online on January 8th 2021 in a joint session with the GFCM. The focus of the meeting was to progress with the data preparation and update assessments of hake and deep-water pink shrimp in Alboran Sea GSAs 01, 03, 04. The group analysed the new data for the year 2019, and decided to present an updated assessment in GSA 01&03 combined, by using the same model settings as the one used last year (XSA model) at the benchmark session. The assessments for deep water pink shrimp were also discussed, and it was decided to present them separately as the data series in three countries have been extended in the last years, and there are not reasons to justify that it is one single stock. Finally the assessment presented at the WGSAD-W were: Hake in GSAs 01&03, and also in GSA 01 independently as it was required by the Spanish Administration, deep water pink shrimp in GSA 01, in GSA 03 and in GSA 04 independently. All the stocks were assessed as in overexploitation status.

- Progress on the identification of stock boundaries:

CopeMed II launched a research programme to identify sardine, hake and blackspot seabream stocks and their spatial distribution in the Alborán Sea (GSA 1, 2, 3, 4 and adjacent waters). The programme TRANSBORAN ("Cross-border population structure of sardines, hake and blackspot seabream in the Alboran Sea and adjacent waters") began in January 2018 and is carried out in close collaboration with the GFCM. Sampling was carried out simultaneously at 17 points in Algeria, Morocco, Spain and Tunisia, including the North-East Atlantic sites and extreme points to achieve greater contrast (the Cantabrian Sea, Portugal, Malta and Greece). By the end of June 2020 all samples of the three species had been collected, processed according to an agreed protocol and partially analyzed in the laboratories in charge of the different techniques. The seven institutions involved (CNRDPA, INRH, IEO, INSTM, University of Malaga, University of Bologna, University of La Sapienza) in the 5 participating countries (Algeria, Italy, Morocco, Spain and Tunisia) have advanced in the respective analyses. The techniques that have completed the analyses are: (i) hake parasites, (ii) fishing information for hake; (iii) hydrodynamic simulations for sardines, hake and blackspot seabream, (iv) genetic analysis of the blackspot seabream, and; (v) morphometry and microchemistry of otoliths in sardines.

The work plan agreed for 2020 has been implemented for the most part. Hydrodynamic hake simulation is ongoing, genetic markers have been identified for all three species and full genetic analysis of the blackspot seabream has been completed. Part of this analysis was carried out in Fuengirola's laboratory during a collaborative stay of a researcher from the University of Bologna who has completed her Master's thesis on "A multidisciplinary approach to assess population structure of *P. bogaraveo* for a correct delineation of stock units in the Alboran Sea".

Between 20 February and 14 March 2020, an oceanographic survey was carried out aboard the research vessel, Emma Bardan of the the Spanish Ministry of Agriculture, Food and Fisheries. A team of scientists from Spain (IEO) and Morocco (INRH participated in the survey). The aim of this survey was to check in-situ the hypotheses about the trajectories of eggs and larvae predicted by

hydrodynamic models in order to understand and validate the connectivity between the spawning areas and fishing grounds on both sides of the Strait of Gibraltar. The survey obtained plankton samples as well as hydrological parameters in a total of 81 stations over 14 transects and at different depths: 30, 70, 100, 200 and 500 m. In addition, samples were taken from 11 stations in the Strait of Gibraltar, the easternmost part of the Gulf of Cadiz and the Alborán basin, in order to connect the northern and southern transects. Detailed identification of all collected larvae will be carried out in the laboratory in the coming months. A portion of sardine larvae (732) were stored in liquid nitrogen, and another 51 larvae were stored in RNAlater at -20°C for future laboratory analytical testing.

A series of Thematic Workshops started to be implemented in the last quarter 2020 with the objective to facilitate the analysis and integration of project results. The workshops are initially focused on the results of each individual discipline, with a final workshop planned for the second quarter of 2021. During the reporting period, two thematic online workshops were organized. The Thematic Workshop on Hydrodynamic Modeling, November 11, 2020 and the Remote Thematic Workshop on Meristics and Body Morphometry, December 10, 2020. Two additional workshops will be held in the first quarter of 2021 (*Otholith shape and microchemistry* and *Genetics*).

3. Enhance regional cooperation and coordination for shared fisheries management, research, and capacity development

One of the key objectives of CopeMed II is to create the optimal conditions for the cooperation among the different participating countries. With this aim, the scientific institutions have to be capable to work together and with other countries in the Mediterranean region following standard methodologies and principles. The following is a summary of the main activities carried out towards this objective.

3.1. Training activities

In 2020, plans were in place to organize the fourth edition of the Summer School. With the COVID-19 pandemic affecting all Mediterranean and Black Sea countries, organizing a face-to-face training as in previous years has become impracticable. In order to maintain the momentum produced in past years, the project in partnership with the other FAO Regional Projects organized online training workshops focused on methods of general interest and methods of specific interest to the sub-regions. Three online training workshops were organized in the reporting period:

Introduction to integrated stock assessment using Stock Synthesis. The online training workshop was organized by the FAO Mediterranean Regional Projects in collaboration with the FAO-Fisheries Division and the USA National Oceanic and Atmospheric Administration (NOAA), between 05 - 09 October 2020. The course was delivered by a team of lecturers from FAO, NOAA and JRC, including the main developers of the Stock Synthesis model. It was attended by 15 participants and 8 observers from 8 countries in the Western-Central Mediterranean and Adriatic Sea where integrated assessment models are currently being used as part of the benchmark process for hake and blackspot seabream. The course aimed at understanding the basic concepts of integrated assessment models and to introduce the integrated assessment package Stock Synthesis. The first half of the workshop focused on the overview of the program and detailed setups of data and parameters. In the second half students applied the model to datasets provided by the trainers. Participants were guided through the analysis

of model outputs, retrospective analysis and sensitivity tests for a full model diagnostics and provision of advice.

Empirical Indicators for Fisheries Management Advice. The FAO Mediterranean Projects organized, in collaboration with the FAO-Fisheries Division, the Online course/Workshop on Empirical Indicators for Fisheries Management Advice (19-23 October 2020). The course was attended by 27 participants, mainly senior scientists from 13 Mediterranean countries involved in the Projects activities. The course focused on Empirical Management Procedures and particularly on the development, selection, and use of empirical indicators to provide operational fisheries management advice. Its starting point was the set of basic requirements of the Ecosystem Approach to Fisheries applied to fisheries management processes. During the workshop most of the time was dedicated to discussing the process and criteria for selecting, validating, using and communicating empirical indicators, and on how to run a peer-validation process for improving the credibility and legitimacy of the indicators and their use in management. A pool of indicators was selected and real data exercises on two stocks formally assessed in the Mediterranean were completed. The results were discussed to highlight properties of indicators and to compare the findings with the outcomes of model-based assessment.

Online course on the stock assessment model: GADGET (Globally applicable, Area-Disaggregated Ecosystem Toolbox). The online course was co-organised with the GFCM Technical Unit of Malaga from 23 – 27 November 2020. The objective of the course was to improve the skills of participants to deal with multi-species, multi-fleet and multi-area stock assessment practices. GADGET is an integrated approach to account for issues such as migration, selectivity of different fleets, different life stages of the individuals in the stock and environmental variables all in a statistical framework. The model is currently used for the benchmark assessment of the blackspot seabream in the Strait of Gibraltar. Delivered by Bjarki Elvarsson and Pamela Woods from the Icelandic Institute of Marine and freshwater Research who are the developers of the model, the course was attended by twelve participants from 5 Mediterranean countries. Practical sessions covered examples of the model application to the blackspot seabream, hake and red mullets.

3.2. Regional coordination, cooperation and synergy

In order to strengthen international and regional cooperation, the Project operated closely with the FAO Regional Projects AdriaMed, MedSudMed and EastMed, with the participating countries' administrations, with the GFCM and its subsidiary bodies and maintained regular informative meetings with the donors.

Coordination between the four regional FAO projects in the Mediterranean (AdriaMed, CopeMed II, MedSudMed and EastMed) is ensured through regular meetings among project's staff, through the participation on the different projects' coordination committee meetings and by the reinforcement of communication among projects by the project Lead Technical Officer and Budget Holder.

In particular, cooperation with MedSudMed is continuing on the activities related with working group on *Coryphaena hippururs*. The cooperation with EastMed continues through the exchange of

experiences regarding the research projects carried out in parallel by the two projects on the identification of the population structure of hake, sardines and blackspot seabream in the Alboran Sea and sardinella in the eastern Mediterranean.

Other topics of common interest among projects are small-scale fisheries, non-indigenous species (NIS) and climate change impacts on fisheries (discussed above). With regards to small-scale fisheries and NIS, two events were organized by the FAO Regional Projects in the period:

Webinar on Local Ecological Knowledge based monitoring. One of the topics of interest and priority in the Mediterranean is the monitoring of NIS. With a view to increase awareness about the use of Local Ecological Knowledge (LEK) and the available LEK protocols for the monitoring of non-indigenous species (NIS), CopeMed in collaboration with the other FAO Regional Projects, organized a webinar on the information gained through LEK to track and tackle some emerging changes in Mediterranean fish diversity. Based on the experience of an international team of scientists, the webinar demonstrated that sound protocols have been built providing new perspectives in the use of LEK for large-scale studies and periodical monitoring. The webinar took place on 11 June 2020 and was attended by over 40 scientists from various Mediterranean countries.

Small-Scale Fisheries University Day. The SSF-University DAY was a single day event organized on 10 November 2020 by the FAO Mediterranean Projects and the FAO GFCM BlackSea4Fish Project in collaboration with several national partner organizations. The event was part of the Small Scale Fisheries University launched by the FAO General Fisheries Commission for the Mediterranean (FAO – GFCM) in the framework of the Regional Plan of Action for a Small Scale Fisheries in the Mediterranean and the Black Sea. National workshops were organized during the Day to address common regional SSF issues such as collaborative science and the valorisation of fishers' knowledge, thus including participatory data collection, local ecological knowledge (LEK), perception on climate change and environmental impacts of fishing. The event was an opportunity to give voice to fishers and to promote a proactive dialogue among them, scientists and national administration. The SSF University DAY was held virtually in 13 different localities at the same time involving 20 institutions and more than 200 connected participants.

Coordination and collaboration with GFCM

Coordination and collaboration with the GFCM is established at different levels, including the participation of CopeMed II in many GFCM meetings and the participation of the GFCM Secretariat at the annual meeting of the Project Coordination Committee. Several informal meetings of coordination were held with the GFCM staff back-to-back GFCM events, which helped to strengthen the cooperation and to find synergies.

The activities of the FAO regional projects are closely coordinated among the projects and the GFCM. All the actions described are in line with the data reporting obligations of the GFCM DCRF, and the GFCM mid-term strategy (2017–2020). Furthermore, with the aim to strengthen the collaboration,

more activities each year are being organised jointly with the GFCM, including data preparation meetings, benchmark assessments and technical meetings.

Due to the travel restrictions related to the COVID-19 pandemic, all relevant presential technical meetings of the GFCM were postponed to 2021. Therefore, the project did not provide the customary support to experts from the Western Mediterranean to participate in GFCM meetings. Nonetheless, project participated in online discussions, workshops and webinars organized by the GFCM in the period, including:

- GFCM Online Forum dedicated to building fisheries and aquaculture resilience post COVID-19 (25 June, July 1, 22 July, 2020)
- BlackSea4Fish Technical presentation on Biological Reference Points (8 December 2020)
- BlackSea4Fish Technical presentation on Data limited stock assessment models (22 December 2020)
- GFCM Working Groups on Stock Assessment (WGSA) of Demersal and Small Pelagic Species, 18-30 January 2021;

Synergies with FAO TCP Project “Blue Hope in the Mediteranean”

The project continued to promote synergies with the FAO TCP Project “Blue Hope in the Mediterranean”. During the reporting period, regular meetings with the technical staff from the TCP project were held to discuss progress with the implementation of the EAF pilot studies in Tunisia (Djerba and El Bibane) and Algeria (Bejaia) and to discuss proposals for investment plans in connection with the pilot studies.

Organization of the Annual Coordination Committee meeting

The twelfth meeting of the CopeMed II Coordination Committee was held in Malaga (Spain) on 28–29 November 2019. The annual meeting was attended by representatives of the Spanish Secretaria General de Pesca and the European Commission DG MARE, participating countries (Algeria, Libya, Malta, Morocco, Spain and Tunisia), CopeMed II project staff and the fishery officer of AdriaMed and MedSudMed projects. The Committee reviewed the activities implemented during the inter-session period, discussed and adopted a proposal of priority activities for the next period of the project until end 2020. The country representatives recognized the important contributions of CopeMed II to the development of the national and regional capacity and particularly the advances in analysing data and produce assessment of shared stocks. The regional cooperation, coordination and the key role of the project as support to increasing scientific knowledge on fishery resources and ecosystems, strengthening national expertise and regional cooperation and the valuable support to the GFCM activities was underlined. The Committee had a lengthy discussion on the administrative issues faced by the project that are resulting in delays and sometimes interruption in the execution of important field activities. Options to mitigate the problems were discussed, including the proposed integration

of the project in the framework of the GFCM. In the view of FAO, the integration would be in line with the mandate and capacities of the GFCM, especially in view of the established sub-regional approach, and would create the administrative conditions for a smooth operation of the project. . The Committee suggested FAO and GFCM to prepare a concept note detailing how the integration would work in practice and explaining the pros and cons of the integration in view of current situation of the Projects. The issue will be further discussed during the current Coordination Committee meeting.

3.3 Project communication

The project maintained a regular communication channel with the network of experts, research institutions and fisheries administrations in the countries, as well as with regional organizations and FAO. Activities and outputs of the project are disseminated through regular meetings with the national counterparts and also through mailing lists and the project website (www.faocopemed.org). In addition, the project maintained an on-line Workspace for more direct exchange of information among the experts of the most regular permanent working groups such as the two Working Groups on Stock Assessment of Demersal and Small Pelagics species in Alborán Sea, the TransBoran Project and Dolphinfish fisheries.

The following technical reports and publications were produced by the project or with the participation of the project in the intersession period:

Documents published and available in the project website

CopeMed II - Technical Documents N° 53. Report of the 12th meeting of the Coordination Committee of the FAO-Project CopeMed II held in Malaga (Spain) on 28–29 November 2019.

CopeMed II - Technical Documents N. 54. “Workshop on the status of *Coryphaena hippurus* fisheries in the Western-Central Mediterranean, Cadiz, Spain, 8-9 October 2019”.

CopeMed II - Technical Documents N. 55. “Report of the CopeMed II Working Group on stock assessment of *P. bogaraveo* in the Strait of Gibraltar, Malaga, Spain, 28–29 October 2019”.

CopeMed II - Technical Documents N° 56. Report of the Joint GFCM-CopeMed II Data Preparation meeting on sardine in Alboran Sea. 18-22 November 2019, Málaga, Spain.

CopeMed II Technical Documents N°57 . Report of the joint GFCM-CopeMed II data preparation meeting on hake and working group on stock assessment of demersal species in GSAs 01, 03 and 04, 28-31 October 2019, Malaga, Spain.

Jarboui, O., Djabou, H., Bernardon, M.et Bdioui, M. 2020. *Mise en œuvre de l’approche écosystémique pour l’aménagement de la pêche artisanale de l’île de Djerba - Tunisie*. Rome, FAO.

Scientific papers and other publications

Moltó, V. et al., 2020. A Global Review on the Biology of the Dolphinfish (*Coryphaena hippurus*) and Its Fishery in the Mediterranean Sea: Advances in the Last Two Decades. *Reviews in Fisheries Science & Aquaculture*. Vol. 28, Issue 3. <https://doi.org/10.1080/23308249.2020.1757618>.

Baez et al., 2020. North Atlantic Oscillation affects dolphinfish catch and bycatch in the Western Mediterranean Sea. *Regional Studies in Marine Science*. Volume 36, April 2020. <https://doi.org/10.1016/j.rsma.2020.101303>.

Martina Spiga. 2020. A multidisciplinary approach to assess population structure of *Pagellus bogaraveo* for a correct delineation of stock units in the Alboran Sea. Masters Thesis. University of Bologna, Italy.

Consultancy reports and publications in preparation

Report of the joint GFCM-CopeMed II data preparation meeting on hake and working group on stock assessment of demersal species in GSAs 01, 03, 04. 28-31 October 2019, Málaga, Spain. 21 pp.

Mennad, M.; Mekhazni, L.; Mokrane, Z.; Inal, A.; Filali, T. et Bernardon, M. In prep. L'approche écosystémique des pêches sur la côte ouest de Béjaïa en Algérie. Rapport de référence sur l'AEP.

Laiz-Carrión, R.; Sammartino, S.; Nadal I.; Quintanilla, J. M .; Rodríguez, J. M .;. Sánchez Garrido, J.C.; Baibai T.; Abdelouahab H.; García, A.; and J. García Lafuente. Informe técnico de la Campaña TRANSBORAN-0202

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