



REPORT OF THE TWELFTH MEETING OF COPEMED II COORDINATION COMMITTEE

28 - 29 November 2019
Málaga, Spain

CopeMed II Technical Documents N°53
GCP/INT/028/SPA; GCP/INT/362/EC

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

Malaga, Spain 28-29 November 2019

November 2019

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° 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 contribute to the sustainability of the marine fisheries in the central and western Mediterranean Sea and its ecosystem through the development of capacities and strengthening of scientific cooperation among participating countries. The project also reinforces 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 version of the report of the 12th meeting of the Coordination Committee of the FAO-Project CopeMed II held in Malaga (Spain) on 28–29 November 2019 adopted by the participants' members. The finalisation of this CopeMed Technical Document was made in collaboration with the participants and the FAO staff of CopeMed II in Malaga and Rome.

Acknowledgements

FAO-CopeMed II acknowledges the participation and contributions of all national delegates, the indispensable contributions provided by the two donors Spain and EC and the support provided by the Spanish government to maintain the CopeMed offices in Malaga.

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ABSTRACT

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.

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REPORT OF THE 12TH COORDINATION COMMITTEE MEETING OF COPEMED II

**Malaga, Spain
28–29 November 2019**

Opening of the meeting, election of the Chairperson and adoption of the Agenda

1. The Coordination Committee (CC) meeting was held in la Subdelegación del Gobierno, in Malaga on 28–29 November 2019. It was attended by representatives of the Spanish Donor (Secretaría General de Pesca) and European Commission Donor (DG MARE), delegations from the participating countries of the Project (Algeria, Libya, Malta, Morocco, Spain and Tunisia), the Marine and Inland Fisheries Branch (FIAF), the Fisheries Experts of FAO CopeMed II, AdriaMed and MedSudMed Projects. The list of participants is included in Annex 1.
2. Mr Marcelo Vasconcellos, Acting coordinator of CopeMed II, welcomed participants and expressed his gratitude to the Secretaría General de Pesca of Spain and the European Commission for continuing financing the Project and thanked the participating delegates for the efforts in implementing the CopeMed activities at national level.
3. Mr Jorge Baro, the national focal point of Spain, was elected chairperson of the meeting.
4. The representative of EU DG MARE thanked the FAO and the coordinator of the project, as well as Spain for hosting this meeting. He congratulated the staff and the members of the project as regards the developments of the project, and supported an ever-increasing integration of the project's activities within the framework of GFCM's mid-term strategy and its sub-regional approach for the sustainable management of fisheries in the Mediterranean. Finally, he underlined that it was important for DG MARE to follow very closely the proceedings of the four FAO regional projects and praised the availability and the clarity of the meeting documents put at disposal in the project web site well in advance to the meeting. A subject on the possible integration of the Regional Projects under the umbrella of GFCM was added as a matter of discussion under Other Matters item. The agenda as it is in Annex 1 was adopted.
5. The representative of the General Secretary for Fisheries Spanish Ministry for Agriculture, Fisheries and Food as one of the donors of the Project, Mrs Encarnación Benito, congratulated the Project for its 12 years of activity thanks to the support of the donors, both Spain and EU Commission (DG MARE), but also thanks to the constant collaboration, work and support of all the people from the different administrations and research institutes of countries involved. She finalized recalling the support of the Secretariat General for Fisheries to the continuity of the Project, which has demonstrated relevant results in the strengthening of capacities and better knowledge for a better management of our resources. In particular she recalled the important in-kind contribution of

Spain through the offer of the vessel *Intermares* as meeting venue and the oceanographic vessel *Emma Bardan* to carry out a research surveys in the Alboran Sea.

Report on the CopeMed Project's Progress

6. After adoption of the Agenda (Annex 2), CopeMed Fishery Expert, Mrs Pilar Hernández introduced item 2 based on the document FAO-CopeMed II CC12/2019/02 (Annex 3), in which the activities carried out by CopeMed II from November 2018–November 2019 were presented. She emphasized that all the activities carried out were in line with the Project objectives and the suggestions agreed during the 11th Meeting of the Coordination Committee (Malaga, 7–8 November 2018).
7. Participants congratulated the project for the extensive work carried out in the period and for the support provided in areas of data collection, capacity building and subregional cooperation towards the assessment of stocks and provision of scientific advice. During discussions participants highlighted the good progress made in the development of EAF management plans for small-scale fisheries, in particular it was underlined the successful case of El Bibane lagoon as a good example of concertation among all stakeholders. The liaison with the FAO Blue Hope initiative since 2019 was welcome as it can help on developing multisectoral economic activities to the small scale fisheries communities.
8. The Committee was informed of other initiatives on the development of Blue Growth in the region, in particular in Morocco the EC-funded Project *WESTMED*, covering all western Mediterranean countries, Mauritania and Portugal. In addition, Morocco has also the *BLUE BELT* Project, which includes among its objectives the protection of the littoral zone. In the frame of this latter project a ministerial meeting was organized in Agadir in 2019. The committee convened to find synergies with these initiatives to avoid duplication of efforts.
9. The members also expressed interest in the actions towards adaptation of fisheries to climate change and reported recent episodes of toxic algal blooms in Tunisia and the spread of Non-indigenous and invasive species in western Mediterranean. They agreed to support the ongoing road map and to participate in the upcoming workshops on the topic in collaboration with the other FAO Regional Projects and within the framework of GFCM Mid Term Strategy.

Proposals on national activities in the framework of the Project.

10. National focal points were invited to comment on their proposals for priority issues in their countries needing specific support from the project.
11. The Tunisian delegate thanked the project for the activities carried out in Tunisia in 2019 and requested the continuation of the support of the project for 2020. More specifically, with regards to *Coryphaena*, the delegate requested the continuous support of the project to the collection of biological and fishing

effort data, with a view to contribute to the planned assessment of the stock in 2020. With regards to the European eel, the work done in previous years with the support of CopeMed II has resulted in good outcomes and contribution to the knowledge of the fishery at national and regional level. The delegate expressed concern for the interruption of data collection in the coastal lagoons before the GFCM research program is launched. Tunisia requested that the Project discuss with the GFCM, strategies to ensure the monitoring of this species and that data collection is not interrupted. In relation to the work being developed in El Bibane lagoon, he requested continued support of the project to the follow up of the management plan. This follow up includes Copemed II participation in the steering committee and the support to research activities, granted by the recruitment of a field observer for the regular sampling of fish in the lagoon. He also requested support in the continuation of the current pilot case of Djerba. With regards the assessment of small pelagic species, Tunisia expressed interest on sharing methodologies to improve the assessment by direct and indirect methods. Tunisia expressed support to continue activities of TransBoran Project.

12. The delegate from Malta stressed the important role of the project in promoting cooperation among countries in the sub-region and expressed the continuous interest of Malta in taking part of subregional actions on capacity building in particular in the fields of otoliths reading and methodologies for stock assessment. With regards to Coryphaena, he emphasized the importance of this fishery for Malta and expressed interest on providing any needed data for the assessment of the stock. He expressed concern by the use of plastic lines in the structure of FADs that remain abandoned attached to the bottom and requested the project potential assistance to look for alternative solutions to retrieve the lines once the fishing season is finished.
13. The Libyan delegate informed the Committee of a program of observers on board launched at national level to collect data on different aspects of fisheries. Training activities would be needed in support to this plan. He highlighted the fact that the fishing fleets has gone through changes in the last decade, and there was an urgent need to carry out a frame survey to update the information on the operating fishing vessels. He requested assistance on the potential use of wrecks as artificial reefs and on the reinforcement of data collection and statistical systems. He suggested also to launch a pilot case on EAF in Farwa lagoon, a recently established MPA close to the Tunisian border.
14. The Algerian delegate thanked the project for the support in recent years and emphasized the need to continue the current actions in place such as the Data collection in Annaba and Algiers, the EAF pilot in Bejaia and their contribution to TransBoran project. He reiterated interest on starting a new fishery for Coryphaena based on previous experience in the neighbouring countries and suggested to undertake a training workshop in Tunisia for both fishermen and scientists. After a comment of the EU delegate on the potential risks of developing a new fishery on a stock not yet assessed by the SAC, the Algerian delegate, emphasized that any activity related to the development of a potential new fishery for dolphinfish in his country would always take into

account the precautionary approach to avoid possible exploitation out of safe biological limits.

15. In his intervention, the delegate from Morocco thanked CopeMed and GFCM for the support provided during last year, particularly in the biological monitoring of the blackspot seabream. He stressed the need to incorporate the socio-economic impact of the management measures adopted. He requested the support of the project to continue the pilot study on the application of EAF to the small-scale fisheries in M'diq Bay. He expressed concerns about the negative interactions between cetaceans and purse seine fisheries and suggested to consider the effect of this interactions in CPUE indices to be used in the assessments of sardine. Data on the quantification of these attacks is being collected for three years on a weekly basis. Increasing pollution in Western Mediterranean was also a matter of concern. He finally expressed the satisfaction of Morocco with the progress obtained so far with the TransBoran project and the support of the country to the planned activities for 2020.
16. The Committee concurred that there are other organisations working on marine pollution although they do not always take into account its effect on fisheries and suggested the Project to investigate the availability of studies in this area.
17. The delegate from Spain welcomed the increase in the number and quality of joint assessments and expressed support to the continuation of this progress, in particular, of high relevance for his country is the fishery of *P. bogaraveo* in the Gibraltar Strait. He praised the work done within the framework of TransBoran and offered technical support from his institution. He shared concern on the increasing levels of pollution and recalled the participants of the existing European Directives on Maritime Strategy and highlighted the potential role of CopeMed to assist non-EU countries in the monitoring of descriptors of the Good Environmental Status, in particular those affecting fisheries.
18. CopeMed thanked the participating countries for the interventions and noted that the requests were in line with the project objectives and could contribute to an enhanced knowledge and capacity needed to support fisheries decision making in the region. Participants were reminded that the implementation of the proposed activities will depend on the availability of funds.

GFCM activities of relevance for CopeMed II

19. Mr Marcelo Vasconcellos presented on behalf of the GFCM Secretariat an overview of the work foreseen by the GFCM for the 2019/2020 intersession relevant to the Western Mediterranean, dividing it into regular SAC activities and mid-term strategy activities. The regular SAC activities included i) the working groups on stock assessment, ii) Benchmark assessment of sardine, hake and blackspot seabream, iii) the assessment and management of *Coryphaena hippurus*, iv) launch of research programmes for red coral and European eel in the Mediterranean, iv) the implementation of priority actions in the RPOA-SSF, v) fishing gear and gear technology and vi) essential fish habitats (EFH) and vulnerable marine ecosystems (VMEs). On the other hand,

mid-term strategy activities will cover i) advances towards an adaptation strategy for climate change and non-indigenous species, ii) issues related to bycatch and surveys at sea, iii) the regional survey on socio-economic characteristics of fisheries, iv) data collection on recreational fisheries and v) advancing on the estimation of IUU. The presentation ended with a list of relevant meetings for the coming intersession.

20. The Committee discussed the importance of the research programmes on eels, blue crabs, red coral and *Coryphaena* to the sub-region. With regards to eels, Tunisia highlighted the importance of starting the implementation of the research program as soon as possible to ensure the continuation of monitoring actions initiated in the past with the support of CopeMed. The active involvement of CopeMed and MedSudMed in the elaboration and implementation of the proposed research programme on *Coryphaena* was highlighted by the Committee in view of the past and ongoing activities of the Regional projects on the species.
21. In relation to the list of meetings for the coming intersession, DGMARE noted that a specific session on Catch Documentation Scheme for red coral will be held in the next WGIUU in Lebanon. Giving that red coral is of regional importance, the meeting should be of relevance to Western Mediterranean countries as well.

Priority activities for the next period of CopeMed II

22. Based on the document FAO CopeMed II CC12/2019/03 and the inputs received during the meeting, CopeMed Fishery Expert presented for discussion and adoption a proposal of activities for the next annual period of the project. Some additions to the original plan as presented in document CC11/2019/03 (Annex 4) are commented here below. The adopted workplan is presented in table 1.
23. In relation to EAF, the Committee was informed of the plan of the Regional Project EastMed to organize a *Seminar on EAF-based fisheries management in the Mediterranean* in the first quarter of 2020. The objective of the Seminar is to take stock of available EAF experiences in the Mediterranean and compile lessons with implementation, particularly for small-scale fisheries, with a view to contribute to the RPOA-SSF. Giving the regional relevance of the Seminar, contributions from other areas of the Mediterranean were also envisaged. The Committee acknowledged the relevance of the Seminar to the ongoing case studies supported by CopeMed in the Western Mediterranean. Moreover it recommended the incorporation of available experience from northern Mediterranean.
24. Tunisia requested support to start collecting fisheries biological information from the western part of the country (Tabarka). Improvements in the biological sampling in the area would be needed to support any future joint assessment with Algeria in the border between GSA 4 and 12. The area is also important for deep water red shrimp and red coral. The Project will evaluate options to provide the needed assistance in collaboration with MedSudMed.

25. With regards to the assessment of blackspot seabream, the project updated the Committee on the proposal made by experts for a fishery-independent longline survey in the Gibraltair Strait. The option of using the vessel *Intermares* was not feasible due to the technical characteristics of the vessel. The rental of a commercial fishing vessel would be a possible alternative but perhaps too costly. Morocco suggested that instead of a survey the project could support the collection of data with observers on-board small-scale fishing vessels. The information obtained would be useful to improve the monitoring of the size distribution and confirm the distribution of the fishing ground.
26. The Committee discussed the possibility of expanding the number of species covered in the CopeMed WG on demersal and small pelagic species. Among the species mentioned were red mullet, sparids, *Trachurus* and cephalopods. The Committee agreed to request the next WGs to prepare a list of potential shared resources to be assessed in the future.
27. The Committee acknowledged the good progress made with the TransBoran project during the intersession. The Project presented to the Committee the proposal for an ichthyoplankton survey to be carried out using the oceanographic vessel *Emma Bardan*, made available by the Secretaria de Pesca as in-kind contribution to CopeMed II. Following the discussion on the survey plan and logistics, the Committee endorsed the proposal and recommended the Project to advance with the preparation of a budget and definition of other technical issues in consultation with Morocco and Spain.
28. With regards to the contributions of the Project to the GFCM Mid-Term strategy, the Committee discussed and agreed to start compiling relevant information on Essential Fish Habitat (EFH) for priority species and information on Non-Indigenous Species (NIS). In order to progress with these themes, the Project will dedicate a specific session to EFH in the next WGs on demersal and small pelagics. The EU informed the committee that the Study MANTIS funded by EU gathered information on possible EFH in the Straits of Sicily. As a first step to the collection of data on NIS, a training on the use of the Local Ecological Knowledge (LEK) protocol being applied by AdriaMed and MedSudMed will be carried out in close collaboration with the Regional Projects. Moreover, during the implementation of the LEK protocol, the Project will explore the possibility of obtaining information on the interactions between small-scale fisheries and recreational fisheries.
29. With regards to training activities, Morocco requested for the Project to work together with countries to evaluate the effectiveness of the trainings carried out on stock assessment. Moreover, options for optimizing the use of resources to enhance existing technical capacities should be explored. On the one hand, the Project will consult with country focal points to evaluate if the people trained were using the knowledge acquired. On the other hand, the Project will work in collaboration with the other partners of the Summer School to improve the training program and adjust the selection of trainees to involve country focal points earlier in the process. Finally, to reduce costs, the project suggested the possibility of hosting this and other planned training activities on board the vessel *Intermares*, which was made available by Secretaria de Pesca as in-kind contribution to the Project.

Any other matters

30. Recalling ongoing discussions on the situation of the FAO Regional Projects in relation to the sub-regional approach of the GFCM, DGMARE requested the opinion of the Coordination Committee on the possible future integration of the Regional Projects in the framework of the GFCM.
31. The CopeMed Coordinator explained to the Committee the current administrative issues faced by the Project and the potential advantages, in this respect, of a future integration with the GFCM. He explained that because of the annual cycle of funding from donors, FAO is required to prepare every year new project agreements with the countries. FAO cannot implement project activities in the beneficiary countries before the project agreements are signed between FAO and the countries. The process of signature can take several months to be completed causing extensive delays in the implementation of activities. Moreover, he remarked that the annual funding cycle precludes the hiring of a more permanent staff to the project. He noted that FAO has been trying to implement some mitigating measures to avoid delays and to ensure that planned activities are implemented, such as obtaining waivers for carrying out sub-regional activities (e.g. trainings and working groups) and requesting DGMARE to extend the termination date of the annual grants. He also added that during the signature of the 2019 grants, FAO informed countries of the multi-annual nature of the project with the intention to avoid the need for annual signatures. The effectiveness of this measure is yet to be tested. He informed the Committee that an additional solution discussed among FAO, GFCM and donors was the possibility of integrating the project under the framework of the GFCM. 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. He finally mentioned that, based on discussions with DG MARE, such integration could be done starting in 2021.
32. Morocco expressed the importance of maintaining the current working approach of the Project, including the independence and decision making role of the Coordination Committee, which has been successfully guiding the project to respond to countries priorities, not exclusively linked to the GFCM work plan. He remarked that the integration should not affect the current working approach but address administrative issues.
33. Tunisia echoed the position of Morocco and remarked that the integration should further strengthen the GFCM sub-regional approach. The delegate of Tunisia also requested further information on how the budget for the Projects would be affected by the integration. DGMARE informed that in principle specific budget lines could be defined for each Regional Project in the GFCM grant, like it is currently done for the Black4Fish project run by the GFCM.
34. Spain, while recognizing the potential benefits of integration in GFCM framework regarding administrative issues, highlighted the importance of

maintaining the essence of the Project, including the tasks of the Coordination Committee, the staff, the headquarters in Málaga and the Project name, and ensuring that the process of integration does not lessen the capacity of the Project to work on different issues identified by its Committee to fulfill the overall objective of achieving sustainable fisheries, as a main contribution to the GFCM goals at subregional level.

35. The Committee finally 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 concept note should be sent to countries in due time

Adoption of the report

36. The Committee adopted the work plan. The report will be edited and finalized together with the appendices to be finally adopted on-line after a revision by all participants before the end of 2019. The report will be published as a new CopeMed Technical Document.

Date and place of the next coordination Committee

The Committee agreed to organize the thirteen Coordination Committee meeting in the fourth quarter of 2020

Closure

37. The delegates thanked the host country and the CopeMed Project for the organization and to the chairperson for his management of the meeting. Finally the Chairperson declared the meeting closed.

Table 1. List of activities foreseen in the next Intersession Period Dec-2019-Nov 2020

ACTIVITIES	Meetings Tentative quarters
1. Support case study for implementation of EAF management plans in Bejaia, Algeria – Stakeholder meeting(s) for Bejaia Pilot Plan on EAF	During the whole year
2. Support new case study for implementation of EAF management plan in the M'Diq bay in Morocco – Preparation of baseline report – Stakeholder meeting(s)	First-Second
3. Support the Implementation and monitoring of the Management Plan in El Bibane and the EAF Case study in Djerba, Tunisia	During the whole year
4. Assessment of the vulnerability of fisheries to climate change and identification of adaptive measures – In collaboration with GFCM and regional Projects, organize a session within the Sub-regional committees.	First
5. SG on stock assessment for demersal species in the Alboran sea (GSAs 01, 02, 03 and 04-W).	Fourth
6. SG on stock assessment for the small pelagic in the Alboran sea (GSAs 01, 02, 03 and 04-W)	Fourth
7. CopeMed-MedSudMed Workshop for follow up on stock assessment of <i>C. hippurus</i>	Third-Fourth
8. Finalize analytical work of the three species of TransBoran	First-Third
9. Ichthyoplankton survey to test larval dispersion models in Alboran	First
10. Final workshop of TransBoran for integration of results and simulations of populations dynamics	Fourth
11. Summer School on quantitative fisheries stock assessment methods organized by FAO Regional projects- GFCM-JRC	July
12. Technical assistance for experimental fishery on <i>Coryphaena</i> in Algeria	Throughout the year
13. Training Workshop on tools for otoliths readings in collaboration with the IEO	TBD
14. Training workshop on the use of LEK methodology to collect information on NIS in collaboration with the Regional Projects	TBD

15. Facilitate attendance of national experts to the relevant meetings of GFCM and its subsidiary bodies	Throughout the year
16. Promote publications of fishery related information produced by scientist in the CopeMed sub-region,	Throughout the year
17. 13th Coordination Committee meeting.	Fourth

12th Meeting of the CopeMed II Coordination Committee
Malaga, Spain 28-29 November 2019

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12th Meeting of the CopeMed II Coordination Committee
Malaga, Spain 28-29 November 2019

Provisional annotated Agenda

THURSDAY 28th November, 9:00-17:30

1. Opening of the meeting, election of Chairperson and Adoption of the Agenda

2. Report of the CopeMed II Project's Progress

The main activities and the Project's outputs will be presented and reviewed. Information will be provided on the results of the CopeMed II Working Groups, research programs, training and cooperation during the current period.

Coffee break 10:45

3. Proposals on national activities in the framework of the project

The national focal points are invited to present national priorities and to propose subregional activities of common interest.

4. GFCM activities of relevance for CopeMed II

The scientific and technical activities foreseen in the FAO GFCM work plan for 2019–2020 will be summarised. Discussion on how the Project can contribute in a coordinated way to these activities during 2019–2020 will be held.

Lunch time: 13:00-14:30

5. Priority activities for the next period of CopeMed II

A work plan of the Project in the cycle 2019–2020 taking into consideration, priority needs toward the national capacity building for the assessment and management of shared resources will be outlined and discussed. The Committee will be asked to provide orientation on the program presented.

Coffee break: 16:00

6. Other matters

FRIDAY 29th November, 11:00-13:00

7. Adoption of the report

8. Date and venue of the next Coordination Committee

**12th Meeting of the CopeMed II Coordination Committee
Malaga, Spain 28-29 November 2019**

**Report on the intersessional activities of the Project
(November 2018 - November 2019)**

Introduction

This document summarizes the activities carried out by the Project CopeMed phase II from November 2018 to November 2019, including workshops, training, research activities and the technical assistance provided to the countries, as well as the cooperation established with the donors, the GFCM and the SAC and Sub-Committees and other relevant regional institutions.

CopeMed II project, coordinated by FAO-FIAF with office in Málaga (Spain), started in February 2008 and is funded by DG Mare (UE) and the Spanish Government (Secretaría General de Pesca, Ministerio de Agricultura, Alimentación y Medio Ambiente).

The overall objective of the project is to maintain the sustainability of the marine resources in the Central and Western Mediterranean and their ecosystems, taking into account environmental, biological, economical, social and institutional issues, and promoting scientific cooperation among the regions. Countries involved are Algeria, Libya, Morocco, Tunisia, Malta, Italy, France and Spain. FAO-FI, GFCM, and the two donors are also members of the Coordination Committee guiding the project.

CopeMed II conducted activities during the period November 2018 to November 2019 following proposals from the national delegates, in close coordination with FAO-FIAF responsible and according to the guidance provided by the Coordination Committee (CC) in November 2018. The work programme and recommendations of the 11th Meeting of the CopeMed II Coordination Committee were implemented according the availability of budget. The activities carried out during the inter-committee period comply with the methodological framework of the Project and its mandate for this phase.

This report details the main outputs of the Project activities and the results achieved structured by three main objectives, consistent with the original project document and the latest grant proposal to the EU DG Mare.

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 been supporting capacity development in the participating countries to put in practice the Ecosystem Approach to Fisheries (EAF) through the development of management plans in selected fisheries operating in national waters. After a first training workshop that was held in 2016, a series of pilot studies were proposed in different countries:

In Tunisia, the first pilot Study was developed during 2017-2018 for the Small scale fisheries in El Bibane lagoon. The proposed Management Plan was adopted by the National Authorities in December 2018 and is currently in process of implementation. CopeMed II is member of the “Comité Technique de Suivi et de Concertation (CTSC)”, in charge of the monitoring of the plan, and is also supporting a specific study to understand migration patterns of priority species between the lagoon and the surrounding open sea. In March and in October 2019 two meetings were organised and an international consultant was engaged to supervise the study which is being carried out by the INSTM.

In addition, a second pilot has been launched in Djerba Island, Tunisia in close collaboration with FAO Inter-Regional Technical Cooperation Program (TCP) on “Blue Hope in the Mediterranean”, aimed at enhancing capacity of countries and fisheries-dependent communities to develop multi-sectoral approaches and investment plans for sustainable coastal activities, including fisheries, aquaculture and tourism. The first mission was held in June 2019, first consultation in July 2019 and second one in November 2019 with good participation of the different stakeholders.

In Algeria a Pilot study on EAF is being developed in the Coastal area of Western Bejaia. Initiated in September 2018 with the objective to support the development of a management plan for fisheries and other economic activities in the area that already holds a National terrestrial Park. Since then, a total of four stakeholder consultations have been held. In February and in June 2019 with participation of all the sectors (including fisheries, aquaculture, environment and tourism). All four meetings provided inputs to the baseline report which is in progress under a wide consultation process. Next phase will involve a Risk assessment workshop planned for end 2019/early 2020. The pilot is being carried out by the CNRDPA and it is also linked to Blue Hope TCP.

During the last Coordination Committee, Morocco 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 the context, the issues and the study area. It was agreed to focus on the Eastern part of the bay where different fisheries

(i.e.:trawlers, coastal longliners and purse seiners together with artisanal vessels) and different economic activities (aquaculture, tourism, industry, maritime transport) interact and may be source of potential conflicts. In close collaboration with the scientists of the INRH a detailed work plan was prepared for 2020 which includes the establishment of the EAF project team, the elaboration of the baseline report and three meetings with stakeholders.

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

In the framework of the GFCM mid-term strategy towards the sustainability of fisheries in the Mediterranean, and with the objective to advance in the development of a regional strategy to cope with the effects of climate change on fisheries, a roadmap was established by GFCM which foresees the implementation of vulnerability assessment case studies in each of the Mediterranean sub-regions. A preliminary assessment for small pelagics and demersal fisheries in Western Mediterranean was carried out by a CopeMed II consultant, in close consultation with GFCM. It was validated by the national focal points and presented during the GFCM Fish Forum in December 2018 and at the Subregional Committee on Western Mediterranean last April 2019 in Sète, France. As a next step, an expert meeting will be organized with other sub-regions with GFCM and FAO Regional Projects (probably back-to-back to the SRC-WM in early 2020) to advance on the identification of adaptation options for the identified priority risks and vulnerabilities.

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

This objective includes all the activities of 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 as established by the 21st SAC Session.

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

CopeMed II has continued providing assistance to scientists and administration of Algeria in the domains of data collection for both biological and socio-economic analysis. The work of Pilot Project in the Eastern part of Algeria (Annaba) has continued to complete two years of biological sampling and socio-economic surveys in line with the requirements of the DCRF covering all the identified fleet segments of two priority species: hake and sardine. The data are being stored in a database and transmitted to the Ministry of agriculture, fisheries and rural development of Algeria. The Socio-economic aspects of the fishery have been described thanks to a survey covering 1217 interviews in two years to small scale vessels, trawlers and purse seiners. A technical report is finalized and it is in editing phase to be published as FAO technical document. (draft available as *FAO-CopeMed II CC12/2019/Inf 12*)

Agreement was also reached with the fishery authorities to continue the assessment of priority stocks in collaboration with the neighbouring countries. On this regard progress has been achieved on the incorporation of data from the western part of GSA 04 to the assessments in Alboran sea. Furthermore, data from the pilot project of two years of monthly sampling in Annaba are ready for a potential joint stock assessment combining GSAs 4 and 12 in collaboration with INSTM and

MedSudMed. The opportunity to undertake this joint assessment is pending of the outcomes of the TransBoran and similar projects in the area that will shed light on the definition of shared stocks.

CopeMed II continues providing technical and financial assistance to Morocco since June 2018 to carry out the biological sampling of *Pagellus bogaraveo* to contribute to the assessment of the state of the stock and provision of scientific advice. Two data preparation meetings were organised by the project in March 2019 in Cádiz, previous to the Sub-regional Committee on Western Mediterranean and a second one in October 2019 in Málaga to feed the two benchmark sessions organised by GFCM in 2019. The information produced by this activity on data collection and the associated technical meetings organised by CopeMed II have contributed to the provision of scientific advice and helped in the adoption of the *Recommendation GFCM/43/2019/2 on a management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3)*.

European Eel is also a priority species at basin level. With regards our activities on this species, it is worth to recall that the Commission adopted, at its 42nd Session in November 2018 the Recommendation GFCM/42/2018/1 on a multiannual management plan for European eel (*Anguilla anguilla*) in the Mediterranean to rebuild the stock through a two-step approach, whereby basic management measures (fishing authorizations, reporting of landings, catch reductions, temporal closures) would be implemented as well as the development of a research program. Pending the launching of this research program, CopeMed II has continued supporting a pilot data collection exercise in Tunisian lagoons from April to June 2019 with the elaboration of the corresponding technical report. The results were presented at the Workshop on the management of European eel Rome 16-17 April 2019 in Rome.

2.2. Subregional research activities related with shared stocks

- Follow up on *Coryphaena hippurus*:

In view of the importance of dolphinfish, *Coryphaena hippurus*, to several CopeMed II countries, the project continued to support a subregional research action on the species. The pilot survey carried out in 6 ports of Mallorca island, in the last quarter of 2018, produced very relevant results. (The report is available as *FAO-CopeMed II CC12/2019/Inf. 06*) Daily information on fishing trips gathered by an observer on board, revealed several aspects of this fishery that has served to: i) select the best unit of fishing effort; ii) assess the impact of the FADs on accompanying species; iii) estimate average number of visited FADs and of fished FADs per trip; iv) length distribution of dolphinfish during the fishing season and v) evolution of the market.

In October 2018 a meeting of the CORY-WG was organised in Cádiz (on board the Intermares vessel) to update the most recent data from the fishery, discuss some remaining issues on the biology to feed the research paper in progress and to try a new assessment with standardized CPUE indices from the FADs and from longliners. At the view of the available data, the group agreed that the best type of models to run a joint assessment are the production/depletion models. Besides Monthly Depletion Estimator used in the last meeting of 2016 we could test a new model developed in R, the CatDyn model. It was originally developed for cephalopods populations and it needs some adaptation for the dolphinfish case. We are in contact with the developer who has shown availability to collaborate with the group.

Main conclusions of the CORY-WG are available as *FAO-CopeMed II CC12/2019/Inf. 07*. The most relevant refer to the fishing effort measure (fishing time from the exit to the entry on port) and also to new growth dynamics described with a Gompertz equation that fits better to the size increase in the first age classes than the classical Von Bertalanffy. The group further noted that considering the catch trends, the mean sizes in the catches (either in FADs and in longlines fishery) and the high productivity of dolphinfish, there are no apparent signs that the stock is outside of safe biological limits. s.

The whole text of the report is in progress. The review paper is now finished, ready to be sent to the journal with the title “*A global review of dolphinfish (Coryphaena hippurus) biology and an update on its fishery in the Mediterranean Sea*”.

Algeria has requested assistance to develop the FADs fishery in its waters. During the current fishing season, (September- December 2019) technical support is being provided to test experimental fishing and pilot data collection in Algeria, with the engagement of Tunisian experts. A first mission has been held on the 26-30 October 2019 to check the installation of FADs in an area close to Bouharoun and to carry out first fishing operations, which has confirmed the presence of dolphinfish in the area. An estimation of potential abundance will be possible only after a few years of experimental fishing. (Report available as *FAO-CopeMed II CC12/2019/Inf 14*).

- Follow up on *P. bogaraveo*

At the request of 20th Session of SAC to compile all necessary data to produce a Benchmark assessment in 2019, CopeMed II, has organised two “Data Preparation Meetings” the first one from 1-3 October 2018 at the INRH in Tangiers, Morocco and a second one in Cádiz on the 19-21 March 2019. The outputs of both meetings were presented and fed discussions at the GFCM WGSAD in November 2018 and further Benchmark session back-to-back to the Subregional Committee on Western Mediterranean in Sète, March 2019 (report available as *FAO-CopeMed II CC12/2019/Inf 02* and also published in the Project web site as Technical Document n° 52).

Furthermore, a third meeting was organised by CopeMed II on the 28-31 October 2019 in Málaga to follow up some pending tasks from the first benchmark of March related to the biology of the species and the standardization of CPUEs. The Group of experts from Morocco and Spain met for three days to collate the new biological information produced by the pilot study during the first year of biological sampling in Morocco and to discuss on standardization methods of CPUEs as the only possible tuning index in the absence of biomass indices from independent surveys. As a result of these three meetings the fleets of the two countries have been characterized in a very detailed manner that has allowed the split the data in three different segments for the first time with the aim to refine the stock assessment models outputs. Finally a set of biological parameters including, growth, length-weight relationship, maturity and natural mortality could be agreed for the whole Gibraltar Straits. In addition the mapping of the fishing grounds in the area is in progress, thanks to the use of VMS data from both countries.

All these results together with the outputs of preliminary model runs with Gadget, VPA, LCA, DioDyn and Spict will be presented at the Benchmark on blackspot seabream which will continue in parallel to the upcoming WGSAD next 9-14 December in Rome.

After the recent adoption of the *Recommendation GFCM/43/2019/2 on a management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3)*, it is important to note the efforts deployed by CopeMed in this period and to acknowledge the great

availability of the experts from the Moroccan and Spanish research institutes (INRH and IEO) to put at disposal the existing data related to this relevant fishery. The data were analysed and compared during the CopeMed-WGs and a common database has been created which is shared by the group in a very transparent way.

As a follow up of this collaborative effort, a second “Data preparation meeting on Blackspot seabream (*Pagellus bogaraveo*) in the Strait of Gibraltar” was organised in Cádiz on the 19-21 March 2019. At this occasion, researchers from the INRH and the IEO met for three days in the University of Cádiz to collate and update all the existing biological and fisheries data of this species. Specific effort was devoted to the standardization of CPUEs which included the characterization of the operating fleets and the definition of nominal effort.

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

In prevision of the Benchmark sessions planned by the GFCM in 2019 on sardine in Alboran sea and hake in all Mediterranean, the two CopeMed II Study Groups met in separate weeks to allow for enough time for data collation, preparation and discussions.

The Group of demersal species held its 8th session on the 28-31 of October 2019 in Málaga. This meeting included three sessions: i) Continuation of benchmark session on *P. bogaraveo* in the Strait of Gibraltar; ii) Joint GFCM-CopeMed II Data Preparation meeting on hake; and iii) Working Group on stock assessment of demersal species in GSAs 01, 03 and 04. Regarding *P. bogaraveo* the main outcomes have been reported in the section above.

With regards to hake, the Data Preparation meeting was co-organised with GFCM and counted with the attendance of the appointed Coordinator of hake in Western Mediterranean, Ms. Beatriz Guijarro. The experts from Algeria, Morocco and Spain provided to the meeting the data needed to cover the objectives of the meeting: *i.e.*: an in depth analysis of existing Biological, Fishery-independent and Fishery-dependent data with the aim to facilitate decisions on the best way to perform stock assessment.

The work during the three days, on all the information available, produced figures and tables which allowed preliminary comparative analysis and well-structured data files ready to feed the Benchmark on hake next 2-7 December 2019 for application of best models and the corresponding scientific advice.

The data from the Western GSA 04 (Alboran Area) and Eastern GSA 04(Annaba area) were analysed. The length distributions in the Western side have smaller means than in the East. Landings are also smaller in the West than in the East. A further comparison of the Eastern data with the data from GSA12 are needed to confirm similarities or differences with the neighbouring Tunisian waters.

In addition the Group decided to update the assessments done in 2018 with more recent data and several model runs were performed during the third session of the meeting: In particular the experts decided to present for validation preliminary runs for the assessment of: hake in GSA 1-3 for years (2010-2018) using XSA. Hake in GSA 4 for the years (2015-2018) using VIT. Deep water pink shrimp in GSA 1-3-4 using VIT. The two species resulted in overexploitation by all the different models used. Moreover, it was agreed to run CMSY for hake in GSA 1-3-4 combined for a global vision of catch trends in Alboran sea. The corresponding report and SAFs are currently under preparation.

With regards small pelagics, also with a view in the next Benchmark session planned in December 2019 and with the objective to provide due attention to the Work-plan for the intersession 2018/2019 towards the assessment of sardine in the Alboran Sea (GSAs 01 - 03 - 04) adopted by the 21st session of SAC¹, all the efforts of this Study Group have been devoted to sardine. To comply with the work plan, the Project supported the attendance of experts to an ICES Workshop on standardization of Age readings, and liaised with the different institutions to follow up on the collation and re-organisation of the existing information to facilitate the analysis at the Data Preparation and Benchmark session in November-December 2019.

The Study Group on Small pelagics, met on the 18-22 November 2019 in Málaga with the objective to accomplish as much as possible the tasks indicated in the Work-Plan for 2019 and to prepare the data for the further assessment. The meeting was co-organised with GFCM and counted with the technical assistance of an external expert, Mr John Ramírez specialised in small pelagics of the western Mediterranean. The most relevant outcomes of this Study Group can be summarised as follows: Tables of data well-structured for further comparative analysis and decision on: set of biological parameters (Linf, K, t0, a, b, M, L50), best tuning indices (surveys or commercial standardized), best models (production models, Statistical) for the assessments to be performed at the Benchmark Session next 9-14 December in Rome.

The corresponding report and the information to be provided to the benchmark are currently in progress.

- Progress on the identification of stock boundaries:

With regards the identification of stocks units, CopeMed II has put in place a medium term research program to identify stocks of sardine, hake and blackspot seabream and their spatial distribution in the Alborán sea (GSAs 1, 2, 3,4 and adjacent waters). The program was named « Transboundary stock structure of sardine, black spot seabream and hake in the Alboran Sea and adjacent waters » (Acronyme TransBoran). It started in January 2018 and was intended to have a minimum duration of two years. The project uses a multidisciplinary approach i.e.: genetics techniques, parasites, life history traits, elemental composition, body morphometry, meristics and fishery patterns over a range of fish samples collected simultaneously at 17 spots in Algeria, Morocco, Spain and Tunisia including NE Atlantic sites and extremes spots for contrast (i.e. Cantabrian Sea, Portugal, Malta and Greece).

As of the middle of November 2019, the progress on the TransBoran project is summarised hereby: all samples of the three species have been collected, processed according to an agreed protocol, and sent to the laboratories in charge of the different techniques. The seven institutions involved (CNRDPA, INRH, IEO, INSTM, University of Málaga, University of Bologna, University of La Sapienza) in the 5 participating countries (Algeria, Italy, Morocco, Spain and Tunisia) have started the respective analysis.

Furthermore, the hydrodynamic modelling of the strait of Gibraltar is progressing by the team of the Physical Oceanography at the University of Málaga. Several simulations of particles dispersal under different conditions and depths have already been tested, in particular for eggs of sardine and blackspot seabream, with spawning areas well identified and displacement of eggs being simulated at different time lapses coupled with the development of the eggs to larvae. The trajectories of the

¹ Appendix 12/A of the Report of the 21st Session of SAC 24-27 Junio 2019, Cairo, Egypt.

particles show connectivity paths between spawning areas and fishing grounds in both areas North and South sides of Alboran Sea. These results are very promising and will continue progressing in 2019-20 for the third species (hake). An ichthyoplankton survey is being planned in early spring 2020 thanks to the offer of a research vessel by the Secretaría General del Mar of the Ministry of Agriculture, food and fisheries of Spain. More details of the survey can be found in the document: Proposal of Priority Activities for the next year of CopeMed phase II available as *FAO CopeMed II CC12/2019/03*.

A Mid-Term workshop of the TransBoran Project was organised on the 22-24 July 2019 in Málaga. The meeting was attended by 27 experts from (Algeria, Italy, Morocco, Spain and Tunisia). The experts shared preliminary results of the different disciplines: genetic markers, morphometry (body and otoliths shape), meristics, microchemical composition, parasites, analysis of fishery data and life history traits and hydrodynamic modeling. The three techniques that have completed the analyses are: i) hake parasites, ii) fisheries information for hake, and iii) hydrodynamic simulations for blackspot seabream. The workshop agreed on a work-plan for the next semester to finalise the remaining tasks. The full report is available as *FAO-CopeMed II CC12/2019/Inf 05* and has been published as Technical Document n° 52 in the project website.

While some of the preliminary results for hake (parasites and fisheries data) suggest certain demographic segregation between north and south, final interpretation need to be done at the view of all analyses completed, which will provide complementary information of connectivity processes and segregation at different spatial scales.

The pace of the different analysis has been uneven for the different techniques. Some delays have been due to circumstances beyond the control of the participants and refers basically to the long FAO administrative procedures for procuring material and issuing contracts.

Preliminary results of TransBoran were regularly presented to the relevant meetings of CopeMed II and of the GFCM including the WG on Stock assessment last November 2018 in Rome and the Subregional Committee for Western Mediterranean held in April 2019 in Sète.

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

- Participation on the “Workshop on Age reading of European Sardine (*Sardina pilchardus*) (NE Atlantic and Mediterranean) [WKARAS 2]” organised by the ICES in Lisbon, Portugal, 18-22, February, 2019.

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- Third edition of the Summer School in quantitative fisheries stock assessment in collaboration with FAO Regional Projects, GFCM and EU-JRC. The third edition of this two-weeks course was held on July 2019 in Capo Granitola, Italy.
 - Training stay at the University of La Sapienza for techniques of fish parasites identification by genetic analysis. April 2019. Rome, Italy.
 - Training course on the software OTolab for image analysis of otoliths including morphometry and age assignation. University of Málaga, July 2019.
 - Training stay on otoliths reading for *P. bogaraveo* in the IEO laboratory of Cádiz. September 2019.

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* and on the collection of data for stock assessment in GSAs 04 and 12 which are co-funded by both projects and organised jointly.

The collaboration with the scientists and the administration of the participating countries has been enhanced by the CopeMed II staff visit to Algeria in January 2019 to hold meetings with the Director General of Fisheries of the Ministry of Agriculture, Rural Development and Fisheries as well as with the Director and staff of the CNRDPA for better planning the activities proposed at the 11th CC. A road map was agreed upon with the Algerian authorities for the year 2019 which included all activities aimed at the consolidation and expansion of the system of biological data collection for the assessment of priority stocks, to continue the implementation of the EAF pilot in Bejaia and to test new fishing techniques for the development of small-scale dolphinfish fisheries.

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.

In particular in the framework of the GFCM mid-term strategy towards the sustainability of fisheries in the Mediterranean, it is worth to mention the co-organisation between GFCM and CopeMed in four **data preparation meetings** for: **i)** blackspot seabream in Cádiz, March 2019 before Subregional Committee on Western Mediterranean; **ii)** second one on blackspot seabream held back-to-back with the CopeMed II Study Groups on stock assessment in October 2019; **iii)** hake within the CopeMed II Study Groups on stock assessment in October 2019; and **iv)** sardine within the CopeMed II Study Groups on stock assessment in November 2019. The Project is also working on the development of case studies to test adaptation strategies to cope with potential effects **climate change** on fisheries in Western and Central Mediterranean.

CopeMed II facilitated the participation of countries in regional activities, dissemination of documents, contribution of national data, knowledge and ideas of national experts in the international sphere of the GFCM.

During the reporting period, CopeMed II participated and funded a total of 20 experts in the following GFCM activities:

- GFCM Working Groups on Stock Assessment (WGSA) of Demersal and Small Pelagic Species, 19-23 November 2018, Rome;
- FishForum on Fishery Science December 2018 in Rome;
- Working Group on Small Scale Fisheries (WGSSF), 7-8 March, Pogdorica, Montenegro.
- Sub regional Committee for the Western Mediterranean (SRC-WM), 5 April, 2019 Sète
- Workshop on the management of European eel Rome 16-17 April 2019 in Rome.
- 21th Session of SAC, 24-27 June 2019 Cairo, Egypt.
- 43rd Session of the GFCM Commission, 4-8 November 2019, Athens, Greece.

3.3. Coordination with the donors

The Project has strengthened the liaison with the Donors (Secretaría General del Mar of MAPAMA and EU-DG-MARE) by holding coordination meetings with them either during the occasion of GFCM intersessional meetings or in specific meetings. One of this coordination meetings was held on the 14th October 2019 in Brussels to present progress on the implementation of activities and discuss plan of activities for the future.

A series of meetings were held at the Ministry of Agriculture, Fisheries and Food in Madrid headquarters to discuss on ways of improving the in-kind contribution through potential activities to be developed in the “Training and Cooperation vessel Intermares”. The vessel can host training courses and working groups along with research activities at sea. The working Group on *Coryphaena hippurus* held last 8-9 October as mentioned above was the first of these meetings held on board of the vessel, at the port of Cádiz. A formal offer has already been received by FAO for an Ichthyoplankton survey in the Strait of Gibraltar in February-March 2020.

3.4 Project communication

CopeMed II contributed to keep experts, research institutions, fisheries administrations, main fisher's organisations and other stakeholders informed on fisheries and marine-related issues by distributing information generated by the project: meeting agendas, technical documents, meeting reports and occasional papers. Furthermore, the project publishes information from other sources (courses, meeting, documents, jobs opportunities) through the mailing list and website.

The Project Fishery Expert, participated in the meeting of the “*Scientific Forum of Spanish Fisheries*” on 17-18 September 2019 in Almeria, Spain. At that occasion, she had the opportunity to introduce the role of the FAO Regional Projects in the context of fisheries cooperation. In particular CopeMed II activities in Western and Central Mediterranean in the last 10 years were presented highlighting the main outcomes and the support received by the donors and the appreciation of the beneficiary countries. The forum explicitly apprised the outcomes of the projects, to strengthen the capacities of the countries of the southern Mediterranean and to promote collaborative projects between countries of the region of great relevance such as those related to connectivity of fishery resources in the Alboran Sea.

The CopeMed II experts networks are ensured, further to the website, through the maintenance of the on-line WorkSpace for more direct exchange of information among the experts. This WorkSpace contains a series of portals (sharepoints) for each 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, Dolphinfish fisheries, as well as for the Coordination Committee meetings.

In order to disseminate the activities and outputs being produced by the project, the web site is continuously updated, and technical documents are being published. 19 documents have been produced during the reporting period, by the CopeMed II staff and by the consultants engaged under the framework of the TransBoran Project, Coryphaena fisheries, EAF pilot, Adaptation to Climate Change, Socio-economic analysis and other activities.

The most relevant reports are made available in the project' Web page www.faocopemed.org which is continuously updated. In addition some of them which are considered final versions and that constitutes key documents of the main priority activities in the reporting period, have been also made available as Informative documents to this 12th Coordination Committee as indicated in the list below:

Documents produced by CopeMed II in the Intersession period (November 2018-November 2019)

1. Report of the 11th meeting of the Coordination Committee of the FAO-Project CopeMed II held in Malaga (Spain) on 7–8 November 2018 CopeMed II - Technical Documents N° 49. (*FAO-CopeMed II CC12/2019/Inf 01*).
2. Report of the joint CopeMed II GFCM Data preparation meeting of blackspot seabream (*Pagellus bogaraveo*) in the strait of Gibraltar (Cadiz, Spain, 19-21 March 2019). Technical Document n° 51. (*FAO-CopeMed II CC12/2019/Inf 02*)

3. Report of the Mid-term Workshop on TransBoran project “Transboundary population structure of sardine, european hake and blackspot seabream in the Alboran sea and adjacent waters: a multidisciplinary approach”. (Malaga, Spain, 22–24 July 2019). Technical Document n° 52. (*FAO-CopeMed II CC12/2019/Inf 05*)
4. Hernández, P., Vasconcellos, M. 2019. La cooperación pesquera en el mediterráneo occidental. Proyecto FAO - COPEMED II. 4 pp. In Rueda, F.; Camiñas, J. A., Alcántara, A., Victoria, E.M. and J. Bataller. I Foro Mar de Alborán. Encuentro de mares, ciencia y culturas. Spain.
5. Othman Jarboui, O.; Djabou, H.; Vasconcellos, M. and M. Bernardon. Implémentation de l’approche écosystémique pour l’aménagement de la pêche de la lagune de El Bibane. Rapport de Référence. 2018. Job Number: CA1012FR - Language: French FAO, Rome, Italy, 80 pp.
6. Nande Manuel. A cost-effective DNA extraction protocol for future analysis of samples. July 2018.
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**12th Meeting of the CopeMed II Coordination Committee
Malaga, Spain 28-29 November 2019**

Proposal of Priority Activities for the next year of CopeMed phase II

This document aims to suggest to the Coordination Committee members elements for discussion on the Project Work Programme for the next inter-Committee period (2019-2020).

CopeMed Phase II is contributing to strengthen and improve the regional balanced cooperation among fishery actors in the participating countries. The Project supports the participation of the countries' experts in regional scientific working groups particularly those related with shared stocks. Capacity building in different techniques and disciplines related to fisheries research is one of the pillars of the Project with more than 40 scientists trained annually on topics such as: stock assessment methodology, collection of statistical data, determination of biological parameters, socio-economic indicators, technical measures for sustainable management and other more specific and tailored for specific needs of each country.

The priority actions of the project for the next inter-committee period are agreed upon within the Coordination Committee taking into account the annual program of the General Fisheries Commission for the Mediterranean (GFCM) and its Scientific Committees, its Mid-term Strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries and are in line with the goals defined by the Malta MedFish4Ever Ministerial Declaration.

The final annual Workplan 2019-2020 that should be adopted by the CC of CopeMed II, will take also in consideration the proposals and recommendations of the national members during the 12th Coordination Committee meeting, in accordance with the regional priorities expressed by the countries on the main components and according to budget availability.

The project is executed by the Marine and Inland Fisheries Team (FIAF) of the Fisheries and Aquaculture Policy and Resources Division of FAO. The Acting Coordinator is based in Rome and the staff: fishery expert and office assistant are based in Málaga, Spain. The coordination and synergy in organizing joint activities and share human and financial resources with the other FIAF Projects of the different Mediterranean regions (AdriaMed, MedSudMed and EastMed) is a priority to CopeMed II.

This document provides suggestion for future activities, based on actions already in course and those that are done regularly, however it will be enriched during the meeting discussions and a more definite work plan will be agreed by all participants.

CopeMed Phase II. 2019-2020 Workplan

In order to facilitate the presentation of the Workplan, activities are grouped by the three main objectives of the Project, consistent with the original project document and the latest grant proposal to the EU DG Mare.

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)

The Project will continue providing the necessary assistance for the implementation of management plans under the Ecosystem Approach to Fisheries in selected case studies at the proposal of the national authorities.

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 been supporting capacity development actions in the participating countries to put in practice the Ecosystem Approach to Fisheries (EAF) through the development of management plans in selected fisheries operating in national waters. After a first training workshop that was held in 2016, a series of pilot studies were proposed in different countries. The project started supporting a pilot in El Bibane lagoon, Tunisia, in 2017 and in Bejaia, Algeria, in 2018. A new pilot in Djerba, Tunisia, initiated in 2019 in close coordination with the FAO Blue Hope Interregional TCP. During the last Coordination Committee, Morocco requested the implementation of a pilot study in M'Diq bay. A first mission to M'Diq was carried out in July 2019 and a detailed plan of work was prepared for 2019/2020. In line with the EAF principles, the pilot studies involve a series of stakeholder consultations meetings, the compilation and analysis of available information to develop fisheries management plans for the selected fisheries. Once the plans are endorsed by national authorities follow-up support is provided for a second phase of implementation through the set up and operation of advisory committees and specific capacity development actions.

In 2020 the project will continue to support the monitoring phase of the pilot study in El Biban (Tunisia), the finalization of the three management plans for Djerba (Tunisia), Bejaia (Algeria) and M'Diq (Morocco). The process during 2020 will involve at least six meetings with stakeholders in the different pilots (about 15 participants each) and short term technical assistance to address technical capacity needs in each location. Furthermore, a research plan for the study of the fish migrations between the lagoon El Bibane (Tunisia) and the Mediterranean and their consequences on the production and seasonality of the fishery that was initiated in 2019, will continue with the engagement of a Mediterranean expert as coordinator of the study. It is also foreseen the publication of baseline reports with the technical basis for the management plans.

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

With the objective to advance in the development of a regional strategy to cope with the effects of climate change on fisheries, a roadmap to provide advice on the vulnerabilities and adaptation options for fisheries in the region was adopted by the 20th Session of SAC. During 2019 the project assessed the vulnerability of small-pelagic and demersal fisheries to the effects of climate change in the Western Mediterranean. The results were presented and discussed at the SRC-WM in April 2019. At the 21st session of SAC countries praised the advances in the vulnerability assessments and

highlighted the importance of pursuing the work at the subregional level to ultimately provide guidance on potential adaptation measures. To this end the SAC recommended the organization of an expert meeting on climate change in December 2019. In view of the change in the calendar of activities of the SAC, it became unpractical to organize the expert meeting in December 2019. The project is currently discussing with the GFCM the possibility of holding the meeting back-to-back or within the SRC-WM in the first quarter of 2020.

The expert meeting will serve to review work done and set the way forward to identify adaptation option for the main vulnerability factors identified. Working in close coordination with the GFCM, the project will support follow up actions coming out of the expert meeting aimed at identifying examples of adaptation measures to cope with climate change impacts on fisheries in the Western Mediterranean, contributing to the formulation of a regional strategy on climate change.

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

The Project, will continue assisting national institutions to put in place or further develop data collection programs to fill the existing gaps. The aim of this action it to contribute with technical and financial support to comply in time and format with the data reporting obligations set at national and regional levels and to maintain complete databases and information systems owned by the relevant national institutions.

The integration of socio-economic data is also a priority. The project can support actions aiming at enhancing national capacity for the collection and processing of this type of data, necessary to produce simulation of management scenarios in view of new management plans to be set forth.

Due attention will be given to the assessment of the stock status for priority species agreed by the SAC and by the national institutions.

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

CopeMed will continue to support national experts from research institutes and fisheries administrations to improve the collection of the biological and socio-economic data necessary for the monitoring of fisheries.

For the last two years the project has been supporting the collection and analysis of biological and socioeconomic data in the Eastern part of Algeria. The objective of the action was to develop capacity in the collection and analysis of socioeconomic data and to obtain biological data for the assessment of the status of priority species, such as hake and sardine. The collection of socioeconomic data was discontinued in 2019 with the achievement of the capacity development action. A report is being produced which summarizes the main results of this socio-economic analysis. On the other hand the biological data collection was continued and extended in 2019 to the central part of Algeria. With a view to obtain a consolidated database for the assessment of the priority stocks, the biological data collection will continue in 2020 on a monthly basis covering three species (hake, sardine and red mullet) in eastern and central areas of the country. The corresponding databases will be fed and analysis will be performed to support the assessment of the status of hake, sardine and red mullet in Algeria.

In order to assist the SAC in improving its scientific advice to manage the blackspot seabream fishery in the Strait of Gibraltar, the biological sampling program launched by CopeMed II in Morocco in 2018 will continue throughout 2020 on a monthly basis to contribute to the assessment

of the stock. The possibility of organising a longline survey with the Training and Cooperation Vessel “Intermares” of Spain has been explored by the experts during 2019, but, unfortunately, the technical characteristics of this vessel do not match the requisites for the use of loglines similar to those used by the professional fleet and therefore other options have to be sounded. One possible solution would be to rent a professional vessel (either Moroccan or Spanish) and perform a tailored *Ad-hoc* short survey. Alternatively, or complementary, a pilot exercise could be developed with observers on board of commercial vessels to collect all information on any specimen of blackspot seabream caught, and other accompanying species, together with the fishing time and location of fishing grounds.

The Committee is called to discuss on these two possible options to collect complementary fishery independent data on blackspot seabream.

2.2. Subregional research activities related with shared stocks

- ***Blackspot seabream***

The project is foreseeing technical and financial support to progress with the update of assessments done in the framework of CopeMed II to be presented to relevant working groups and the GFCM meetings including the corresponding subregional committee in 2020. The Project can support the data preparation and technical assistance to comply with the scientific monitoring and evaluation of measures established in the recently adopted *Recommendation GFCM/43/2019/2 on a management plan for the sustainable exploitation of blackspot seabream in the Alboran Sea (geographical subareas 1 to 3)* including organizing a workshop to contribute to discussions on potential technical management measures besides minimum legal sizes.

- ***CopeMed SG on stocks assessment for demersal species in the Alborán sea (GSAs 01, 02, 03 and 04 West):***

The list of demersal priority species, in Western Mediterranean as decided at the 42nd Session of GFCM are: *M. merluccius*, *P. longirostris* and *P. bogaraveo*. The project will focus attention on this species in the coming year. CopeMed will organize the Study Groups of demersal species in October 2020. The assessments done at the CopeMed Study Group on Stock Assessment of demersal species recently held in Málaga (October-November 2019) in view of the corresponding Benchmark sessions for hake and blackspot seabream will be presented to the next Working Groups on stock assessment of GFCM next 2-14 December 2019 in Rome. The recommendations and advice provided will be taken into account for the next assessments and will be applied during the next Session of the Study Group in the last quarter of 2020.

- ***CopeMed SG on stocks assessment for small pelagic species in the Alborán sea (GSAs 01, 02, 03 and 04 West):***

CopeMed SG will focus on the two priority species: *Sardina pilchardus* and *Engraulis encrasicolus*. A new meeting of the SG for small pelagics species in the Alboran Sea will be convened for the last quarter of 2019. The recommendations and advice provided will be taken into account for the next intersession.

- Follow up on *Coryphaena hippurus*:

The CopeMed-MedSudMed CORY-WG has met in 2019 to update the information on fisheries from the last three years and to assess the stock of this migratory species. A review has been completed to be published in an international journal. After the adoption of the *Recommendation GFCM/43/2019/1 on a set of management measures for the use of anchored fish aggregating devices in common dolphinfish fisheries in the Mediterranean Sea* by the 43rd Session of GFCM, the Project will support the countries on the needed actions to comply with the transitional measures set out in the Recommendation mentioned above, including organizing workshops to provide scientific basis for further contribute to the GFCM Working group and Research program to be established in 2020.

The Project will continue providing technical support to Algeria to test experimental fishing and pilot data collection in with the aim to develop a potential new fishery on dolphinfish.

- Progress on the identification of stock boundaries:

After the Interim Workshop of TransBoran Project held last July 22-26 in Málaga, (Report available as *FAO-CopeMed II CC12/2019/Inf. 02*), a workplan for the coming months was agreed by the group of experts. For the three pending techniques, it can be summarized as follows:

Genetic Analysis: Genotyping and allele scoring for the three species studied.

Morphometry and meristics, Most of samples are processed, the few remaining samples will be analyzed before the end of 2019.

Microchemical analysis for hake and blackspot seabream samples are in progress.

The statistical analysis combining the different outcomes of the seven techniques are planned for the first half of 2020 and a final workshop will be organized tentatively in June 2020.

In addition, the **hydrodynamic** modelling has advanced substantially, and a set of theoretical larval dispersal trajectories have already been obtained for sardine and blackspot seabream under different conditions of depth, season and tide phase. The best way to confirm the validity of these theoretical trajectories would be to develop a specific **ichthyoplankton survey** during the spawning period of the species. To this aim, CopeMed II has taken advantage of the kind offer of a research vessel by the Secretaría General del Mar of the Spanish Ministry of Fisheries and Agriculture and is currently working with the experts on a plan of survey to be put in place in February-March 2020. The survey would cover the identified spawning areas in western Alboran sea (Morocco and Spain) and would consist of ichthyoplankton hauls along a series of radials to the coast. In addition, the survey would have a training component to allow experts from other countries to improve their skills. The vessel has a capacity of 5 scientists (including experts and trainees) but there could be organized in turns to allow more people on board for a few days each. Official letters have been sent to Spain and Morocco to start the procedures by the respective administrations. A survey coordinator should be nominated in Spain, in Morocco and in Algeria to liaise on the planning and execution of the survey.

2.3. Additional supporting actions for the GFCM mid-term strategy

The Project will contribute to close knowledge gaps on topics of priority identified by the GFCM SAC, including Small Scale Fisheries (SSF), Recreational Fisheries (RF), Vulnerable Marine Ecosystems (VME), Essential Fish Habitat (EFH) and Non-Indigenous Species (NIS) supporting the collection of data on following the protocols and methodologies adopted by GFCM SAC.

Upon request of countries and in support of the GFCM Regional Survey on Small Scale Fisheries (SSF), CopeMed II can assist on the collection of data on selected fishing gears and areas of SSF to contribute to the mapping of the spatial distribution of small scale fisheries at regional level.

In the same line, in order to test the proposed GFCM/SAC methodology for the assessment of Recreational Fisheries (RFs), upon request of the countries, CopeMed would identify and implement pilot case studies to collect data on this unreported fishery

With regards to VME and EFH the project will promote preliminary discussions on the availability of information on VME and EFH in Western Mediterranean vis a vis the GFCM Excel templates adopted by the Working Group on Marine Protected Areas in February 2019. Preliminary discussions on VMEs and EFH will be held within the existing CopeMed Working Groups on demersal and small pelagic species.

Considering the significant role and impact of non-indigenous species (NIS) in the Mediterranean, and in order to contribute to the ongoing GFCM pilot monitoring programme CopeMed could support the compilation of data on the priority list of NIS species, based on current fisheries data collection programs in place and through the application of local ecological knowledge (LEK) survey protocols in countries of the Western Mediterranean.

With regards the standardization of methodologies in the execution and data analysis of surveys at sea CopeMed II stands ready to support countries, upon request, with training and data analysis.

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

3.1. Training activities

The Project will continue to support the strengthening of national expertise through the implementation of specific training with the aim to build a common ground for fisheries science. Training workshops and on-the-job training activities will be organized in different topics according to the needs expressed by this Committee and trying to cover all steps in the fishery science, from sampling and processing of data to stock assessment and management options.

In particular, and not to be considered exclusive, activities foreseen for the coming period include:

- Organization of ad-hoc trainings on methodologies for stock assessment, socioeconomic data analysis and the evaluation of management strategies upon request of countries and complementary to the objectives of the Summer School in quantitative fisheries stock assessment can be planned on a case by case basis.

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- Fourth edition of the Summer School in quantitative fisheries stock assessment in collaboration with FAO Regional Projects, GFCM and EU-JRC. The fourth edition is planned to be organized in July 2020. The program of the school will be modified building on the results of the previous editions, with a view to facilitate the exposure of students previously trained to more advanced models. A more tailored program involving short term stays in different Institutions is envisaged. Travel for young scientists to attend the school and letters of agreement with the hosting institution would be arranged by the Project in collaboration with the other co-organisers.
 - Training on onboard sampling for discards and by-catches. After the first experience, in 2018 in Algeria, the project stands ready to support, under request of the countries training activities for observers on board of commercial vessels to monitor discards and incidental catch of unwanted species.
 - Otoliths reading. Students will be trained in new tools to standardize age reading for different priority species.

The Research and Cooperation Vessel “Intermares” owned by the Secretaría General del Mar remains available to be used as venue of training workshops or other type of meetings. It holds several class-rooms, meeting rooms of different size and well-equipped laboratories for practical training. Lodging and meals would be kindly offered by the Spanish donor.

3.2. Regional coordination, cooperation and synergy

During the inter-Committee period, the project will continue working in tight coordination with the other FAO Mediterranean projects by organizing joint activities, fostering participation of experts in the training activities and adjusting calendars of meetings among them and the GFCM.

In coordination with the other FAO projects, CopeMed will prepare the annual Report of activities and main achievements for the SAC.

Cooperation with the GFCM secretariat and its Subsidiary Bodies will continue through coordination meetings held in Rome, back-to-back in GFCM events and through on-line communication to ensure coordination in our respective mandate’s tasks and to find synergies.

Furthermore and, as mentioned above, several activities are planned in line and in support to GFCM work plan for 2019-2020 and the Mid-term strategy (2017-2020) towards the sustainability of Mediterranean and Black Sea fisheries. CopeMed II will facilitate the contribution of countries in accomplishing the five targets of the Strategy and to comply with their data reporting obligations. The attendance to meetings in the international sphere of the GFCM will be granted by CopeMed II in the coming year.

The communication with the scientists of the national institutes is permanent and fluid for planning and organization of the working groups, to discuss of the Project’s activities, their current research projects and to find synergies and benefits to all members. In the framework of FAO decentralisation, CopeMed will continue collaborating with the subregional (SNE) and regional

(RNE) FAO offices in the North African and near East countries by supporting joint initiatives on fisheries and sharing information on the activities and results of the Project.

Taking advantage of our participation in different meetings and conferences, any occasion will be used as an opportunity to have informal meeting with donors, delegates from the member countries and experts.

More in particular, to ensure the regular information to the donors, two yearly meetings will be held with DG MARE and with Secretaría General de Pesca of Spain to present progress on the implementation of activities and discuss plan of activities for the future

3.3. Project communication

In order to keep experts, research institutions, fisheries administrations, main fisher's organisations and other stakeholders informed on fisheries and marine-related issues, the website of the project will be continuously updated with the different events, documents and news. The Project also foresees participation in external meetings, conferences and seminars to disseminate our products and search for synergies with other projects and institutions working for the fisheries in the Region. Printed material is being reduced in line with the FAO policy of environmental respect, but still some relevant technical documents can be printed and distributed upon request.

To contribute to the communication of the CopeMed experts networks, further to the website, which is continuously updated, CopeMed maintains active an on-line WorkSpace for more direct exchange of information among the experts. This WorkSpace contains a series of portals (sharepoints) for each of the most regular permanent working groups and can be enlarged with new portals as needed in the future.

The Project will continue promoting publication of scientific papers produced by scientist in the CopeMed sub-region on shared stocks, assessment methodologies marine species and its ecosystems.

In addition, all the Technical Documents and Occasional Papers produced by the technical working groups and consultants engaged will be made available on the Project web site at www.faocopemed.org.



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