



EastMed

Report of the Eighth Meeting of the Coordination

Committee Cairo, Egypt, 8–9 November 2017

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Preface

The Project “Scientific and Institutional Cooperation to Support Responsible Fisheries in the Eastern Mediterranean- EastMed is executed by the Food and Agriculture Organization of the United Nations (FAO) and funded by Greece, Italy and EC.

The Eastern Mediterranean countries have for long lacked a cooperation framework as created for other areas of the Mediterranean, namely the FAO sub-regional projects AdriaMed, MedSudMed and CopeMed II. This made it more difficult for some countries in the region to participate fully in international and regional initiatives for cooperation on fishery research and management. Following the very encouraging experience of technical and institutional assistance provided to countries by the other FAO sub-regional Projects,

EastMed

The project was born to support the development of regional cooperation and the further development of multidisciplinary expertise necessary to formulate appropriate management measures under the FAO Code of Conduct for Responsible Fisheries and the principles of the Ecosystem Approach to Fisheries (EAF) to ensure rational, responsible and participative fisheries management

The project’s **longer-term objective** is to contribute to the sustainable management of marine fisheries in the Eastern Mediterranean, and thereby to contribute to supporting national economies and protecting the livelihoods of those involved in the fisheries sector.

The project’s **immediate objective** is to support and improve the capacity of national fishery departments in the sub-region to increase their scientific and technical information base for fisheries management and to develop coordinated and participative fisheries management plans in the Eastern Mediterranean sub-region.

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Publications

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Occasionally, relevant documents may be translated into national languages as EastMed Translations (GCP/INT/041/EC – GRE – ITA/ET-00)

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ABSTRACT

The eighth coordination meeting of the EastMed project was held in Cairo, Egypt, from 8 to 9 November 2017 under the kind invitation of the General Authority for Fish Resources Development (GAFRD). The meeting was attended by delegations from Greece, Egypt, Lebanon, Palestine, Turkey, the European Commission and staff of the EastMed project. After the opening of the meeting and election of the chairperson, the activities during the 7th year of the project were presented, followed by the proposals of activities for the 8th year from each country. The participants expressed their satisfaction with the project and thanked both the staff of the project and the donors for their contribution. The agreed work plan for the 8th year includes training and support in data collection, data analyses, activities aiming in strengthening stakeholders' awareness and activities in promoting regional participation and cooperation. EastMed finally, will continue to support the participation of experts from the project's area at the meetings of the FAO-GFCM and other relevant regional/international organizations. The EastMed project, in close cooperation with the other Mediterranean sub-regional projects, will continue to find synergies among the various activities in the region.

REPORT OF THE 8TH MEETING OF THE EASTMED CO-ORDINATION COMMITTEE

**Cairo, Egypt
8 – 9 November 2017**

Opening of the meeting and election of the Chairperson (Agenda Item n. 1)

1. The eight meeting of the Co-ordination Committee of the FAO EastMed sub-regional Project “Scientific and Institutional Cooperation to Support Responsible Fisheries in the Eastern Mediterranean” was held in Cairo, Egypt, from the 8th to 9th November 2017, and hosted by the General Authority for Fish Resources Development (GAFRD).
2. The meeting was attended by delegations from Greece, Egypt, Lebanon, Palestine, Turkey, the European Commission and staff of the EastMed project. Mr. Samir Majdalani, from Lebanon and outgoing Chair of the Compliance Committee of GFCM, represented the GFCM in the meeting. The list of participants is given in Annex I.
3. The meeting was opened by the FAOR in Egypt, Mr. Hussein Gadain, who welcomed the participants to Cairo and thanked GAFRD for hosting and organizing the 8th Coordination Committee meeting of EastMed. He highlighted the importance of the EastMed project in the regional efforts by FAO in assisting member countries in achieving the goals of sustainable fisheries in the Eastern Mediterranean. He noted the threats currently faced by fisheries in the region, such as overfishing and illegal fisheries. Mr. Hussein reminded participants of the regional policy goals and commitments agreed by Mediterranean countries in the MedFish4Ever Malta Declaration and the GFCM Mid-Strategy for Sustainable Fisheries, and emphasized the important role that EastMed and other FAO Regional Projects will have in enabling countries to achieve these commitments.
4. Ms. Mona Mehrez, the Deputy-Ministry of Agriculture and Land Reclamation, welcomed participants to Egypt. In her speech she noted the importance of the fisheries sector to food security in Egypt and emphasized several priority areas of work such as the need for alternatives for increase fish production in view of the growing domestic demand, and the need to address the conservation of resources and coastal lagoons. She thanked the EastMed project for the assistance provided to Egypt and other Eastern Mediterranean countries and invited the Coordination Committee to give appropriate attention to the small scale fisheries sector given its importance for employment generation in the region.
5. Mr. Marcelo Vasconcellos, acting coordinator of EastMed, thanked GAFRD for organizing the meeting and the FAO Representation for hosting the meeting in the FAO premises. He noted the good level of participation of EastMed countries in the Coordination Committee meeting, and welcomed the participation of DG Mare, the main donor of the project. He explained the rationale and advantages of having the meeting in the last quarter of the year, including the possibility of taking into account the results of the GFCM Session, held in October 2017, and also having a clearer idea of the budget for the next year, which was only recently negotiated with the donors. He thanked the participating countries for the accomplishments made in the last year, including among them the progress made in the collection of socioeconomic, biological and discards data and the advances made in the

development of management plans for national fisheries. He emphasized three main areas of work that the project could focus next year: the work in collaboration with GFCM for the implementation of the Mid-Term Strategy; the implementation of the management plans that were developed and endorsed by national authorities; and the strengthening of scientific cooperation to address issues of subregional relevance.

6. Mr Christos Maravellias, representative of the European Commission DG Mare, highlighted the importance of the FAO Regional projects to the objectives of the MedFishForever Malta Declaration and noted that projects were considered a priority by DG Mare.
7. Mr. Alaa Eldin El Haweet from Egypt was elected as chairperson of the meeting.

Adoption of the Agenda (Agenda Item n. 2)

8. The Agenda (Annex II) was presented to the Coordination Committee. The Chair invited the participants to offer any comments, but all agreed that the draft agenda reflected their expectations of the meeting. The Agenda was adopted with no changes.

Report on the Project's Progress (Agenda Item n.3)

9. The project's technical officer, Mr. Mark Dimech, introduced this agenda item and the document "Report on Project's Progress" *EastMed CC8_02* (Annex III) in which the main activities carried out by EastMed from May 2016 to October 2017 were described. The activities carried out correspond to the prioritized work programme and recommendations of the 7th Meeting of the EastMed Coordination Committee. In his presentation he noted that despite the limited coverage of the stocks being assessed in the Eastern Mediterranean, since 2013 the project facilitated the preparation of 28 stock assessments submitted to the GFCM WG on Stock Assessment, and that every year the number of assessed stocks increased both in quantity and in quality. He noted in many occasions the assessments are considered preliminary due the short time series of data and the lack of age data in some cases. He also noted that some of the species being assessed with support of the project are not among the priority species for the sub-region defined by GFCM. This mismatch amplifies the impression of data- and stock assessment limitations in the region.
10. The Committee members thanked the project for the activities which were carried out in the intersessional period, and highlighted the importance of all the achievements of the project, especially the work being conducted on fisheries data collection, socioeconomic analysis and EAF management planning.
11. Participants agreed on the need to contribute to the revision of the list of priority species defined by the GFCM for the sub-region. There was a consensus among the participants that because of the differences in ecological characteristics and fishing activities in the region, it was unpractical to try to define a minimum common pool of species for the subregion. Broadening the list of species to reflect country-specific priorities would be a solution. In view of the planned discussions on priority species in the next GFCM Subregional Committee for the Eastern Mediterranean, participants agreed to prepare a preliminary list of priority species to be taken into consideration by the Sub-regional committee. The list, included in the Annex IV of this report, was constructed based on the importance of the species to each country both in terms of volume and value.

12. The representative of Turkey thanked the project for participating in the recent joint mission with GFCM to define a program of work with the EastMed countries for the implementation of the Mid-term Strategy. He noted however that until now no clear mechanism of coordination between the project and GFCM has been established and this creates confusion at national level about how FAO will respond to the country's demands and necessities. Similar concerns were also shared by the other countries present in the meeting. In response to this issues, as a way of trying to find a solution, EastMed officers informed participants that it is the intention of the project to have a coordination meeting soon with GFCM to agree on common plan of work taking into account the results of the CC meeting and the bilateral discussion between countries and GFCM.
13. Discussions following the presentation of fishing trials for SSF in Lebanon focused on the need to take a step further and investigate the economical feasibility of the new fishing techniques being tested, particularly the fishing with Spanish traps. Among other things, the project could evaluate options for the branding and marketing of the species being caught and not commonly consumed today in Lebanon, such as the deep water shrimp (*Plesionika edwardsi*) and monkfish.
14. Representative from DG Mare thanked the project and the countries for the work done to develop management plans for national fisheries. He noted however that more information about the EAF process in the countries should be made available to the donor and also to the public at large. Improving the dissemination of project results in general will help the donor evaluate the relevance of the activities being proposed and also promote the continuous support to the projects in the future. This would also contribute to increase transparency about the work done in support of assessment of stocks. It was noted for instance that information about the preliminary assessments, for some reason are not validated by SAC, and the stock assessment summaries are often difficult to find both in the reports or on the internet. Participants concurred with the need to improve the dissemination of the project achievements in general, and in particular with the EAF process giving its wide relevance not only to the Mediterranean but also to developing countries in other regions. In this regard, a suggestion was made to make management plans available once they have been endorsed by national authorities.

GFCM activities for the next intercessional period (Agenda item 4)

15. Mr. Samir Majdalani introduced the preliminary work plan of the GFCM SAC for 2017-2018, which was adopted in the 19th SAC meeting and endorsed by the Commission at its 41st Session. He presented the activities planned at the regional level, for the entire Mediterranean Sea and at the sub-regional level, specifically for the Eastern Mediterranean sub-region. At regional level, foreseen activities concern the implementation of the GFCM Mid-term Strategy. Specifically for the Eastern Mediterranean, the activities of the work programme include: i) Identify elements supporting the development of an adaptation strategy to cope with the potential effects of NIS, based on the results of the UNEP/MAP GFCM NIS pilot study as well as on previous and ongoing initiatives; ii) Organize a dedicated session to update elements for the management of deep-water red shrimp iii) Organize a dedicated session on NIS based on the outcomes of the pilot study; iii) Organize a dedicated session on the provision of advice for DLS; iv) Perform a detailed analysis of catches and information by species towards revising the list of priority species in the eastern Mediterranean.

16. Participants were informed that the GFCM mid-term strategy which was adopted by the GFCM Commission has the aim to strengthen fisheries management in the region and revert the situation of overfishing. The strategy involves, among other things, a program of work on the monitoring and mitigation of by-catch and discards, fishery-independent surveys, capacity development assistance to countries and small-scale fisheries. A GFCM FishForum is also being planned to serve as a hub for the exchange of scientific knowledge on different aspects of fisheries in the Mediterranean and Black Sea
17. In the ensuing discussion different comments were made concerning the mid-term program of work of the GFCM. Participants noted the importance of having a scientific forum in the Mediterranean and acknowledged the relevance of the mid-term strategy. They also highlighted the need for coordination between GFCM, FAO regional projects and other concerned entities to ensure that the capacity development needs are addressed in the most effective and efficient way.

Development of the project`s programme for the next period (Agenda Items 5 & 6)

18. The EastMed Technical Officer presented the document “Tentative Work plan for the 8th Year of the Project”. The draft proposal for the EastMed which covers the years 2017-2018 work plan was presented, based on the previous years` work plans. It was underlined that the proposed work plan for the future period aims to consolidate the achievements of the past years and provide technical assistance at national and sub-regional level during the coming year. The work plan proposal is based on the scientific cooperation established within the framework of the project in collaboration with the other FAO Mediterranean projects and GFCM. The components of the project will contribute directly to Targets 1 and 5 of the GFCM Mid-term Strategy and to action (b) of the Malta MedFish4Ever Ministerial Declaration. The Committee was reminded that the final work plan would take into account the recommendations emerging from this Committee meeting, the priorities expressed by the countries on each activity and the availability of the Project`s budget.
19. With regards to the planned activities in support of a regional strategy for climate change and Non-indigenous Species (NIS), the Committee was informed by Mr. Vasconcellos that FAO, GFCM and WWF are organizing an "Expert meeting on the implication of climate change to fisheries in the Mediterranean and Black Sea", to be held in GFCM, Rome, from 4 to 6 December 2017. The meeting will take stock of the available knowledge and design a methodology for the assessment of the vulnerability of the fisheries in the region to climate change. He informed the Committee that the application of the methodology for a regional assessment will likely involve case studies and country reviews during 2018, which could be supported by the Regional projects.
20. With regards to training on stock assessment, Mr. Marcelo Vasconcellos informed participants of the intention of FAO to organize the second Edition of the “Summer School in quantitative fisheries stock assessment”, in July 2018. The Summer school will become the main training initiative supported by the projects, and organized in close cooperation with GFCM and EU-JRC. The summer school is planned to run every year for two weeks during the summer months. It will combine theoretical lectures with practical, hands-on sessions. The courses will be based on the R language for statistical computing and graphics.

21. He also noted that the project could also support a limited number of complementary *ad-hoc* trainings on methodologies for stock assessment, tailored to the needs of the participating countries. In this regard participants expressed interest in the organization of training on data-limited stock assessment methods. The possibility of organizing such trainings in cooperation with the GFCM is to be investigated by the project, in view of its relevance to the region recognized by the SAC SRC-EM.
22. With regards to the role of the project in support of data collection and surveys at sea, it was again emphasized by participants the need for GFCM and FAO Regional projects to coordinate their actions. It was the view of EastMed that given the budget implications of implementing surveys at sea and the specific mandates of GFCM and Regional projects, the projects could have a stronger role in providing training needs and the standardization of methodologies while GFCM could take the lead in supporting survey implementation. It was also the view of the participants that data collection activities (catch and effort, biological sampling, and socioeconomic data), until now supported by EastMed, should be slowly taken over by GFCM given the mandate of the RFMO. The role of the project in creating national capacities to conduct such data collection activities has been completed and attention should now be moved to themes not yet well established in the sub-region. It was the view of DG Mare that the projects could also have a complementary role in the actual survey implementation.
23. Participants also expressed their fears of interruptions in data collection if the attribution of supporting these activities are moved from the project to GFCM. A mechanism of smooth phasing out of project support to these activities should be discussed with GFCM. With regards to surveys at sea, participants also highlighted the importance of finding the means to cover the insurance of national experts that will be participating in the surveys.
24. The participants welcomed the sub-regional initiative that has been started last year on developing age length keys for stocks that are currently being assessed. This was especially important for shared resources such as sardines and the data derived from age reading including growth could also be used in the definition of stock boundaries and the determination of shared stocks. The participants agreed to follow-up on the program of otolith image exchange and conduct an age reading workshop in the first quarter of next year. Furthermore the participants also agreed for the EU countries to facilitate the participation of Eastern Mediterranean countries in ongoing age reading groups of hake in the EU.
25. A candidate project has been presented by Greece concerning the age validation of *Mullus barbatus* (Linnaeus 1758) and *Mullus surmuletus* (Linnaeus 1758) from the Eastern Mediterranean Sea based on their otolith microstructure. The activity was considered relevant but probably too costly to be supported by the project. It was requested that an approximate budget be provided in order to facilitate the evaluation of the feasibility of supporting the activity next year. Partnerships with other EU countries should be also be sought in order to share costs.
26. With regards to red shrimp, the participants agreed to organize a 1-2 days workshop to take stock of the available fishery and biological information on the species and the current gaps to enable the assessment of the species in the sub-region. This workshop should be organized

prior to the next SRC-EM (March 2018) with a view to contribute to the planned discussions on the species by the subcommittee.

27. With regards to eels and red coral, following the request of Egypt, it was agreed that the project could support pilot actions on data collection for the two species, in line with the GFCM methodologies with a view to contribute to regional efforts to assess the status of the species’.
28. The representative of Egypt requested support to a project aimed at identifying spawning areas of sardines through the surveys of eggs and larvae. The relevance of the study to understand the boundaries of sardine stocks in the region was highlighted by participating countries, including Lebanon. Options for conducting such surveys were discussed, including the possibility of using the planned GFCM surveys also for collecting data on fish eggs and larvae. The feasibility of supporting such project at subregional level is to be investigated by EastMed considering budgetary implications, the available capacities at national level and the opportunities for coordinating with the GFCM surveys. The outcomes of this study will assist in determining the stock boundaries of the Sardines and anchovies in the Eastern Mediterranean.

Date and venue of the next Coordination Committee meeting (Agenda Item 8)

29. The representative of Turkey, invited the Committee to hold its next meeting in Istanbul, Turkey. If this will not be possible the Palestinian delegate offered to host the meeting in Amman, Jordan, since it was extremely difficult to host it in Palestine (West Bank). Other venues for consideration include Greece and Rome. The Committee accepted the offers, and the exact date and venue will be decided later. It was tentatively proposed to hold the meeting in the last quarter of 2018.

Work plan for the 8th year of the project

30. **Provide IT and laboratory equipment**

(GFCM Strategy Target 5, Output 5.1)

The Project will provide IT and laboratory equipment following a specific request from the participating countries.

31. **Evaluate options for the modernization and diversification of small scale fisheries in Lebanon** (GFCM Strategy Target 2, Output 2.2)

In past co-ordination committee meetings a request was made from Lebanon to determine the possibility to design and construct a new fishing vessel. The request came up since the existing fishing fleet is old and not properly equipped to fish beyond 3 nautical miles from the coast. Without a suitable design for fishing vessels and the associated equipment, the Lebanese fishing fleet could never efficiently exploit offshore fisheries resource, maintain healthy fishing grounds, preserve the catch in good quality and work in the appropriate health and safety conditions. Furthermore information is lacking on the deep water fishing grounds of Lebanon. During the past years the project supported preliminary studies on vessel design and exploratory fishing in offshore areas. In this respect the project could continue support activities in the modernization and diversification of a small scale fisheries, including testing of artisanal fishing techniques and to survey deep water unexploited fishing grounds in Lebanon using passive gears.

32. **Further development and implementation of a roadmap for the development of a clam fishery in Egypt** (GFCM Strategy Target 1, Output 1.3)

In Egypt fishing for clams is mostly conducted with a hand rake at depths shallower than 1 m. However, from the preliminary survey that was conducted recently, it was shown that clam resources exist in deeper waters, which are currently not exploited. The situation of overcapacity of the trawl feet and the over exploitation of the demersal resources exploited by the trawlers has generated considerable interest in diversifying the trawl fleet in fishing for unexploited species. This is especially relevant for the trawlers smaller than 18 m in length who fish mostly inshore at < 3 nm from the coast. As a result there has been strong political pressure to find other fishing opportunities. Fishing for clams could be one these solutions, since the small trawlers could be easily adapted to fish for clams. In this respect a roadmap was developed to guide the sustainable development of the clam fishery. Further developments of the roadmap should be done to provide specific guidance to fishery managers on the process by which the clam fishery can be developed, with clear phases and steps with timeframes and required funding. Among the first actions to consider involves conducting experimental fishing to assess the feasibility of exploiting the resource and to determine the market potential of the product. First preliminary surveys carried out with the support of EastMed showed promising results. Options to scale up the surveys to make a more comprehensive assessment of the stock and market needs to be investigated and implemented.

33. **Support the development and implementation of the fisheries management plans in the Eastern Mediterranean** (GFCM Strategy Target 5, Output 5.1)

There is now broad agreement at the international policy level that the ecosystem approach to fisheries (EAF) is the appropriate and necessary framework for fisheries management. One of the key outcomes of the EAF is the development of comprehensive fishery management plans. These plans can guide the implementation of agreed management measures, as well as their adaptation in face of changing conditions, thus helping managers make more informed decisions for the sustainable use of fisheries resources.

In this respect in Egypt, Lebanon and Turkey three case studies are underway on the application of EAF. In Egypt a fisheries management plan was developed for the trawl fishery, in Lebanon a draft management plan for the purse seine fishery was developed, while in Turkey the draft plan is under development. After their finalization and if endorsed by the relevant governmental authority, the project could support implementation of activities to facilitate the implementation of the adopted management plans. New EAF pilot studies could be also supported, upon the request of countries, building on the know-how and capacity of national authorities. Palestine specifically requested to develop a case study on EAF.

Staff Training and Development

The project will continue to support on-the-job training, national and sub-regional workshops and opportunities for experts to participate in regional management meetings, in particular:

34. **Support training in stock assessment methods** (GFCM Strategy Target 5, Output 5.1)

A general need for training on stock assessment has been indicated in several cases by the countries participating in the project. The project will support the Summer School on Quantitative Fisheries Stock Assessment, to be jointly organized by FAO, GFCM and JRC in the second quarter of 2018. In addition, and upon request of countries, the project could support other specific training sessions and also facilitate the participation of experts from Eastmed countries in other training activities promoted by other FAO Mediterranean regional projects or other entities relevant to the Mediterranean.

35. **Support training activities in surveys at Sea** (GFCM Strategy Target 5, Output 5.1)

Organization of training courses and on-the-job training activities for the design of scientific surveys and the analysis of survey data. Such activities, to be organized in collaboration with the GFCM, will prepare scientists in the Eastern Mediterranean countries to implement the GFCM demersal and acoustic surveys in 2018 according to the Mid-Term strategy (2017-2020).

36. **Support training activities related to age reading for species that are being assessed.** (GFCM Strategy Target 5, Output 5.1)

A subregional activity has been launched aiming at improving national competences on fish age estimation by using calcified structures, predominantly otoliths. At this stage, Countries are invited to collect through their sampling activities otoliths from a set of species and then share images of those otoliths with researchers from the Levantine basin and Turkey. This collective exercise is meant to assess precision and bias in the age estimations and to inter-calibrate readers, specifying the interpretation differences, progressing in the implementation of quality assurance in the labs. The project could support training activities and workshops in age reading

37. **Support the organization of Ad Hoc training activities.** (GFCM Strategy Target 5, Output 5.1)

Ad Hoc Training courses for scientific staff can be organized based on the demands of the participating countries. The main objectives will be the enhancement of the cooperative framework established by the Project, the standardization of scientific procedures for monitoring fisheries resources, the development of a common regional approach in fisheries sciences. Particular attention will be given to the methods and tools of the assessment of Data-Limited Stocks (DLS). To optimize the use of resources, efforts will be made to deliver the training sessions in connection with the sub-regional working groups on fisheries data analysis and stock assessment. Specific courses may also be done at national level based on the requests of the countries.

Data Collection and Analyses

38. **Support activities on the collection of catch, effort, socio-economic and biological data in Egypt, Palestine, Lebanon and Turkey**
(GFCM Strategy Target 1, Output 1.1, 1.2 & 1.3)

The project will continue to support ongoing data collection activities on catch, effort, biological and socio economic variables.

39. **Support the collection of biological on the Red Shrimp resources in the Eastern Mediterranean** (GFCM Strategy Target 1, Output 1.1 & 1.3)

During the first meeting of the Sub-regional Committee for the Eastern Mediterranean (SRC-EM) of the GFCM SAC which was held in FAO headquarters, Rome, Italy, on 24–25 February 2017 the participants stressed the need to improve knowledge and available information on deep-sea fisheries, in particular on deep-water red shrimps (*Aristeomorpha foliacea* and *Aristeus antennatus*) due to their high economical value.

It was noted that further information on the status of the deep water red shrimp fishery in the international waters of the Mediterranean Sea was needed, as well as information and an assessment of the catches of both species by different fleets. In this respect, it was highlighted that any potential management measure should take into account the particularities of the different fleets operating in the fishery. In this respect the SRC-EM agreed to compile information on deepwater red shrimp catches and, if possible, spatial information on fleet effort to support the discussions towards the establishment of management measures for this fishery. The project could support activities in collecting and analysis such information before the meeting of the SRC-EM so that the results can be submitted on time to the GFCM SRC-EM.

40. **Support activities in developing age-length keys for species that are being assessed**
(GFCM Strategy Target 1, Output 1.1 & 1.3)

In the Eastern Mediterranean, in general the determination of age is indirectly estimated from the Von Bertalanffy growth parameters which are obtained from the length frequency distributions. Stock assessments are being conducted using length based methods, however these methods have several limitations, and the best approach to have accurate information on growth is by measuring directly the age of the fish, after which this information is used to produce Age-Length Keys (ALKs). Using direct measurements of age from hard structures such as otoliths, scales or spines to determine the age of the fish greatly improves the quality of the stock assessments.

The ALKs give the proportion of individuals by age in each length class. The length distribution of the whole catch is then used to estimate the age distribution of the whole catch by assigning ages to individuals in each age-length class according to their frequency distribution in the ALK. In this respect the project could support specific activities in developing age-length keys for the species which stock assessments are currently being conducted.

41. **Support activities on the collection of discards, by-catches and incidental species from onboard observations in Egypt, Palestine, Lebanon and Turkey** (GFCM Strategy Target 4, Output 4.1)

Discarding is a global issue and FAO estimates that around of 20 million tonnes of discards occur which are about 25 percent of the reported annual yield from marine fisheries. Furthermore the discarding of targeted species and by-catches have long been recognized as a problem. Incidental catches of vulnerable species such as marine mammals, seabirds, turtles, sharks and rays have recently become dominant factors in the management strategies of some fisheries.

The available information on by-catch species and incidental catches of vulnerable species is very limited. The GFCM has a number of recommendations for the collection of data of incidental catches of seabirds, sea turtles, seals, cetaceans, sharks and rays species. Information should be collected on the number of individuals captured by fleet segment and gear types. As mentioned in the GFCM DCRF manual such data can be collected by on-board observers. In this respect the project can support training and studies in the sampling and assessment of discards, by-catch species and incidental catches of vulnerable species.

42. **Conduct an experimental fishing survey as part of the roadmap for development of the clam fishery in Egypt** (GFCM Strategy Target 1, Output 1.1)

In Egypt due to the Nile delta and the presence of large shallow waters (0-20 m), with areas composed of sand and mud, there could be a great potential for the exploitation of a variety of clams. In 2013 a pilot survey was conducted, to determine if the resources were present at sea. Overall the results showed that the *C. gallina* has a potential for exploitation together with other potentially commercial species. After the survey a market-chain analysis was conducted in order to better understand the existing bivalves market in Egypt. The survey was now completed and the preliminary results showed that the bivalve market in Egypt is managed by few key wholesalers, which move the product throughout the whole country. One important aspect is that the demand far exceeds the supply, providing several opportunities for the introduction of *C. gallina* in the local market.

To complete the evaluation of the potential feasibility of developing a new fishery for clams, it is necessary to expand the surveys to obtain a more comprehensive view of the stocks and the markets. Options to conduct the survey along the Egyptian coast need to be identified and confronted. Depending on the availability of funds, the project can support the survey of the stock in a larger and more representative area of the Egyptian coast. There is also a need to commercialise the product on the local market on a trial basis, to determine the reaction of the consumers. The coupling of the resource and market surveys could provide the needed amount of product for the market trial, with the support of local wholesalers.

43. **Support surveys using artisanal fishing gears in Lebanon** (GFCM Strategy Target 2, Output 2.1)

One of the problems that is exhibited by the Lebanese fisheries is the restricted continental shelf, and the concentrated fishing activities close to the shore. In this respect in 2012, EastMed in collaboration with the CANA project "Establishing monitoring and sustainable

development of the Lebanese sea" conducted a study to evaluate the potentiality of offshore fishing grounds for the local artisanal fishery. A preliminary survey was carried out in the area between Tyre and Naqoura (South Lebanon), using both monofilament gillnets to target hake (*Merluccius merluccius*) and Spanish traps designed to catch the striped soldier shrimp (*Plesionika edwardsii*). The results of the survey, showed the occurrence of potentially exploitable resources on the Lebanese upper slope. Further surveys are required to gather quantitative data on the spatio-temporal distribution of hake, striped soldier shrimp and other resources offshore the Lebanese coasts and to identify the more suitable fishing periods and areas. In this respect the project could support further experimental surveys in offshore fishing grounds using small scale fishing gears. Furthermore more the project could explore possibilities on how to introduce these new fishing techniques to the small scale fishing communities in Lebanon.

44. Support the organization of an EastMed WG on fisheries data analysis (GFCM Strategy Target 1, Output 1.3)

During the sixth co-ordination committee meeting of the EastMed project which was held in Rome, Italy, from the 21-22 of May 2015, the participants decided to support the organization of an EastMed Working Group on fisheries data analysis. Two meetings of the WG were conducted, one in Antalya (Turkey), and the main objective of the meeting was to devise a plan for the 2015-2016 fishery data analysis, which included stock assessments and socio-economic analysis. The plan would be in preparation to the next meeting of the Working Group, so that any data that would be used for the analysis could be prepared beforehand.

The 2nd meeting of the WG was conducted from the 2-6 of November in Athens, Greece. The aim of the working group was to undertake stock assessments and to conduct a socio-economic analysis of the fisheries in the Eastern Mediterranean. Two sub-groups were held, one to conduct Stock Assessments, and the other to conduct Socio-Economic analysis. During sub-groups, stock assessments and socio-economic analysis were conducted. In the next phase the project could support the organization of another WG on fisheries data analysis in order to undertake stock assessment for species that have been assessed on a regular basis and new species for which the time series is being collected and socio-economic analysis. It is envisaged that the WG could again have a session on the analysis of Red Shrimp resources in the Eastern Mediterranean.

45. Support activities in the collection and analysis of data on European Eel (GFCM Strategy Target 1, Output 1.3)

The Joint EIFAAC/ICES/GFCM Working Group on Eel [WGEEL] has been collecting and analyzing data on eel for the assessment and management of the stock. At the moment and based on the stock indicators, it was concluded that the stock in most reporting countries/areas was not within the biomass limits and in most management units, anthropogenic mortality is not at a level that can be expected to lead to recovery. A pilot study has been undertaken by the countries in the GFCM region which has included a comprehensive data gathering exercise and a preliminary standardized modelling assessment on all the tidal lagoons (123) and on the main rivers (12) and lakes (ten) in the region. The model needs to be validated and some data gaps need to be filled before this can be accepted as reliable information on levels of silver eel production and escapement. The assessment

covers approximately 78% of the wetted area of eel habitat within the Mediterranean region. The total landings from commercial fisheries in 2014, provided in Country Reports and other statistics, were about 4500 t of eel. The current state of knowledge on level of underreporting, misreporting and illegal fisheries is insufficient to include these in the assessment. Catch and landings data for recreational fisheries are not consistently reported in the Country Reports: inconsistencies exist in environments, fishing gears, and life stages sampled. Therefore, it was not possible to assess the most recent total landings and catches of recreational and non-commercial fisheries. In this respect the project could support activities in the collection of data on European eel to be submitted to the WGEEL.

46. Support activities on the age validation of *Mullus barbatus* L., 1758 and *Mullus surmuletus* L., 1758 in the Eastern Mediterranean based on otolith microstructure.
(GFCM Strategy Target 1, Output 1.3)

The red mullet (*Mullus barbatus*) and stiped red mullet (*Mullus surmuletus*) are common demersal fish of the Mediterranean Sea, mostly found in depths down to 200 m. Both species are of high commercial importance for the Mediterranean countries. It is generally considered that their stocks undergo high fishing pressure and can be characterized as overexploited. Age information is important in stock assessment studies since it has been considered among the most influential of biological variables. Fish ageing is being performed through a variety of different techniques with otolith reading being the most reliable. However, age validation is also very important in ageing studies. There are many instances in which ageing errors have contributed to the serious overexploitation of a population or species.

Mullus species ageing has been proven difficult until now because of the absence of accurate age estimation (lack of validation studies) as well as of low precision (inconsistency among readers) as proven in several dedicated exchanges and workshops (WKACM, 2009; WKACM2, 2012; WKVALMU 2017). As both *Mullus* species are of high economic importance for all Mediterranean countries, it is well understood the necessity to validate the age and the first growth increment formation in these species. This was also getting evident in the last workshop on *Mullus* ageing (WKVALMU, 2017). Daily growth increments offer a very promising field of study with many applications. For this reason, a study of the daily otolith increment of both *Mullus* species will be valuable in order to identify the 1st annual annulus and possible false and demersal rings. The method needs expertise and standardization (selection of appropriate section axis, resins, slope of grinding, polishing papers) because the otoliths of *Mullus* are quite thin and fragile. However, the cost of this method is low compared to other methods. A data set of otoliths for the standardization of the methodology will be provided by Greece. Then two data sets of otoliths coming from two countries of the E. Mediterranean (Greece and another one country with complete data set of otoliths) will be used for the validation study. Their images will be taken and then they will be reading, measured and analysed.

47. Support activities on the identification of spawning and nursery areas of Sardines in the Eastern Mediterranean by conducting egg and larval surveys at Sea.

Fish stocks maintain their spatial and temporal distribution by active and passive displacements. In their adult and juvenile live stages populations migrate from feeding to

spawning areas, and nurseries to feeding areas. Passive movements occur mostly in the egg and larval stages where currents act as a dispersion medium. Identifying spawning, nursery and feeding areas, as well as understanding the migratory and dispersal patterns, is a prerequisite for effective evaluation of the resources and effective fisheries management. It is clear that the observed spatial distribution of an exploited population is the result of a complex adaptation of the biological cycles to the physio-ecological characteristics and particularly for small pelagics like the Round Sardinella and Anchovies the influence of hydrological factors. Due to the importance of the sardine fisheries in the Eastern Mediterranean the project could support egg and larval surveys for the determination of spawning and nursery areas. The outcomes of this study will assist in determining the stock boundaries of the Sardines and anchovies in the Eastern Mediterranean.

48. Support pilot activities on branding for low value fisheries products in Lebanon

Through the analysis of consumers' behaviour and market value chain, the project could identify potential options for product branding. The objective of this activity would be to explore ways to increase the marketability and value of fisheries products which are: already valued among consumers but not yet adequately branded; and products that fetch a low price on the local market, entirely discarded or not targeted by the fishermen in Lebanon (e.g. monkfish). Options for branding such products could also be identified based on expert advice from international seafood specialists and traders. Study tours could be organized to expose local traders and/or fishery cooperatives to examples of successful branding/certification initiatives in other Mediterranean countries. A roadmap for pilot testing the branding of the products could be elaborated. A strongly branded, well designed packaging with a modern approach would be developed to make the product seem more appealing to the consumers' eye. Along with communication material that includes information about, the nutritional values, taste, health benefits and new ways to cook (e.g. gourmet recipes) with a professional branding approach would be drawn up.

49. Support pilot activities on improving scientific information on red coral in the Eastern Mediterranean.

There is an urgent need of Mediterranean scientific projects aimed to fill several gaps of knowledge on the different traits of red coral life history, because they represent essential data in support of the red coral management. Based on the GFCM Recommendation GFCM/40/2016/7 a research programme for red coral was developed by the SAC and endorsed by the 41st session of the GFCM. The Committee noted there were considerable gaps in the information and that, to support a better understanding of the status of the resource, the use of ROV for scientific purposes should be allowed, stressing that any recommendation on this matter should ensure that this instrument is not used for any other purposes. The research program includes the collection of data useful for the provision of advice in support of management, especially in regards adopted recommendations using a combination of fishery dependent (e.g. analysis of catch) and fisheries independent (e.g. surveys to be done on multiannual basis) sources of information to ensure the regular monitoring of the resource. All the countries where the commercial harvesting of red coral occurs should be involved and countries where red coral populations are known to exist are also invited to participate. The Mediterranean research programme should also provide guidelines and facilitate harmonization, standardization of protocols, coordination and comparison of results obtained by ongoing and future national, regional and international

research programmes addressing red coral. In view of the adopted research programme, and upon request of countries, EastMed could support regional activities on red coral and preliminary evaluations of the fisheries and exploitation areas in Eastern Mediterranean countries within the work program of the GFCM.

Increased Participation and Cooperation

50. Strengthening the cooperation with the other FAO Regional Projects (GFCM Strategy Target 5, Output 5.3)

The existing cooperation with the other FAO sub-regional projects AdriaMed, MedSudMed and CopeMed II will be further strengthened. In this context, synergies including training activities will be coordinated among all the projects, in order to avoid duplication or overlapping of activities. The participation of other experts from the projects in training courses organized by EastMed and vice versa will be foreseen.

51. Support Government staff to attend and fully participating in GFCM meetings (GFCM Strategy Target 5, Output 5.1 & 5.3)

The Project will continue to strengthen the international and regional cooperation at Mediterranean level with the GFCM and its related bodies (SAC, Sub-Committees, Working Groups), according to budget availability, through the support to the preparation of scientific contributions for GFCM events, the participation of experts from the EastMed countries in GFCM events and through support to the countries to be compliant with the GFCM requirements.

52. Support ongoing initiatives towards a regional strategy on climate change and non-indigenous species (GFCM Strategy Target 4, Output 4.2)

A joint GFCM-UN Environment/MAP pilot project on **non-indigenous species** (NIS) in the Eastern Mediterranean was developed with a view to i) develop and test the NIS common indicator at sub-regional level; ii) identify monitoring needs to assess this indicator towards the development of a sub-regional monitoring program; iii) strengthen sub-regional cooperation at expert level and regional ocean governance and iv) develop a sub-regional IMAP and GFCM monitoring program, to be potentially replicated in relevant areas. The results of the UN-Environment/MAP GFCM NIS pilot study, will identify elements in support to the development of an adaptation strategy to cope with potential effects of invasive species, as outlined in the mid-term strategy. In this respect the project can support activities related to the NIS pilot project.

With regards to climate change, FAO, GFCM and WWF are organizing an "Expert meeting on the implication of climate change to fisheries in the Mediterranean and Black Sea", to be held in GFCM, Rome, from 4 to 6 December 2017. The meeting will take stock of the available knowledge and design a methodology for the assessment of the vulnerability of the fisheries in the region to climate change. The application of the methodology for a regional assessment will likely involve case studies and country reviews during 2018, which could be supported by EastMed.

53. Support the organization of the Co-ordination Committee meeting
(GFCM Strategy Target 5, Output 5.3)

The project should organize the meeting of the Co-ordination Committee, where lessons learned and possible recommendations regarding requirements and priorities will be discussed, also in the light of a possible follow-up project supporting the development of national and regional capacity for fisheries management.

54. Disseminate Project's results and develop fishery information systems through the use/development of databases, web pages and technical papers (GFCM Strategy Target 5, Output 5.3)

The contents, and consequently the EastMed web portal, will continue to be updated and further developed in order to make it always easily accessible in areas of interest to website users. The Project will continue to disseminate the project's results through the preparation of technical documents, meeting reports, brochures and posters.

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Annex II Final Agenda

Eight Meeting of the EastMed Coordination Committee Cairo, Egypt, 8-9 November 2017 Venue: FAO office in Cairo

Day 1: Wednesday 8th November, 9:00-18:00

1. Opening of the meeting and election of the Chairperson

- *Welcome and introduction of the participating countries international organisations and other participants and designation of the chairperson*

2. Adoption of the agenda

3. Report on the Project's progress

- Presentation of the EastMed Project's 7th year activities
Information will be given on the progress and achievements of the project since the last Coordination Committee Meeting. The project's initiatives to seek additional strategic alliances with other projects and GFCM will also be mentioned.

4. GFCM activities for the next intersessional period

- *Presentation of the GFCM planned scientific and technical activities of relevance to the project.*

5. Project's Programme for the next period

- Presentation of the work plan for the next period
Following the current activities of the project, the work plan for the next intersessional period will be discussed and finalised. The Committee will be asked to provide feedback on the work plan presented.
- Proposals for activities by the European Commission & Greece

7. Any other matters

8. Date and venue of the next Coordination Committee meeting

Day 2: Thursday 9th November, 10:30-13.00

9. Adoption of the report

Coffee breaks: 11:00 - 11:15 and 15:30 - 15:45
Lunch breaks: 13:00 - 14:00

Annex III Report on the Intersessional Activities of the Project

(June 2016 – October 2017)

FAO EastMed Working Document

Introduction

This document summarizes the main activities carried out by the Project EastMed from June 2016 – October 2017, including workshops, training, research activities and the technical assistance provided to the countries; as well as the cooperation established with the GFCM, the SAC and Sub-Committees and other relevant institutions. The work programme and recommendations of the 7th coordination committee meeting of the EastMed Coordination Committee (Beirut, Lebanon 19-20 May 2016) were mostly implemented.

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 activities of the project and the results achieved with direct reference to the following project components:

- 1) Institutional strengthening.
- 2) Staff training and development.
- 3) Data collection and analysis.
- 4) Increased participation and Cooperation.

Component 1 - Institutional Strengthening

To undertake institutional analysis and needs assessments of Fisheries Departments and provide recommendations for change and support

➤ Follow up of the development of the software for the licensing system in Lebanon

After the appraisal of the fishing vessel licensing system in Lebanon which is handled manually, a proposal was drawn up to develop a Web-based system. A prototype system for the analysis of fleet data was demonstrated to the Ministry of Agriculture (MoA). The system was followed by recommendations on how the licensing system should have to be developed including its utility in future catch and effort assessment surveys. A bid was set up and a private company undertook the development of the software including the training of the staff of the MoA. The software was first tested in 2013 and the software bugs were fixed in 2014. The private company also handled the training of the staff of the MoA. The system is now operational however there were some logistical problems in the provision of internet access in the outposts of the MoA and this has hampered the full use of the system. In 2016, the project supported the maintenance agreement with the IT company for the update of the software.

➤ Support for the IT infrastructure in Egypt

In Egypt, the project supported the procurement of five complete desktop computers which were necessary for the IT support in the fisheries data collection system in the field by GAFRD. This was required for the data which is being collected on catch and effort, socio-economic data, biological sampling and onboard sampling which includes data on discard and vulnerable species.

➤ Development of EAF Fisheries Management Plans in Egypt, Lebanon and Turkey

FAO has been supporting in recent years various activities to mainstream EAF as the approach for managing fisheries in the Mediterranean, including the promotion of seminars, training courses and more recently pilot case studies in selected countries. The pilot studies are being implemented as a complementary tool for capacity development where fisheries agencies previously exposed to EAF training are offered an opportunity to put in practice the approach to the development of management plans for fisheries operating in national waters. Such initiative, supported by FAO Regional Projects, follows the overall methodology for EAF implementation including the organization of a series of stakeholder consultations aimed at reaching agreement on management priorities and identifying mid-term strategies and management systems for addressing these priorities.

Since 2016 EastMed has been supporting three pilot studies in Eastern Mediterranean countries aimed at supporting the development of management plans for selected fisheries. The pilot are: the small-scale fisheries in Gokova Bay, Turkey; the small-scale purse seine fisheries for small pelagics in Lebanon; and the demersal fisheries of Egypt. Until now baseline reports, describing the biological, socio-economic and governance situation of these fisheries were finalized. Following the EAF implementation steps, a total of four stakeholder

consultations were held in Turkey, five consultations in Lebanon and six in Egypt. Draft management plans were developed for the pilots in Egypt and Lebanon. The management plan of demersal fisheries in Egypt was endorsed by GAFRD. A draft management plan for the Gokova Bay is under preparation. The experiences with these pilot studies show that the continuous and step by step approach to EAF implementation is a valuable strategy for capacity development in participatory fisheries management planning. It is the intention of the project to continue supporting the implementation of the plans developed in the pilot studies, at least in areas of capacity development, as well as the scaling up of these experiences to other fisheries upon request of the countries.

➤ ***Review of the Lebanese legislation to introduce a closed licensing scheme for the Purse seine fishery in Lebanon.***

During the stakeholder consultations held as part of the development of a management plan for the purse seine fishery in Lebanon, a call was made for the consideration of regulating fishing by establishing limits to the number of licenses issued to purse seiners. As a first step, it was agreed that a study should be carried out to assess the technical and legal feasibility of establishing license limits. The study should also provide a range of options for establishing such a scheme for the purse seine fishery in Lebanon, considering the experience with similar fisheries in other countries. With the support of EastMed and GFCM, the study was recently launched with a mission of fisheries legal experts from GFCM and FAOLEG to Lebanon, from 24 to 26 of April 2017. The experts provided legal advice to MoA on how to address the limitation of licenses based on the international/regional legal instruments. Following the mission, a comprehensive evaluation is being developed by MoA and is expected to serve as basis to inform the development of management strategies for the purse seine fishery.

Project Component 2 - Staff Training and Development

National and sub-regional workshops and on-the-job training will be organized.

➤ *Training course on the processing of socio-economic data for experts in Palestine*

A training course on the processing of socio-economic data to the experts in Palestine (Gaza Strip) was conducted remotely by the EastMed Project and held from FAO headquarters, Rome, Italy, from 13 to 15 July 2016. The training course was intended for those already familiar with sample-based socio-economic data collection. The training course started with an explanation of the basic concepts in sample-based data collection for socio-economic variables, with a description of the sampling design, the setting up of the fleet and segmentation scheme and the population and sample size. A presentation was given on how to classify the fishing fleet according to the GFCM TASK I using the definitions of fishing gears, size classes and fleet segments. Following the basic statistical principles, such as the normal distribution, mean, variance, precision, accuracy and quality indicators such as standard error (S.E.) and co-efficient of variation (C.V) were described and practically applied. After the parameters were calculated it was demonstrated how to raise the sample data to the total fleet (statistical inference) by each fleet segment and how the final estimates should be presented. A follow-up of the course is foreseen after the next data collection is finalized.

➤ *Training courses on the sampling of catch and effort data using a probabilistic sampling approach.*

Two training courses, one in Egypt and one in Lebanon were held in order to improve the collection of catch and effort data. During the first days presentations were delivered by the project to the fisheries administration and scientists on the theoretical and practical aspects of the methodology. During the second day the respective officers from the Ministries in Egypt and Lebanon supported by the project, organized a training course for the data collectors. During the training courses the general scheme, the target variables, the data collection and data entry sheets were described and many suggestions were provided on how conduct the interview and to overcome the potential difficulties.

➤ *Sub-regional training course for onboard observers for the collection of data on commercial catches, discards and bycatches.*

The project organized in Alexandria, Egypt from the 25th to the 31st of March a sub-regional training course for onboard observers for the collection of data on commercial catches, discards and bycatches. The course was organized within the framework of the FAO EastMed Project and the GFCM mid-term strategy. It was attended by 20 participants from different nationalities. The presentations included the background and context of the course which stems from the requirements of the GFCM DCRF and the GFCM mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries, which includes an important component towards the reduction of bycatch rates. Presentations followed on the problems of the discarding of targeted species and by-catches, the methodology to follow to collect sound and effective on board data

collection, and identification courses for teleost, elasmobranch and invertebrate species. Every day, the afternoon was dedicated to laboratory sessions in order to simulate the on-board processing of samples coming from a haul, and practice in identification with the use of photos and with fresh specimens. Moreover, the project demonstrated how to take the standard biological measures, how to take standard photographs, how to take a genetic sample and how to assign a maturity stage. This created interest and direct involvement of the trainees. The project explained the importance to record the by-catch and discard of species of sharks, skates and rays that could be very rare in Mediterranean. To stimulate the collaboration and as a follow-up activity of the training, the creation of an informal group, through WhatsApp, was proposed to the participants in order to assist them directly in the field, in case of doubts with the identification of shark, skates and rays species. During the training, the project became aware of the record of *Hydrolagus mirabilis* in Egyptian waters, a species of chimaera distributed in the Atlantic Ocean and never recorded in Mediterranean. The presence of this species was published in the Egyptian Journal of Aquatic Research by one of the participant, Mahmoud M.S. Farrag. In terms of acquired knowledge, the group assimilated the basic concepts in the sampling of data from onboard observations and in the identification of bycatch species. The participants were energetic and worked hard during the laboratory sessions. The partnership of instructors was effective, with complementary skills for helping participants to understand certain concepts. The lecturers as well as the personnel of the GAFRD and AAST were always available for solving any technical or logistic problem. The next phase will be to implement a sampling program within the Framework of the EastMed project in the collection of fisheries data from onboard observations, which is expected to contribute in developing the capacity of the Eastern Mediterranean countries to monitor by-catches in line with the GFCM DCRF and mid-term Strategy.

➤ ***Summer School in Quantitative Fisheries Stock Assessment***

The project participated in the organization of the Summer School in Quantitative Fisheries Stock Assessment, held in Capo Granitola, Italy, 10 - 21 July 2017. The Summer school was co-organized by FAO, GFCM and JRC, with the objective to enhance the capacity of Mediterranean scientists in the analysis of fisheries data and stock assessment using R. The school was attended by several scientists from EastMed countries.

Project Component 3 - Data Collection and Analyses

The project will assist countries to improve/develop fishing vessel surveys, national catch, effort and socio-economic surveys, and ecosystem characterization.

➤ ***Support to fisheries data collection in Egypt***

The project assisted Egypt in implementing the new GFCM Data Collection Reference Framework (DCRF) which aims to be instrumental in achieving a more efficient data collection programme at sub-regional level. The project described each module of the DCRF and discussed and reviewed the existing data collection systems, most of which have been supported by the FAO EastMed project, addressing any problems which existed, and then adapting it to the new GFCM DCRF. It assisted Egypt in developing the sampling strategy and sampling design for the implementation of a fisheries data collection system in 2015, 2016 and 2017. The project then supported the country's fisheries data collection system through a Letter of Agreement with the General Authority for Fish Resources Development (GAFRD) for the collection of catch, effort socio-economic and biological sampling. This will assist Egypt in continuing the data collection, so that it could assess better the status of the fisheries resources. Furthermore FAO EastMed continued to assist technically the Egyptian fisheries administration in any problems they encountered during the implementation of the fisheries data collection program.

➤ ***Support on fisheries data collection in Lebanon***

The project assisted Lebanon in implementing the new GFCM Data Collection Reference Framework (DCRF) which aims to be instrumental in achieving a more efficient data collection programme at sub-regional level. The project described each module of the DCRF and discussed and reviewed the existing data collection systems, most of which have been supported by the FAO EastMed project, addressing any problems which existed, and then adapting it to the new GFCM DCRF. It assisted Lebanon in developing the sampling strategy and sampling design for the implementation of a fisheries data collection system in 2015, 2016 and 2017. The project then supported the country's fisheries data collection system through a Letter of Agreement with the Centre for National Research (CNRS) for the biological sampling and other administrative arrangements with the Ministry of Agriculture for the catch, effort and socio-economic sampling. This will assist Lebanon in continuing the data collection, so that it could assess better the status of the fisheries resources. Furthermore FAO EastMed continued to assist technically the Lebanese fisheries administration in any problems they encountered during the implementation of the fisheries data collection program.

➤ ***Support to fisheries data collection in Palestine***

During the 7th EastMed co-ordination committee meeting it was agreed to continue supporting ongoing data collection activities on catch, effort, biological and socio-economic variables. In Palestine (Gaza Strip) the data has been collected along the coast of the Gaza Strip in four landing sites (Gaza City, Dar al Balah, Khan Yunes and Rafah). The first pilot study was completed at the end of 2013, with a second, third and fourth routine sampling which covered the period from 2014-2016. The pilot survey continued in 2017. The

components covered during 2017 included the sampling of biological parameters of the stocks and socio-economic aspects of the fishery. Based on the advice of the FAO experts a scheme for the collection of biological data was agreed between the project and the experts in Palestine (Gaza Strip).

➤ ***Support to onboard sampling for the collection of data on commercial catches, discards and by-catch species.***

The GFCM DCRF and the GFCM mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries, include an important component towards the assessment, identification and reduction of bycatch rates. In this respect in 2017 the project is supporting pilot activities on the collection of data on commercial catches, discards and by-catch species from onboard observations. In Egypt the pilot activity is being done onboard trawlers, in Lebanon onboard purse seiners and to some extent on the small scale fleet and in Palestine (Gaza Strip) on board Purse Seiners and trawlers. The activity is ongoing however the preliminary results obtained already give an interesting picture of the by-catch rates.

➤ ***Otoliths sharing programme***

A subregional activity has been launched aiming at improving national competences on fish age estimation by using calcified structures, predominantly otoliths. At this stage, Countries are invited to collect through their sampling activities otoliths from a set of species and then share images of those otoliths with researchers from the Levantine basin. This collective exercise is meant to assess precision and bias in the age estimations and to inter-calibrate readers, specifying the interpretation differences, progressing in the implementation of quality assurance in the labs.

➤ ***Experimental fishing trials***

Experimental fishing trials over the Lebanese continental slope are being conducted to gather information on demersal communities scarcely exploited by Lebanese Small Scale Fisheries (SSF). This exercise can eventually provide information on the profitability of fishing techniques currently not used by local SSF. Deep-water-resistant trammel nets and Spanish traps targeting *Plesionika edwardsii* are the two gears used to that end. In total 12 fishing hauls were carried out in (6 in the North and 6 in the South) during the past year.

➤ ***Support the organization of the EastMed WGs on Fisheries Data Analysis.***

The third meeting of the Working Group on Fisheries Data Analysis was conducted in FAO HQ Rome from the 2-5 of May. It was attended by participants from Cyprus, Egypt, Greece, Italy, Lebanon, Palestine and Turkey. The aim of the working group was to conduct stock assessments and a socio-economic analysis of the fisheries in the Eastern Mediterranean. The WG was organized in two parallel sub-groups: one to conduct stock assessments and the other to conduct the analysis of socio-economic data. The WG carried out the assessment of stocks for Cyprus, Egypt, Lebanon and Palestine. Furthermore a session was dedicated to

Management Strategy Evaluation (MSE), with two case studies, one for the demersal fisheries in Egypt and one for the Purse seine fishery in Lebanon. The results from the stock assessments and the socio-economic analysis were used to run the MSE, with different management scenarios as proposed by the EAF management planning process for the two case studies. The results of the MSE will feed directly into the discussions with the stakeholders of the draft Management plans for both fisheries. The WG also served as an on-the-job training activity in stock assessment methods and socio-economic analysis, fostered by the exchange of experiences and knowledge among participants and the direct assistance of project staff. The socio-economic sub-group focused on the production of a basic description of the economic performance of the national fleets, by GFCM fleet segments, for the year 2015 and compared the performance from that of 2012.

➤ ***Market Value Chain Analysis in Egypt and Lebanon.***

The project is currently conducting two value chain analysis in Egypt and Lebanon. The one in Egypt deals with the existing bivalves market which is focussing on mapping the flows of bivalves throughout the different stages of the value chain, from the producers to the consumers. This will serve to develop strategies that will allow the marketing of the new bivalve species *Chamelea gallina*. The preliminary investigations show that the bivalve market in Egypt is managed by few key wholesalers, which move the product throughout the whole country. One important aspect is that the demand far exceeds the supply, providing several opportunities for the introduction of *C. gallina* in the local market.

The one in Lebanon is being done in partnership with FAO Lebanon under a Technical Cooperation Program in support of the Country Programming Framework (2016- 2019). The two main objectives set out for the project include to better understand the existing fisheries market in Lebanon in order to map the flows of products throughout the different stages of the value chain, from production to marketing and to identify critical factors, challenges and opportunities to improve the efficiency of the fishery value chain in Lebanon. The expected output of the activity are mapping the structure of the market and performing the value-chain analysis per group and mapping consumer behaviour. The target population was defined from within the stakeholders group and then divided into three main categories of players including large-scale, medium-scale and small-scale (fishmongers) within the value-chain.

Project Component 4 - Increased Participation and Cooperation

The Project will promote sub-regional cooperation and collaboration for fishery research, monitoring and management and will support Government staff to attend and fully participating in GFCM (and other) regional meetings

➤ ***Organisation of the 7th EastMed Coordination Committee Meeting.***

The project organized the seventh meeting of the Co-ordination Committee of the FAO EastMed sub-regional Project which was held in Beirut, Lebanon, from the 19th to 20th May 2016. The co-ordination meeting was attended by delegations from areas participating in the project, representatives of the FAO and GFCM. After the opening of the meeting and election of the chairperson, the activities during the 6th year of the project were presented, followed by the workplan of activities for the next period. The participants expressed their satisfaction with the project and thanked both the staff of the project and the donors for their contribution. The agreed work plan for the next period includes training and support in data collection, data

analyses, activities at implementing the Ecosystem Approach to Fisheries (EAF) in specific case studies and activities in promoting regional participation and cooperation. The tasks of the project will be the follow up of the activities which had started in the previous years’.

➤ ***Participation at the GFCM WG on Stock Assessment***

The project participated in the Working Group on stock assessment for Demersal and small pelagic species to support experts from the Eastern Mediterranean to present stock assessments from the region. Several stock assessments were presented in the Working Group, most of which were produced during the EastMed Working Group on fisheries data analysis (Athens, Greece, Nov, 2015) and included *Saurida undosquamis* (GSA 26), *Mullus surmuletus* (GSA 26), *Metapenaeus stebbingi* (GSA 26), *Sardinella aurita* (GSA 27), *Sardinella aurita* (GSA 26 & 27), *Mullus barbatus* (GSA 25) and *Boops boops* (GSA 25). All of the stock assessments show that the stocks are in overexploitation.

➤ ***Participation at 18th session of the Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM).***

The project supported experts to participate to the 18th session of the Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) and to *ad hoc* coordination meetings with Projects’ participating countries to plan future joint and cooperative activities. The SAC was held in Cyprus. The meeting was attended by delegates from contracting parties, by observers from non GFCM Member Nations, from intergovernmental organizations and non-governmental organizations: ACCOBAMS, OCEANA, CIHEAM and World Wide Fund For Nature (WWF). The main activities carried out by the FAO FIRF Projects operating in the Mediterranean Sea (i.e. AdriaMed, CopeMed II, EastMed, MedSea-LME and MedSudMed) were presented and contributed to the discussion for the development and approval of multi-annual fisheries management plans, as well as on the definition of the annual work plan for the SAC and its subsidiary bodies. The SAC acknowledged the support received from the FAO Projects, in particular in relation to the progress fostered in capacity development, standardization of methodologies, assessment of shared stocks, development of harmonised fisheries management strategies.

➤ ***Participation at 40th session of the General Fisheries Commission for the Mediterranean (GFCM).***

The Project attended the 40th session of the GFCM, the 7th session of its Committee on Administration and Finance (CAF) and the 10th session of its Compliance Committee (CoC). At the 40th GFCM session, the Project presented a synthesis of activities carried out during the GFCM intersessional period by the FAO Regional Projects AdriaMed, CopeMed II, EastMed and MedSudMed. During the 40th GFCM, proposals for specific fisheries management measures were endorsed as binding recommendations. The importance of the Projects and their fundamental role in the Mediterranean for the development of national capacity, fostering cooperation and supporting the development of fisheries management was widely acknowledged by national delegations. The GFCM approved the Programme of work of SAC and of the Committee on Aquaculture (CAQ) for the next period.

➤ ***Participation at GFCM Regional Conference on “Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea”.***

The Project was present in Algiers, Algeria, from 7 to 9 March 2016, to participate and present results of the FAO Mediterranean Projects at the GFCM Regional Conference on “Building a future for sustainable small-scale fisheries in the Mediterranean and the Black Sea”. The conference enjoyed the attendance of over 200 participants, which included policy-makers, scientists, practitioners, fishers representatives, fish workers, civil society organizations, NGOs, research institutions, international organizations and more. This Regional Conference was conceived as a practical response to the outcomes of the First Regional Symposium on Small-Scale Fisheries (Malta 2013), seeking to capitalize on the momentum already generated in order to offer a tangible strategy for the future sustainable development of this sector. Concrete case studies were carried out, which further explored key themes identified through the Symposium, and their results were presented in a format that deliberately sought to promote discussions, express opinions and share experiences in order to better grasp priorities and opportunities for this sector. The FAO Mediterranean Regional Projects AdriaMed, CopeMed II, EastMed and MedSudMed participated in the organization of the conference and provided support to scientists from the Mediterranean in presenting specific case studies on small-scale fisheries (SSF). The Projects supported the preparation of a case studies for Panel I "Supporting the sustainable development of small-scale fisheries in the Mediterranean and the Black Sea under the Blue Growth perspective". The case studies addressed key questions in the 1st Panel which included aspects on the importance of small scale fisheries within the national context and gaps in information on the key parameters of SSF. Furthermore final conclusions of the Regional Conference were drawn up in light of the UN Sustainable Development Goals which, among other issues, stress the importance of providing access for small-scale artisanal fisheries to marine resources and markets. Widespread support was expressed by conference participants for the conference objectives to raise awareness, share knowledge, and devise future strategy to promote this crucial fishing sector.

➤ ***Participation at the Workshop on the assessment, exploitation and conservation of Elasmobranches.***

The Project participated at the workshop on the assessment, exploitation and conservation of Elasmobranches, which was organized by the Italian Association of Marine Biology in Chioggia, Italy, from 10 to 11 May 2016. The objectives of the workshop were to review the most recent advances in the knowledge, taxonomy, state of exploitation, management, and the future priorities and research perspectives on elasmobranches. Several presentations were made on various aspects of elasmobranches biology and fisheries. The outcomes of the workshop showed that the Mediterranean elasmobranches are mostly not targeted directly by a specific fishery. However they constitute an important component of the by-catch. The Western part of the Mediterranean shows the most critical situation with high exploitation rates. In some cases, the stocks are considered highly overexploited, although some research programmes, such as the European Union Data Collection Framework, are showing an improvement of the situation with a significant increase in terms of biomass, especially for some demersal stocks. Based on the knowledge obtained, a programme of work on elasmobranches by-catch will be proposed to be implemented in the Eastern Mediterranean, with the support of EastMed Project and in close coordination with the GFCM.

- ***Present the results of the Mediterranean EAF case studies to the EAF Forum in Africa.***

The Project went to Abidjan, Côte d'Ivoire to contribute to discussions at the EAF Project Forum which was held from 17 to 19 October 2016. The Forum was attended by around 90 participants from 28 partner countries, three RFBs, the BCC, partner Projects (e.g. CCLME, SWIOFish), the AU-IBAR, the Marine Stewardship Council, Norwegian partners and FAO. The FAO Regional projects EastMed and CopeMed supported the participation of experts from Egypt, Lebanon, Turkey and Tunisia to present the results of the ongoing pilot studies on EAF in the Mediterranean. Participants felt that generally, the presentations and discussions had been of high standard and the Forum was extremely useful. In the Joint Meeting of the Regional Steering Committees, participants requested the EAF-Nansen Project to provide technical and financial support to the countries to help them in the implementation of the management plans developed with support of the Project.

- ***Participation at the GFCM SAC Subregional Committee for the Eastern Mediterranean (SRC-EM).***

The project participated and contributed to the first meeting of the Subregional Committee for the Eastern Mediterranean (SRC-EM) of the General Fisheries Commission for the Mediterranean (GFCM) Scientific Advisory Committee on Fisheries (SAC) was held in FAO headquarters, Rome, Italy, on 24th -25th February 2017. The aims of the meeting were to: i) compile and discuss the status of Eastern Mediterranean stocks as emanating from the Working Group on Stock Assessment of Demersal Species (WGSAD) and Working Group on Stock Assessment of Small Pelagic Species (WGSASP); ii) evaluate the outcomes of the SAC technical activities relevant for the management of Eastern Mediterranean fisheries, including issues related to the management of Deep-sea Fisheries and Vulnerable Marine Ecosystems; iii) take stock of relevant subregional initiatives and provide advice towards the management of the resources in the subregion, including the implementation of multiannual management plans; v) propose a list of activities of relevance to the subregion to be considered for the 2017–2018 SAC workplan. The SRC-EM compiled a draft advice on issues related to fisheries in the subregion, including a summary of the status of stocks, advice on data collection for the future implementation of a management plan, measures to manage Eastern Mediterranean deep sea fisheries, realization of a monitoring program to control the alien species and a revision of the priority species list consistently with the needs of the subregion. In addition, the SRC-EM agreed on the importance to improve the coverage of scientific surveys, participate in a proposed UNEP/MAP GFCM NIS pilot study and compile relevant information for puffer fish, red shrimp and sardinella.

- ***Working together with stakeholders to increase knowledge about discards and the strategies to reduce them.***

The project participated at the DiscardLess Stakeholders Conference where a diverse group of approximately 60 fisheries stakeholders met with 50 scientists from the DiscardLess project to discuss the EU Landing Obligation at FAO Headquarters in Rome on 9-10 March 2017. Stakeholders represented many different organisations, interests and opinions, including fishers and their representatives from the small-scale fleet to large trawlers and

pelagic fisheries, seafood processors, NGOs, Advisory Councils, the European Commission, national administrations, and the European Fisheries Control Agency. Conference participants came from all EU fisheries regions, from the Baltic to the Mediterranean, and also from outside the EU including Chile, North Africa, the Middle East, the USA and Australia.

➤ ***Coordination among the sub-regional projects, with the GFCM and the donors including Italy and the EU***

In order to strengthen international and regional cooperation the project is interacting closely with the FAO sub-Regional Projects, AdriaMed, MedsudMed and CopeMed II throughout the year with several co-ordination meetings. These meetings were held in order to consolidate and envisage common activities. In this respect the project also participated to in the Coordination Committee of AdriaMed, MedsudMed and CopeMed II where synergies were identified. Training activities were coordinated among all the Projects, in order to avoid duplication or overlapping of activities. The participation of other RPs' experts in training courses organized by EastMed and vice versa was conducted. Common informative material (leaflets, CD-rom, etc.) are prepared that can improve the visibility of the RPs in the Mediterranean.

Cooperation was further sustained with the GFCM Secretariat and the GFCM subsidiary bodies. EastMed continued to support the activities of the GFCM by providing scientific contributions for discussion and by funding the participation of several experts from the Eastern Mediterranean countries to GFCM and other international activities.

Technical documents have been prepared and the ones published are available online through the website. Hard copies have also been distributed to participating countries. Posters were prepared, and presentations were given to several meetings, in which the publications were distributed.

The project web site (www.faoeastmed.org) has been improved and active links have been created with the websites of the other sub-regional projects and GFCM. It is continuously updated with new information, and on the home page a new section on upcoming events was developed.

Annex IV Proposed list of species to be included in the GFCM Priority List

GFCM Priority List Eastern Mediterranean			
<i>Sardinella aurita</i>			
<i>Engraulis encrassicolus</i>			
<i>Mullus barbatus</i>			
<i>Saurida lessepsians</i>			
<i>Corallium rubrum</i>			
<i>Lagocephalus sceleratus</i>			
<i>Pterois miles</i>			
<i>Anguilla anguilla</i>			
Proposed Additional species	Countries for which the species are a priority	Ranking	GSA
Value and Volume landings	Data available		
<i>Metapenaeus stebbingi</i>	Egypt		
<i>Mullus surmuletus</i>	Egypt, Greece		
<i>Aristeus antennatus,</i> <i>Aristaeomorpha foliacea</i>	Egypt, Greece, Turkey, Italy, Cyprus		
<i>Spicara smaris</i>	Cyprus		
<i>Boops boops</i>	Cyprus		
<i>Pagellus erythrinus</i>	Egypt, Lebanon, Cyprus		
<i>Pagellus acarne</i>	Lebanon		
<i>Upeneus mollucensis</i>	Turkey, Palestine		
<i>Merluccius merluccius</i>	Egypt, Greece, Turkey		
<i>Sardina pilchardus</i>	Egypt, Greece, Turkey		