

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

Report of the thirteenth session of the

SCIENTIFIC ADVISORY COMMITTEE

Marseille, France, 7–11 February 2011

Rapport de la treizième session du

COMITÉ SCIENTIFIQUE CONSULTATIF

Marseille, France, 7-11 février 2011



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PREPARATION OF THIS DOCUMENT

This is the final report approved by the participants at the thirteenth session of the Scientific Advisory Committee of the General Fisheries Commission for the Mediterranean held in Marseille, France, from 7 to 11 February 2011.

PRÉPARATION DE CE DOCUMENT

Le présent document est le rapport final adopté par les participants de la treizième session du Comité Scientifique Consultatif de la Commission générale des pêches pour la Méditerranée tenue à Marseille, France, du 7 au 11 février 2011.

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ABSTRACT

The Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) held its Thirteenth Session in Marseille, France, from 7 to 11 February 2011. The session was attended by delegates from 21 Members of the Commission as well as observers from intergovernmental organizations and non-governmental organizations together with the Russian Federation. The session appraised the achievements of its subsidiary bodies along with the outcome of the Coordinating Meeting of the Sub-Committees (CMSC). The Committee reviewed the topics addressed by the 17 technical meetings held by its subsidiary bodies. These included proposals for fishery management measures, research programmes, data collection schemes and development of Management Plans. It discussed several other technical issues connected to the exploitation of red coral and European eel, the status of elasmobranchs, the protection of seabirds, turtles and monk seals as well as the monitoring of the by-catch in the Mediterranean fisheries. SAC further commented on the outputs of the workshop on algal and jellyfish blooms which provided options to tackle the problems posed by this phenomenon on fisheries and also gave due importance to the results of the workshops on recreational fisheries and on fishing gear selectivity. Definitions of some socio-economic parameters within the Task 1 data collection framework were reviewed and options for the improvement of the collection and submission of biological data under this framework were considered. The Committee acknowledged the progress made in undertaking joint stock assessments of several demersal and small pelagic species and identified a way of progression of the use of Biological Reference Points. SAC also reviewed the progress made on the development and management of GFCM databases, including the new Biological Parameters Database and the newly released e-Glossary, as well as that made on the issue of catch weight thresholds in logbook reporting. Finally, the Committee proposed the establishment of a new Working Group to specifically address the Black Sea issues and agreed upon its workplan for 2011.

RÉSUMÉ

Le Comité Scientifique Consultatif (CSC) de la Commission générale des pêches pour la Méditerranée (CGPM) a tenu sa treizième session à Marseille, France, du 7 au 11 février 2011. Ont participé à cette session, les délégués de 21 membres de la Commission, des observateurs d'organisations intergouvernementales et d'organisations non-gouvernementales ainsi que la Fédération de Russie. Le Comité a examiné les activités et résultats de ses organes subsidiaires ainsi que de la réunion de coordination des Sous-Comités (CMSC). Le Comité a analysé les questions abordées par les 17 réunions techniques organisées par ses organes subsidiaires, qui comprennent des avis en matière de gestion des pêches, des programmes de recherche, des systèmes de collecte de données ainsi que le développement de plans de gestion. Le CSC a discuté plusieurs autres questions techniques en relation avec l'exploitation du corail rouge et de l'anguille européenne, la situation des espèces d'élasmobranches, la protection des oiseaux de mer, des tortues et des phoques moines ainsi que le suivi des prises accessoires dans les pêcheries Méditerranéennes. Il a examiné les résultats de l'atelier sur la prolifération d'algues et de méduses qui a proposé des options pour résoudre les problèmes d'interaction de ce phénomène avec la pêche et a également reconnu l'importance des résultats des ateliers sur la pêche récréative et la sélectivité des engins de pêche. Les définitions de certains paramètres socio-économiques dans le cadre de la collecte de données de la Tâche 1 ont été examinées et des options pour l'amélioration de la collecte et la transmission des données biologiques ont été considérées. Le Comité a reconnu les progrès accomplis dans la réalisation d'évaluations conjointes des stocks de plusieurs espèces démersales et petits pélagiques et a identifié un moyen pour avancer sur l'utilisation des points de référence biologiques. Le CSC a examiné les progrès accomplis dans l'élaboration et la gestion des bases de données de la CGPM, y compris la nouvelle base de données des paramètres biologiques, le glossaire électronique (e-Glossary), ainsi que sur la question des seuils de poids des captures dans les carnets de bord. Finalement, le Comité a proposé l'établissement d'un groupe de travail dont la mission est d'aborder de manière spécifique les questions concernant la mer Noire et a approuvé son plan de travail pour 2011.

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OPENING AND ARRANGEMENTS FOR THE SESSION

1. The thirteenth session of the Scientific Advisory Committee (SAC) of the General Fisheries Commission for the Mediterranean (GFCM) was held in Marseille, France, from 7 to 11 February 2011.
2. The session was attended by delegates from 21 Members of the Commission as well as observers from non GFCM Member Nations, from intergovernmental organizations and non-governmental organizations: the Russian Federation, the Agreement on the Conservation of Cetaceans in the Black Sea Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS), Plan Bleu, OCEANA, Mediterranean Marine Protected Areas Network (MedPAN), the “Confédération internationale de la pêche sportive” (CIPS), the Regional Activity Centre for Specially Protected Areas of the United Nations Environment Programme Mediterranean Action Plan (UNEP-MAP-RAC/SPA), the International Union for Conservation of Nature (IUCN) and the World Wide Fund For Nature (WWF), as well as staff from the FAO regional projects.
3. Mr Henri Farrugio, Chairperson of SAC, opened the meeting and welcomed the participants. He introduced Mr Gérard Riou and Mr Pierre-Yves Andrieu, Director of Ifremer Mediterranean and inter-regional Director of the Mediterranean Sea, respectively.
4. Mr Riou and Mr Andrieu welcomed the participants on behalf of the French authorities and thanked Mr Farrugio and the GFCM Secretariat for the organization of the meeting. They highlighted the importance of SAC within the GFCM mandate and stressed its major role in the common efforts to reach sustainable development in the Mediterranean and Black Sea. They underlined that the diversity of work carried out by the Sub-Committees of SAC was remarkable and allowed for a holistic approach to fisheries science and management.
5. Mr Abdellah Srour, GFCM acting Executive Secretary, welcomed the participants on behalf the GFCM Chairperson Mr Mohamed Hadj Ali Salem and thanked the French authorities for the hospitality and excellent organization. He stated that, over the last ten years, major contributions to fisheries management processes have been delivered by SAC in this regard. He also underlined the important role of regional projects which are funded by a number of Members of the Commission in fostering scientific cooperation.

ADOPTION OF THE AGENDA

6. After having invited all delegates and observers to introduce themselves, the Chairperson gave the floor to the acting Executive Secretary who informed the Committee about logistics and reporting arrangements during the session.

7. The Agenda was introduced and adopted, as shown in Appendix A of this report. The list of participants is attached as Appendix B.

8. The documents, which were before the Committee, are listed in Appendix C.

INTERSESSIONAL ACTIVITIES

Review of the main decisions adopted at the thirty-fourth session of the GFCM concerning fisheries management

9. The acting Executive Secretary outlined the main decisions adopted by the Commission at its thirty-fourth session held in Athens (April 2010) and recalled their scope. He pointed out the importance given by the Commission to some topics such as the scientific collaboration in the Black Sea, the use of Biological Reference Points and the monitoring of fishing capacity. He also recalled the pending decision to organize before 2013 a technical workshop on Vessel Monitoring Systems (VMS) and invited SAC to consider this issue when discussing its 2011 workplan.

10. The acting Executive Secretary informed that three binding recommendations were adopted: (i) the Recommendation GFCM/34/2010/2 which includes a data call related to information on vessels longer than 15 m and lays the foundation for the development of a Regional Plan of Action on the management of fishing capacity and which has been addressed during the intersessional period (ii) the Recommendation GFCM/34/2010/1 on the establishment of GFCM logbook standards (iii) the Recommendation GFCM/34/2010/3 concerning the identification for non-compliance. He added that the Commission has also endorsed management measures adopted by ICCAT in relation to swordfish and tuna fisheries together with the conservation of thresher sharks.

Report by the Chairperson: overview of SAC activities

11. On the basis of document GFCM:SAC13/2011/2, the Chairperson presented the activities undertaken by the four Sub-Committees during the intersession. He informed the delegates that

seventeen scheduled meetings had been convened and that the proceedings and outcomes of technical workshops were available in documents GFCM:SAC13/2011/Inf.12 to GFCM:SAC13/2011/Inf.21.

12. Referring to the technical workshops, the Chairperson informed the Committee that several topics had been addressed and substantial results had been obtained. These included proposals for fishery management measures, research programmes, data collection schemes, development of plans of action as well as technical issues, in connection with the exploitation of red coral, the catch of elasmobranchs and the European Eel fishery. In addition, he referred to the work carried out by the workshop on data collection methods which contributed significantly to the implementation of the Task 1 data submission processes. Furthermore, the Chairperson gave an overview of the outputs of the workshop on algal and jelly fish blooms which provided options to tackle the problems posed by this phenomenon on fisheries, the marine environment and society in general. He also gave due importance to the results of the workshop on recreational fisheries which identified various sub-sectors and provided definitions for each, as well as the workshop on fishing gear selectivity which addressed, *inter alia*, impacts of the implementation of the 40 mm mesh size, reduction of by-catch and the impact of trawl fisheries on seabeds.

13. On the work carried out by the Sub-Committee on Statistics and Information (SCSI), the Chairperson highlighted, in particular, the progress made on the development and management of GFCM databases and information systems, data confidentiality and data access policy, the implementation of the GSA compatible STATLANT 37A reporting scheme, the review of Task 1 data parameters and definitions, as well as on the issue of catch weight thresholds in logbook reporting.

14. The Chairperson informed SAC that the Sub-Committee on Economic and Social Sciences (CESS) reviewed the outcomes of the workshop on the monitoring of recreational fisheries in the GFCM area as well as the results of case studies related to the economic impacts of the implementation of the 40 mm square mesh codend. He added that the CCESS also reviewed and edited the definitions for the economic variables related to Task 1.3.

15. With regards to the Sub-Committee on Stock Assessment (SCSA) the Chairperson reported that the Sub-Committee has reviewed 32 technical papers on demersal species and 11 technical papers on small pelagics elaborated by the two Working Groups on stock assessment. He added that the SCSA reviewed the outcomes of the workshops on European eel, elasmobranchs and fishing gear selectivity and by-catch reduction. SAC was also informed that the SCSA drew up a number of additional sheets within the Stock Assessment Forms and addressed the use of Biological Reference Points.

16. The Chairperson also informed SAC that the work of the Sub-Committee on Marine Environment and Ecosystems (SCMEE) focused on the impact of alien species on the fisheries, the Ecosystem Approach to Fisheries (EAF) and fry fisheries in relation to the conservation of sensitive habitats. He noted that the SCMEE endorsed the proposal to set up a new Fisheries restricted area (FRA) around seamounts in the Balearic archipelago area.

17. Referring to document GFCM:SAC13/2011/Inf.10, the SAC Chairperson presented the conclusions of the Coordination Meeting of the Working Groups (CMSC) including the issues related to the strategy for implementing the SAC workplan as well as the functioning of the SAC Sub-Committees and Working Groups.

18. SAC commended the work carried out by its subsidiary bodies during the intersessional period, despite the limited time available, and expressed its satisfaction on the quality of the results obtained which could allow the Committee to formulate management advice to safeguard the sustainability of fisheries as well as the wellbeing of the marine ecosystem. The Committee also congratulated the GFCM Secretariat for the excellent work performed during the intersessional period and for the organization of this session.

19. The delegate from the European Union (EU), renewed the invitation made by the EU to sponsor the workshop on VMS which had been postponed by the Commission at its thirty-fourth session.

20. The representative of ACCOBAMS expressed her satisfaction for the excellent collaboration with GFCM and renewed her interest to continue this collaboration, in particular on issues related to data collection on by-catch of cetaceans, ecolabelling and marine protected areas.

Major activities of regional projects and initiatives

21. The Coordinators of the ongoing FAO regional projects AdriaMed, CopeMed II, ArtFiMed, EastMed and MedSudMed presented their major activities carried out during the intersessional period. The information provided dealt with research activities, training programmes, workshops and working groups as well as technical assistance provided to the countries and the contributions to SAC activities. The information on the current situation of the MedFisis, MED-LME and the Black Sea projects was also presented. The delegates were informed that detailed information regarding the activities and outputs of the projects is available in the annual report of the Coordination Committees of the different projects and in document GFCM:SAC13/2011/Inf.22.

22. SAC acknowledged the extensive work undertaken by the projects and the valuable scientific contributions provided, especially in developing and implementing common methodologies through organizing joint field training activities, surveys at sea, as well as strengthening the expertise at national level. It was highlighted that the work of SAC implemented during the intersessional period benefited substantially from the support of the regional projects and their coordination.

23. The Committee expressed its satisfaction on the amount of activities implemented and results achieved, of interest to the countries and GFCM, particularly in relation to shared stocks.

24. Delegates of countries participating in the AdriaMed Project (Albania, Croatia and Montenegro) reiterated the strategic role of the Project in the area, being the only project which groups all the Adriatic countries. This facilitated and strengthened the regional coordination and the implementation of joint activities, which resulted, *inter alia*, in joint data collection and finally joint appraisal of shared resources. Particular mention was also made to the effective establishment of regional cooperation among the research institutions and the fisheries administrations in the Adriatic which allowed for the improvement of fisheries management in the project area.

25. The delegate from Egypt informed the Committee that cooperation had been established between EastMed and his country which, in a short time, had led to several achievements.

26. The delegate from Tunisia highlighted the important role of the regional projects in continuing to support joint work on shared stocks, such as stock boundary identification and assessment. He further stated that this constitutes the necessary baseline for the final goal of formulating harmonized fisheries management strategies. He further emphasized, together with the delegate from Morocco, the positive impacts of CopeMed and ArtFiMed activities in their countries and the need to maintain these activities in order to fulfil SAC recommendations.

27. The delegate from the Libyan Arab Jamahiriya outlined the benefits his country has gained from its participation in the activities of MedSudMed and CopeMed projects, especially in the framework of capacity building and training in sampling methods collection, analysis and reporting of scientific data. Such output will hopefully enable the Libyan scientists to continue these important scientific programmes when the said projects end. The Libyan delegate also thanked the supporting European countries for sponsoring these regional projects.

28. With regards to MedFisis and CopeMed, some delegations stated that it would be important to start planning the follow-up of these projects as soon as possible since they are due to end in June 2011 and July 2011 respectively.

29. In the light of the above, the European Union delegation proposed that countries should include in their national report reference to their involvement in activities of regional projects, results obtained and any assistance received.

SALIENT RESEARCH ACTIVITIES BY MEMBER COUNTRIES

30. Mr Matthew Camilleri from the GFCM Secretariat presented the document GFCM:SAC13/2011/Inf.11, providing a synthesis of the information contained in 16 national reports received by the Secretariat prior to the meeting (Appendixes F(a) and F(b)).

31. The Bulgarian and Romanian delegates informed the Committee that their countries submit a similar national report to the Black Sea Commission (BSC) and this could serve as the basis for the national report to be submitted to SAC.

32. Upon the suggestion of the delegates from Tunisia and the Libyan Arab Jamahiriya, SAC agreed on adding a new element to the national report concerning the management measures taken in direct response to GFCM recommendations, including the assessment of their effects.

33. Some delegations reported on other activities not included in the national reports. In this respect, the Secretariat invited delegates to submit, as soon as possible, a revised national report, if necessary, to reflect these additional activities so that these can be included in the report of the current SAC session.

FORMULATION OF ADVICE IN THE FIELD OF FISHERY MANAGEMENT AND RESEARCH

Conclusions and recommendations of the Sub-Committee on Marine Environment and Ecosystems (SCMEE)

34. The Coordinator of the Sub-Committee, Mr Federico Alvarez, presented the conclusions and recommendations of the SCMEE on the basis of document GFCM:SAC13/2011/3 and document GFCM:SAC13/2011/Inf.5. The Coordinator described the outputs focusing on management and research issues.

35. Some delegates felt that the proposal to adopt a minimum size for the exploitation of coral branches was premature and that it may require further research and discussion to decide on a minimum size. On the other hand, it was generally agreed that other measures such as the prohibition of the use of ROVs, the protection in the colonies of shallow waters and the establishment of quota

system based on number of licenses could be put forward for the consideration of GFCM. SAC also stressed that there was enough scientific evidence on the low/very low connectivity among different colonies, even within short distance, and hence locally adaptive management was advisable as a general rule for the red coral in the region.

36. The Sub-Committee hence noted that further research was needed before adopting a minimum size for the exploitation of red coral. In the light of the above, delegations expressed agreement on progressing on the elaboration of a common regional management plan. In this context, it was agreed that a second workshop on the subject should be convened in 2011.

37. The Algerian delegate informed the Committee that the exploitation of red coral is forbidden in Algeria in the absence of scientific information. Nevertheless, she stressed that this fishery could be reopened when said data would be available.

38. The Tunisian delegate informed the Committee that Tunisia is planning to launch a programme for the assessment of red coral and he suggested that the proposed measures concerning the prohibition of red coral exploitation in shallow waters (< 50 m) be taken once the outcome of this assessment is available.

39. SAC encouraged further efforts in acquiring scientific knowledge on red coral and invited research institutes of member countries to set up cooperative research projects on the subject. It also endorsed the proposal by the SCMEE to undertake a regional medium-term research programme on red coral and called for the identification of funding sources for this purpose, amongst which the possible support of FAO regional projects could be considered.

40. In this regard, the FAO Regional Projects expressed that activities on red coral could be implemented by the projects when specific funds being available to undertake these initiatives.

41. On the proposal for the establishment of a new FRA in the Balearic Islands, the Spanish delegate stated that the FRA proposed (Appendix D) was only based on qualitative studies (presence/absence) and it has a lack of benthic biomass and socio-economical studies. She also stressed that some of the habitats included in the FRA, such as coralligenous and maërl seabeds, are already protected under the EU regulation. The proposal as it has been submitted cannot be supported by Spain at this stage, nevertheless the Administration is open to continue studying the data provided together with IEO scientific advice, in order to achieve a more complete study of the area, focusing mainly on the mapping of the different habitats, fleet description and effort distribution, together with the potential socio-economic impact of the proposed protection measures.

42. The observer from OCEANA stated that the information available was, in fact, qualitative, but it clearly described those habitats that were not only coralligenous and maërl as well as other sensitive habitats such as *Isidella elongata* and deep-sea sponge beds. She stated also that communication with the relevant authorities was made respecting the appropriate timing, immediately after the proposal was endorsed by SCMEE scientists. She also added that the declaration of the FRA could help the Spanish Government to enforce the protection of coralligenous and maërl beds. OCEANA stressed the urgent need of preserving the seamounts of the Mallorca Channel through the declaration of a FRA.

43. The EU delegate welcomed the study carried out by OCEANA which, although qualitative, allowed identification of sensitive habitats within waters under Spanish jurisdiction, and where therefore the prohibition to fish with trawl nets already applies according to EU legislation. He suggested that the standard format for new proposals of FRA should be amended in order to reflect a minimum of quantitative information supporting such proposals. He favoured that proposals be submitted by more than one author.

44. The importance of the seamounts as hotspots for biodiversity was underlined during the discussion. SAC was called upon for actions to improve the knowledge on the topographic description and bio-economic aspects of these areas so that further steps may be subsequently taken, either oriented towards bioeconomic studies or to recommend fisheries management measures. It was also stressed that it would be advisable to ban the use of trawl nets and dredges over coralligenous and maërl habitats to all the Mediterranean in order to preserve these important ecosystems.

45. Taking into consideration the above mentioned remarks, SAC called upon the SCMEE to further investigate the issue, before the submission to the Commission, in line with the general SAC mandate to improve knowledge in structure and functioning of canyons and deep-sea habitats.

46. The observer from IUCN made reference to the already established FRAs and stated that the monitoring of these areas should be properly addressed by GFCM.

47. Concerning the required data on vessels operating in the FRA of the Gulf of Lions in compliance with the Recommendation GFCM/33/2009/1, SAC took note of the fact that the information received by the Secretariat is still provisional. The Committee stressed that the spatial distribution of fishing effort, derived, *inter alia*, from VMS data, is a key element in stock assessments.

48. The EU delegate informed that, with reference to the SAC responsibility to assess the effects of current regulation on the FRAs, it is evident that scientists accessibility to VMS data should be facilitated by the GFCM Parties taking also into account Recommendation GFCM/33/2009/7 and in particular Article 16 therein. Moreover, considering that the majority of fishing vessels in the GFCM area is smaller than 15 metres overall length and that most of them may legally operate offshore and quite far from coastline and port of registration, further reflection would be advisable to possibly extend the compulsory use of VMS and/or logbook to vessels smaller than 15 metres overall length. Since knowledge on the spatial deployment of the fishing effort is becoming increasingly important, it is necessary that fishing operations are recorded, at least, by coded rectangles of 30'x30' of the GFCM statistical grid. This statistical grid should be superimposed onto a map of the GFCM area to be included, as a reference, in the cover page of the logbook, as indicated in Recommendation GFCM/34/2010/1.

49. SAC discussed and endorsed the measures proposed by SCMEE on the reduction of the by-catch of monk seals, sea turtles and seabirds. These include in particular:

- For the monk seal: restrict setting static nets (gill nets, trammels, etc.) at a minimum distance of 5 nm radius around the location of monk seal caves during autumn and winter. The radius will be extended to 10 nm around breeding caves.
- For sea turtles: use of unhooking devices to release animals which are incidentally caught by long-lines.
- For seabirds:
 - In longline fishing: only night-setting of gears should be authorised, use of bird-scaring devices, fast sinking extra weighted lines and conditioning of bait (thawed, blue dyed).
 - In trawl fishing: use of scaring devices to be fixed on the trawl warps.

For both type of fishing practices, it is advised to decrease the offal/discards availability to birds by freezing it into blocks or fluidizing it for later disposal when seabirds are not present.

50. With regards to the monk seals, the effective application of the measures is conditioned by the knowledge of the location of the monk seal sites. The Secretariat was invited to gather and analyse the maximum of information on location sites of monk seals, possibly before the next GFCM session.

51. The observer from RAC/SPA stressed that the protection should be implemented without much delay in the known monk seal areas.

52. Regarding seabirds, SAC agreed that the relevant FAO International Plan of Action should be the reference for the future measures to be taken in order to reduce the by-catch of this species.

53. The observer from ACCOBAMS expressed interest to collaborate in the fulfillment of by-catch data submission under the Task 1 scheme of GFCM. She informed the Committee of current projects in the Black Sea and Mediterranean on the monitoring of by-catch of cetaceans.

54. On the proposal to promote medium-term, multidisciplinary integrated research on jellyfish and algal blooms, the Tunisian delegate informed that his country would collaborate in such a project. He suggested working with institutions such as the Mediterranean Science Commission (CIESM), which has already offered its disposition to start joint activities with GFCM. The Turkish delegate also expressed his interest and informed that his country is willing to provide financial support to follow-up studies to be undertaken by GFCM on jellyfish and algal blooms. Further interest was expressed by the observer from ACCOBAMS on any collaboration with the GFCM on the issues of algal and jellyfish blooms.

55. The EU delegate informed the Committee that some projects funded by the EU on this phenomenon have been carried out or are still currently in place and invited the scientists involved in SAC to regularly consult CORDIS (http://cordis.europa.eu/home_en.html) for possible further calls for proposals.

56. The SCMEE Coordinator also informed the Committee about an initiative of a consortium to apply for funds through the INTERREG call of the EU in which several research institutes of Mediterranean countries are intending to participate.

57. The proposal by the SCMEE to continue conducting pilot studies on the effects of implementing the new codend meshes was approved by SAC.

58. Referring to the proposal to conduct pilot studies on measures to reduce the by-catch of elasmobranchs, the EU delegate expressed concern on the generalisation of such type of measures since not all the species of sharks are threatened or endangered. He suggested that the first issue to be addressed is to ensure that the by-catch¹ data is properly collected and analysed in order to allow for more specific measures to be taken and the species to be better protected. SAC suggested to postpone such pilot studies and start taking some action in relation to the species for which data is available. The Committee also stressed the importance of performing stock assessment on these species.

¹ According to SAC Glossary, by-catch is defined as: *The total catch of unwanted animals including vulnerable and endangered species. By-catch of commercial species should be reported as associated species.*

59. SAC stressed on the need to follow-up on the updating of the protocol on selectivity pilot studies, and research on submarine canyons and reporting of by-catch of elasmobranchs within the framework of Task 1.

60. On the proposal to protect nursery areas, SAC agreed on considering them as sensitive areas. The Egyptian delegate highlighted the fact that the fisheries of larvae and juveniles for fish farms was also a fishery to account for and to be monitored.

61. Regarding the proposal on ecolabelling, the Turkish delegate suggested the promotion of the marketing of fish and fishery products through ecolabelling as a potential instrument for increasing the incomes from fisheries. ACCOBAMS also invited the GFCM to participate in an upcoming meeting on ecolabelling.

Conclusions and recommendations of the Sub-Committee on Stock Assessment (SCSA)

62. The Sub-Committee Coordinator, Mr Fabio Fiorentino, presented the conclusions and advice emanating from the meetings organised during the intersessional period. He introduced the stock assessments carried out by the SCSA which cover 14 GSAs and 12 species for demersal species and 7 GSAs and 2 species for small pelagic species. He noted that 23 stock assessments of demersal species were validated (22 in overfishing/overfished status and 1 fully exploited). For small pelagic species, 11 stock assessments were accepted (2 stocks were considered in overfishing/overfished status and 7 fully or moderately exploited).

63. The Committee thoroughly reviewed the advice related to demersal and small pelagic species as provided in Table 1 and Table 2 respectively. SAC agreed to endorse the advice formulated by the SCSA after having accepted to introduce slight amendments and considering some remarks.

64. SAC noted that some assessments, although based on few years of data, were considered as validated using a pseudo cohort approach, when the assumption of steady state in catch was checked. It added that the advice emanating from some of those assessments, qualified as preliminary, may serve in any case as a basis for management measures assuming that these assessments will be performed again once the time series data become longer and related analysis will be refined.

Table 1

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 01 & 03 (Northern and Southern Alboran Sea)	<i>Pagellus bogaraveo</i>	Lfreq & catch	2005–2007 (artisanal fisheries from Morocco and Spain)	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (0.40) higher than F _{0.1} (0.18) and F _{max} (0.37)	Decrease the fishing effort. Adopt the same management measure in GSA 03 and GSA 01. Improve the sampling standardisation. Maintain the joint assessment.	Improve the biological sampling and estimate the importance of the catches of juveniles that occur in more shallow areas by trawlers in order to improve the assessment in the case such removal be assessed as not negligible. The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	SAC appreciated the effort done by the scientists of Morocco and Spain to assess jointly the stock status. The relevant contribution of the regional project Copemed II in pursuing the activity was highlighted. Endorsed.
GSA 03 (Southern Alboran Sea)	<i>Parapenaeus longirostris</i>	Catch & effort	2000–2009	Schaeffer Surplus production	Over-exploited; F _{curr} / F _{0.1} = 392% F _{curr} / F _{MSY} = 353%	It was recommended to decrease the fishing mortality by 60–80%. The abundance indices observed during surveys indicate a decrease of this resource.	The WG recommend extending the assessment of the <i>Parapenaeus</i> stock including the data from other adjacent areas (Spanish and Algerian areas). The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Boops boops</i>	Lfreq & catch	2000–2009	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (0.90) higher than F0.1(0.61) and Fmax (0.75)	Reduce the fishing mortality and control the trawling ban in coastal water.	No sign of depletion is evident. The fishing mortality can be reduced limiting the moving of trawlers from the Atlantic to the Mediterranean. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed	No further comments. Endorsed.
	<i>Mullus barbatus</i>	Lfreq & catch	2004–2009	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (0.68) higher than F0.1(0.55) and Fmax (0.56)	Reduce the fishing mortality and control the trawling ban in coastal water.	No sign of depletion is evident. The fishing mortality can be reduced limiting the moving of trawlers from the Atlantic to the Mediterranean. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 05 (Balearic islands)	<i>Merluccius merluccius</i>	Catch, effort, Lfreq catch, Trawl surveys	1980–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.85) higher than F0.1(0.20) and Fmax (0.31)	Reduce fishing mortalities by 30 to 50% through reducing the effort activity and improving the selection pattern of the fishery.	Explore the parameterisation of XSA (the contribution of each tuning fleet in the model) and run sensitivity analysis on its effects. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.
	<i>Mullus surmuletus</i>	Catch, effort, Lfreq catch, Trawl surveys	2000–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.60) higher than F0.1 (0.38) and lower than Fmax (0.74)	Reduce fishing mortalities by 30% to 50% through reducing the effort activity and improving the selection pattern of the fishery.	The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Mullus barbatus</i>	Catch, effort, Lfreq catch, Trawl surveys	2000–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.82) higher than F0.1(0.33) and Fmax (0.53)	Reduce fishing mortalities by 40% to 60% through reducing the effort activity and improving the selection pattern of the fishery.	Explore the parameterisation of XSA (the contribution of each tuning fleet in the model). The WG group noticed that while SSB appears increasing, recruitment time series suggest an increasing trend. The WG suggest performing sensitivity tests for defining the influence of input biological parameters in the results. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.
	<i>Nephrops norvegicus</i>	Catch, effort, Lfreq catch, Trawl surveys	2002–2008	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (0.45) higher than F0.1 (0.30) and lower than Fmax (0.63)	Decrease fishing mortality by 20–30% by: - Reducing effort, both in capacity and/or activity - Improving the selection pattern of the fishery - Implementing area closures for fishing	Perform a sensitivity analysis. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Aristeus antennatus</i>	Catch, effort, Lfreq catch, Trawl surveys	1992–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.62) higher than F0.1 (0.33) and lower than Fmax (0.76)	Decrease fishing mortalities by 30% to 50% through reducing the effort activity and improving the selection pattern of the fishery. Implementing area closures for fishing in the nursery areas during the recruitment period.	Evaluate the effect of the biological parameters running XSA with sex combined data. Explore the parameterisation of XSA (the contribution of each tuning fleet in the model). The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.
	<i>Parapenaeus longirostris</i>	Catch, effort, Lfreq catch, Trawl surveys	2000–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited	The problems found with the residuals and the retrospective analysis makes not possible to provide a full management advice.	The WG agrees that the stock is overfished but some uncertainty do not allow to suggest an available value to reduce the actual fishing mortality. The WG endorses the assessment as a source of general information of the stock.	The assessment must be considered as a rough estimation of the stock status. To be verified.	SAC consider this assessment as provisional.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 06 (Northern Spain)	<i>Merluccius merluccius</i>	Catch, effort, Lfreq catch, trawl survey	1995–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (1.70) higher than F0.1(0.60)	To reduce the growth overfishing: - Decrease the effort of trawl. - Improve the fishing pattern of the trawl fleets. To avoid recruitment overfishing: - Reduce effort in trawl 70% - Special surveillance in the use of 40 mm square mesh size in the cod end in trawl gears. - Encourage studies to allocate area closures to fishing (FRA).	The stock show dangerous signals of recruitment overexploitation due to the decreasing trend in recruitment and very low levels of the spawning stock. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	SAC noted that the absolute value of F, both in terms of current and target F, are higher than those of the other areas of the Mediterranean. Due to the robustness of Y/R analyses, the percentage of reduction of current F to reach the target values should not be biased. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Mullus barbatus</i>	Catch, effort, Lfreq catch, trawl surveys	1998–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.76) higher than F0.1 (0.39)	Decrease the fishing mortality by 70%. More effective control in shelf areas above 50 m depth to reduce the catch of small individuals under the minimum legal size. The use of the 40 mm square mesh in the cod-end should improve trawl exploitation pattern and Y/R by 24%, but a close supervision of the observance of this measure is needed.	Co-occurrence of Standing Stock Biomass (SSB) increasing and recruitment decreasing. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.
	<i>Parapenaeus longirostris</i>	Catch, effort, Lfreq catch, trawl surveys	2001–2009	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (1.37) higher than F0.1(0.30) and lower than Fmax (2.73)	Reduce growth overfishing: - Reduce the effort of trawl by 70%. - Improve the fishing pattern of the trawl.	Since there are some evidences of synchronous oscillation of abundance of the species in the western Mediterranean, environmental factors (e.g. water temperature) are thought to notably affect the stock dynamics. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 07 (Gulf of Lions)	<i>Merluccius merluccius</i>	Catch, effort, Lfreq catch, trawl surveys	1998–2009 (French and Spanish data from trawlers, gillnetters and longliners)	Extended Survivor Analysis (XSA) & Y/R analysis.	Over-exploited; current F (0.87) higher than F0.1(0.20) and Fmax (0.29)	Reduce fishing mortality by 60% to 70% to reach the Fmsy proxy F0.1. To reduce growth overfishing: - Improve the fishing pattern of the trawl - close nursery areas at least temporally - Reduce the effort of trawl, from reducing time at sea, number of fishing boats, engine power, Bollard pull and/or trawl size To avoid recruitment overfishing: - Reduce the effort of longline and gillnets in order to increase (or at least maintain) the SSB. - Establish temporal closures for longline and gillnet during the period of maximum spawning	The trend of the SSB does not show any risk of stock depletion or collapse. The parameterization of the XSA model may have an impact on the results obtained. To identify the extension of such decisions, further work must be done to explore different parameterizations of the model and run sensitivity analysis on its effects. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Mullus barbatus</i>	Catch & Lfreq of catch	2004–2009	Pseudocohort (LCA, VIT), Y/R	Slightly over exploited.	Current F has to be reduced by 30-40% to reach F0.1.	The WG endorsed the assessment and recommendations.	Since the current F (0.7) is higher than F0.1 (0.4) and Fmax (0.5), the Sub-Committee recommends to not use the attribute “slightly” in identifying the stock status. Endorsed.	No further comments. Endorsed.
GSA 09 (Ligurian and North Tirrenian)	<i>Merluccius merluccius</i>	Lfreq Catch Surveys data	1994–2009	LCA – Pseudocohort analysis (VIT) Y/R ; SURBA	Over-exploited; current F (1.40) higher than F0.1 (0.22) and Fmax (0.35)	The stock appears to be highly overexploited with a need of F reduction of about 40–80%. The current SSB is estimated as 5% and 10% of the virgin SSB, nevertheless, the stock productivity does not appear to be impaired and able to still produce relatively large year classes.	The group noticed a decreasing trend of the SSB for both assessments performed with SURBA on 2 different surveys (MEDITS and GRUND). The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Mullus barbatus</i>	Catch , effort & trawl surveys	1995–2009	Non-equilibrium production model	Over-exploited; current F (0.73) higher than FMSY (0.64)	A reduction of fishing mortality by about 10% is considered necessary in order to reach the Fmsy level.	The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	No further comments. Endorsed.
	<i>Parapenaeus longirostris</i>	Catch, effort, Lfreq Catch & trawl survys	1990–2008	LCA – Pseudocohort analysis (VIT) Y/R ; SURBA	Fully -exploited	Not increase the fishing mortality.	This stock could be strongly driven by environmental and ecological factors (e.g. water temperature, predatory release effect) that can make difficult to evaluate the effect of fishing on the stock. The WG endorses the assessment and the related recommendations but notes that only the reference points computed by VIT should be considered for management.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 12,13,14, 15&16 (Strait of Sicily)	<i>Parapenaeus longirostris</i>	LFD of catch	2007–2009	LCA – Pseudocohort analysis (VIT & ANALEN) Y/R ;	Over-exploited; current F (1.13) higher than F0.1 (0.90) and lower than Fmax (1.23)	A reduction of fishing mortality by about 20% is considered necessary in order to reach the F0.1 level. In addition the exploitation pattern of the fishery should be improved. A protection of the stable nurseries on the Adventure and Malta Banks in the Strait of Sicily is advised.	A change in M and k has pronounced effect on Y/R when the variation was applied in opposite directions. On the other hand B/R and SSB/R are not strongly affected when the change is in the same direction. Alternative methods such as global production methods and trawl survey based approach should be used in the future to make the assessment more robust. The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	SAC appreciated the effort done by the scientists of Italy, Malta and Tunisia to assess jointly the stock status. The relevant contribute of the regional project Copemed II and Medsudmed in pursuing the activity was highlighted. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 17 (Northern Adriatic)	<i>Solea solea</i>	Catch, effort, LFD, rapido surveys	2005–2009	Extended Survivor Analysis (XSA), LCA – Pseudocohort analysis (VIT) & Y/R ; SURBA	Over-exploited; current F (0.61) higher than F0.1 (0.29) and Fmax (0.42)	A reduction of F of 50–80%, especially by rapido trawling, would be recommended. A two-months closure for rapido trawling inside 11 km off-shore along the Italian coast, after the biological fishing ban (August), would be advisable to reduce the portion of juvenile in the catches. The safeguard of spawning area is also advised.	Include in the future assessments biological samples data from the eastern fishery as well as to extend the rapido trawl survey inside the 12 nm from the Croatian coast, as was performed in 2005 and 2006. Such requirements could be attained in the framework of ADRIAMED regional project.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 18 (Southern Adriatic)	<i>Merluccius merluccius</i>	Trawl surveys and commercial catch	Medits (from 1996 to 2009 for Italian and Albanian coasts and 2008 only for Montenegro). LFD of catch only for the west side in 2009	SURBA, ALADYM and VIT	Over-exploited F _{current} (year) = 0.57-0.58 F _{0.1} =0.2 F _{max} =0.3	- the current yield in long term is maintained if F _{0.1} is reached. - the value in yield in long term increases if the exploitation pattern is improved.	The WG discussed the use of the slow or fast growth parameters to assess the hake stock and of the sensitivity analyses. Results from VIT (only one year data) are considered as indicative.	No further comment. Endorsed.	SAC appreciated the effort done by the scientists of Albania ,Italy and Montenegro to asses jointly the stock status. The relevant contribute of the regional project Adriamed in pursuing the activity was highlighted. Endorsed.
GSA 26 (South Levant)	<i>Solea solea</i>	LFD of catch	2006–2007	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (0.66) higher than F _{0.1} (0.41) and lower than F _{max} (0.81)	Reduce fishing mortality by about 40–60% to achieve F _{0.1} . Improve the trawl selectivity. Identify and protect the nursery grounds. Improve the fishery data collection system.	As the assessment was done at first using three years 2006–2008 and it was found that the length composition of year 2008 is greatly different from the two others, the assessment was redone using the mean number of years 2006–2007. The WG endorses the assessment and the related	No further comments. Endorsed.	Since the stock is exploited not only by trawlers, SAC recommended to include catches of artisanal fisheries in next assessment. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	recommendations	WG comments	SC comments	SAC comments
	<i>Boops boops</i>	LFD of catch	2007–2008	LCA – Pseudocohort analysis (VIT) Y/R	Over-exploited; current F (1.09) higher than F0.1 (0.59) and Fmax (0.94)	Reduce the fishing mortality by 40–60%		The WG endorsed the assessment and the related recommendations	No further comments. Endorsed.	Since the stock is exploited not only by trawlers, SAC recommended to include catches of artisanal fisheries in next assessment. Endorsed
	<i>Pagellus eryrinus</i>	LFD of catch	2007–2008	LCA – Pseudocohort analysis (VIT) & Y/R	Over-exploited; current F (0.65) higher than F0.1 (0.34) and Fmax (0.57)	Reduce the fishing mortality by 40–60%. Identify and protect nurseries.		The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	Since the stock is exploited not only by trawlers, SAC recommended to include catches of artisanal fisheries in next assessment. Endorsed.

Table 2

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 01 (Alboran Sea)	<i>Engraulis encrasicolus</i>	Lfreq & catch	2002–2009	Extended Survivor Analysis (XSA), Y/R analysis & Annual exploitation rate.	Moderately exploited Sustainable fisheries.	Not increase the fishing effort. The management of anchovy fisheries needs to account the multi-species effects, mainly the interaction with sardine.	The WG considers the analytical assessment as provisional. The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	Endorsed.
	<i>Sardina pilchardus</i>	Lfreq & catch	2002–2009	Extended Survivor Analysis (XSA), Y/R analysis & Annual exploitation rate.	Fully exploited Sustainable Fisheries.	Not increase the fishing effort. The management of sardine fisheries needs to account the multi-species effects, mainly the interaction with anchovy.	The WG considers the analytical assessment as provisional. The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 03 (Southern Alboran Sea)	<i>Sardina pilchardus</i>	Catch, effort, Lfreq catch,	2000–2009	Pseudocohort (LCA, VIT), Y/R	full exploitation; current F (0.6) higher than $F_{0.1}/F_c=0.62$ and lower than $F_{max}/F_c=1.86$ Uncertain biomass	- Maintain the current fishing effort; - Reduce the mortality of fishing on the spawning fish - Introduce seasonal closure during January which coincides with the peak of the spawning; - Prohibit fishing during May near short-nap close Kibdana to preserve the young fish.	The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	Endorsed.
GSA 06 (Northern Spain)	<i>Engraulis encrasicolus</i>	Catch, effort, Lfreq catch,	2002–2009	Extended Survivor Analysis (XSA), Y/R analysis & Annual exploitation rate.	The stock abundance is considered as low, while the exploitation rate is uncertain.	Avoid further reduction in SSB.	The WG considers the analytical assessment as provisional. The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Sardina pilchardus</i>	Catch, effort, Lfreq catch,	2002–2009	Extended Survivor Analysis (XSA), Y/R analysis & Annual exploitation rate	Overexploited The stock has declined over many years, partly due to reduced recruitment and partly to poor survival of the recruits. Most likely, the stock has been increasingly overexploited in recent years.	A substantial reduction in exploitation is advised.	The WG considers the analytical assessment as provisional. The WG endorsed the assessment and recommendations the related recommendations.	No further comments. Endorsed.	Endorsed.
GSA 07 (Gulf of Lions)	<i>Engraulis encrasicolus</i>	Echosurveys and catch	1998–2009	Biomass at sea and harvest ratio (Catch /Biomass)	Fully exploited - moderate harvest ratio. Low biomass.	- Reduce fishing effort on anchovy in the Gulf of Lion - Respect the European regulation on minimum length size of catch (> 9 cm, UE 1976/2006) - Consider interactions with sardine fisheries.	The WG endorses the assessment and the related recommendations.	No further comments. Endorsed.	Due to the likely effect on small pelagics of environmental factor, in case of low biomass at sea, SAC recommend to avoid to report judgement of exploitation status of the stock (fully exploited). Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Sardina pilchardus</i>	Echosurveys and catch	1998–2009	Biomass at sea and harvest ratio (Catch /Biomass)	Moderately exploited. Severely reduced production capacity.	- Strongly reduce fishing effort on sardine in the Gulf of Lion; - Formalize and establish a protocol of “sentinel” activity for fishermen, and produce monthly spatial and temporal observations to describe the evolution of the system; - Respect the European regulation on minimum length size of catch (11cm, UE 1976/2006; - Consider interactions with anchovy fisheries.	The WG endorsed the assessment and recommendations.	No further comments. Endorsed.	Due to the likely effect on small pelagics of environmental factor, in case of low biomass at sea, SAC recommended to avoid to report judgement of exploitation status of the stock (moderately exploited). It also recommended to maintain the recent level of fishing effort induced by the very low abundance of adults in the stock until indication of a better status of the stock and endorsed the assessment.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 16 (Strait of Sicily)	<i>Engraulis encrasicolus</i>	Echosurveys and catch	1998–2009	Biomass at sea and harvest ratio (Catch /Biomass)	Exploitation rate (ratio between total landings and biomass estimates): high fishing mortality. Stock abundance (acoustic biomass estimate): very low abundance.	- Not increase the fishing effort. -Assess the impact of fry fishery may have. - Not extend fry sardine fishery after March to avoid additional mortality on juvenile anchovy.	Negative effects on these populations could result from pressure of other fishing gears on pre-juvenile stages (locally known as "bianchetto" or "neonata"). The WG endorses the assessment and the related recommendations.	Since the stock is characterised by both high exploitation rate and low biomass, the SC recommends to change “not increase the fishing effort” into “decrease the fishing effort”. Endorsed with this modification.	

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Sardina pilchardus</i>	Echosurveys and catch	1998–2009	Biomass at sea and harvest ratio (Catch / Biomass)	Exploitation rate (ratio between total landings and biomass estimates): moderate fishing mortality. Stock abundance (acoustic biomass estimate): low/intermediate abundance.	- Not increase the fishing effort. -Assess the impact of fry fishery. As the impact of fry fishery on this population is not known, a proper quantification of the catches in the fry fishery is mandatory.	Over the last four years, the population appears to be stable though at a relatively low level. However, taking into account the moderate exploitation rates experienced, results would suggest the stock being able to tolerate the current level of exploitation.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
GSA 17 (Northern Adriatic)	<i>Engraulis encrasicolus</i>	Catch, effort, LFD, rapido surveys	1975–2009	VPA with Laurec-Shepperd tuning	The stock at the present level of biomass can be considered as moderately exploited.	- Not increase the fishing effort. - Consider the interactions with sardine fisheries.	In the present assessment, important improvements were made regarding the echo-survey data used as tuning index for VPA: in particular, for the first time, biological data from the western Adriatic were used to split into age classes only the abundance estimated by the western echo-survey, while biological data from the eastern Adriatic were applied to the eastern echo-survey abundance.	No further comments. Endorsed.	No further comments. Endorsed.

GSA	Species	Data type	Years data	Methodology used	Stock status	Management opinion	WG comments	SC comments	SAC comments
	<i>Sardina pilchardus</i>	Catch, effort, LFD, rapido surveys	1975–2009	VPA with Laurec-Shepperd tuning	The stock at the present level of biomass can be considered as moderately exploited	<ul style="list-style-type: none"> - Not increase the fishing effort. - Consider the interactions with anchovy fisheries. 	In the present assessment, important improvements were made regarding the echo-survey data used as tuning index for VPA: in particular, for the first time, biological data from the western Adriatic were used to split into age classes only the abundance estimated by the western echo-survey, while biological data from the eastern Adriatic were applied to the eastern echo-survey abundance.	No further comments. Endorsed.	No further comments. Endorsed.

65. On the validation of assessments by the SCSA, it was suggested to establish some objective criterion to validate the assessments, such as verifying the steady state assumption, retrospective and sensitivity analyses, before the Working Groups meetings. The SCSA was invited to establish a strategy to address this issue.

66. In relation to the assessment of the Blackspot Seabream (*Pagellus bogaraveo*) carried out in GSA01 and 03, the Spanish and Moroccan delegations noted that this fishery extended into the Atlantic from GSA01 and that, for the first time this year, it had been evaluated jointly by the two countries as a shared stock, extending the analyses to the Atlantic to cover the whole stock.

Use of the Biological Reference Points (BRPs)

67. The Coordinator presented the progress done in the use of BRPs in stock assessment related work. He noted that the Sub-Committee adopted FMSY or its proxy $F_{0.1}$, the fishing mortality corresponding to the 10% of the slope at Y/R curve when $F=0$, as a provisional Target Reference Point and F_{max} , the fishing mortality corresponding to the maximum in a Y/R curve, as provisional threshold Limit Reference Point to compare with the current fishing mortality and to evaluate the exploitation status of the stock.

68. In cases where BRP cannot be obtained either due to technical reasons or for specific cases such as some small pelagics, an empirical Traffic Light approach combining stock status, biomass indices from surveys and pressure indicators (harvest ratio and/or an adequate proxy of environmental stress), was suggested (see Table 3).

Table 3 – Traffic Light approach for small pelagic species

Indicators of environment and ecosystem	Standing stock biomass from scientific surveys		
	Biomass above the precautionary reference point	Biomass below the precautionary reference point	Biomass below the limit reference point
Satisfactory conditions	May increase capacity or effort	Maintain constant capacity or effort	Close fishery in this area
Deteriorating conditions	Maintain constant capacity or effort	Reduce the capacity or effort	Close fishery in this area
Unsatisfactory conditions	Reduce capacity and effort	Close fishery in this area	Close fishery in this area

69. Concerning the necessity to clarify the diagnosis in stock assessment in a BRP framework, SAC recommended to distinguish the term overfished/overexploited from overfishing/overexploitation and proposed the following definition to be included in the SAC Glossary:

Overfished or overexploited – A stock in which biomass at sea is below an agreed biomass based Reference Point. This classification is independent of the current level of fishing mortality.

Overfishing or overexploitation – A status in which a stock is exploited at a fishing mortality or effort above a agreed fishing mortality or effort based Reference Point. This classification is independent of the current level of standing stock biomass (see Figure 1).

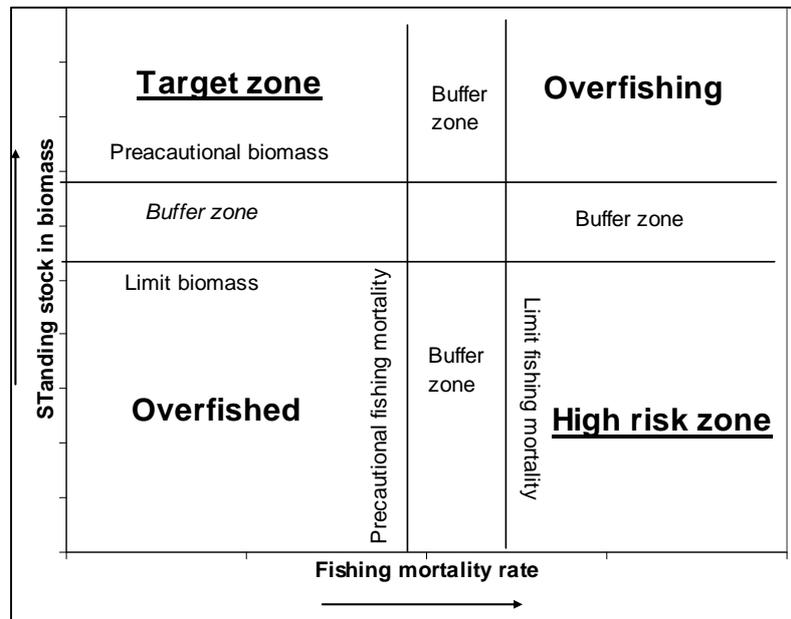


Figure 1 – Precautionary framework to stock assessment for management

70. The discussion indicated it would be advisable that the GFCM specifies a framework for precautionary approach by identifying clear management objectives and selecting target, threshold and limit reference points so to allow joint management strategies while providing courses of action to be taken depending on the fishing mortality levels and where appropriate, biomass levels or other type of indicator either model based or empirical. This approach would substantially facilitate and further improve the work of scientists in terms of determining the level of exploitation, the status of exploited stocks to calculate limit reference points (or proxies) and to forecast current and projected stock status with respect to the reference points.

Proposal of new Stock Assessment Forms (SAF) for direct methods

71. The Coordinator briefly presented the new sheets of the Stock Assessment Forms (SAFs) for data from surveys at sea reported in detail in Appendix III of GFCM:SAC13/2011/Inf.8 and then summarized the main recommendations of SCSA on assessment for the next future.

Advice on European Eel

72. After presenting the results of the Workshop on European Eel, the Committee endorsed the related advice as follows:

- (i) Gather and synthesize information on the biological parameters by habitat and on the regulations (Fisheries and Habitat conservation) by countries, the latter in coordination with the LaMed project.
- (ii) Collate and analyse main information useful for the Eel Management Plans as described in the GFCM draft publication on European Eel as presented to the Sub-Committee meeting. The raw data shall be transmitted to the GFCM Secretariat.
- (iii) Initiate the setting up of a network of Mediterranean experts on Eel fisheries in collaboration with the working group on Eel management of EIFAC/ICES.

SAC pointed out the importance to be given to this species, notably by setting up a better monitoring of this resource through Regional Management Plan.

73. The Tunisian delegate, supported by other delegations, suggested that a consultant be engaged to assist in the finalization of a regional management plan as required by the European Union regulation.

Advice on Elasmobranchs

74. SAC expressed satisfaction on the work being undertaken on elasmobranchs with a view to provide a greater insight on their exploitation and status. Under the suggestion of the EU delegate, the Committee agreed that catch and effort monitoring programmes should be proposed at national level so to ensure a close monitoring of catches, both target and associated species, and by-catches and to report through the GFCM data submission scheme of Task 1.

75. With regards to the future actions to be undertaken by SAC on the protection of elasmobranchs, the EU delegate stated that GFCM should endeavour to devote greater attention to the sustainable exploitation and conservation of elasmobranch species in line with its remit and in close coordination with the Barcelona Convention. He added that several elasmobranch species have been listed either in Annex II (list of endangered or threatened species) or in Annex III (list of species whose exploitation is regulated) of the Barcelona Convention. He informed the Committee that, pending further scientific information, some species currently listed in Annex III, such as the porbeagle (*Lamna nasus*), shortfin mako (*Isurus oxyrinchus*) and Maltese skate (*Leucoraja melitensis*) might be uplisted into Annex II.

76. The representative of RAC/SPA fully supported the arguments of the EU regarding the need to properly record data on elasmobranchs, together with the need for that to have fish reaching the ports in an identifiable condition. He informed the Committee that the updated Annexes II and III to the SPA/BD Protocol of the Barcelona Convention (November 2009) include many elasmobranchs species. In order to properly preserve those species listed, the institutions concerned with fisheries should respect the conservation (Annex II) or proper exploitation regulation of these species. Furthermore, RAC/SPA informed the SAC on the elaboration of guidelines on catch and release for recreational fishing of elasmobranchs that would be available to GFCM.

77. Within this overall context, and without prejudice to future evaluations, SAC agreed that the scientific information, that had been the base for the listing of some elasmobranchs in the Annex II of the Barcelona Convention, was mostly shared out and draw the attention of GFCM to grant the maximum protection by the fishing activities to the species listed in Annex II. In particular, to prevent landing from fishing activities and marketing and, to the extent possible, individuals found alive to be released unharmed.

78. To this regard, SAC also endorsed a proposal by the SCMEE regarding the possible measures to permit that carcass of animals landed be identifiable, such as: avoid beheading, finning, skinning or to land fins and carcass of animals in different ports.

79. SAC considered that only catch and release of elasmobranchs shall be authorized for recreational and sport fishing and that adequate reporting to GFCM would be advisable.

80. The EU delegate informed that specific EU measures for porbeagle fishing were taken and in particular 0 TAC was established both for EU and international waters in the North-East Atlantic and furthermore EU vessels were prohibited to fish for, to retain on board, to transship or to land porbeagle in all international waters. He stated that GFCM may consider to act in the same direction.

81. In line with SCMEE advice, SAC considered of relevant importance both the identification and mapping of critical areas for elasmobranchs (e.g. nurseries) and the protection of nursery grounds, often in coastal areas, from the action of trawling activities.

82. The Committee endorsed the proposal of the SCSA to carry out in 2011 assessments on selected Mediterranean and Black Sea elasmobranchs species such as *Raja clavata*, *Raja miraletus*, *Raja asterias* and *Scyliorhinus canicula*. The Committee recommended to carry out a tentative assessment of *Leucoraja melitensis*.

83. The EU delegate informed about the availability to provide support for the organization of this meeting on elasmobranchs and possibly to host the meeting in Brussels.

Advice on gear selectivity

84. The Sub-Committee Coordinator reported that the SCSA proposed to perform the experiments with a wider range of square mesh sizes, not only to compare square and diamond mesh selectivity but also to estimate parameters relating square mesh size to the probability of retention at size. He also informed the SAC that the SCSA suggested to consider in these experiments not only to evaluate the effect of separator panels in reducing by-catch and discards but also the occurrence of debris and litters in the trawl net.

85. SAC further reviewed and agreed to endorse the conclusions and proposals of the transversal workshops on the improvement of gear selectivity and reduction of by-catch.

86. Finally, the Committee welcomed the initiative of organizing the SCSA/SCMEE transversal workshop on Spatial Approach to Fishery Management and to work jointly with the SCSA on the improvement of Task 1.5 and eventual creation of the Task 2 on biological data of catches.

87. Furthermore, SAC congratulated the SCSA for the work done and expressed its satisfaction for the extended coverage of GSAs by assessments as well as for the continuous increase of work in terms of quantity and quality although further improvements are still needed. SAC pointed out that some assessments need revision, as stated in the synthesis table, and deserve a deeper investigation in the future. It also acknowledged the work done on various important issues and thanked the Coordinator for the efforts made to make these achievements possible.

88. The Egyptian delegate expressed his support for public awareness campaigns on alien species but proposed that one should refrain from referring to alien species as being implicitly harmful.

Conclusions and recommendations of the Sub-Committee on Statistics and Information (SCSI)

89. The Coordinator of the Sub-Committee, Mr Joël Vigneau, presented the conclusions and recommendations of the SCSI on the basis of the document GFCM:SAC13/2011/3 and GFCM:SAC13/2011/Inf.6, together with the results of the workshop on the monitoring and the management on fishing capacity as contained in document GFCM:SAC13/2011/Inf.15.

90. On the need to simplify the process of the submission of various vessel datasets, SAC proposed that the first step to an agreed solution would be that the SCSI works on a template, with the support of the GFCM Secretariat, considering the information requested by the GFCM Recommendations related to vessels lists.

91. SAC noted the SCSI concern to strengthen the GFCM Secretariat in order to handle the increasing tasks in data processing and its capacity to assist member countries in fulfilling the GFCM requirements in terms of data submission. SAC agreed that the role of the Secretariat is of utmost importance in a system which is becoming more and more complex and that it would require reinforcement, but indicated that the assistance to member countries should not overlap with the mandate of FAO regional projects. It was agreed that a proposal to address this matter should be prepared by the Secretariat for consideration by the Commission.

92. Referring to the proposal to set up a frame for the submission of biological data, expanding on the current Task 1.5, SAC agreed to adopt a stepwise approach as suggested by the CMSC. This approach requires SCSA to precisely define their data needs for assessment purposes and in a second stage SCSI would design a data compilation format compatible with the Task 1 framework. SAC underlined that both biological data describing the catches by operational units and population dynamic parameters pertaining to stocks are essential in carrying out stock assessments.

93. SAC considered the options put forward by the SCSI on data access and confidentiality issues linked to the Task 1 datasets. The Committee agreed that the statistical bulletin and basic statistics should be available to the public without restrictions; however the access rights for the Task 1 datasets raised more concerns. Some delegations proposed that all data should be fully accessible without restrictions, whilst others proposed that the datasets should be accessible on demand and/or for specific expert groups. It was agreed that this issue along with the proposals of the SCSI, should be forwarded to the Compliance Committee (CoC) for further consideration.

94. SAC noted that the SCSI could not reach a decision on the logbook catch reporting threshold as requested by GFCM. Some delegations suggested to adopt a logbook system without any threshold, while others reiterated that the threshold value should be in the range of 10 to 15 kg on the basis of the studies presented at the SCSI meeting. Considering that adding another year of study and further discussion by the SCSI would not add much to the current knowledge, the SAC proposed to set up a maximum threshold of 15 kg for the GFCM logbook, giving the possibility to member countries to define a lower threshold between 0 and 15 kg.

95. The following SCSI proposals were also approved by SAC:

- ⤴ The submission of data based on STATLANT 37A form should continue as long as Task 1 is not fully operational and able to replace it.
- ⤴ A contact person for Task 1 data submission should be formally nominated by GFCM Members, who may be the SCSI focal point or another person.
- ⤴ The reference list of the group of target species currently used for defining Operational Units in Task 1 should be modified, taking into account the ISCAAP divisions and groups of species, in the data exchange protocol (Task 1 operating tool, CSV and XML schemas).

96. The proposals put forward by the workshop on fleet capacity for a Regional Plan of Action (RPOA) for the Management of Fishing Capacity were endorsed by SAC. Based on the outline of the RPOA drafted during the workshop, the options to be considered by GFCM are the following:

- ⤴ Invite the Commission to consider introducing elements of the Draft Outline GFCM RPOA-Capacity into the Recommendation GFCM/34/2010/2 whilst continuing the elaboration of the GFCM RPOA-Capacity.
- ⤴ Engage a consultant to draft a GFCM RPOA-Capacity on the basis of the outline produced and other suggestions made by GFCM subsidiary bodies.
- ⤴ Convene a workshop to finalize the drafting of the GFCM RPOA-Capacity on the basis of the outline produced and other suggestions made by the GFCM subsidiary bodies.

Or

- ⤴ Any combination of the above

97. The SCSI Coordinator proposed that the statistical grid reference scheme drawn up by the SCSI at its ninth session should accompany the statistical grid already adopted by GFCM. SAC agreed with this proposal and endorsed the grid reference scheme as produced in Appendix E.

Conclusions and recommendations of the Sub-Committee on Economic and Social Sciences (SCESS)

98. The Coordinator of the Sub-Committee, Mr Vahdet Ünal, presented the conclusions and recommendations of the SCESS on the basis of the document GFCM:SAC13/2011/3 and GFCM:SAC13/2011/Inf.7, together with the results of the workshop on monitoring recreational fisheries in the GFCM area as contained in document GFCM:SAC13/2011/Inf.18

99. SAC noted that participation in the activities of the SCESS was very limited, a situation that hindered the effectiveness of the work of the Sub-Committee. The Coordinator of SCESS stressed the

urgency to enhance the expertise in the Region through formal training and specialised degree programmes in fisheries economics. It was also suggested to explore the possibility of involving experts from various research institutions (faculties, universities, etc.)

100. The observer from UNEP / MAP – Plan Bleu stressed the importance of considering socio-economic issues in the fisheries management process and informed the Committee that Plan Bleu is carrying out a study on excess capacity which integrates environmental and economic aspects and will be pleased to collaborate on this subject with GFCM.

101. On this issue, the EU delegate also underlined the importance of formulating integrated advice incorporating exploitation control measures and economic aspects in order to contribute to the improvement of the sustainable exploitation of fishing fleets. He stressed that, in order for the SCESS to work in a more effective manner, GFCM should agree on reference points, both model based and empirical, allowing the implementation of a precautionary approach management framework and a more defined fisheries management strategy, which would allow economists and biologists to carry out bio-economic analysis within the framework of the defined management objectives.

102. With regards to the conclusions of the SCESS on recreational fisheries, the observer from CIPS noted that sport and recreational fisheries only contributed to 1–2% of the exploitation of fisheries resources and thus had limited impact. He also noted that some changes were introduced to the results obtained during the Workshop on Recreational Fisheries held in Palma de Mallorca. He expressed a reserve on the conclusions related to the licensing schemes.

103. Some delegations suggested that the definitions should only provide a general description of the activities and that the regulation of leisure and sport fishing activities should be detailed in national legislation. Caution was also expressed with the adoption of the term “Pesca Turismo” which opened the door to several other types of national leisure and sport fishing practices to be included in the SAC glossary of terms.

104. The Syrian delegate informed SAC that strict recreational fishing regulations were in place in his country in order to safeguard the livelihood of fishermen, who depend on the limited fisheries resources in Syrian waters.

105. The Egyptian delegate drew the attention of the Committee to the fact that the ICCAT definition of charter fishing is quite different from the one proposed by the SCESS, the former being related to a commercial fishing activity. In this context, the delegate from the Libyan Arab Jamahiriya

proposed that any definitions adopted by SAC and included in the SAC glossary should be used strictly within the GFCM context.

106. Concluding on this issue, SAC agreed that the definitions, as proposed by the SCESS, be adopted yet allowing any amendments that may arise during the forthcoming intersessional period, on the basis of relevant suggestions which the Sub-Committees may wish to put forward.

107. SAC also agreed on the SCESS proposals to develop a harmonised monitoring framework protocol for recreational fisheries, to design a data collection scheme for recreational fisheries indicators and to conduct a regional study on the possible implementation of licensing schemes for this sector. Furthermore, SAC agreed on the development of a code of practice for responsible recreational fisheries but stressed that the FAO Code of Conduct for Responsible Fisheries should be used as a basis together with other specific codes developed by other organizations such as EIFAC. In addition, further progress on studies related to the socio-economic impact of the implementation of the 40 mm square mesh/50 mm diamond mesh in trawl codends was encouraged by SAC.

108. The Committee was informed that the document on the study undertaken by CopeMed I on socio-economic indicators was being reviewed by CopeMed II and will be published in due course.

109. SAC agreed that the SCESS should proceed with analysis of socio-economic data collected through the Task 1 framework and to explore ecolabelling impacts.

110. Finally, the Committee endorsed the amendments to the definitions of parameters in Task 1.3 and concurred with the SCESS proposal to draw up definitions for other socio-economic parameters as necessary.

GFCM Performance Review

111. Mr Philippe Ferlin, representative of the expert panel in charge of the Performance Review, presented the document GFCM:SAC13/2011/Inf.24 prepared in connection with the GFCM Performance Review undertaken over the past year. He focused in particular on the conservation and management framework and the functioning of SAC. He stated that whilst GFCM has been producing significant results over recent years, the conclusions and recommendations contained in the Performance Review document should assist GFCM Contracting Parties to strengthen this Commission to function as a more effective regional fisheries management organization.

112. The EU delegate stated that the Review has presented many elements and messages to be considered by SAC to improve its working strategy. He agreed in particular with the recommendation to focus on shared stocks to fulfill obligations laid down in the United Nations Fish Stocks Agreement. He remarked, however, that although it was true that geographical sub-areas (GSA) boundaries may not coincide with the distribution of fish stock units, GSAs are not necessarily to be considered as management zones and that the statistical grid adopted by the GFCM should be useful in defining the boundaries of stock units. He also agreed with the conclusion that compliance and enforcement need to be strengthened with the introduction of a penalty mechanism.

113. The French delegation stressed that the objectives and scope of the Sub-Committees on Economic and Social Sciences (SCESS) and on Marine Environment and Ecosystems (SCMEE) need to be more developed in the Performance Review report.

114. SAC acknowledged the strong messages of the Performance Review with regards to the amendments of the GFCM agreement, aimed to consider the Precautionary Approach Principle in the work of GFCM.

115. The observers from ACCOBAMS and RAC/SPA noted that cooperation with non-fisheries organizations was not addressed in the Performance Review. Mr Philippe Ferlin explained that the consultants chose not to tackle this aspect due to the limited time available to conduct a proper assessment.

116. The observer from IUCN highlighted the importance of strengthening cooperation with non-governmental and inter-governmental organizations.

117. SAC noted the recommendation included in the report on the GFCM Performance Review to reconsider the current practice to automatically adopt ICCAT recommendations without prior review of the scientific basis supporting these recommendations by SAC. It also suggested that the relevance of the contribution of the FAO regional projects to the SAC activities be properly highlighted in the Review.

118. The FAO Projects Coordinators recognized the importance of the GFCM Performance Review but noticed that there was a misconception on the purpose and role of the FAO regional projects relatively to the GFCM activities.

119. The acting Executive Secretary invited delegations to submit any further remarks on the Performance Review to the Secretariat, relevant to SAC, within two weeks.

Fisheries regulations in the Mediterranean and Black Sea (LaMed project)

120. Ms Camille Samier, consultant within the GFCM Secretariat, presented the LaMed Project on “fisheries laws and regulations in the Mediterranean and the Black Sea” together with a draft questionnaire aimed at updating and completing the comparative study undertaken by Philippe Cacaud in 2005. She explained that the questionnaire focuses on six main issues: i) the legal framework, ii) the access regimes to fisheries resources, iii) the conservation and management measures, iv) the monitoring, control and surveillance, v) the post-landing, post-harvest practices and trade, and vi) the enforcement and compliance. She added that a final section on the identification of priority issues for GFCM Members, at the international, national and/or regional levels will be developed at a later stage. She informed the Committee that national experts will be contacted to complete the questionnaire and that the responses will serve as a basis for discussion during an expert workshop to be held in 2011 on the identification of a harmonized approach to fisheries laws, which could provide a stronger foundation for further cooperation in the GFCM region.

121. Some delegations felt that more time was needed to properly review the questionnaire. In this respect, the Secretariat invited delegations to submit their comments within three weeks after the termination of the session.

122. The Committee welcomed the presentation and thanked the Secretariat for the work carried out. The Committee also thanked the donor (Italy) for supporting the LaMed project.

SAC e-Glossary

123. Mr Federico De Rossi, consultant within the GFCM Secretariat, presented the SAC e-Glossary web application on the basis of document GFCM:SAC13/2011/Dma.6. After a brief historical overview of the Glossary, he illustrated the building steps of the database design and development. The attention of participants was drawn to features of the e-Glossary, namely the search features (index-based and full-text search engine), the export facility in different formats together with the real time updates of the latest definitions. The importance of promoting the use of this web application during the Commission’s meetings was also underlined and it was stressed that it would be advisable to review its content annually.

124. The Committee acknowledged the effort pursued by the Secretariat in releasing the e-Glossary as a useful tool for the GFCM and its partners. Moreover, some participants took the opportunity to

express thanks for the management of the GFCM web site which has become a fundamental source of information for the activities of the Commission.

125. Suggestions for further developments of the e-Glossary were made by some delegations, e.g. the citation of the source of information, the cross reference, the track of modifications and the multilingual facility. In this regard, the Secretariat informed the Committee that all suggestions were welcome and a number of improvements of the e-Glossary were already underway. In response to the question raised on the procedure for updating the content of the Glossary, the Secretariat reminded that any proposal of amendments should be submitted, through the Sub-Committees, to SAC for its consideration and possible endorsement.

GFCM database on biological parameters

126. Ms Pilar Hernández from the GFCM Secretariat presented the progress done on the elaboration of a database on biological parameters and population features for the purpose of stock assessments. She outlined the origin of the database, giving some background of the request made by SAC in 2010. She recalled that a questionnaire had been circulated in November 2010 to be filled in with non published information and to update the existing one.

127. Suggestions for further improvements of the database were made by some delegations, e.g. the inclusion of graphs with maturity ogive, the minimum size/length at maturity, the size/length at sex change for hermaphrodite species, age-length vectors. It also was suggested to link the bibliographic references to the published document when electronically available. The Secretariat thanked the delegations for their ideas and informed that the number of improvements suggested by the SCSA at its 12th session is already being taken into account.

128. The delegations were invited to kindly collaborate notably in distributing among the Mediterranean and Black Sea scientific community the modified questionnaire being circulated by the Secretariat.

GFCM actions in the Black Sea

129. Ms Hernández presented the GFCM actions undertaken in the Black Sea during recent years. She gave a brief overview of the characteristics and the situation of the fisheries in this region. She outlined the evolution of the attempts to start a FAO regional project in the Black Sea and stressed on

the need for urgent action in the development of cooperative research in close collaboration with the existing relevant organizations. The attention of SAC was drawn on the urgency to take specific actions and activities which could be included in the short term workplan of the Committee with the aim to improve the knowledge of the fisheries in this area and to strengthen their management.

130. In the course of the discussion that followed this presentation, Mr S. Nicolaev, delegate from Romania, welcomed the report and noted that there are three Conventions in the region which concern directly or indirectly fisheries issues. From the institutional point of view, the situation is that all countries are Contracting Parties (CPs) of Bucharest Convention, four countries are CPs of ACCOBAMS and three are CPs of GFCM. Furthermore, Romania and Bulgaria are EU members.

131. He also stated that this was a particular situation which calls for the need to harmonize existing regulations and strategies. Mr Nicolaev explained that the Commission on the Protection of the Black Sea Against Pollution and its Advisory Group (AG) have recorded a number of achievements in this regard and he underlined the following ones:

- In 2008 the Black Sea Status of the Environment report was elaborated with a special chapter on Marine Living Resources (MLRs).
- In 2009 the Strategic Plan of Action for the Black Sea (BS SAP) was adopted having special objectives for fishery and conservation of MLRs.
- Annex IV of the protocol on Biodiversity Conservation (CBD) adopted in 2002 contains a list of species, the exploitation of which needs to be regulated.
- Through special projects a process started for the elaboration and implementation of regional agreed methodologies for stock assessment of pelagic and demersal species.
- In 2010 the check-list of Black Sea fish species was elaborated describing the state of each species in accordance with IUCN criteria.
- In 2007 the Black Sea sub-group of STECF–EU was created.

132. The Romanian delegate also informed the Committee that the Advisory Group on the Environmental Aspects of the Management of Fisheries and other Marine Living Resources (AG FOMLR) of the BSC developed a database for Black Sea fisheries.

133. He added that the main problem faced is that some countries, namely Bulgaria and Romania, presently report to three institutions: BSC, the Scientific Technical and Economic Committee for Fisheries (STECF) and GFCM. This situation needs to be taken into consideration in order to avoid overlapping or duplication of activities.

134. He further explained that another particularity of the Black Sea area is that the majority of stocks are shared or migratory. This imposes needs to involve all riparian countries in the assessment of stocks and the implementing of conservation activities, even if only three of the countries are GFCM Contracting Parties.

135. The Romanian delegate also welcomed the initiative of the FAO BlackSeaFish project and recommended that in the process of elaboration of the project objectives, the priorities listed in the BS SAP should be taken into consideration.

136. The Bulgarian delegation fully supported the intervention by the Romanian delegate. He highlighted the existing activities in his country carried out under the fisheries EU Data Collection Framework, the conduction of scientific surveys and analyses, activities carried out by the Black Sea working group under STECF-EU, setting and applying the TACs and quotas in EU waters for two species, sprat and turbot, since 2007. In addition, he informed the SAC that the Black Sea working group under STECF has been asked by STECF-EU to prepare and assess five more species in 2011 including one shellfish invasive species *Rapana venosa*. He proposed to provide the Secretariat with the whole text of the documents regarding fisheries in the Black Sea region for more comprehensive information about the situation in the Black Sea area.

137. The Turkish delegate stated that there is an emerging need to harmonize the regulatory management structure in the Black Sea Region. Despite the existing structures and initiatives of several international and regional organizations, the management and conservation of living marine resources requires more concrete actions. In this context, Turkey explained its willingness to participate in any sort of joint activities/initiatives that would strengthen technical and scientific cooperation and collaboration in the region. Turkey also underlined that over the last years a promising collaboration in the area of fisheries has been established between a Turkish research institution for fisheries (i.e: Trabzon Central Research Institute for Fisheries) and the corresponding research institutions of the neighboring Black Sea countries.

138. The Turkish delegate explained that despite several national programs on stock assessments, particularly for small pelagics, Turkey lacks systematic stock assessment studies covering Turkey as a whole. However, a prioritized focus is being given to enhancement of institutional and technical capacity building for nation-wide stock assessments in support of management and conservation of living marine resources. He acknowledged the work done by the EU regarding the management and the conservation of sprat and turbot fishery in the region and expressed Turkey's readiness to contribute in this field. The Turkish delegate stated that his delegation was satisfied with the growing

focus on the Black Sea by the GFCM and briefed the Committee on the progress regarding the preparatory phase of the Black Sea project (BlackSeaFish).

139. The EU delegate welcomed the renewed attention given by GFCM to the Black Sea. He stressed that in order to ensure sustainable fisheries, it is important that fishery management is science-based and is carried out jointly with all concerned parties exploiting shared stocks; the EU is therefore interested in sustaining and participating in initiatives which could further promote scientific cooperation and ensure the establishment of the best fishery governance in the interest of the coastal countries of the Black Sea, in accordance with the legal requirements of the EU exclusive competence on fisheries policy.

140. Without prejudice to possible future evolution of the fishery governance in the Black Sea, the EU delegation considered that, in the short term, the setting up of an ad hoc working group for the Black Sea could facilitate the work of SAC in delivering scientific advice and to facilitate the participation of scientists from countries which are currently non-members of GFCM.

141. The EU delegate also informed the Committee that EU establishes on an annual basis TACs and some technical measures for some stocks in EU waters of the region and that, so far, the catch limitations have been set taking into account the scientific advice of an international working group, including non-EU scientists, convened under the Scientific, Technical and Economic Committee for Fisheries (STECF). He added that expertise developed in the STECF framework may be helpful for the proposed GFCM-Black Sea working group. He stated that it is clear that the formulation of the scientific advice for the TAC setting in the Black Sea waters should be carried out with a schedule adequate to take decision on the TAC, and allow national implementation, before the end of each year. He announced that this year the STECF working group for the Black Sea will meet between 10 to 14 October 2011 and scientists of all Black Sea countries will be invited as in the previous years.

142. The observer of the Russian Federation thanked the GFCM Secretariat for its kind invitation to the Russian Federal Research Institute of Fisheries and Oceanography (“VNIRO”) scientists to attend the meeting as observers. He highlighted the high level of organization of this meeting and professionalism of the GFCM. He acknowledged the comprehensive and overall approach given to the questions related to the Mediterranean Sea. He proposed to the GFCM to continue the effort on improvement of consideration of the Black Sea related issues to make it as integrated as for the Mediterranean Sea. He strongly supported the EU proposal to create a special working group on the Black Sea and stated that participation in this working group is of the great interest to the scientists of the Russian Federal Research Institute of Fisheries and Oceanography (VNIRO) in particular. In order to help on the positive official decision of the Russian Federation government towards the adhesion to

the GFCM, he suggested that these discussions be initiated at the FAO with the Russian Permanent Representation.

143. The ACCOBAMS Executive Secretary congratulated the GFCM Secretariat for its initiative to promote activities in the Black Sea and invited all the organizations working in the area to coordinate their efforts. She expressed her willingness to participate in the meetings of the proposed ad hoc Working Group on the Black Sea. She informed the Committee that the four Black Sea member countries of ACCOBAMS have adopted a Conservation Plan for cetaceans that includes actions linked to fisheries. She also informed the delegations of several projects in force, the information of which is available together with the national reports of the parties. Finally, she also announced the fourth Conference on the Black Sea to be held in Odessa, Ukraine and invited GFCM to organize a round table to discuss collaborative affairs.

144. The FAO representatives thanked the GFCM Secretariat for promoting this discussion on the current situation regarding the Black Sea. Furthermore they recalled that the Black Sea Project is being finalized under the Technical Lead of FAO Regional Office for Europe in Budapest according to the FAO strategy of decentralization of competences. According to the current information, all countries bordering the Black Sea expressed their interest and willingness to participate in such a project, and some of them already communicated this formally to FAO. Only some minor bureaucratic issues are still preventing the start of the project, but it is expected that they will be overcome very soon. The FAO Mediterranean projects took this opportunity to reiterate their availability to support this initiative by putting their experience in launching similar initiatives at the disposal of the Black Sea countries and the GFCM. Finally, the FAO staff committed to inform the FAO Fisheries and Aquaculture Department of the interest of the Russian Federation to become a member of GFCM.

145. SAC thanked the Secretariat for the overview presented and congratulated, along with the delegations, the prospective of an enhanced collaboration with the Black Sea countries. It agreed to establish an ad hoc Working Group on the Black Sea open to all scientists of the region and to the partner organizations. It also decided to hold the first meeting of this Working Group in Romania in early 2012 and invited the Secretariat to prepare draft Terms of Reference of this Working Group to be submitted for the consideration of the Commission at its Thirty-fifth Session to be held in Rome in May 2011.

REVIEW OF THE SAC PRELIMINARY WORKPLAN FOR 2011

146. This agenda item was introduced on the basis of the suggestions made by the Sub-Committees as reflected in documents GFCM:SAC13/2011/4, supplemented by the reports of the Sub-Committees (documents GFCM:SAC13/2011/Inf.5, Inf.6, Inf.7 and Inf.8) and the Coordination Meeting of the Sub-Committees (document GFCM:SAC13/2011/Inf. 9).

147. Referring to the workshop on VMS which had been postponed by the Commission at its thirty-fourth session, the EU delegate recalled that the original reason for holding this workshop had been to respond to the request by some countries to receive technical assistance in the monitoring of vessels through VMS. He added that this workshop could also focus on the use of VMS data for scientific purposes.

148. The Tunisian delegation, supported by several other delegations, favoured the organization in 2011 of this workshop since it would help develop VMS standards in the region in line with the GFCM Recommendation on this matter.

149. In this context, the Committee agreed with holding this workshop during the forthcoming intersessional period considering the original Terms of Reference already submitted to the Commission, with the possibility to introduce any relevant amendment.

150. The Committee also agreed to convene the first meeting in early 2012 of the proposed multidisciplinary ad hoc Working Group on Black Sea fisheries.

151. SAC took note of the offer of ACCOBAMS to collaborate in the organization of the meeting of the Working Group on by-catch.

152. The observer from IUCN announced that a meeting on sub-marine canyons, in collaboration with RAC/SPA, will be held in Monaco in 2011. He invited the Secretariat to envisage the possibility to be represented by an expert in this matter.

153. The observer from MedPAN informed the Committee that his organization is working closely with RAC/SPA and is involved in updating a database on MPAs in the Mediterranean. He welcomed the collaboration of GFCM in this initiative.

154. In light of the above, SAC further agreed on its working programme for 2011 as follows:

Sub-Committee on Stock Assessment (SCSA)

- carry out assessments on selected Mediterranean and Black Sea elasmobranchs stocks;
- organize a joint Workshop with the SCME and SCESS on Spatial Based Fishery Management. The draft Terms of Reference are presented in Annex I;
- prepare a proposal aimed to transform the Task 1.5 related to biological data possibly in connection with the Stock assessment forms and the Biological Parameters Database. A specific workshop together with the SCSI could be envisaged as a further step, if deemed necessary;
- organize the meetings of the Working Groups on stock assessment of demersal and small pelagic resources simultaneously;
- continue the elaboration of the GFCM Regional Database on biological parameters to facilitate agreement on values to be used for each stock assessment in the eastern, central and western Mediterranean;
- improve the Stock Assessment Forms to facilitate the inclusion of raw data and the connection with the possible new Task 2 compilation and submission framework;
- develop reference points with the view to evaluate the status of the stocks and fisheries including also the effects on exploited stocks of FRAs; and
- collate and analyse main information useful for the European Eel Management Plans and set up of a network of Mediterranean experts in collaboration with the working group on Eel management of EIFAC/ICES;

Sub-Committee on Statistics and Information (SCSI)

- update the Task 1 data entry/software and data submission exchange protocols (XML and CSV);
- update and publish the statistical bulletin (reference years 2008 and 2009);
- continue the development of the Task 1 Regional Information System. Members are expected to submit the full Task 1 datasets for 2008 by January 2011, and the full Task 1 datasets for 2009 by May 2011;
- finalize the development of the Regional Fleet Register information system and manage the data submitted accordingly; and
- work on a template considering the information requested by the GFCM Recommendations related to vessels lists, with a view to create a single data submission framework for vessels.

Sub-Committee on Marine Environment and Ecosystems (SCMEE)

- continue on the implementation of the medium term programme on elasmobranchs taking into consideration the suggestions from the first expert meeting;

- prepare and disseminate educational material (posters, leaflets, brochures, etc.) for informing the public in the Mediterranean and Black Sea countries about harmful species and jellyfish.
- prepare a new version of the TECHNOMED selectivity protocol as a standard document which could be made available for any Mediterranean case study as standard, including the collection of socio-economic data. The methodology of the statistical analysis should be improved and completed;
- Carry out, jointly with the SCSA, assessments on selected Mediterranean and Black Sea elasmobranchs stocks;
- Organize an age reading training course on selected Mediterranean and Black Sea elasmobranchs under the framework of the Permanent Working Group on Assessment Methodology (PWGAM);
- Organize a second workshop on red coral according to the terms of references in Appendix D;
- Organize a transversal workshop on Artificial Reefs in the Mediterranean and Black Sea, possibly back to back with the SCMEET meeting, according to the terms of references provided in Appendix D;
- Organize a by-catch Working Group meeting;
- Undertake a regional medium-term research programme on red coral with the possible support of FAO regional projects; and
- Improve the knowledge on the topographic description of seamount areas.

Sub-Committee on Economic and Social Sciences (SCESS)

- Undertake a review of the fisheries laws and regulations in force at national level in the Mediterranean and the Black Sea and organize an expert meeting in the framework of the LaMed Project;
- Elaborate a Code of Practice/Technical Guidelines on recreational fisheries in the GFCM area;
- Perform regional studies to provide an overview of recreational fishing activities (gears, techniques, target species, etc);
- Develop studies regarding the socio-economic impact resulting from the implementation of the 40 mm diamond mesh in trawl fisheries;
- Populate the GFCM webpage dedicated to TECHNOMED with any information dealing with the economic impacts of selectivity studies;
- Organize a specific workshop, back-to-back with the forthcoming SCESS meeting on the processing and analysis of Task 1.3 data;
- Proceed with analysis of socio-economic data collected through the Task 1 framework; and
- Explore ecolabelling socio-economic impacts.

Meetings

SAC agreed on the list of meetings as set out below.

Meeting	Place/Date
Second Transversal Workshop on Red Coral (3 days)	Ajaccio, Corsica/ 5-7 October 2011
Expert meeting on Fisheries legislation within the framework of the LaMed Project (3 days)	Beirut, Lebanon / 26-28 October 2011
Working Group on stock assessment of Demersal Species (6 days)	Chania, Crete, Greece / 24-29 October 2011
Working Group on stock assessment of Small Pelagic Species (6 days)	Chania, Crete, Greece / 24-29 October 2011
Transversal Workshop (SCSA/SCMEE/SCESS) on Spatial Based Fishery Management (3 days)	GFCM HQs, Rome / 21-23 November 2011
Workshop on VMS (3 days)	Zagreb, Croatia / 28-30 November 2011
Second meeting of the Working Group on by-catch (3 days)	Antalya, Turkey/ 7-9 December 2011
Training course on age reading and growth parameters of the main elasmobranchs species (5 days)	Antalya, Turkey/ 5-9 December 2011
Stock assessment of selected species of elasmobranchs (5 days)	Brussels, Belgium / 12-16 December 2011
First meeting of the <i>ad-hoc</i> Working Group on the Black Sea (3 days)	Constanta, Romania/ 16-18 January 2012
Session of the SCSA (4 days)	FAO HQs, Rome, Italy / 23-26 January 2012
Session of the SCESS (4 days)	FAO HQs, Rome, Italy / 23-26 January 2012
Session of the SCSI (4 days)	FAO HQs, Rome, Italy / 23-26 January 2012
Session of the SCMEE (4 days)	FAO HQs, Rome, Italy / 23-26 January 2012
Workshop on the processing and analysis of Task 1.3 data (back-to-back with the SCESS Session)	FAO HQs, Rome, Italy / 23-26 January 2012
Workshop (SCMEE) on Artificial Reefs, possibly back to back with the SCMEE session	FAO HQs, Rome, Italy / 23-26 January 2012
12 th Session of the CMSC (1 day)	FAO HQs, Rome, Italy / 27 January 2011
14 th Session of the SAC (5 days)	Varna, Bulgaria / 20-24 February 2012

SAC took note of the offers made by some delegations for hosting some meetings, subject to the confirmation by their relevant competent authorities.

OTHER ISSUES

155. SAC expressed its great pleasure on the attendance and active participation of several of its partners. In particular, it highly appreciated the active participation of observers from the Russian Federation and expressed the wish that close collaboration with this country will be maintained in the future. SAC looked forward to the possibility of the Russian Federation to join GFCM.

156. The Committee extended its appreciation to the French Government for hosting this session and for the hospitality. In particular, it warmly thanked the Ifremer for the dedication and the excellent collaboration that made possible the organization and the success of the meeting. The exceptional conditions of work kindly offered by France were highly appreciated by all the delegates.

DATE AND VENUE OF NEXT SESSION

157. The Committee took note of the invitation made by the Bulgarian delegate to host the fourteenth session of SAC, subject to confirmation by the competent authorities of his country. The exact date and venue will be communicated at a later stage.

ADOPTION OF THE REPORT

158. The report, including its appendixes, was adopted on Friday 11 February 2011.