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**GENERAL FISHERIES COMMISSION FOR
THE MEDITERRANEAN**

**COMMISSION GÉNÉRALE DES PÊCHES
POUR LA MÉDITERRANÉE**



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GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN

SCIENTIFIC ADVISORY COMMITTEE (SAC)

Twelfth Session

Budva, Montenegro, 25-29 January 2010

**REPORT OF THE 10TH MEETING OF THE SUB-COMMITTEE ON
ECONOMIC AND SOCIAL SCIENCES (SCESS)
Malaga, Spain, 30 November-3 December 2009**

* Available only in English

OPENING AND ARRANGEMENT OF THE MEETING

1. The joint Sub-Committees meeting of the Scientific Advisory Committee (SAC/GFCM) including the transversal session was held in the office of the Spanish Government in Malaga, Spain, from 30 November to 3 December 2009.
2. During the general opening, Mr Baro, Director of the “Instituto Espanol de Oceanografia” in Malaga welcomed the participants and thanked them for attending this important meeting.
3. Mr Sebastian Fraile Arévalo of the “Secretaria general del Mare” welcomed the participants to the beautiful city of Malaga and highlighted the relevance to improve the knowledge on the Mediterranean fisheries. He commended the importance of GFCM as regional Fisheries management Organization and draws attention to the fact that the conclusions obtained in the meeting will help to the governments to adopt the best management measures to maintain in the future these valuable fisheries.
4. Mr Srour, Executive Secretary a.i of the General Fisheries Commission for the Mediterranean (GFCM), welcomed the participants and thanked the Sub-delegation of the

Spanish Government in Malaga and the IEO for their kindness in hosting and arranging the meeting. Mr Sroure recalled that GFCM has recently lost his Executive Secretary Dr Alain Bonzonon who was always keeping in mind the interests of the Organization and its members. He invited to keep a minute of silence in his memory. Mr Sroure further drawn the attention of the participants on some important issues to be addressed by the Sub-Committees and thanked the FAO regional projects for their support to this meeting.

5. Mr Henri Farrugio, Chairperson of the SAC thanked also the hosting country and the participants for attending the meeting and introduced the transversal session.

TRANSVERSAL SESSION: REVIEW OF TRANSVERSAL ISSUES

6. The outcome of transversal session is introduced in Annex III

INTRODUCTION OF THE SCESS MEETING AND ADOPTION OF THE AGENDA

7. The tenth session of the SCESS was held in Malaga from 30 November to 3 December 2009. It was attended by 20 members from 7 Member countries (France, Italy, Morocco, Slovenia, Spain, Tunisia and Turkey). The list of participants is attached as Annex II

8. The Agenda of the Sub-Committee was adopted (Annex I). Mr Ramon Franquesa was the chairperson of the meeting and Mr. Vahdet Ünal was designated as rapporteur.

FOLLOW UP ON RECREATIONAL FISHERIES

9. Mr. M. Ordan presented the outcomes of the recreational fisheries study carried out in France (Pêche de loisir, Recreative et sportive) published in French in April 2009. This study was realized by BVA and IFREMER with IFOP and IFREMER co funding. Initially a telephone survey was conducted with 3,861 families, followed by a survey on 1,776 fishing operations. The estimated number of recreational fishermen is 2,450,000. The production is estimated to be 25,000 tonnes of fish and 3,100 tonnes of shellfish. It represents 3,4% of the total catch taken by the professional sector. The estimated socio economic value of the recreational fisheries in France is in its highest estimate around 1850 million €. The outcomes of this study show, as in the case of previous studies in Spain, that the Recreational Fisheries have a high level of added value activity. After the discussion, the SCEESS agreed on the necessity that any study on fishing activity (as recreational or professional) carried out in France, Morocco and Spain should try to differentiate between the situation in the Mediterranean and that of the Atlantic.

10. The SCEES agreed that one of the main tasks in this area is to provide an appropriate definition to all realities present in the Mediterranean Fisheries. In this respect, the SCESS proposed the following new definition:

- **Non Professional Commercial Fishing** - *“The fishing activity developed in partial time by non professional fishermen, that sales part of their production to obtain complementary incomes”.*

In the same context there was unanimous agreement that recreational fisheries should be defined as non commercial activities (see the item 4.3).

11. Mr Y. Zahri presented a report on the recreational activity on the Mediterranean side of Morocco, where the progress of the recreational fisheries is clearly evident, albeit with distinct differences between underwater fisheries and other leisure fishing activities.

12. The SCESS agreed that the reports presented should be included on the GFCM website under the SCEES bibliography section.

REVIEW OF SOCIO-ECONOMIC ASPECTS RELATED TO SELECTIVITY IMPROVEMENT AND BY-CATCH REDUCTION

13. SCESS stressed the importance of studies related to the impact of implementation of 40 mm square mesh size and bycatch reduction. However, due to the lack of studies showing concrete results of this improvement SCESS recommended that a website should be used to host all the new studies and documents in order to facilitate the work of the Sub-Committee.

14. SCESS underlined its interest in completing socioeconomic studies related to improvement in gear selectivity, such as the change in net mesh size or substitution of driftnets. However it stated that the results of technical and biological analysis are not yet available to the SCESS and stressed that information on the impacts on the resources and their potential to recover is a prerequisite for the following analysis to be done:

- Evaluation of the changes in the costs structure (i.e. on fuel consumption and work)
- Evaluation of the cost of gear transition
- Evaluation of the losses on sales in the short term
- Estimation of the impact on fish prices in the short term
- Evaluation of the gains on sales, after the recovery of the stocks, in the long term
- Evaluation of the impact on the viability and competition between different gears in the short and long terms
- Evaluation of the changes on employment and wages in the short and long terms

15. Although that the initial work on these issues would mainly be carried out from biological and technological perspectives, the SCESS recalled the advantage of developing interdisciplinary teams to analyze the impact of changes in selectivity.

FOLLOW UP ON STUDIES RELATED TO THE IMPACT RESULTING FROM THE IMPLEMENTATION OF THE 40 MM SQUARE MESH

16. Ms Marzia Piron and Mr Fabrizio De Pascale presented a document about the EU adoption of the 40 mm square-meshed net for the trawl codend that will be in force for the European countries from the 31st May 2010 (Art. 14 Reg. CE n. 1967/2006). The document addresses the relation of this regulation to the GFCM measures together with the issue of communication with fishers about the relevance of these regulations for sustainable fisheries. In addition, the presentation dealt with the comparison among different fishery management measures adopted

by GFCM Members on specific issues, providing a comprehensive framework for comparing different fishery management actions in place in the Mediterranean.

FOLLOW UP ON PROMOTING THE USE OF SOCIOECONOMIC INDICATORS IN FISHERIES MANAGEMENT.

17. SCESS suggested (as was the case at its 8th meeting) the publication of the COPEMED study “Economic Indicators Estimation in the Mediterranean Fisheries” which was completed in 2005.

18. Mr. Scander Ben Salem presented the study on the analysis of economic performances of the stripped shrimp (*Penaeus kerathurus*) fishery in the Gulf of Gabes (Tunisia). He highlighted the economic difficulties encountered especially by bottom trawlers in the Gulf of Gabes Area in 2007 due to the increasing of fuel, maintenance and gear replacement costs. He stressed on the necessity to continue the studies on socioeconomic indicators and particularly the need of regular availability/accessibility of financial and economic data by GFCM countries.

19. Mr. Bernardon presented the ArtFiMed diagnosis realized in Ghannouch in the Gulf of Gabès in Tunisia particularly the profitability study of the different fishing strategies. He explained that the ArtFiMed project identified socio economic indicators to follow the evolution of the different fishing and strategies during the project duration, since the use of socio economic indicators is very useful also for the management of the artisanal fisheries.

FOLLOW UP ON THE CONTRIBUTION TO IMPROVE AND UPDATE THE GFCM GLOSSARY

20. The SCESS generally agreed with the terminology proposed in the glossary together with the idea to limit the definitions to the items relevant to Mediterranean fisheries management. The SCESS encouraged its experts to contribute to the last revision of the glossary before 30 December of 2009.

21. The Sub-Committee further agreed on the following definition:

- **Recreational Fisheries** - “Non commercial fishing activities exploiting marine living aquatic resources. For Mediterranean fisheries management purposes it comprises four independent segments: leisure, sport, underwater and charter fisheries.

It was agreed that SCESS will provide the concrete definition of these four groups in writing before 30th December 2009, on the basis of reports and studies developed on this subject. These are the definitions of the four groups drawn up after the meeting:

- “Leisure fishing” means recreational fishing practiced for pleasure from the coast or a boat

- “Sport fishing” means recreational fishing practiced from the coast or a boat with competitive intentions, within an established institutional framework which sets clear rules, collects data on catches and informs the public on the outcomes of the competition
- “Charter fishing” means recreational fishing practiced from a rented boat, with a captain or fishing guide on board, for leisure or sport purposes
- "Underwater fishing" means all fishing activities practiced as a sport or for leisure by snorkelling techniques

GENERAL CONCLUSIONS AND RECOMMENDATIONS

22. Following its discussions and analyses of the different contributions and information delivered, the SCESS concluded that:

- The increase in fuel prices as well as the added pressure on the fishing industry to decrease CO₂ emissions affects in a relevant way the fishing activities and the related future trends, implying a difficult scenario for the industry. This underlines the necessity that more focus should be given to this reality and highlights the need to accelerate the data collection of economic information in order to allow for reliable predictions and adaptation in the economic and social dimensions.
- Data collection should progress in relation to the development of the problems in the fishing activities. The SCESS urged all parties to progress in the full implementation of Task 1 without any delay and to initiate the full economic data collection as soon as possible. To assure their effective use, the SCESS also underlined the necessity of immediate development of a data policy to access this data. It is important that SCESS can make use of this information as soon as possible to provide the best advice to SAC and GFCM.
- Economic and social analyses of the impact of the new gear selectivity regulations can contribute to facilitate their acceptance and support, but the main effort in this area should first be developed from the biological and technological perspective. The SCESS recommends the undertaking of multidisciplinary work in this regard and is available to provide its contribution to this matter.
- The SCEES fully supported the revision of the SAC glossary to facilitate the transversal work together with a clear definition of the data collection and regulatory proposals as soon as possible. The inclusion of a definition for “non professional commercial fishing”, the definition of Recreational Fisheries as a non commercial activity and the collection of quantitative and qualitative data on the different recreational fisheries segments are very important aspects which facilitate the future work of the Sub Committee.

2010 SCESS WORKPLAN

23. For the next period, the SCESS proposes the following program of work:

- Development of an analysis on the fishermen social structure across all Mediterranean countries, to know their associations, level of organization, links with the institutional bodies, relation with other users, etc. This task can be considered as a follow up to study published in 2001 by F. Feral. The SCESS proposes that in the forthcoming period the coordinator tries to engage discussions on methodology, data needs, experts concerned, etc. in order to initiate the constitution of an expert network on this matter along with the compilation of studies through email exchange.
- Analysis of the impact of changes in the cost of energy inputs including those related to new technologies, analysis of the energy factor in different fleets segments, forecast of the social, economic and environmental effects, good practices in saving energy inputs, etc. The SCESS proposes the opening of a section in the GFCM website to put all related studies and invited the other Sub-Committees to develop transversal collaboration in this subject.
- Collection of the relevant legal changes in the national fisheries legislations which would allow the comparison of the different levels of protection, the divergences and common elements in fishing regulations, as well as the comparison of the economic and social effects of the different facets of the regulations. The SCESS supports the initiatives proposed by Mr Srour (see item 7) addressing this subject and suggests the use of internet facilities to allow experts to share all new legal developments and related information.
- Before the inclusion of the Recreational Fisheries in the data collection, the SCESS proposes to initiate in the next period a quantitative and qualitative collection of information on Recreational Fisheries in the member states, by the four segments considered and also on the “non professional commercial fishing” segment to evaluate what is the present situation on the global Mediterranean area. The SCESS suggested holding a workshop on the potentialities and conflicts of recreational and non professional fisheries in the Mediterranean. TORs of this workshop are included in Annex V. It is suggested to hold it in October 2010 in Palma de Mallorca

ANY OTHER MATTERS

24. Mr. M. Camilleri (GFCM Secretariat) presented an overview of the data exchange protocol for the submission of Task 1 data. He explained that a XML Schema has been developed and related documentation has been drawn up by the Secretariat in order to provide national software developers with clear instructions on the creation of routines, embedded in their national information systems, for the production of a data file compliant with the Task 1 requirements. Furthermore, he informed the participants that a software has also been developed for those countries not being able to use the XML Schema. He went on to deliver a brief presentation of this software focusing in particular on Task 1.3 which deals with the submission of socio-economic data by fleet segment at national level. In his presentation Mr. Camilleri also mentioned that economic data submission will be mandatory as from January 2011.

25. Executive Secretary Mr. A. Srouf introduced the project (expected to be funded by Italy) aiming to update and complete information on fisheries law and regulation in the Mediterranean and the Black Sea. He emphasised that the harmonisation of the regulations in the Mediterranean is needed and SCESS could play an important role in reaching the objectives of the aforementioned project.

26. Ms. Macher informed that the International Institute for Fisheries Economics and Trade (IIFET) Biennale Conference will be held in Montpellier from 13th to 16th July 2010 and welcomed the participation of SCESS experts.

27. The SCESS expressed thanks to the CopeMed II, MedSudMed and AdriaMed projects for supporting the participation of experts in the intersessional workshops and SCESS meeting as well as their on-going support to the SCESS.

NOMINATION OF THE SCESS COORDINATOR

28. The SCESS unanimously nominated Mr. V. Ünal (Turkey) as new coordinator of the Sub-Committee.

29. The participants commended the excellent work achieved by Mr Ramon Franquesa during the last two years.

DATE AND VENUE OF THE NEXT MEETING

30. The date and the venue of the next SCESS meeting will be set up by the SAC

ADOPTION OF THE REPORT AND CLOSURE OF THE MEETING

31. The report was adopted by the meeting on 3 December 2009.

ANNEX I

Agenda

- 1. Introduction of the SCESS meeting and adoption of agenda**
- 2. Follow up on Recreational Fisheries**
 - 2.1 Conclusions on the enquiry on recreational and sportive fisheries in France
 - 2.2 Definitions
 - 2.3 Recreational marine fishery in the Moroccan Mediterranean coast
- 3. Review of socio-economic aspects related to selectivity improvement and bycatch reduction**
- 4. Follow up on:**
 - 4.1 Studies related to the impact resulting from the implementation of the 40 mm square mesh
 - 4.2 Promoting the use of socioeconomic indicators in fisheries management.
 - 4.3 Contribution to improving and updating the GFCM glossary
- 5. General conclusions and recommendations**
- 6. 2010 SCESS workplan**
- 7. Any other matters**
- 8. Nomination of the SCESS coordinator**
- 9. Date and venue of the next meeting**
- 10. Adoption of the report and closure of the meeting**

ANNEX II

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ANNEX III

**OUTCOME OF THE TRANSVERSAL SESSION
OF THE SAC-SUB-COMMITTEES
Malaga, Spain, 30 November 2009**

This session was attended by 73 experts from 15 Member countries and 4 partner organisations. It was agreed that general discussion on the topics will take place during this session and that further reflections could be undertaken during the sub-committees meetings. The following subjects were reviewed:

Transversal workshop on Regional Logbook (J. Vigneau)

Abstract. In response to a demand by SAC (GFCM Scientific Advisory Committee), endorsed by the 2009 session of the GFCM, a workshop was held in July, in the premises of FAO (Roma), on the setting up of a Regional logbook for the Mediterranean and Black Sea. The terms of references of this workshop included a review of the current situation regarding the collection of effort and landings data in the different Member Countries, the identification of the objectives and scope of a GFCM logbook, the agreement of the parameters and format, and the proposition of a roadmap for the implementation of the GFCM logbook. Alternative means of collection of effort and landings per fishing activity and area for the vessels not covered by the GFCM logbook, were also to be considered. The objective and scope of a regional GFCM logbook were clearly defined as being a tool to serve the needs for MCS (Monitoring, Control and Surveillance) of the fisheries in the Mediterranean and Black Sea, and a primary source of data for the GFCM data collection framework, and in particular the Task 1. Building on existing formats among GFCM Member Countries and adapting the parameters to the needs for Task 1 obligations, a proposal was made during the meeting (see document in annex XX). Concerning the roadmap for implementation, it was recommended that

- The GFCM logbook should be implemented as a minimum for vessels more than 15 metres in length overall.
- The implementation of the GFCM logbook should be effective for Member Countries as from 1st January 2012.
- A transitional period should be considered for some countries having little or no logistic resources to handle a LB system.
- The EU should check whether there is a need to change the ERS (Electronic Recording System) Regulation to reflect the proposed GFCM Logbook
- GFCM, FAO regional projects and the EU should offer assistance to Member Countries having little experience in setting up a logbook system.

Finally, it was also stated that the use of the GFCM Logbook will not cover all the requirements to complete the GFCM Task 1, and the information collected should be cross-checked with other sources for quality issues. Alternative means for collecting effort and landings information presented to the workshop were harbour surveys, fishing calendar surveys, monthly, daily or simplified forms.

Comments. The transversal session endorsed the outputs of the workshop on the regional logbook. Experts discussed the size of the vessels to be covered by the logbook and some highlighted the need to include vessels below 15m since the fishing efficiency of such vessels has increased with technology innovations. Nevertheless, it was agreed that it was up to the Commission to decide on this matter. Many experts did not agree on the proposal to limit reporting to only the GFCM priority species and suggested that all the species caught, including species of conservation concern, should be reported. Experts acknowledged the fact that there may be some difficulties in bringing fishermen to complete logbooks for a variety of reasons, including problems of illiteracy. However, there was general agreement that a logbook scheme is a vital instrument for fisheries control and management, as well as for scientific monitoring and assessment. A proposal to introduce a simplified logbook for the artisanal fleet was also put forward by some experts.

Transversal Working Group on Selectivity improvement and bycatch reduction

(M.N. Bradai)

Abstract

The meeting addressed various issues and made the main following conclusions:

- The large variability in bycatch between different areas and gears in the Mediterranean;
- The need to develop and adapt mitigation measures have been developed outside the Mediterranean
- The lack of aggregated knowledge on the biology and fishery of elasmobranches in many parts of the Mediterranean;
- The need of a common strategy to reduce the effect of fisheries on sea turtles, marine mammals and seabird bycatch;

The SCMEE further made the following main recommendations to SAC:

- More studies should be conducted on the characterisation of bycatch of species of conservation concern in areas of the Mediterranean;
- The importance of testing of mitigation measures and technologies that have been developed outside the Mediterranean and by some Regional Fisheries Management Organisations;
- More information, education campaigns and training workshops should be conducted to inform the fishing industry on regulations on species of conservation concern and current practices to reduce the mortality of such species;
- Develop and initiate a regional strategy to reduce sea turtles, marine mammals and seabird bycatch;
- Setup a medium term year work plan to improve knowledge and assess the status of elasmobranches in the Mediterranean and the black sea was elaborated.

Comments. The participants acknowledged the extensive work carried out by the workshop on reduction of bycatch and discards. The session highlighted the need to further implement a strategy to improve the selectivity of fishing gears operated in the GFCM area. The participants agreed on the proposal to step-up assessments on elasmobranches and stressed on the importance to continue collaborating with other

relevant organizations involved in elasmobranchs monitoring activities. The MedSudMed coordinator informed the participants that extensive work and training activities have been carried out by MedSudMed on the biology and age reading of these species and suggested to consider all of these as a foundation for the work of SAC. Finally the session proposed that the definition of by-catch should be drawn up and that a data collection framework for species of conservation concern caught during fishing operations should be established.

Progress on improvement and updating of SAC glossary (J. Leonart)

Abstract. The GFCM Glossary has remained untouched since 2003. It contains 693 words and 841 definitions. This unbalance is due to the presence of 115 words with more than one (actually 2 to 7) definition. A number of words correspond to the ordinary language, the jargon of some other specialized discipline not directly related to Mediterranean fisheries (i.e. statistics, general ecology or economy, etc.), not relevant to GFCM, or simply obsolete. It is advisable to remove those words that do not belong to the specific tasks of GFCM. On the other hand multiple definitions for a single word usually mislead the reader. Usually they are redundant. They say the same thing (or similar) with different words and level of precision. These problems were identified by the SAC and led it to promote the refinement of the glossary. That means to reduce the GFCM Glossary to the words really significant for the normal scientific work and provide a single clear definition in order to allow the people working on GFCM issues to exactly understand the meaning of the key words in the GFCM context.

A first phase of analysis of the glossary gave the following proposals: to remove: 253 definitions, to modify 359 definitions and to accept as they are 215.

A second phase including consultations with GFCM Secretariat and SCESS coordinator and another analysis (not yet finished at the date of this report) the proposals are the following: 224 definitions to be accepted, 76 new words (with definition) to be added, 36 definitions already modified, 175 definitions to be analyzed and 398 definitions (involving 307 words) proposed for deletion.

Comments. The work carried out so far to revise the GFCM glossary was commended by the experts. It was agreed that further consultation with the SAC sub-committees together with national scientific and academic institutions would be very valuable. 29th December 2009 was set as a deadline for consultations after which the consultant will proceed to finalise the draft revised glossary to be presented at the SAC session in January 2010. The Sub-Committees were invited to identify appropriate means to contribute to the glossary revision process.

Progress on the implementation of the FAO-ArtFiMed Project in Morocco and Tunisia (Caminas and Bernardon)

Abstract. Le projet ArtFiMed s'intègre à la fois (i) aux priorités des pays en matière de lutte contre la pauvreté, d'amélioration des conditions socio-économiques des populations côtières et de réhabilitation des pêches artisanales, (ii) aux préoccupations régionales en matière d'échange d'expériences, d'amélioration de la gestion des stocks partagés et des espèces d'intérêt commun, (iii) aux recommandations et objectifs

internationaux énoncés dans le cadre des objectifs pour Millénaire et du Comité des Pêches de la FAO. Dans une première étape, des rapports diagnostics des trois sites sélectionnés pour la mise en œuvre du projet, Dikky au Maroc, et El Akarit et Ghannouch en Tunisie ont été élaborés et seront présentes. Ces rapports ont fait l'objet d'un processus de concertation avec les communautés bénéficiaires pour évaluer précisément le contexte dans les zones d'intervention et permettre ainsi l'identification participative des besoins et des activités qui seront mises en œuvre dans le cadre du projet.

Comments. The achievements of the project during its first phase were acclaimed by the participants. The proposal to also focus on the impact of artisanal fisheries on the state of the stocks and vice-versa was raised by some experts. The transversal session also acknowledged the effort being made by the project to promote the involvement of artisanal fishers in the fisheries management process.

CopeMed pilot study on the implementation of the 40 mm square mesh in the bottom trawls (J. Sacchi and J. Baro)

Abstract. With reference to Resolution GFCM/31/2007/3 on the introduction of the 40mm square mesh in the codend of trawl nets exploiting demersal resources and Recommendation GFCM/33/2009/2 on a minimum mesh size in the codend of demersal trawl nets by 31 January 2012, CopeMed II project supported by the Coordination Committee agreed with the GFCM in supporting a subregional action according the availability of financial resources. The commitment included: a) Preparing a Technical document on the 40 mm mesh selectivity; b) Organising a subregional Workshop to analyse the implementation of such measure; c) to prepare methodologies that could be utilised for the CopeMed countries and d) helping the INRH in carrying out a pilot study as example for the other subregional countries. A technical document was prepared by two international experts to CopeMed II. The document include a protocol on trawling gear selectivity; standard methodologies to evaluate the biological and economic effects of the 40 mm mesh implementation and standard methodologies for the analysis of the biological and socio economic effects of the implementation of the 40 mm Resolution. The document is in its last phase and will be distributed by CopeMed II. A Workshop (Malaga, 10-11 September 2009) was organised by CopeMed II to: promote the cooperation between the CopeMed countries on this issue; discuss the implementation of the GFCM Recommendation and to prepare a pilot study on the gear selectivity, biological and socio-economic impacts of the adoption of this measure to be applied on a first step in Morocco and later to be extended to the other south Project' countries according to the budget availability. Experts from the EU, Tunisia, Algeria, Morocco and the authors of the document from France and Spain participated in the meeting. A draft plan for the pilot survey to be carried out in Nador (Morocco) in collaboration with the INRH was also discussed during the Malaga meeting aimed to prepare the scientific and operational aspects to carry out the pilot survey to: evaluate the yields of the target species using a 40 mm traditional (rhombic) and a codend of 40 mm with a square mesh (experimental); obtain the selectivity parameters for target species and types of mesh; determine the discarded fraction; conduct an economic assessment of the effects of

changing the mesh size; compare the experimental results with the obtained by the Moroccan trawl gear, in terms of by-catch of unwanted species, juveniles and discards. As main conclusions of the workshop the operational protocols were adopted, the gear and vessel type selected, the survey equipment and material needs agreed, the on board and data analysis methodologies adopted. The document prepared by CopeMed II was revised, the different responsibilities distributed and a first budget table prepared and the schedule adopted. At the moment of the SCs meeting CopeMed II should contact INRH and GFCM Secretariat to agree on the budget contributions to carry out this activity in Morocco. The cost of the pilot project was calculated as 120.926 \$, including the four phases: 1.Elaboration of documents, preparatory meeting and campaign preparation (14.091 \$); 2.Experimental campaign of selectivity in Nador (81.104 \$); 3. Data analysis (15.898 \$) and 4.Final report and Conclusions (9.834 \$).

Comments. The session welcomed the pilot study being conducted through COPEMED II assistance in Morocco on the impact of the implementation of the minimum mesh size. Some experts highlighted the importance of taking into consideration the varying behaviours of fishers from one area to another when establishing a sampling design.

Climate change and its impact on fisheries and Ecosystems (M. Camilleri, GFCM Secretariat)

Abstract. The concerns about direct and indirect impacts of climate change on the physical marine environment, marine ecosystems, living marine resources and the livelihoods of people who exploit them are shared globally. Over the last few years, the FAO Fisheries and Aquaculture Department (FI) have been addressing this issue through a specially established internal working group on Climate Change in which the GFCM Secretariat is represented. In April 2008, the FI held an Expert Workshop on Climate Change Implications for Fisheries and Aquaculture (FAO Fisheries Report 870) to respond to the request made by the FAO Committee on Fisheries (COFI) to address the subject and to provide inputs to the FAO High-Level Conference on World Food Security. The Workshop identified and reviewed key issues, from the physical changes, the impacts on aquatic resources and ecosystems and how these ecological impacts translate into human dimensions of coping and adapting within fisheries aquaculture. It also evaluated policy options, mitigation, impact reduction means and the building of adaptive capacity to climate change. Three technical papers formed the basis of the technical discussions and have been recently published by the FAO (FAO Fisheries and Aquaculture Technical Paper 530). In addition, the FAO along with several other international organisations have published a joint policy brief entitled “Fisheries and aquaculture in our changing climate”. With a forecasted significant increase in sea surface temperature and sea level rise over the next century, the Mediterranean and Black Sea fisheries and aquaculture industries are also particularly vulnerable to climate change. In this respect and in the light of the outputs of the FAO workshop referred to above, there is a growing need for the GFCM Scientific Advisory Committee to focus on the issue of climate change and to include it in various components of its programme of work.

Comments. The participants welcomed the presentation delivered by the Secretariat and agreed that SAC activities should incorporate climate change issues. The Sub-Committees and the Coordination Meeting of the Sub-Committees were invited to identify concrete activities in this regard.

SAC framework and medium term strategic plan (J.J. Maguire)

Abstract. J.-J. Maguire briefly introduced the terms of reference for his assignment to review the SAC frame of reference. He invited participants to talk to him on their views on the SAC achievements, modes of operations and other aspects they considered important in improving the performance of the SAC.

Introduction and discussion on the issue of Alien species in the Mediterranean and Black Sea

(B. Ozturk)

Abstract. Alien species of the Black and Mediterranean Seas were reported. Main vectors were shipping, hull fouling, clinging and sediment tank of the ships. Besides, intentionally and unintentionally introduction was also important both seas for the dispersion of the alien species. Impact of fisheries, human health and biodiversity changes has been examined. Climate change and dispersion of the alien species also considered. Some recommendation and suggestion were listed and submitted to the GFCM Secretariat.

Comments. The presentation was commended by the participants who agreed that the subject of alien species and their impact of fisheries ecosystems and resources deserves due attention. Nevertheless, experts stressed that not all alien species should be considered invasive and / or established, and that the short, medium and long term impacts on fisheries should be addressed, some of which may be positive and could be exploited. The SCMEE was invited to formulate draft a strategy to focus on the monitoring of alien species and their impact, with immediate effect.

Abstracts

BVA & IFREMER, Recreational fisheries in France

A study about recreational fisheries in French (Pêche de loisir, Recreative et sportive), published in April 2009. This study is based on personal enquiries.

To download the complete study go to:

<http://agriculture.gouv.fr/sections/magazine/dossiers/littoral-peche-loisir/ifremer-se-penche-sur>

Y. ZAHRI, Recreative Marine Fishery in the Moroccan Mediterranean Coast

A brief review was done on both types of recreational fisheries (underwater fishery and the fishing-by foot) in the Moroccan Mediterranean coast and the regulation system. After, updated statistics were presented and shows an exponential increase in the number of allowed fishing-by foot that were issued between 2004 and 2008, from less than 2000 to about 7700 permits, with an increase noticed in the east between 2007 and 2009 due, probably, to the improvement of the accessibility to the coast. For the underwater fishery, we note a general increase of the number of authorization delivered between 2004 and 2008 from about 100 to about 250, with stability in the east part of the coast with an average of 60 fishermen per year. For the period 2004-2008, 65% of the beneficiaries of fishing authorizations underwater fishery have a Moroccan nationality; the others are from Spain and French. For the "fishing-by foot" we note that 99% of beneficiaries are Moroccans.

Scander BEN SALEM & Yassine BEN ARFA, Analysis of economic performances of the stripped shrimp (*Penaeus Kerathurus*) fishery in the gulf of Gabes (Tunisia)

The main goal of this study is to compare economic performances of the boats targeting the stripped shrimp (*Penaeus Kerathurus*) in the gulf of Gabes (Tunisia) for the years 2004 and 2005. The parameters of performance used are Total Revenue (TR), Gross Profit (GP), Net Profit (NP), Profitability Ratio ($NP=NP/Capital$) and Gross Value Added (GAV). The fleet targeting this specie was divided into 4 segments according to the engine power for trawlers and the length for artisanal boats. Four segments were identified: segment 1 (trawlers > 400hp), segment 2 (trawlers \leq 400 hp), segment 3 (artisanal > 10m) and segment 4 (artisanal \leq 10m).

The analysis of the composition of TR confirms the importance of the value of stripped shrimp in TR specially for segment 3 (51,3% of the TR) followed by segments 2, 4 and 1 with respectively 47,5%, 43% and 32% of the TR. The GP was positive for all segments. However, the NP was negative for bottom trawlers (segments 1 & 2) and positive for artisanal boats (segments 3 & 4).

The GAV shows that the whole activity produces a positive balance. But it is important to indicate that the segment 1 which encounters problems of profitability, participates with the greatest part in the GAV (60%).

The contrast of TR, cost structure, GP and profitability rate of trawlers belonging to segment 1 for the years 2001, 2005 and 2007 shows that in spite of the progressive increasing of current TR, the GP and the profitability rate were positive in 2001 and 2005 but become negative in

2007. This is due to the increasing of fuel cost in 2007 (38% of TR) compared to 2005 (26%) and 2001 (25%). This was the case also for costs of maintenance and those of gear replacement that augmented in 2007 (21% of TR) in 2007 compared to 2005 (15,7%) and 2001 (17,3%).

Abstract of the diagnostic study in Ghannouch presented by M.BERNARDON

Matthieu Bernardon presented main socio economic results of the diagnostic study of Ghannouch in Tunisia. The objective of this diagnostic study is to obtain a complete and detailed overview at the start of the project, the context, issues, fishing activity and socio-economic conditions of fishing communities on the sites selected by the project.

In Ghannouch there are only small fishing boats (around 200) and half of the total number are motorised. Fishermen use trammels net (for shrimp or sepia), gill net or beach seine.

To study the different fishing strategy and profitability, different operating account were established.

All these operating accounts have been drawn from variables collected from fishermen and wholesalers, to characterize the fishing activity. Then a monitoring system was implemented to obtain all the necessary data and main indicators to update those operating account during the project duration.

These simulations were used to compare the profitability of different fisheries and demonstrate that in most of cases, the result achieved by the fishermen is very low or even negative.

It shows that those tools and especially the use of socioeconomic indicators are very use full in fisheries management.

For more information, the diagnostic report is available on the ArtFiMed webpage:

www.faoartfimed.org

Marzia PIRON, Roberto ODORICO, Cristina CASTELLARIN, Fabrizio DE PASCALE, Comparison of GFCM and EU regulations for fisheries management in the Mediterranean about implementation of the 40 mm and by-catch.

The study is devoted to highlight the importance of a methodology for comparing legislative measures, all concurring to the management of fishing activities in the Mediterranean as a base for the definition of a common reference framework and to explain to the fisherman the relevance of these measures for a sustainable fishery. In this case-study the analysis examines the adoption of the 40 mm square-meshed net for the codend of trawlers in the context of the GFCM measures and of the EU regulations as a specific application of the methodology.

For the member countries of the EU, in fact, the adoption of the 40 mm square-meshed net for the trawl codend will be in force from the 31st may 2010 (Art. 14 Reg. CE n. 1967/2006): this will constitute an important test for verifying some effects of this measure, on short term, in a complex context as the Mediterranean Basin. About this issue, in the last years, GFCM adopted the Rec. GFCM/2005/1, Rec. GFCM/2007/1, Res. GFCM/2007/3 and Rec. GFCM/2009/2. In 2009 was recommended that member countries have to adopt and implement, by 31 January 2012, the 40 mm square-meshed net or 50 mm diamond mesh for the codend of the trawl net.

The analysis of the GFCM measures allows to highlight some differences in the management choices taken regarding the trawl selectivity. These differences are mainly due to the need of assuring gradual changes in the fishing exploitation model. From the socio-economic point of view and for the short term, it is important to consider also that for the fishing industry the

change of the codend of the trawl net constitutes an investment not always easy to implement especially if changes introduced vary in few years.

The latest EU measures about the selectivity of trawls codend are reported in the Mediterranean Regulation n. CE 1967/2006 "Restrictions concerning fishing gears":

by implementing the recommendation GFCM/2005/1, starting from 31 December 2007 it is forbidden mesh size smaller than 40 mm for trawl codend; by imposing the substitution of the codend of the trawl net with squared mesh size of 40 mm or, after motivated request from the fishing vessel owner, with 50 mm diamond mesh, starting from 1st July 2008, in line with the recommendation GFCM/2009/2 (Art. 14 by way temporary derogation till 31 May 2010 and Art. 19 about management plan).

Eventual changes at the Regulation are possible only after the 30th June 2012, when the Commission will present at the European parliament and at the Council a report on the implementation of the measures based on the information received from member countries. Moreover, in the same regulation CE 1967/2006 are reported the technical conditions for attachments to and rigging of the trawl nets and, in the Reg. 517/2008 of the Commission, are reported the rules for determination of the mesh size and assessing the thickness of twine of fishing nets. These are to keep the maximum selective efficiency that, as reported also in the "Report of the SCSA/SCESS/SCSI Barcelona, Spain, 2007".

More generally, the comparison among different fishery regulation measures adopted by GFCM members on specific issues will provide a comprehensive framework for comparing different fishery management actions in place in the Mediterranean. This might constitute a decisional support for identifying shared management regulations.

ANNEX V

Terms of Reference of the Workshop on the Potential and Conflicts of Recreational and Non Professional Fisheries in the Mediterranean

Considering the decline of marine resources, new developments in the fishing activities and increasing conflicts among stakeholders, the SCESS proposed a new definition and classification of non professional fishing activities:

- **Recreational Fisheries** means “*non commercial fishing activities exploiting marine living aquatic resources. For Mediterranean management purpose it comprises four independent segments: leisure, sportive, underwater and charter fisheries*”.
- **Non Professional Commercial Fishing** means “*the fishing activity developed in partial time by non professional fishermen, that sales part of their production to obtain complementary incomes*”.

To facilitate the future work on the data collection, legal framework and scientific discussion the SCESS proposes to hold a workshop on the Potential and Conflicts of Recreational and Non Professional Fisheries in the Mediterranean with the objectives to:

- ❖ Describe the situation of the non professional fishing activities in the Member Countries and provide all quantitative information available on each segment, including number the people concerned, species affected, environmental effects, economic impact, etc.
- ❖ Provide quantitative and qualitative information on the tendency of each segment in the Mediterranean area.
- ❖ Evaluate the relative economic and social importance of these activities
- ❖ Describe the conflicts and difficulties in relation to the resources and other stakeholders resulting from the recent evolution in these activities.
- ❖ Compile and analyze the different regulatory systems in connection with these activities in the Mediterranean countries

The SCESS suggested to hold the meeting in the first week of October 2010 in Palma de Mallorca (Spain).