

# **GENERAL FISHERIES COMMISSION FOR THE MEDITERRANEAN**

## **SCIENTIFIC ADVISORY COMMITTEE**

### **Sub-Committee on Statistics and Information**

**Barcelona, Spain, 6 - 9 May 2002**

#### **1. OPENING OF THE SESSION**

1. The Third Session of the Sub-Committee on Statistics and Information (SCSI) Annual Meeting was called to order by Mr Dino Levi, Chairperson of the meeting. Ms Nicoletta Milone acted as Rapporteur. The list of participants is provided in Annex 1.

2. The Chairperson gave an overview of the last two SCSI meetings results and drew attention to the GFCM request for proposals to improve information systems and to create a GFCM Information System.

3. The needs to have a joint meeting with the other Sub-Committees was promptly stressed by the SCSI members and a proposal to the GFCM-SAC will be presented related to this issue. The SCSI was informed that a joint group of SUB-COMMITTEE coordinators will be held on Thursday 9<sup>th</sup> and the output will be reported during the approval of the report of this meeting.

#### **2. ADOPTION OF THE AGENDA**

4. The Agenda was presented to the Sub Committee. The Chairman requested any comments or alterations considered necessary. A new item on the Agenda was added: the presentation of the artisanal fisheries system (ArtFiMed). The participants were also informed that a presentation on this topic will be performed, with two papers to be annexed to this report.

#### **3. REPORT BY THE SECRETARIAT ON THE MEDFISIS REGIONAL PROJECT**

5. The FAO Technical secretary of the SAC-SCSI gave an overview of a project proposal to develop a Mediterranean fishery statistics and information system (MEDIFISIS) emphasising the importance and urgency of setting-up compatible statistical systems covering the entire region. Mr. Coppola informed the meeting that UE, at the last session of GFCM had expressed its willingness, on condition that other members expressed an interest, to co-finance the project on statistics for GFCM. He also informed the meeting that the project could have some costs reduced because of the work already been carried out in some of the participating countries of the ADRIAMED and COPEMED Projects and the reduction in the number of participating countries (mainly from the Black Sea, where a GEF programme seems to take care of the issue).

6. He reported that the FAO direct contribution would possibly materialise with the formulation of a regional TCP targeting those countries that are not covered by the present projects. This could be used as a bridging step to enable those countries to improve their situation and better profit from the regional project.

#### **4. REPORT BY NATIONAL PARTICIPANTS ON THE FISHERY STATISTICS AND FISHERY DATA COLLECTION**

7. The presentation of the development of a pilot fishery statistics system in Mediterranean Morocco was performed. This system has been developed with the support of COPEMED and in collaboration with FAO experts. It was aimed at the development of a statistical system to evaluate and manage the fishery data on catch/effort in Mediterranean Morocco. The preliminary results were reported, it was pointed out that these data are going to fill the lack of information due to the official information system focused on administrative and commercial purposes. Data were available on: total catch for species/ports/gear/commercial category; and fishing effort for gear, considering the variability of tide. It was underlined that this system solves the problems of the "other" categories, often a large portion of the official statistical system, since the difficulty of species identification (but in a scientific system it falls below 1%). This pilot study did not cover all the fisheries as a result of the seasonal character of many fishing methods. This missing data were resolved by setting up a routine system. The optimisation of the sampling system is planned to be carried out in a second phase.

8. An overview of the current status of the Malta fishery statistical system was presented. It was reported that the final version of MALTASTAT (version 2.6) has been released and is fully functioning and its licensing facility is being used successfully. The use of this database in drawing up maps related to effort distribution and intensity was also demonstrated. It was also reported that economic analysis in terms of value of landings by zones had been conducted using fish market data and MALTASTAT.

9. The catch assessment scheme was launched officially in Malta for vessels under 10 m in length in January 2002, whereby one port from each of the three strata identified is sampled over a 10 day period. An automatic processing system is currently being developed with the support of COPEMED and FAO to handle the catch/effort data and produce related reports.

10. Fishing effort, landings and biological data are also being collected on *Coryphaena* and tuna within the framework of the COPEMED project on these species. Landings and fishing effort data on *Coryphaena* have also been processed in GIS format.

11. The EUROSTAT representative explained which statistics are collected and produced by this institution. He also illustrated the scope of the EU 1543/2000 regulation on the collection of basic data. The potential advantage which the GFCM countries, already a member of the EU, might have in relation to the technical infrastructure i.e. computers, software, communication networks, to be used for the management, production and dissemination of the requested statistics was discussed. In this respect, the EUROSTAT representative indicated one of the main difficulties could come from the lack of standardization or compatibility of the concepts, definitions, nomenclatures that are used rather than the lack of financial measures.

12. The other participants illustrated the situation of Fishery Statistics Data collection in their countries (Italy, France, and Spain). The need to have data collection and information systems compliant with the EU requests was stressed. The SCSI members agreed to propose that statistical information systems in the EU countries and those which are being created should be compatible or made to be compatible.

13. The network developed in IEO (Spain) was illustrated. This network aims to collect fisheries data independently of the official statistics system. It is developed to cover selected ports in the Mediterranean area and provides daily data on catch/effort, total catch, species composition and by catch. Observers on board record size distribution. All data are inputted into a database accessed by Intranet homepage of the IEO, SIRENO. This system has been working for five years and an improvement proposal to add capture, species and vessel data is on going.

14. The representative of France reported on the project executed by the IFREMER in 2001-2002 on the small scale fisheries in the Gulf of Lion (Languedoc-Roussillon). The main objectives of the study were listed: improvement of catch data and size composition for the stock assessment of the *Merluccius merluccius* in the Gulf of Lion (G.S. 37.07), comparing the results with previous studies, reorganize the biological sampling of landings of hake by small scale fisheries.

15. The Italian representative reported on the recent innovation of fishery statistics and fishery data in the Italian General Fisheries Directorate. Following the EC regulation 2104/93 a formal agreement with the IREPA to carry out a survey for the estimation of catch data on the basis of suitable sampling scheme has been defined. The national programme for fishery data collection for the 2002/2006 period, approved by EU, according to the EC regulation 1543/00, was shortly reported.

16. The List of country that have already submitted data on OU are listed in Annex 2.

## **5. REPORT ON THE ANCONA TABLE OPERATIONAL UNITS**

17. A contribution of the Libyan delegate was distributed to the participants. Data for three species were registered according to the Operational Units (*Sardinella aurita*, *Pagellus erythrinus* and *Merluccius merluccius*) and a summary of the distribution of Operational Units into three Geographical Sub-Areas was presented.

18. The discussion was focused on the needs to promote a system that could be flexible, according to user's request, and the management gap problems were discussed. Following the discussion, the participants agreed that a proposal to a joint working group focusing on the OU made up by both economics and statistics subcommittee members should be presented. It was proposed to bring this topic to the attention of the Sub-Committee coordinators joint meeting to be followed by a proposal for the SAC.

19. It was also proposed that the national statistic information system should be automatically generating report by OU.

### **5.1. Tuna Farming**

20. The FAO FIDI delegate reported on the outcome of the 6th GFCM ICCAT meeting on “Stocks of large pelagic fishes in the Mediterranean” that was held in Malta, 15-19 April 2002. In particular, the Sub Committee was informed on a series of difficulties for the estimation and reporting of related fishery statistics created by the rapidly growing practice of bluefin tuna fattening. The main problems are: a) estimation of the quantities of tunas caught and transferred to the cages; b) reporting of the quantities gained in the captivity; and c) possible no reporting of catches of other marine resources (mainly small pelagic) specifically caught to feed the tunas in the cages.

21. The Malta delegate reported that also the Sub Committee on Stock Assessment had discussed the tuna farming topic proposing that a working group would be established, including members from all the SAC Sub Committees to agree on common standards that should be adopted by all the parties involved in the tuna farming practice.

22. The representative of Morocco reported some of the results presented during the last joint session of the GFCM-ICCAT regarding the impact of tuna farming in the Mediterranean Sea, held in April in Malta. Impacts on socioeconomics, biological, statistical, environmental and management aspects have been shortly illustrated. In particular the impact on tuna fisheries statistics was underlined and the following topics were listed: information quality on the origin of fish; validity of the CPUE data due to a different fishery strategy; data validity according task 1 and task 2 of ICCAT; quality of statistical reports in relation to the ICCAT-BTSD (Bluefin Tuna Statistical Document).

## **6. REPORT ON DATA COLLECTION ACTIVITIES IN COPEMED AND ADRIAMED**

23. The COPEMED activities have been briefly illustrated. The attention was focused on the research activities carried out and the databases available. A series of activities implemented and related to shared stocks were commented. In particular tuna fisheries database and dolphin fish (*Coryphaena*) have been improved with data on fishing effort, landings and biological data.

24. Concerning AdriaMed’s support to national fishery statistics systems, the Secretariat reported on the work done in Albania and Croatia. As far as Croatia is concerned, it is worth remembering that there was a joint agreement to let the Croatian Administration conclude the present restructuring of the national data collection system. From Albania the statistical survey design was completed and consisted of the census and the catch and effort survey. The reports on the statistical information systems for Albania and Croatia will be included in this report as annexes after the approval of the countries.

25. The AdriaMed Project Coordinator illustrated the data collection activities carried out by the Project. The support of the national statistic information system as well as the improvement of data collection are some of the main tasks of the Project. Attention has been paid on the shared stocks: collection of the historical data for the Adriatic research institutions and the reviewing of the time series on abiotic and biotic variables in the Adriatic Sea are some of the research activities carried out. Following the recommendations of the last meeting on Socio Economics a review on socio economic data available in each AdriaMed country is being developing.

26. Following the presentation it was suggested that, although scientific statistics and official statistics tend to vary, data from all sources should be integrated, following a quality control exercise, to achieve a common output.

27. It was also recommended that the GFCM, its Sub-Committee on Statistics and Information and regional projects such as COPEMED and ADRIAMED should continue to work towards developing standardised fisheries statistics outputs based on predetermined minimum-level requirements. Each country should be free to develop its own tailor-made system, provided that they are based on these common requirements and outputs.

## **7. PRESENTATION OF THE ARTISANAL FISHERIES INFORMATION SYSTEM**

28. This study was presented by the coordinator of the System. The inventory of artisanal fishery communities in the Central-Western Mediterranean was conducted by a team that has worked part time, in many cases voluntarily, to achieve some results. It was stressed that these results (a collection of more than 13000 records/elementary métiers in the data base) were not considered to be final serve as the launching pad of deeper analyses and more sector studies. The whole study consisted of the planning and achievement of the following major components: (a) the methodological design, (b) the data collection (field work), (c) the data base (ArtFiMed), (d) the case studies, (e) the processing and analysis, (f) the CD output, (g) appropriate documentation, and (h) a power point presentation. The strong relationship of this study with a GIS application and the direct support to countries in the Region in the improvement of their national statistical systems was also mentioned. A paper was distributed along with a copy of the CD automatically created from the database through a built in software application. It was mentioned that that work was totally developed, in all its components, within the FAO-COPEMED Project. Two Case Studies derived from this work were to be presented at the end of the session in order to show the progress of work and the results so far achieved and programme further applications.

29. The Chairman informed the Sub-Committee members that the IRMA-CNR (Italy) submitted, within the framework of INCO-MED a proposal on the artisanal fisheries. This project aims to linking existing networks to collect, disseminate and inform about the artisanal fisheries related problems. It would be a useful tool for administrations, resources users, scientists to understand the importance of these fisheries in the Mediterranean Sea Area. The final objective is to finalise some guidelines for the countries to sustain and improve the local artisanal fishery sector.

## **8. PRESENTATION OF THE ITAFISH-MEDFISH APPROACH**

30. The Secretariat presented the status of the art of the MedStat programme, being implemented with the support of the FAO HQ and the projects. This is a “customised approach” that has been developed and is being implemented in some of the Mediterranean countries under the two FAO sub-Regional Projects COPEMED and AdriaMed. It is flexible and adaptive because it must be made-to-measure for each situation in each country. The speaker remarked that it was addressing both the needs of: The National Centre responsible for the Statistical System, the Periphery, the internal and external relationship with applied research and developed within an Institutional Framework. One paper and a demo were presented with a data sheet of the database that will be added on appendix.

## **9. BUILDING UP THE GFCM INFORMATION SYSTEM**

31. The discussion was focused on the building up the GFCM Information System. It was stressed that needs and priorities should be identified on domains of interest of the GFCM; and then make an inventory of the information system available at regional level, make them compatible and homogeneous and ensure that each application will be administrated by a single responsible person/entity.

32. It was pointed out that a system should be conceived, developed, maintained used and distributed. It was therefore stressed that the maintenance of the system the administration (including the updating) is the phase that requires time/energy and it should be carefully assessed before taking into account the development of a new information system or any new application.

33. Therefore two proposals were presented to the committee:

- Provide the GFCM Secretariat on guidelines to be used in the case of already existing databases. An inventory of these information systems should be carried out starting from the regional level (AdriaMed, COPEMED, ItaFISH, etc.). An analysis on how these information systems can be used should be the starting point for this committee.
- For the new databases to be designed two hypotheses were proposed: 1) all the new information systems (countries, GFCM, FIGIS etc..) should be developed according a common standard requirements), 2) the new system should applied to common conditions.

34. The problem of continuous update of such systems was discussed and the way to involve countries was stressed. The participants agreed on the need of a common strategy to be developed to address this topic.

## **10. PRESENTATION AND DISCUSSION FROM THE MAIN GFCM AND ASSOCIATED REGIONAL DATA OWNERS**

35. A presentation of MedSudMed Project was delivered. The main objective of the Project will be to conduct research topics on ecosystem approaches common to the four participating countries (Italy, Libya, Malta and Tunisia). The ongoing activities were also presented (bibliographic review, inventory of data available in the zone of study, creation of an environmental database relevant to fisheries, preparation of the cartography region). The plan for the near are mainly the definition of common research topics and the strengthening of regional collaborations with other projects and institutions. The structure of the future environmental database was illustrated: it should contain several types of information, such as ongoing projects in the Institutes, a dictionary giving the definition of all variables of the database, maps, fishery data, environmental parameters, legislation indications. The database should be linked to a GIS software, via an interface, in order to allow the production of maps and applications. So far, the conceptual framework of the database has been designed and is still under study and opened to possible modifications. Further development will presented in the future.

36. The current situation and future perspectives of COPEMED information system was presented. Possible fields of assistance for the improvement of the GFCM system were underlined. The importance of establishing data exchange protocols between different levels (national, regional, global) was stressed as well as the need to ensure the availability of financial and human resources, especially for the administration of the databases.

37. The FAO-AdriaMed Project Information System based on the website was demonstrated. It is an integrated information system and provides access to heterogeneous information sources, as output the user receives centralized, homogeneous results with particular attention to the Adriatic Sea. The AdriaMed Information Centre is included in the AdriaFISH system (Adriatic Fishery Information System) and it will be interfaced with the other databases produced in the framework of the GFCM activities. The AdriaMed Documentation Centre, an experimental search engine that clusters the results of a general bibliographic search query into a list of references on the relevant categories was shortly illustrated.

38. The FAO Fishery Information Data and Statistic Unit (FIDI) representative reported on the GFCM capture database. Capture statistics are collected through the STATLANT 37A questionnaire which provides data by Mediterranean and Black Sea subareas. Data reported by countries are carefully checked and validated. When doubtful data are submitted the national correspondent is consulted asking for a clarification. If the country does not report after several reminders, FAO estimates the missing data by marking them in the database with a "F".

39. It was underlined that despite the effort of the staff, FAO capture and aquaculture database quality is a direct consequence of the quality of the data submitted by countries. Following this considerations, improvements of the national systems to collect fishery statistics are very much appreciated granted that they are sustainable throughout the time. GFCM capture data are presently available for 1970 to 1999. The 2000 data will be available within a couple of months. The global capture and aquaculture datasets and the GFCM dataset are disseminated through the FISHSTAT+ software available either on CD-Rom or downloadable from the FAO web site.

40. Mr M. Taconet presented the Fisheries Global Information System (FIGIS) from FAO, together with one of its subsystem of direct concern to the SAC/SCSA, the Fisheries Resources monitoring System (FIRMS), and the FIRMS-GFCM case study developed with the assistance of the COPEMED information system expert Mr A. Bench . The objective of the case study were (i) test the integration of GFCM information in FIGIS through the FIRMS, (ii) collaborate to the improvement of the FIGIS Document Type Definition (DTD) for stock, (iii) formulate recommendations for the inventories and observations related to stocks and fisheries in the Mediterranean. The work consisted in integrating 2 SAC/SCSA reports (2001 session report, Assessment of Hake in gulf of Lions 2001 working group report).

41. The benefits of the methodology have been underlined: streamlining information flows, reusability of information for multiple usage, structured exchangeable information, realisation of structured inventories (Stocks, Fisheries), availability of tools to publish up-to-date observations by regular reporting from the data-owner, links the information to related information owned by other partners and information domains (species identification, vessels types and fishing techniques, etc.).

42. The results of this case study showed that the FIGIS system is compatible with the information currently prepared by GFCM in its stock assessment working groups and SCSA reports, although it was recognized that further participation of GFCM in setting up harmonised formats at international level would facilitate the process of integrating GFCM information into FIRMS. In order to facilitate the preparation of a possible agreement between FIGIS and GFCM, it is recommended to establish the list of stocks and fisheries monitored under the Commission's mandate, for which the Commission or its subsidiary bodies would have full reporting responsibility and ownership in the FIRMS system. GFCM should also coordinate the extension of this inventory to reflect those stocks, resources, and fisheries monitored at national level. Finally, it was proposed that the draft FIRMS partnership agreement be transmitted to the GFCM Secretariat for consideration. (For detailed description of FIGIS and FIRMS interacting with the Web prototype, a PDF document has been prepared and can be downloaded from the following URL:

<http://193.43.36.85/fi/figis/about2.jsp>)

43. Following the presentations the discussion was focused on data duplication. The proposal to avoid the problem of just living the maintenance task to the owner data was discussed. It was proposed to point out this issue to the attention of the GFCM Secretariat.

## **11. CONCLUSION AND RECOMMENDATIONS**

44. The Chairman stated that some progresses on the relevant topics were made since last meeting. It was stressed the importance of such a progress in order to convince countries on the GFCM Commission's reliability.

45. He stated that an effort to harmonize data collection and information is proceeding. The Sub-Committee agreed on the fear that was expressed regarding the effort to improve the system data collection in the country could be an episodic trial and it would be not a continuation if the GFCM Commission does not achieve its juridical position soon.

46. The Sub-Committee should be stressed by the other Sub Committees that summarised information can be granted towards this Sub Committee. The Secretariat's role should now be concentrate and ultimate the administrative part of the information.

47. Two proposals on the strategy to be followed by this Sub-Committee were agreed on. In order to maximise the available information resources all the database available should be addressed to an owner (at country level, regional level). The new information systems that will be developed in the future should be follow common standards.

48. The following options, discussed and examined, were drawn up by the sub-committee and will put foreword for consideration by the SAC main committee.

49. Since the GFCM Information System is the responsibility of the Commission, which is not yet in place, as a temporary measure, the following strategy will be applied: the regional projects will continue to look after their own systems and provide assistance to member countries in these issues.

50. Make an inventory of all the databases at the present available in the various systems (COPEMED, AdriaMed, ItaFISH, etc), select and transfer those that can be maintained by individuals or institutions within the GFCM members. The basic example was to transfer the administrative databases such as the “Research and Development” to the GFCM Secretariat and assist him to set it up, and make sure that its maintenance will be the responsibility of the GFCM secretary.

51. As far as any new applications to be implemented, they must follow standards agreed by this committee and in agreements with the country needs as well as FIGIS, EU and others, when applicable. As far as all the other database that will not find a recipient (administrator), to leave them as they are with the same level of attention as it is now, until further instructions. Contribution from partners and projects should particularly ensure their maintenance and updating.

52. It was finally reiterated that this sub-committee is responsible for all statistics and information systems activities within the SAC and the GFCM and will collaborate and interact more with the other sub-committees.

53. The validity of each information systems available should be assessed and the need of synchronize the work in progress of this Sub-Committee with the other Sub-Committees were recommended. It was decided that the proposal should come from the other Sub-Committees and the aims of this Sub-Committee should be to analyse and assess them.

**LIST OF PARTICIPANTS**

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**LIST OF COUNTRIES  
THAT HAVE ALREADY SUBMIT DATA ON OPERATIONAL UNITS**

Morocco  
Tunisia  
Libya  
Malta  
Albania (\*)  
Slovenia (\*)  
Croatia (\*)  
Italy (\*)

**LIST OF PAPERS  
DISTRIBUTED TO THE SAC SCSI THIRD MEETING  
BARCELONA, 6-9 MAY 2002**

- Etude pilote pour le development d'un système statistique en Méditerranée Marocaine  
Abdellah Srour, Rachida Houssa, Dounia Essekkeli, Salvatore Coppola and  
Domenica Fioredistella Iezzi.
- COPEMED INFORMES Y ESTUDIOS N° 6 .  
Inventory of the Artisanal Fishery Communities in the Western and Central  
Mediterranean  
Version 2.0 FAO 2002  
CD ROM
- Inventory of the Artisanal Fishery Communities in the Western and Central  
Mediterranean  
Salvatore Coppola  
FAO-COPEMED Project, 2001
- Italian innovations in fishery data collection (Reg.2104/93 and Reg. 1543/00 EC)
- Contribution on Operational Units information in Libya
- Decision-support systems for fisheries – The ITAFISH case study  
Salvatore Coppola and Donatella Crosetti  
General Fisheries Commission for the Mediterranean, Studies and Reviews No. 72,  
FAO 2001