

**GENERAL FISHERIES COMMISSION FOR THE  
MEDITERRANEAN**

**SCIENTIFIC ADVISORY COMMITTEE**

**SUB-COMMITTEE ON ECONOMIC AND SOCIAL SCIENCES**

***WORKING GROUP ON SOCIO-ECONOMIC INDICATORS***

**Barcelona, Spain, 15-17 March, 2004**

**1. Opening of the meeting**

The meeting was organized by the University of Barcelona upon kind invitation by the Gabinete de Economía del Mar (GEM) and the FAO COPEMED project. Mr. Malouli, the SCESS Coordinator, presented on behalf of the Working Group (WG) participants, heartfelt sympathies to the Spanish colleagues following the bomb attacks in Madrid and he opened the session with a minute of silence. He thanked the organizers for gathering this group for the second consecutive year. Afterwards, Mr. Franquesa, GEM Director, welcomed the participants (list in annex 1).

The WG regretted the absence of representatives from several countries, particularly France and Italy that were active and often present in previous meetings. The WG proposes that the GFCM Secretary, in consultation with the Coordinator, re-activates the call to countries to send the official delegates of GFCM countries.

The WG expressed its appreciation to the FAO COPEMED regional project for its support regarding the participation of researchers from Algeria, Morocco and Tunisia.

**2. Approval of the agenda and organization of next meeting**

Mr. Franquesa was invited to chair the working group and Mr. Malouli and Mr Ben Salem were appointed rapporteurs.

The agenda was adopted with minor amendments (annex 2).

### **3. Presentation of studies carried out in the intersession**

#### *3.1. Survey of socio-economic indicators for fisheries in the Algerian Mediterranean, situation and perspective.*

Mrs Ferhane and Mr. Hachemane presented the results of the survey, “Socio-Economic Indicators of Algerian Fisheries”, conducted by the National Center of Studies and Documentation for Fisheries and Aquaculture (NCSDFA), under the framework of the regional program financed by the FAO COPEMED project. A data collection operation was launched from the end of 2002 and the beginning of 2003.

For that purpose, surveys were conducted in fourteen Wilayas (Municipalities) with maritime access.

Through this survey, both fleet segmentation and socio-economic assessment of the sector were empirically addressed.

In this case and, six segments were identified in accordance to the segmentation adopted by SCESS (annex 3), that is, small liners (< 6m) and (6 - 12m) (segments B and C), trawlers(> 24m) (segment F), trawlers (12-24m) (segment E), sardine boats (12-24m) (segment H) and sardine boats (6-12m) (segment G).

These fleet segments share resources essentially from small pelagics, large pelagics and demersal species. It is important to notice that some fleet segments exploit multiple species, thus creating conflict between the segments (e.g. small liners – trawlers and sardine trawlers).

The analysis of macroeconomic data made it possible to register the following observations:

- the index of production and export is clearly lower than the figures recorded by neighboring countries ;
- there is a very high unemployment rate ;
- the inflation rate, which has been decreasing during the past few years, reached almost 6% in 2002.

The annual profit ratio registered is negative for each fleet segment due to:

- a very high immobilization rate;
- aged fleets.

Several constraints were found during the data collection process, such as:

- lack of qualified collectors
- fishermen reluctance.

#### *3.2. Presentation of the state of development of the socio-economic survey in northern and eastern Tunisia*

Mr. Ben Salem presented the state of development of the fisheries socio-economic indicators survey in northern and eastern Tunisia carried out under the framework of FAO COPEMED project. He noted that the methodology adopted is in accordance with those used in the Alboran Sea (Spain/Morocco) and the Gulf of Gabes (Tunisia) projects.

This second Tunisian survey is related to the other two regions in Tunisia; that is, the northern and eastern regions. Eight Local Operational Units were selected in each region to cover 20 ports. In order to compare different ports and fisheries fleet segments in Tunisia, the fleet segmentation used in the first Tunisian surveys was selected in lieu of the one adopted by SCESS. Also, three specific segments were added. They were mid-water trawls in the eastern region as well as crawfish boats (those exploiting red lobster) and the coral boats (exploiting red coral at diving) in the northern region (annex 4). The sampling rate selected was 10% for artisanal fleet and 15% for the other fleet categories. This rate related to 100 % of the fleet for some segments and/or LOU for which the total size of the fleet is very small (i.e. 1 to 5 units).

The field work started on February 1, 2004 and so far, 69 and 133 surveys have been completed in the northern and the eastern regions respectively. These samples account for 50% and 70% respectively of the sample sizes projected. This field work will conclude during the month of April, and the final results will be presented in the next Subcommittee meeting.

Mr. Ben Salem also stated that a study to up-date the fisheries socio-economic indicators in the Gulf of Gabes should start during the month of May 2004. This would allow the tracing of trends of the indicators between 2001 and 2003. This study will be presented at the next Working Group (2005).

### *3.3. Presentation of a case study on red tuna fishing in the region of Ksar Sghir, in the Moroccan Mediterranean.*

Mr. Malouli presented the pilot study on red tuna fishery in the region of Ksar Sghir, which was implemented within the framework of the FAO COPEMED project. The WG was reminded that this fishery presents a very special interest as it targets a large pelagic with great bio-ecological and economic values.

This study approached the different aspects of red tuna exploitation: exploitation means, evaluation of socio-economic parameters, and determination of certain biological parameters.

It is a seasonal activity (July to September), developed by an artisanal fleet of around 200 vessels attached at 5 sites; generally lacking the necessary basic infrastructure.

In 2003, the fishing effort of the artisanal fleet recorded an increase of close to 25% compared to the previous year. This allowed for a total production of red tuna of about 210 tons, for a total value of about 8 million Dhs.

For the socio-economic aspects, this activity is practiced by a relatively young population, with an education level ranging from weak to poor. This activity presents the best economic productivity and the best results when compared with other Moroccan Mediterranean artisanal fisheries.

Most of the production is exported, mainly to the European market. The average price in the first sale is about 40 Dhs/kg, a relatively low price compared with those offered by the foreign markets, due to unfavorable working conditions for fishermen and to the lack of means for the preservation of the tuna catches.

The results from this study led to two groups of recommendations:

- In the field of scientific research, it is desirable: to annually update the database with information about the socio-economic aspects, to go deeper in the work with the commercialization circuits and the production destination, to improve the quality of fishing statistics through the implementation of a regular data collection system, and finally, to ensure the follow up of the biological aspects.
- In the field of development and improvement of exploitation conditions, it is desirable to help the fishermen to enhance their social condition by facilitating their adhesion to the National Social Security Bureau.

#### *3.4. Presentation of a document compiling the work on socio-economic indicators completed under the framework of the FAO COPEMED project.*

Mr. Franquesa presented the report about the progress of the publication, which includes the work done in the Western Mediterranean on socio-economic indicators. The structure of this publication is presented in Annex 5. The final version will be available after the conclusion of the reports from Algeria and Tunisia.

This publication will allow researchers and administrators to have:

- A description of the socio-economic indicators in fishing
- A segmentation method by type of fleet and maritime region
- A method for statistical distribution of the surveys
- An example of the interpretation of results
- A description of the current situation for Algeria, Spain, Morocco and Tunisia

This publication summarizes the essence of the work developed in the last five years within the SCESS. The Working Group deemed it a very useful publication to facilitate the creation of indicators in other countries of the GFCM, and to show the usefulness of indicators in fishery management.

#### **4. Implementation of the manual created by GEM Barcelona and IREPA on the collection of socio-economic data and the application of socio-economic indicators**

Mr. Franquesa presented the final version of the working manual on statistical methods for fleet sampling in order to estimate the socio-economic indicators of fisheries in the Mediterranean. This work was published by FAO, in the collection “Studies and Reviews” n° 73 of the GFCM, under the title “Manual of Fisheries Sampling Surveys: Methodologies for Estimations of Socio-Economic Indicators in the Mediterranean Sea” (Rome, 2003).

This publication, undertaken by Evelina Sabatella (IREPA) and Ramón Franquesa (GEM), is the result of the work implemented during the last two years by this Working Group, with the main objective of solving the issue of optimizing the distribution of surveys among the different segments and locations. The application of this manual will allow to reduce sampling costs and to improve the precision of the data collected.

Regarding the establishment of minimum data quality requirements linked to the sampling methodologies used to collect the economic data on fleets, the WG considered it premature at this moment to make recommendations with respect to those reference points, and that the main objective should focus on the collection and availability of data in order to create the proposed indicators. Mr. Franquesa pointed out that, even after six years of work, there are no apparent quality standards linked to the «Economic Assessment of European Fisheries: Economic Performance of Selected European Fishing Fleets »<sup>1</sup>.

Therefore, the Working Group does not recommend any data quality/statistical reference points; however, applying the GFCM Studies and Reviews n° 73 “Manual of Fisheries Sampling Surveys: Methodologies for Estimations of Socio-Economic Indicators in the Mediterranean Sea” (Rome, 2003) would assist in moving toward standardised data collection systems and, hence, robust economic data on fisheries.

#### **5. Internal reflection about activities conducted by the WG**

The Working Group noted the following positive achievements during the past 5 years, in spite of the vast differences between the Mediterranean countries:

- The feasibility of collecting data;
- The feasibility of producing economic indicators;
- The approval of the SCESS-proposed fleet segmentations;
- The capability of using the indicators to compare across the various fleet segments, ports and countries;
- The pertinence of the chosen indicators to fisheries management;
- The ease of interpretation of the indicators;
- The relative low cost of data collection and indicator estimation;
- The additional use of such data in bio-economic models, such as BEMMFISH.

---

<sup>1</sup> <http://www.farec.fo/default.asp?show=page&id=2343>

However, the Working Group requested a concerted effort on the part of member governments to identify and fund data gathering teams in order to ensure continuity and complete coverage in the collection of socio-economic data.

The Working Group recommended to creation of an annual report, similar to the one produced by the European Union (“Economic Assessment of European Fisheries”), in order to give the member countries a coherent comparison about the economic situation of the Mediterranean fleets.

In order to progress in this direction, it is first necessary to guarantee the continuity of the socio-economic data collection, which is our main objective of this WG. However, in this direction we face two main constraints:

- Lack of human resources. Despite the creation of some teams in Albany, Algeria, Spain, France, Greece, Italy, Morocco and Tunisia, the WG recommends the other countries of GFCM to design teams to be in charge of data collection and their analysis.
- Lack of financial resources to assure the annual survey process.

The WG was informed about the decision of the European Union regarding the regulations related to the collection of fisheries data (among others, economic data from 2004)<sup>4</sup>. This decision is very positive for the future of SCESS, because 7 countries from the GFCM: Cyprus, Slovenia, Spain, France, Italy, Greece and Malta, will be collecting economic data.

Likewise, the WG was very pleased about the inter-ministerial declaration of the European Commission of Venice to ensure the continuity and the creation of regional cooperation projects that will be co-financed by the EC, and eventually by Spain, Italy and Greece (regarding the implementation of a new project for the Eastern Mediterranean).

Following this declaration, the WG proposes the SCESS and the SAC:

- That the EU takes into account GFCM needs, after compilation of such economic data;
- To implement a range of actions, co-financed by regional projects and governments in order to regularly compile economic data necessary to produce economic indicators. This will allow governments to honor their commitments regarding GFCM requests.

---

<sup>4</sup> Regulation (EC) n° 1543/2000 from June 29, 2000 Council ([http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l\\_176/l\\_17620000715en00010016.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l_176/l_17620000715en00010016.pdf)) and Regulation (EC) n° 1639/2001 from July 25, 2001 Commission ([http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l\\_222/l\\_22220010817en00530115.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2001/l_222/l_22220010817en00530115.pdf)).

The WG reviewed previous SCESS recommendations regarding this regulation (item 33 of SCESS fourth session report (Cyprus, 2003)):

- To ask the European Commission to provide a definition of the character, timetable, method and publication criteria of the data collection program in the next session of the GFCM.
- To analyze the points wherein the cooperation of non-EU members is necessary to assure a harmonized development of data collection activities.
- To provide paths of cooperation at all levels to assure these objectives.

## **6. Other issues**

### *6.1. BEMMFISH Model*

Mr. Jordi Guillen presented the necessary data requirements for the construction of the bio-economic model « BEMMFISH ».

BEMMFISH is a European project included in the context of the fifth research framework program from the EU<sup>5</sup>. Taking into account the similarities between the Mediterranean countries in the EU and the Mediterranean countries that do not belong to the Community, this model could be applied in many fisheries.

There are two main objectives as part of this model:

- The model should take into account the bio-economic conditions of fisheries, taking into consideration the artisanal, multi-specific and multi-engine character of the Mediterranean fisheries where the control variable is actually the fishing effort. Hence, the main management measure considered relies on the limitation of the fishing effort;
- The model should ensure simulations based on various management strategies. It should allow the testing of such strategies in the technical and the economic fields through the introduction different kinds of events (biological, economic and commercial).

This model also controls for the strategy of fishermen to increase their fishing efficacy in order to increase fishing mortality but always keeping the nominal effort constant. This is modeled by the function that links efficiency (or technological progress) to capital invested in fisheries and time variables. The improvements introduced at the level of the function that links captures to capital (ship value) and at the level of the multi-varied function of price were also presented.

A copy of the last project report related to this model was distributed together with a list of the data necessary to run the model (Annex 6). For up-to-date information, please visit [www.bemmfish.net](http://www.bemmfish.net).

---

<sup>5</sup> Life quality and live resources management (Q5RS-2001-01533)

The WG recommended using the data collection process already necessary for the creation of economic indicators to collect information for input into the bio-economic model.

The discussions of the different participants in this WG lead to the inclusion of the following aspects in the new version of the model:

- A simple statistical method to allow extrapolating data related to the sample of fishery unit and the fleet group.
- A statistical method (analysis of chronological series) to prevent variations of reproduction and climate conditions affecting particularly the small pelagics.

The FAO COPEMED project will assist the researchers from Algeria, Morocco and Tunisia to participate in the next BEMMFISH meetings, to conduct case studies in their countries, and to make test this prototype model before the launching of the final version.

### *6.2. Masters on Economy and Management of Fishing Activities*

Mr. Franquesa informed the WG about the Masters of Fisheries Economics and Management (Master Internacional en Economía y Gestión de Pesca), which will begin next September, in the Facultad de Ciencias Económicas, at the Universidad de Barcelona (UB). This Masters is supported by both FAO—through the FAO-COPEMED project—and the Spanish Government—through its Secretariat General of Marine Fisheries.

It is an international Masters organized by the UB and the CIHEAM leading to a UB-CIHEAM university degree (Annex 7). The Masters program will have the financial support to facilitate the participation of fishery specialists in the Mediterranean countries and will train the participants in fisheries economics and management.

For further information, please visit [www.ub.edu](http://www.ub.edu) and [www.gemub.com](http://www.gemub.com).

### *6.3. Publication of CIHEAM Yearbook*

Mr. Franquesa noted the first-time inclusion of a fisheries-specific chapter in the CIHEAM 2003 Annual Report, “Development and agri-food policies in the Mediterranean region”,<sup>7</sup>. Ramón Franquesa (GEM) and Pere Oliver produced a general overview of the biological and socio-economic status of the Mediterranean fisheries. Although the socio-economic data remained limited, the CIHEAM expressed an interest in the continual inclusion of such a chapter in successive reports.

---

<sup>7</sup> “Development and agro-feeding policies in the Mediterranean region” CIHEAM Annual Report. <http://www.ciheam.org/>

#### *6.4. Analysis of the consequences of management measures.*

The WG believes that the recommendation from the first COPEMED forum—noted by 28<sup>th</sup> GFPM held in Tangier (October 2003)—proposing that the Scientific Advisory Committee of the GFCM be in charge of analysing the consequences from potential measures proposed for the reduction of the efforts (in terms of number of vessels, fishing time or fishing capacity) is very interesting. These analyses should include the consequences that such measures will have on the biological aspects (resources, habitat) as well as on the socio-economic aspects (profitability, employment).

In order to respond to this request, the WG deemed it necessary that all the countries ensure the active participation of their experts at the WGs level of and with the necessary basic data to accomplish this difficult task. The respective institutions should guarantee the availability of these data to the scientists (participants).

#### *6.5. A socio-economic survey of Greek fishing fleets.*

Pursuant to European regulations Reg (EC) 1543/2000 and Reg (EC) 1639/2001 concerning the National Fisheries Data Collection Program (NP), the member states are obliged to collecting economic data on all the fishing sectors during the period 2004 – 2006.

This will be the first time that an economic survey of this magnitude will be implemented in Greece. The NP in Greece is carried out by three national fishery research centers throughout the country. A questionnaire including both sociological and economic aspects was designed for application by “local representatives” to achieve sample sizes of up to 50% of the national fleet through the national ports<sup>8</sup>. These local representatives—official representatives of the local municipalities—were chosen to ensure a good geographical representation of the main ports, for example, the ports on the islands and the continental ports. The local representatives will receive surveying training by scientific survey experts from the three research centers.

The parameters that will be recorded for each individual vessel (in accordance to the Reg. 1543/2000 and Reg.1639/2001) will be the following:

- Total income as well as distribution of income based on the species.
- Production costs detailed in categories (personnel, fuel, maintenance etc.).
- Fixed costs (average cost calculated from investment)
- Leverage ratio of own to foreign capitals.
- Assets.
- Prices of fisheries products per tonne for species sold in the market.
- Distribution of the personnel based on occupation and tasks.

---

<sup>8</sup> Pursuant to the European regulation 1639/2001, up to 50% of the 12 to 24 meters vessels and purse seiners are to be surveyed. The sampling requirements for the smaller fleet segments are fewer given the large number of small vessels in the Greek fisheries.

- Technical description of the fishing vessel (tonnage, engine power, age and fishing gears used).
- Fishing effort.

In addition to the economic parameters the questionnaire will also include social aspects such as:

- Educational level of skippers as well as of crew members and their experience level on their work
- Age of skippers and crew
- Preference of skipper on crew synthesis (foreign or Greek nationals) and justification of his/her choice
- Family dependency of skippers, fishing vessels' owners and crew

The first economic data collection of Greek fleets will be evaluated at the end of the first year of application and, if possible, the methodology used and the analysis of results will be presented in the next meeting of the Working Group.

#### *6.6. Tentative agenda for the fifth session of the SCESS*

The WG proposed an agenda for the next session of the SCESS that will be held from the 10th to the 12th of May 2004 in Malaga (Annex 8)

#### *6.7. Place and date for the next Working Group session*

Participants suggest that from now on, this WG meeting is held in the same place of the SCESS session, and limited to one day before such SCESS session.

#### *6.8. Suggestions*

- The WG suggested the active and permanent participation of a representative from SCESS in the Working Group for the operational units, piloted by SCSi;
- The Director of the FAO COPEMED project informed the WG about the preparation of a co-managed pilot plan on small pelagics created at the level of the Alboran Sea (Spain, Morocco and Algeria), taking into account its socio-economic aspects ;
- The WG requests the support of SCSi to prepare a program for data entry and analysis related to the construction of socio-economic indicators to be distributed to the country members (the MEDFISIS project coordinator is in favor of facilitating this activity). The SCESS will be in charge of recovering the results obtained at the level of each country;
- The WG considers that the updating of FAO memo N° 927 entitled « fisheries at the Mediterranean Sea: information elements about the fishing context and

economic levies of their management» with the support of FAO/FIPP, is useful to have an idea about the macroeconomic context of the Mediterranean.

#### **7. Working program and activities for next year**

The WG decided to continue current works until next SCESS session where the working program for next year is going to be prepared.

#### **8. Approval of the agenda**

The report was approved by the participants on March 17, 2004.