

FAO Regional Office for the Near East

**Regional workshop on
latest developments in fishery survey
tools and integrated databases**

Cairo, 20-22 November 2006

**Food and Agriculture Organization of the United Nations
Cairo, November 2006**

1. Venue and purpose of the workshop

The regional workshop on latest developments in fishery survey tools and integrated databases was held at the Flamenco Hotel, Zamalek, Cairo, during the period 20-22 November 2006. The workshop was organized by the FAO Regional Office for the Near East with the view of bringing together senior fisheries statisticians of the region and provide a forum for the exchange of views and experiences in the development and implementation of fisheries statistical monitoring programmes. Participants from Bahrain, Egypt, Iran, Iraq, Jordan, Kingdom of Saudi Arabia, Kuwait, Mauritania, Morocco, Oman, United Arab Emirates and Yemen attended the meeting. A list of participants is given in Annex A. The Agenda of the workshop is given in Annex B.

At the opening ceremony Dr. Fatima Hachem, Fisheries o-i-c, RNE, welcomed the participants and observers on behalf of the ADG/RNE. During her statement she underlined the importance of fisheries in the region, pointed out that sustainable fisheries and their management require reliable information and data, and stressed the need for continuing improvement of fisheries statistics at both national and regional levels. The full text of the statement is given in Annex C.

Mr. Hemdan Abdel Sattar, vice-chairman, GAFRD, welcomed the participants and thanked FAO RNE for organizing the meeting. He stated that Egypt has always been and will continue to be an active partner in FAO's activities in the region. He stressed the importance of fisheries statistics and expressed his assurance that the workshop should greatly assist the countries in improving their fishery statistical programmes.

2. Adoption of the Agenda

The meeting nominated Mr. Ahmed Salem, representative of Egypt as chairman and Mr. Abdellah Moustatir, representative of Morocco, as vice-chairman. Ms. Seham Abdallah Fayed, representative of Egypt was nominated as rapporteur. The Agenda of the meeting was adopted.

3. Presentation of national fisheries statistical programmes

Each of the national representatives briefly described their functions and made presentations of their national fishery statistical programmes. Their statements included methodological and logistical aspects, such as methods of data collection (e.g. census- or sample-based), existing infrastructure, operational constraints, etc. Summarized statistical data were also presented that related to vessel typology and distribution, landings and fishing effort, infrastructure, and personnel. Based on the discussions that followed each presentation, the following major points of common concern/interest were identified:

- Accuracy of obtained statistics: There is a wide variety of statistical programmes that are in use in the countries of the region. Some make use of complete enumeration techniques (i.e. census) for recording all landings and fishing operations occurring along the national coastline. Others use sample-based data collection systems by means of which only part of the fishing activities are covered statistically and totals are extrapolated. Others use mixed approaches whereby total catch is estimated while total effort is censused. However, irrespective of the type of data collection system in use, the question of accuracy was debated at some length, with regards to complete enumeration methods versus sample-based approaches.

- Monitoring of data collection: This means that supervision, guidance and regular checks on the quality of collected information should be part of the statistical operations;
- Need to make maximum use of obtained statistics: The meeting agreed that a statistical programme should not be an end in itself but serve the purpose and meet the objectives for which it was conceived, developed and implemented. This would mean that the collected and processed statistics should be of high utility, that is statistics should be used for the formulation of indicators and diagnostics for use by research groups, administrators, planners, etc.
- Harmonization of statistics for regional purposes: This point was discussed briefly, as the subject would be further debated in length under agenda item 6.
- Need for advanced technology in data diffusion (i.e. GIS): Although the workshop did not have the technical capacity to discuss this point at an appropriate level, it was nevertheless recognized that GIS and similar systems ought to be fed with good data and information. Timeliness and completeness of GIS contents were also considered of high importance.
- Data security and confidentiality were also discussed. Regarding the former it was generally agreed that medium- and large-scale statistical programmes require the continuing support of system administrators so as to secure the application of standard data security measures, such as backup operations, technical support, troubleshooting, etc. Data confidentiality was also considered an issue of importance when data start being disseminated to different user groups. It was understood that confidential information concerning individual fishing units ought to be of privileged use.

4. Basic criteria for evaluating data collection systems

A table containing evaluation criteria for census-based and sample-based data collection systems was presented and discussed. Upon request of the participants the table was also distributed in its Arabic version.

5. Methodological and operational tools for vessel registers and catch/effort assessment surveys.

Catch/effort data collection scenarios

The meeting discussed basic methodological approaches that apply to sample-based fishery surveys. A number of different data collection scenarios for sampling on catch and effort were presented. It was agreed that in sample-based surveys the relation between CPUE and boat activity constitutes the generic formula for estimating total fishing effort and catch within the logical context of a time period, a geographical stratum and a specific boat/gear category. Demonstrated examples with samples from landings and effort aiming at a given level of accuracy, consolidated the discussions and conclusions relating to the generic approach mentioned above. Participants were informed that the presentations and associated software would be made available on CD ROM upon conclusion of the workshop.

Vessel registers: Case study.

Mr. Samir Majdalani, FAO Consultant, made a presentation of a complete case study concerning the Lebanese vessel census that was conducted in the country for the first time in 2004. The presentation included:

- Background information;
- Methodology: Census design, frame, data collection, questionnaires, software, reports, data analyses.
- Problems encountered, lessons learned, follow-up and current constraints.

During the discussion that followed the presentation the following points were stressed:

- Vessel register systems should have built-in mechanisms for their continuing updating so as to reflect accurately the dynamic of the fishing fleet.
- Maximum use should be made of the register information and data with the view of obtaining an as complete as possible picture of the typology and distribution of the fishing fleet.
- If the register is to be used in association with a catch/effort assessment system, then the register program should have flexible built-in functions for the dynamic creation of sampling frames (i.e. spatial extrapolation factors for fishing effort).

6. Criteria and techniques for establishing regional databases

The meeting discussed various aspects of integrating nationally collected fisheries statistical information and data into regional datasets. The participants observed that a first option is the establishment of an autonomous regional statistical programme, collecting and analyzing its own data, independently of the existence of national systems. In this manner regional standards would first be set-up and then a complete package would have to be developed, tested and implemented.

The second option is to make use of nationally developed systems that would regularly be feeding a regional data collection. It was pointed out that such a process would essentially be based on the following assumptions:

- That all participating countries have national fisheries statistical programmes that are functional and statistically sound;
- That there exists a commonly accepted species nomenclature and boat/gear classification;
- That the regional system will not interfere with the national standards and criteria.

Several participants observed that in essence the links between national systems and a regional dataset simply concerned a well-defined regional classification system (e.g. one based on FAO codes and standards), combined with logical links between national and regional data items.

7. Presentation of and discussion on case studies

Mr. Ahmad Salem, General Manager, Information Department, GAFRD-Egypt, presented the nationally-developed catch/effort system "SAMAC". The functionality and adaptability of the software were highlighted. Participants made favourable comments on its methodological and

operational aspects and showed high interest in seeing it applied in certain applications sectors in their countries. Specifically, the meeting welcomed the following SAMAC features:

- Good interaction of existing vessel registers with the view of obtaining sampling frames for extrapolating fishing effort;
- Easy of use and simplicity in data entry operations;
- Its ability to communicate in four languages simultaneously (i.e. Arabic, English, French and Spanish);
- Its rich reporting menus;
- Its built-in tutorial as well as the training services offered by GAFRD;
- Its easy integration with standard international packages such as Excel, Word, etc.

8. Issues of common interest

Two major points were discussed under this item. The first concerned the upcoming 4th Session of RECOFI that will be hosted by the Kingdom of Saudi Arabia in May 2007. Participants from RECOFI countries strongly suggested that the major findings, conclusions and recommendations of the workshop be brought to the attention of the RECOFI Plenary with the view of mobilizing its subsidiary body for fisheries statistics to take follow-up actions.

Countries coastal to the Red Sea expressed high interest on the status of the Red Sea Management sub-regional project the formulation of which is being finalized. Several participants pointed out that the project ought to pay particular attention to national fisheries statistics as well as to regional databases as these systems would be a prerequisite for research studies and stock management at regional level.

9. Conclusions and recommendations

- *Good interest was expressed regarding GIS applications, and basic training on GIS techniques was requested;*
- *Need for sample-based systems to use standardized, documented and reputable statistical literature and software. Accuracy of estimates and relating guidance and diagnostics ought to be an inseparable part of any catch/effort assessment system;*
- *Harmonization of nationally collected data mainly concern species nomenclatures and boat/gear categorization. When regional standards are set-up, this process should not interfere with national standards and criteria;*
- *The production of good statistics should be accompanied by maximum use of collected data so as to increase its utility and justify operational costs;*
- *Establishment of regional databases ought to make use of standard criteria for data integration and transfer. Such standards would be the FAO international classification of species, vessel and gear categories, etc;*
- *Participants from RECOFI countries strongly suggested that the workshop report be brought for consideration by the 4th RECOFI Plenary meeting in May 2007, with the view of mobilizing the Committee's WGS for follow-up actions;*
- *A workshop for hands-on practice with the SAMAC application in its full Arabic functionality, is recommended for several countries of the region where SAMAC could be effectively utilized.*

10. Adoption of the report

The workshop report was adopted on 22 November 2006.

Annex A

List of participants

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ANNEX B

AGENDA

1. Opening of the workshop
2. Adoption of the Agenda and meeting arrangements
3. Presentation of primary methodological and operational features of national fisheries statistical programmes
4. Basic criteria for evaluating data collection systems
5. Presentation of standardized methodological and operational tools for vessel registers, and catch effort assessment
6. Criteria and techniques for establishing regional databases
7. Presentation of and discussion on case studies
8. General discussion on fisheries statistical issues of common interest
9. Conclusions of the workshop
10. Adoption of the Report

ANNEX C

Opening statement

Distinguished participants and observers,
Dear FAO colleagues,
Ladies and Gentlemen,

It is a great pleasure for me to welcome you all on behalf of ADG /RNE at the opening session of the regional workshop on fisheries statistics which is organized under the auspices of the FAO Regional Office for the Near East.

Fisheries have always been and will continue to be a key component of our activities. Most of the countries in the Near East region have fisheries operating in a wide range of marine and inland water areas and several are also engaged in significant fish farming activities. I am pleased to see that this geographic, environmental and economic diversity of national fisheries is well reflected at this meeting.

Before describing briefly the objectives and expected results of the workshop, I would like to make some general remarks on knowledge needs concerning capture fisheries in the Near East region, given that the need for reliable and comprehensive fisheries information and statistics has never been more acutely felt than at present.

Ladies and Gentlemen,

As we have all come to know, living marine and inland resources are far from being limitless and can be preserved only if their exploitation is performed in a sustainable manner. But there are several factors that work against a desired equilibrium between abundance and harvest. Nowadays populations are larger and wealthier, hence consumer needs are higher. Fish consumption is encouraged and promoted and local and international trade of fish and fishery products has become an important component in many countries' economies. There have been significant increases in the numbers and capacity of fishing fleets. New technologies in vessel design and equipment allow fishers to move farther and faster and target and catch much more in much less time.

The risk that many fisheries are facing today is over-exploitation or even depletion of several commercial fish stocks. This would have a direct economic impact upon the fishers themselves and would also constitute an environmental damage affecting other sectors of the national economy.

Dear Audience,

It is now acknowledged worldwide that for the capture fisheries to be sustainable, a certain degree of management and planning should become a regular function of national fisheries administrations and in partnership with the fishing industry. This, in turn, indicates the need for timely and accurate information relating to fleet structure and size, level of fishing operations and harvesting results. In short, fisheries statistical monitoring is considered an inseparable component of a fisheries planning and management programme.

The countries in our region are conscious of the importance of fisheries statistics in resource management and are in the process of improving their methodological and operational tools not only at national but also at sub-regional level. The latter aspect is of equally high importance since fish stocks tend to ignore national boundaries and in many areas resources are shared among two or more countries. Consequently there is a need for regionally-consistent monitoring of resource exploitation.

This regional workshop will address methodological, operational and logistical issues associated with fisheries statistical monitoring. It will present for debate ways and means for reducing survey costs while, in parallel increasing efficiency. It will suggest approaches to be implemented in the short and medium-term by countries which need to improve their national fisheries statistical programmes. And will provide the forum for consultations regarding the integration of national fisheries statistics at sub-regional and regional levels. It is expected that the workshop participants will work collectively by comparing their assessments and exchanging technical views and expertise.

Their task will be challenging but not easy since fisheries is a complex industry and its typology is widely varying even within a country. But, knowing the high skills, expertise and dedication of the participants I have every reason to believe that the workshop will be highly successful and will contribute to bringing fisheries statistics in the region several steps ahead.

Distinguished participants and observers,
Dear FAO colleagues,
Ladies and Gentlemen,

I conclude my brief statement by first expressing my warmest thanks to the Government of Egypt for their continuing and generous hospitality and assistance to FAO. My thanks are extended to all those who worked in organizing the meeting as well as to all of you for honouring the opening session. To the participants I express my firm belief that their efforts and contribution will make the workshop a great success.

Thank you very much for your attention.