

**REGIONAL WORKSHOP ON MARINE FISHERIES MANAGEMENT
AND ENFORCEMENT**

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**FAO, FISHERY MONITORING, CONTROL AND SURVEILLANCE (MCS)
AND THE CONTROL OF ILLEGAL FISHING**

G.V. Everett, Fishery Policy and Planning Division, FAO, Rome

1. The Expert Consultation on Fisheries Monitoring, Control and Surveillance

In response to the introduction of Exclusive Economic Zones (EEZ) and at the time when the UN Convention of the Law of the Sea (UNCLOS) was about to be adopted, FAO organised in 1981 in Rome an Expert Consultation on Monitoring, Control and Surveillance for Fisheries Management. Experts from 12 major fishing nations participated and the recommendations of the Consultation were later adopted by the FAO's Committee on Fisheries, forming since then the basic policy of the Organisation with regard to MCS.

The consultation (FAO, 1981) broadly defined the MCS elements as:

- Monitoring :** the continuous requirement for the measurement of fishing effort characteristics and resource yields.
- Control :** The regulatory conditions under which the exploitation of the resource may be conducted.
- Surveillance :** The degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities.

The Consultation recognised the great need for transfer of knowledge to the developing coastal States to improve their capabilities for MCS for the utilisation of the resources in their newly extended economic zones. To this end, it was recommended that FAO should provide assistance through the selective assignment of experts, advisory missions and the preparation and implementation of training courses within a regional context as a means of identifying the type of specific training and development required by the individual region and the countries within it.

2. Training in MCS

Following the recommendation of the Rome 1981 Consultation, FAO organised MCS workshops in Indonesia, Sierra Leone, Seychelles, Ghana, Senegal and Mauritius, for technical staff from Departments of Fisheries in countries of the respective subregions.

Since 1998, FAO has executed the Inter-regional Programme of Assistance to Developing Countries for the Implementation of the Code of Conduct for Responsible

Fisheries – called the Fishcode Project. The Programme is undertaken within the FAO/Government of Norway Cooperative Programme and there is a prominent focus on MCS. Regional workshops and training courses in MCS have been held in Malaysia, for countries of South and Southeast Asia, in Oman, for countries of the Northwest Indian Ocean region, and Thailand, for countries of Southeast Asia. A national workshop on MCS was held in Goa, India, in February 2001. During each workshop about 30 officers were trained; the officers having experience in MCS at the level of policy, systems and operations.

The workshops were primarily designed as a forum where presentations on MCS could be made by specialists involved in the fisheries management process, and then discussed, and where participants could outline their management and MCS experiences. Small working groups allowed participants to extensively exchange ideas and prospects on how national and regional MCS systems could be improved. Special attention was given to the methods for assessing objectives of fisheries management and the consequent design of MCS systems to assist management in different situations. Wherever possible, practical exercises were conducted to improve the approach to inspection of fishing activities both onshore and at sea.

Particular attention was given to working at the national level with those technical staff who attended regional workshops. Specific assistance and advice have been given to Malaysia, Vietnam, Cambodia, Myanmar, Sri Lanka, India, Maldives, Bangladesh, Indonesia and Thailand. In addition to providing MCS advice to these countries, the Programme has assisted countries bordering Lake Tanganyika in their approach to this issue. Legal advice has been provided to the Government of Thailand with regard to revising their fishery laws in support of fisheries management.

The programme of assistance funded by FAO/Norway is expected to continue to provide advice and assistance to countries with their MCS, both at the national as well as at the regional levels.

The Department of Fisheries of FAO is also involved in a regional project, financed by the FAO/Government of Luxembourg Cooperative Programme, that supports MCS in the subregion of Mauritania, Senegal, Cape Verde, The Gambia, Guinea Bissau, Guinea and Sierra Leone. An aerial surveillance operation is based on Banjul, The Gambia. An FAO regional fishery adviser is located at the headquarters offices of the Sub-regional Commission for Fisheries office in Dakar, Senegal. The first phase of the project terminates in 2003. Since so many of the stocks in the subregion are shared, the role of the secretariat is important in ensuring cooperation between States for the fisheries management. The main objective of the project is the control of illegal fishing. An achievement of the project has been the increasing cooperation between neighbouring countries in sharing the use of patrol vessels and surveillance planes for subregional operations. The patrol vessel and surveillance planes of both Cape Verde and Senegal have been used in The Gambia, Guinea Bissau and Sierra Leone. This cooperation cuts costs and assist countries which would otherwise have no fishery enforcement facilities.

Through other field projects and activities in Ghana (for the World Bank), and Bahrain as well as Oman (through TCP), FAO has been assisting countries to improve

their MCS and reduce illegal fishing. Cooperation and contact is maintained with the EU-SADC Project for MCS.

3. Vessel Monitoring Systems (VMS)

The Fishery Industries Division of the FAO Department of Fisheries has been giving attention to the use of Vessel Monitoring Systems in increasing the efficiency of MCS (FAO, 1998). In the last few years several countries have introduced VMS which enable the activities of fishing vessels to be monitored and for such vessels to report on catches to the fisheries management authority. Attention is drawn to the need for recommendations on common data exchange formats and protocols. Eventually these recommendations may be adopted as an international standard for a common international data exchange format in VMS and in catch reporting. Coastal States, which apply VMS to national and foreign fishing vessels licensed to fish in their EEZs, can monitor the activities of such vessels very effectively and economically, thereby increasing the effectiveness of their MCS. Also, the implementation of VMS by Flag States, for vessels authorised to fish on the high seas, is the most effective means of ensuring that vessels flying their flag do not conduct unauthorised fishing within areas under the national jurisdiction of other States.

Satellite surveillance systems (and electronic logbooks) are gradually emerging as a potential source of complementary information to VMS. Satellite surveillance allows the detection of vessels that are not reporting, and therefore highly likely to be involved in illegal, unreported and unregulated (IUU) fishing. The purchase of satellite data is still relatively expensive and the analysis of data still has problems with the detection of smaller vessels and the delivery time of data. Nevertheless satellite data are likely to make substantial contribution to effectiveness of MCS within the next decade. The Department of Fisheries has been developing useful contacts with the Joint European Research Centre, Italy, in addition to Norway and Canada, in this regard.

The current situation of rapidly emerging technologies for MCS requires that diagnostic evaluation of a national MCS be undertaken prior to major capital expenditures or long term commitments. In this respect, it should be noted that the new technologies (such as VMS with or without satellite surveillance) might not be an appropriate tool for every administration. (For example, no VMS or satellite surveillance can measure a codend mesh or inspect a catch on board, as this will involve direct involvement of inspectors or observers).

4. Information Exchange

FAO provides a forum for exchange of information between fisheries authorities and specialists seeking to cooperate in setting standards, and enhancing the role of fisheries in world affairs. As just one example of FAO's work in providing a forum, mention could be made of its work in international fishery information where, since organising an expert meeting on fishery statistics in 1959, FAO maintains a co-ordinating working party on fishery statistics, which meets regularly and provides a focus for harmonisation of reporting, classification of craft, gear, species, areas and agreement on concepts and definitions at an international level.

It was through FAO that a number of regional fisheries bodies were created, to support fisheries management, one example being the International Commission for the Conservation of Atlantic Tuna, and others being the European Inland Fisheries Advisory Commission and the General Fisheries Commission for the Mediterranean. The Indian Ocean Tuna Commission is a recent example of the creation of a regional fishery management body being facilitated through the work of FAO.

5. The Code of Conduct for Responsible Fisheries

The Code of Conduct for Responsible Fisheries (FAO, 1995) was adopted unanimously by the FAO Conference in 1995. It consists of five introductory articles followed by an article on General Principles that precedes the six thematic articles on: (i) Fisheries Management; (ii) Fishing Operations; (iii) Aquaculture Development; (iv) Integration of Fisheries into Coastal Area Management; (v) Post-Harvest Practices and Trade; and (vi) and Fisheries Research. The FAO Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas forms an integral part of the Code. There is detailed reference to the importance of fisheries monitoring, control and surveillance in Article 7.7 concerning implementation of fisheries management, and Article 8.1 concerning duties of all States in fishing operations. The Code has become a cornerstone of my Department's activities from which normative as well as field programmes are derived.

6. International Plans of Action

In recent years the FAO Committee on Fisheries (COFI) has approved International Plans of Action (IPOA) for the Management of Fishing Capacity, Reducing Incidental Catch of Seabirds in Longline Fisheries, and for the Conservation and Management of Sharks. These Plans of Action are another example in which the international community expects FAO to tackle global fishery problems because these cannot be effectively addressed on a region-by-region basis. FAO monitors and urges implementation of these Plans of Action.

As for another important issue which must be addressed and resolved globally, the Twenty-third Session of COFI in 1999 addressed the need to combat illegal, unreported and unregulated fishing (IUU). In cooperation with FAO, the Government of Australia organised an Expert Consultation on the subject from 15 to 19 May 2000, to discuss and to draft, on a preliminary basis, an international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing, and an FAO Technical Consultation on the subject was held in Rome from 2 to 6 October 2000.

The International Plan of Action (IPOA) to combat Illegal, Unregulated and Unreported (IUU) Fishing was adopted by the 24th session of the FAO Committee on Fisheries (COFI) in February 2001, approved by the 20th session of FAO Council in June 2001. The IPOA – IUU supports the 1995 Code of Conduct for Responsible Fisheries (CCRF), the 1982 UN Convention on the Law of the Sea (UNCLOS), the 1993 FAO Compliance Agreement, and the 1995 UN Agreement on Straddling and Highly Migratory Stocks.

The 24th session of COFI “acknowledged the important role that FAO should play in promoting the implementation of the IPOA-IUU, particularly in provision of technical assistance to developing countries. Some Members pointed out that funds would be required to facilitate implementation of the IPOA and it was proposed that FAO consider providing Regular Programme funds for this purpose and seek extra-budgetary funding, as appropriate”. This has special reference to paragraph 25 of the IPOA “States should develop and implement, as soon as possible but not later than three years after the adoption of the IPOA, national plans of action to further achieve the objectives of the IPOA and to give full effect to its provisions as an integral part of their fisheries management programmes and budgets”. Paragraph 85 of the IPOA emphasizes the need for training in this field by FAO and other agencies, particularly for developing countries, and paragraph 86 calls for FAO to support States in “the strengthening and enhancement of integrated MCS systems”.

Paragraph 81 of the IPOA-IUU calls for States to make available to regional management organizations, and FAO, information relevant to the prevention, deterrence and elimination of IUU fishing. This information includes records of vessels, both authorised, and engaged in IUU fishing, and measures taken to deter IUU fishing.

The IPOA-IUU document has been published in French, Spanish, and English. It is available in English on: <http://www.fao.org/DOCREP/003/X6729e/X6729e00.HTM>. Regional fishery bodies have been requested to include an item on implementation of the IPOA-IUU in agendas for their meetings. They have been requested to refer to the advantages of introducing a vessel monitoring system.

7. Support for implementation of the IPOA-IUU

It is clear that a number of developing countries will not be able to implement provisions of these instruments and will need assistance either through bilateral or international assistance, in addition to assistance on appropriate management strategies and plans for fisheries. Therefore FAO will have an important role to play in providing this assistance in the future.

The U.S. Government recently approved funding for the FAO Department of Fisheries, in support of the implementation of the International Plan of Action to Prevent, deter and eliminate illegal, unreported and unregulated fishing. Funds are to be used for preparation and distribution in various languages of a technical guidelines to support the IPOA on IUU fishing. A second activity will be the organization of a workshop of countries operating open registries and those operating as “ports of convenience” so as to emphasize the importance of reducing IUU fishing.

The third activity will be a contribution to the International Network for the Cooperation and Coordination of Fisheries related MCS activities (MCS), which will involve assisting States in (a) identifying their national organizations/institutions responsible for fisheries-related MCS, and the primary contact persons who shall act as the main national coordinator for the purposes of this network; (b) Collecting and providing timely and accurate MCS information to other parties of the arrangement; (c) considering requests and, where appropriate and possible, cooperating in joint fisheries-related MCS activities; (d) promoting technical assistance, training,

experience exchange, and institutional development, to increase MCS knowledge and capability amongst participating parties.

FAO shared sponsorship of the International Conference on Monitoring, Control and Fishing Surveillance held in Santiago, Chile, in January 2000. There was a representative of FAO, as observer, at the Key Largo, Florida meeting, January 2001 where the terms of reference for the MCS Network were developed, as well as the follow-up meeting at Hobart, Tasmania, in October 2001.

The IMCS is serving to exchange information on MCS in different countries. As a response to their request, FI has publicised IMCS on its WebPage (<http://www.fao.org/fi/Manage.asp>) and provides a direct link to the IMCS Website. The English and the Spanish link are: <http://swr.ucsd.edu/enf/mcs.htm> and <http://swr.ucsd.edu/enf/mcs/mcssp.htm>. The direct address of the website is <http://www.imcsnet.org>, user name-mcs, and password mcsnet.

8. Ongoing FAO activities

The FAO Programme for Fisheries (2002 - 2003) draws attention to the need for arrangements for successful implementation of the Code of Conduct. MCS is further addressed in the activity for “Sustainable Development of Small-scale Fisheries”, and, as part of the support to implementation of the international plans of action.

With regard to data for article 6 of the FAO Compliance Agreement (information on vessels fishing on the high seas), the Department of Fisheries unit for data and information (FIDI) has received records (<http://www.fao.org/fi/figis/hsvar/index.jsp>) from Japan, the EU (2634 vessels), the USA (about 1149 vessels), Canada (six vessels) and Norway for incorporation in the “High Seas Vessels Authorisation Record” (HSVAR). Twenty-five countries need to ratify the FAO Compliance Agreement before it comes into force, and twenty two have already done so (<http://www.fao.org/legal/treaties/012s-e.htm>).

The FAO Law Development Service has developed guidelines for the implementation of the 1993 FAO Compliance Agreement. It has produced a model legislation for the implementation of the 1993 FAO Compliance Agreement and the 1995 UN Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks for the members of the Organization of Eastern Caribbean States (OECS). Recent work for the implementation of the two agreements has been carried out in Barbados, Cape Verde, Indonesia, Malaysia, St. Lucia, Seychelles, Thailand, Tonga and Vietnam.

In a recent draft report prepared for the Legal Service of FAO, the consultant Lobach (2002) described the port State control system for merchant vessels established in 1982 by a memorandum of understanding signed in Paris. This is an international agreement among 18 countries to establish a co-ordinated port State control system with respect to vessel safety and pollution prevention standards and equipment. The consultant has proposed that a similar agreement be signed with regard to port State control of fishing vessels. Inspections will be carried out for the purpose of monitoring compliance with relevant conservation and management measures. If an inspector finds that there are reasonable grounds for believing that a

foreign fishing vessel has engaged in or supported IUU fishing, the inspector shall promptly notify the flag State of the vessel and, where appropriate, the relevant coastal States and regional fisheries management organizations.

FAO is currently in the process of finalising reports on cost effectiveness of MCS in developing countries, observers on fishing vessels and an updated version of an introduction to MCS (Flewwelling, 1994).

References

- FAO, 1981. Report on an expert consultation on monitoring, control and surveillance systems for fisheries management, Rome, Italy, 27-30 April 1981. Rome, FAO, FAO/Norway Cooperative Programme FAO/GCP/INT/344/NOR, 115 p.
- FAO, 1995. Code of Conduct for Responsible Fisheries. Rome, FAO, 41p.
- FAO, 1998. Fishing Operations. 1. Vessel monitoring systems. FAO Technical Guidelines for Responsible Fisheries. No. 1, Suppl. 1. Rome, FAO, 58 p.
- FAO, 2001, International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing. Rome, FAO, 24p.
- Flewweling, P., 1994. An introduction to monitoring, control and surveillance systems for capture fisheries, FAO Technical Paper 338, 217 p.
- Lobach, T., 2002. Port State control of foreign fishing vessels. 29p. draft report presented to FAO Legal Office.

TRAINING

Some FAO activities in related training (ref. para 85 of the IPOA – IUU)

1. Workshop on MCS for African States bordering the Atlantic Ocean. Accra, 2 – 5 November, 1992. FAO, GCP/INT/466/NOR working paper 93/22.
2. Regional workshop on MCS. Mauritius, 16 – 20 December 1996. GCP/INT/606/NOR report 97/37.
3. Regional workshop on MCS, Malaysia, 29 June – 3 July 1998. GCP/INT/648/NOR Report C-1. FISHCODE PROJECT.
4. Revision d'un système SCS pour les pêches du Lac Tanganyika, 1999, GCP/INT/648/NOR. Rapport C-2.
5. Regional workshop on MCS, Oman. 24 – 28 October 1999, GCP/INT/648/NOR Report C-3.
6. Final report on legal advice to Thailand, 2000, GCP/INT/648/NOR Report C-4.
7. Regional training course in MCS, 4 – 12 July, 2000, Songkhla, Thailand, GCP/INT/648/NOR Report C – 5.

8. Fisheries management and MCS in South Asia; comparative analysis (by P. Flewelling), 2001 GCP/INT/648/NOR report C-6.
9. National workshop on MCS, 12 – 17 February, 2001, Goa, India GCP/INT/648/NOR Report C-7.

LINKS

Link between FAO and MCS Network website

FAO Fisheries website (<http://www.fao.org/fi/default.asp>) then click on Management with insertion under Marine Fisheries:

In the **English management page** (<http://www.fao.org/fi/Manage.asp>)

In the **French management page** (<http://www.fao.org/fi/Managef.asp>)

In the **Chinese management page** (<http://www.fao.org/fi/Managec.asp>)

In the **Arabic management page** (<http://www1.fao.org/fi/arcp/Managea.asp>)

International Network for Fisheries Monitoring, Control and Surveillance (MCS Network)

The International MCS Network is an arrangement of national organizations/institutions in charge of fisheries-related MCS activities, which have been authorized by their countries, to coordinate and cooperate in order to prevent, deter and eliminate Illegal, Unreported and Unregulated (IUU) fishing (<http://swr.ucsd.edu/enf/mcs/mcs.htm>).

In the **Spanish management page** (<http://www.fao.org/fi/Manages.asp>)

Red Internacional de Monitoreo, Control y Vigilancia para Actividades pesqueras.

La red internacional del MCV es un acuerdo de las organizaciones/instituciones nacionales encargadas de actividades de MCV relacionadas a pesquerías, quienes han sido autorizadas por sus países, para coordinarse y cooperar a fin de impedir, disuadir y eliminar la pesca IUU.

(<http://swr.ucsd.edu/enf/mcs/mcssp.htm>).