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Organización  
de las  
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Unidas  
para la  
Agricultura  
y la  
Alimentación

## FISHERY COMMITTEE FOR THE EASTERN CENTRAL ATLANTIC

### Sixteenth Session

Tenerife, Spain, 22-24 October 2002

### STRENGTHENING MONITORING, CONTROL AND SURVEILLANCE (MCS) IN THE REGION

## I. INTRODUCTION

1. The Fishery Committee for the Eastern Central Atlantic of FAO has been supporting fisheries monitoring, control and surveillance (MCS) since 1980, and the activities involved in this field of fisheries have been broadly defined as follows: "Monitoring" involves the collection, measurement and analysis of fishing activity on catch, species composition, effort, discards, area of operation, etc., which is to assist fishery managers to arrive at management decisions. "Control" involves the specifications of the terms and conditions under which resources can be harvested, and normally contained in national legislation, and provides a basis on which management arrangements are enforced. "Surveillance" involves checking and supervision of fishery activity to ensure national legislation and terms of access and management measures are observed. This activity is critical to ensure that resources are not overexploited, poaching is minimised and management arrangements are implemented.

2. The many diverse fisheries along the Atlantic coast of Africa present a number of challenges for effective MCS in support of fisheries management. The challenges can be at a local level for stocks near shore and/or extending over a small area, to subregional and regional level for stocks migrating through or extending through the Exclusive Economic Zones of a number of countries.

3. The fisheries are exploited from the shore by canoes, often in brackish water lagoons linked to the sea, through to capital intensive operations undertaken by sophisticated multi-million dollar vessels catching large quantities of low value or smaller quantities of high value fish. Locally based and registered industrial fleets, frequently with foreign interests, are expanding steadily, and target shrimp and high value fish stocks such as sole. Cephalopods are mainly found off the Northwest African coast. Large concentrations of small pelagic resources are found off certain coasts. Many canoe fishermen, also, are involved in the catching of high value fish for export. The presence of a number of highly mobile tuna vessels also poses problems for the implementation of effective MCS.

4. The most common management regulation concerns fishing zones, with inshore zones (normally varying from 5 – 12 miles from shore) being reserved for canoe fisheries. Mesh size in the codend of trawl nets is also a regulation that is frequently enforced. Closed seasons for certain fisheries have been introduced in Morocco, Mauritania and Senegal. The control of fishing effort and catch are monitored but irregular reporting is not normally a violation of a regulation. Regulations concerning unlicensed fishing are normally enforced.

5. At an international level there has been increasing emphasis given to reducing the problems caused by illegal fishing. At the World Summit on Sustainable Development, Johannesburg, September 2002, there was agreement to develop and implement national and, where appropriate, regional plans of action, to put into effect the FAO international plans of action, in particular the international

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plan for the management of fishing capacity by 2005 and the international plan of action (adopted by FAO in 2001) to prevent, deter and eliminate illegal, unreported and unregulated fishing by 2004. It was also agreed to establish effective monitoring, reporting and enforcement, and control of fishing vessels, including by flag States, to further the international plan of action to prevent, deter and eliminate illegal, unreported and unregulated fishing.

## II. DEVELOPMENTS AT THE NATIONAL LEVEL

6. MCS at the national level can take many forms, ranging from the complex - involving vessel monitoring systems (VMS), aircraft, fishery patrol vessels, coastal radar and other methods - to the simple, and relatively inexpensive, procedure of relying on licensed fishermen reporting on illegal fishing activity, as well as shore and port inspection of craft.

7. A number of countries in West Africa are focusing on changes in the approach to fisheries management through strengthening institutions. Ghana is a country that is enhancing the priority being given to fisheries, in the fields of strengthening the department of fisheries, stock assessment and preparation of management plans for marine and inland fisheries and establishment of fisheries monitoring, control and surveillance systems. Other components involve aquaculture extension, and reform of the policy, legal and regulatory framework so as to improve management, enhance private investment and promote sustainable fish production. Nigeria has been benefiting from a World Bank loan to assist coastal states put in place a strengthened monitoring, control and surveillance in support of fisheries management. Efforts are being made in Cote d'Ivoire to strengthen the regulatory measures required for management of the lagoon fisheries, through implementation of closed seasons and prohibition of certain gears.

8. Throughout the region there is frequently an inshore zone where industrial fishing is prohibited, so as to allow canoe fishing to continue undisturbed. Other frequently applied measures for marine fisheries include a stretch mesh in the codend of trawl nets, often with a minimum size of 60 mm.

9. The Republic of Mauritania maintains a management system through zones of fishing, reserved for artisanal fishing near the coast, and a series of zones for local and foreign registered vessels. Trawlers must use a minimum mesh size in the codend, and there is normally a closed season of one or two months each year when the catch of cephalopods is prohibited. There is some possibility that the artisanal catch of cephalopods, with pots, may have a negative impact on stocks exploited by industrial fleets, but this is one of the continuing issues that fishery researchers are assessing with a view to improve overall fishery management.

10. Foreign fleets have access to Mauritanian resources within the framework of fishing agreements. A number of vessels from Eastern Europe countries are

authorised to exploit small pelagics, usually under an agreement whereby a set percentage of the value of the catch is reserved for Mauritania. The government has received substantial assistance from the Government of Germany in activities of monitoring, control and surveillance, as well as institutional strengthening. A special unit of the Ministry of Fisheries (based at Nouadhibou) is responsible for MCS and, in co-operation with the defence forces, employs patrol vessels, aircraft and shore facilities for tracking the operations of fishing vessels and, where necessary, arrest and prosecution for different offences.

11. Vessels of the European Union fish in the Mauritanian EEZ within the framework of an agreement. The EU vessels are using a vessel monitoring system and information from this system is understood to be made available to the Mauritanian authorities at regular intervals.

12. Morocco's fisheries extend over a substantial coastline. The institute for research provides fishery management advice. The use of certain gear is prohibited in various zones of the coast. The cephalopod trawl fishery, as well as fisheries for shrimp and other species, are subjected to a closed season normally of two months per year, as well as a mesh size regulation in the codend. As foreign fishing effort is reduced steadily, there is expected to be an increase in the catches of Moroccan trawlers. The Ministry of Fisheries and Merchant Navy co-operates with defence forces to patrol the fishing zones and apprehend vessels not working in compliance with management regulations. Observers are assigned to most foreign vessels working in the Morocco fishing zone. A vessel monitoring system has been introduced.

13. Through the assistance of a project financed by Canada in the 1980s Senegal has been practising MCS over a relatively long period. There is a Directorate for Surveillance and Protection of Fisheries. The system relies on co-operation of the Direction de l'Océanographie et des Pêches Maritimes with the defence forces as well as the fisheries research institute (Centre de Recherches Océanographiques de Dakar - Thiaroye). A small aircraft regularly patrols the fishing zones and checks on location of industrial vessels. These should stay in zones at various distances from the coast; not only to protect inshore fish resources but also to avoid conflicts with the large and active shore-based canoe fleet. Coastal radar stations have been set up, to aid fishery officers monitor incursions of industrial vessels into zones reserved for canoe fishermen, so that follow-up action can be taken if required.

14. Guinea is one of the countries that sets annual management plans for each fishery, which is an attempt to set a limit for catch of the main species, as well the number of vessels permitted to operate in the fishery. Systems of monitoring, control and surveillance are then designed so as to take into account the implementation of the management plan and the operations of vessels partaking in the fishery. Sierra Leone has recently been making progress in improving maritime MCS, and the maritime authorities have successfully prosecuted vessels for illegal fishing

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practices. The country is to receive assistance in MCS through approval of a loan of the African Development Bank.

15. The Eastern Central Atlantic does not cover fisheries in Namibia, nevertheless there is much to be learnt from experiences in that country. The main fisheries are subjected to levels of total allowable catch. A fisheries management information system provides a comprehensive data base, to assist management and MCS. Many vessels carry observers, and the MCS is aided by deployment of three patrol vessels, an aircraft and a helicopter. The Sea Fisheries Act of Namibia is being revised, and it will include provisions for clarifying the status of inspectors and observers. In recent years there has been no systematic problem with illegal fishing by foreign vessels, and surveillance effort has been substantially redirected towards ensuring compliance with applicable laws by licensed vessels.

16. In general, benefits from fishery management can increase as fishing effort is lowered. This may involve a package of measures which could include freezing the fleet size, as a first step towards progressive reductions as appropriate, and assessing, for each fishery, the total allowable effort, and, where appropriate its allocation among sections of the fishing sector, associated with establishment of a system of fishing rights, etc. In some cases, and in particular with foreign fleets, it might be feasible to increase licence fees, to induce the less efficient vessels to leave the area, and another possible but drastic option might even be to close the fishery for two or three years. Whichever option is chosen, the essential pre-requisite for success will be an effective system of enforcement, which might often have to be arranged in concert with authorities of a neighbouring country (and ideally the whole strategy to reduce effort should be done on a regional or sub-regional basis, if the geographical distribution of the stocks so requires).

17. An important issue, also, is the cost recovery component of MCS, so that overall costs to a nation of enforcing management measures can be assessed. In some cases it is possible to cover the entire cost of MCS through the raising of revenues in the form of licence fees and other levies. The concept of "user pays" is becoming widely accepted in fisheries management, but the capacity for development of such a system is dependent on the type and value of the resource. The potential for generating revenues from some resources, such as low value artisanal fisheries, is low, but the cost of management of these resources may be offset by revenues derived from other, more valuable, fishery resources. Costs can also be reduced through sharing facilities on a regional basis, such as the regional application of VMS, and joint investment in a fisheries patrol vessel.

### **III. DEVELOPMENTS AT THE SUBREGIONAL LEVELS**

18. The Subregional Fisheries Commission (SFRC) based in Dakar has been progressing steadily to be a vehicle for co-operation between countries of the area (Mauritania, Senegal, Gambia, Cape Verde, Guinea-Bissau, Guinea), as well as serving as a focal point for donors in their interest to support fisheries on a regional

basis. Sierra Leone has been cooperating closely with the SRFC and is expected shortly to be admitted as a full member.

19. The project for air surveillance of fisheries in countries of the Sub-regional Fisheries Commission (as well as Sierra Leone) has been executed since 1992 with funds from Luxembourg and with headquarters in The Gambia. Since 1999 the Government of Luxembourg has provided an extension of this funding for the Surveillance Operations Coordinating Unit (SUCO) based in Banjul, as well as a project executed by FAO (GCP/INT/722/LUX), for direct support to the SRFC secretariat in Dakar. The main objectives are to collect information on fishing operations along the coast, train air observers, and reinforce cooperation between countries in the subregion. The SUCO in Banjul falls within the framework of the SRFC.

20. A number of joint operations, involving the navy, air force and technical staff of the fisheries ministries, have been organized by SUCO/SRFC between countries of the region; for example there were cooperative arrangements between Senegal and Mauritania, as well as between Senegal and The Gambia. Both these joint operations contributed to the arrest and prosecution of vessels that were found to be fishing illegally. In March 2002 the Dornier aircraft of the Cape Verde Coast Guard was used to locate fishing vessels off Guinea-Bissau, Guinea and Sierra Leone. A patrol craft of the Senegal Navy cooperated in the inspection of vessels at sea, and the operation led to arrest of several vessels that were found to be fishing illegally.

21. Staff of SUCO have organized training of SRFC member States' personnel involved in observation and inspection at sea. A number of courses have been organized and follow-up training on the job has been scheduled.

22. Canada has been supporting the Subregional Fisheries Commission in the fields of resource management, monitoring, control and surveillance, research and training. The SRFC has also received funding from France, and the European Union for activities concerning fishery information, based in Guinea.

23. An SRFC working group on surveillance and fisheries protection meets regularly. At the most recent meeting in Banjul on 4-5 July 2002, points for discussion included illegal transshipping, mesh size offences, radio communication, hot pursuit, as well as IUU fishing in general.

24. The Regional Fisheries Committee for the Gulf of Guinea continues to attempt to improve fisheries monitoring, control and surveillance. Since 1999 the Southern Africa Development Committee (SADC) sector co-ordinating unit for marine fisheries and resources, with the support of the EU, is implementing a programme for regional monitoring, control and surveillance of fisheries activities. This followed preparation of a report on MCS in the SADC countries of Tanzania, Mozambique, South Africa, Namibia, and Angola. With regard to tuna in the region the International Commission

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for the Conservation of Atlantic Tuna (ICCAT) takes measures to enforce a number of management regulations.

25. At a regional workshop on MCS held at Accra, Ghana, in December 1992, organised by FAO in support of the Ministerial Conference on Fishery Co-operation among African States bordering on the Atlantic Ocean, a number of recommendations were made pertaining to: the need to delimit clearly defined maritime boundaries, harmonisation of fishery legislation, standard international identification markings for all vessels, the tasks and supervision of observers, the importance of logbooks, and the need for suitable legislation to support implementation of MCS. In December 1995, a technical consultation on fisheries observers in West Africa, was held in Senegal where VMS was also discussed. The consultation was organized by the FAO Project GCP/RAF/302/EEC "Improvement of the legal framework for fisheries cooperation, management and development of coastal states of West Africa".

26. On 20 September 2001 the Ministerial Conference of the SRFC adopted the Nouakchott Declaration on illegal, unreported and unregulated fishing and approved a strategic action plan for the SRFC which accords high priority to MCS activities of the Commission. As a follow-up, on 14 – 17 October, 2002 – at Saly, Senegal - the SRFC with substantial funding of the US/FAO Fishcode trust fund project (GCP/INT/849/USA) "Support for the implementation of the international plan of action to reduce and eliminate illegal, unreported and unregulated fishing" organized a workshop on vessel monitoring systems, specifically for members of the SRFC. The workshop objectives were to sensitise the SRFC member States on the potential of VMS as a complement to their other MCS activities, and to foster discussions at a technical level leading to the formulation of a sub - regional strategy for cooperation on VMS.

27. In support of these initiatives the World Summit of Sustainable Development agreed to assist developing countries in coordinating policies and programmes at the regional and subregional levels aimed at the conservation and sustainable management of fishery resources. As noted above, there was agreement on the need for monitoring and control of fishing vessels to deter illegal fishing, and this could be supported by the International Network for the Cooperation and Coordination of Fisheries-Related Monitoring, Control and Surveillance Activities (commonly called the MCS Network, with a website at [www.imcs.net.org](http://www.imcs.net.org)), which countries are encouraged to join.

#### **IV. SUGGESTED ACTION**

28. Although many countries along the West African coast are now giving increased attention to fisheries monitoring, control and surveillance, as a means of improving the overall fishery management process, there still remains a substantial need to improve procedures not only at a national level but also increasingly at a regional level. It is suggested that further attention needs to be given to improved

measures for establishing and enforcing fishing zones, mesh size and approved gears, and practices for observers and inspectors to follow. Member States may wish to recommend that this co-operation between neighbouring countries be intensified, most notably in the case of certain fisheries where management is shared by a number of coastal countries. Of primary importance is the need to set practical targets which can be achieved in the management process.

29. Patrol vessels, aircraft and seagoing personnel such as observers can contribute to management processes. Certain information can be obtained from techniques such as a vessel monitoring system and, if this is introduced, it is recommended that all vessels above a certain length be fitted with automatic locator devices (ALD), so their location can be recorded at regular intervals. This information should be sent to the receiving station in the waters of which the vessel is located, (and possibly simultaneously to a subregional centre). Foreign vessels (particularly those fishing under agreement between coastal country and the EU) and larger vessels (of coastal state) already have facilities for providing regular data on location to monitoring stations. Surveillance also needs to be continued in areas where vessels are known to be fishing without ALDs.

30. A further action on which the delegates may wish to reflect is the need for training at a technical level to allow fishery personnel to assess latest developments in technology and procedures for improving fisheries monitoring, control and surveillance. The delegates may wish to indicate the priorities for specialised training, workshops and consultation.