

APPENDIX A PROGRAMME AND TIMETABLE

Saturday, 23 October

Arrival of participants

Sunday, 24 October

08:00 Registration of participants

08:45 Arrival of the Honourable Minister of Agriculture and Fisheries

09:00 Welcome speech by Honourable Minister of Agriculture and Fisheries

09:15 Speech by Mr G. Everett, on behalf of the Director General, Food and Agriculture Organization of the United Nations

Tea

10:15 Introduction, framework for the workshop, administrative arrangements, and introduction of participants

10:30 Overview of fisheries in the region, and issues of importance to monitoring, control and surveillance (MCS)

Oceanographic conditions and fish resources in the northwest Indian Ocean

Legal issues related to MCS

Fisheries and MCS in the Sultanate of Oman

Lunch

The changing face of MCS, and the Southeast Asian experience with MCS

A well managed fishery: MCS in Namibia

Fisheries and MCS in Iran

Monday, 25 October

08:00 Inspection procedures at sea and on land

The role of observers

Surveillance in the Sultanate of Oman

Information systems for MCS

Fisheries and MCS in India

Fisheries and MCS in United Arab Emirates

Fisheries and MCS in Pakistan

Lunch

Vessel Monitoring Systems (VMS)

Enforcement aspects and legal issues related to the use of VMS

Presentation by Crystal Information Technology

Presentation by Purple Finder Project of OHI Pole Star

Fisheries and MCS in Yemen

Artisanal fisheries and community-based fisheries management, and MCS

Tuesday, 26 October

- 07:00 Visit to Fish market Muttrah
13:00 Visit to Quriyat fish harbour

Wednesday, 27 October

- 08:00 Vessel identification and patrol boats
Access arrangements, licensing and administrative procedures
Fisheries and MCS in Eritrea
Fisheries and MCS in Saudi Arabia
Fisheries and MCS in Sudan
Marine parks and reserves

Lunch

- Training
Regional cooperation
Working Groups (Legal issues and economic considerations; Institutional matters;
Management-related matters)

Thursday, 28 October

- 08:00 Working group sessions
Presentations of each working group
Final discussion – future priorities
General conclusions of the workshop
Formal closure of the Workshop

Lunch

APPENDIX B LIST OF PARTICIPANTS

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APPENDIX C

LIST OF DOCUMENTS PRESENTED AT THE WORKSHOP

DOCUMENTS DISTRIBUTED TO ALL DELEGATIONS

- FAO, 1995. Code of Conduct for Responsible Fisheries, Rome, FAO, 41p. [in Arabic and English]
- FAO, 1996. Fishing Operations. *FAO Technical Guidelines of Responsible Fisheries*, No.1. Rome, FAO, 26p. and 6 Annexes.
- FAO, 1997. Fisheries Management. *FAO Technical Guidelines of Responsible Fisheries*, No.4. Rome, FAO, 82p.
- FAO, 1998. Fishing Operations. Vessel Monitoring Systems. *FAO Technical Guidelines for Responsible Fisheries*, No.1/Suppl.1. Rome, FAO, 58p.
- FAO/FISHCODE/MCS, 1999 – Report of a Regional Workshop on Fisheries Monitoring, Control and Surveillance. Kuala Lumpur and Kuala Terengganu, Malaysia, 29 June - 3 July 1998. Workshop Proceedings and Recommendations. GCP/INT/648/NOR Field Report C-1 (En)
- FAO/FISHCODE/MCS, 1999a – Report of a Regional Workshop on Fisheries Monitoring, Control and Surveillance. Kuala Lumpur and Kuala Terengganu, Malaysia, 29 June - 3 July 1998. Supplement 2: Technical Papers. GCP/INT/648/NOR Field Report C-1/Suppl. 2 (En)
- Flewwelling, P., 1994. An introduction to fisheries monitoring, control and surveillance systems for capture fisheries. *FAO Fish. Tech. Pap.* No. 338. Rome, FAO, 217p.
- Troadec, J.P., 1983. Introduction to Fisheries Management: Advantages, Difficulties and Mechanisms. *FAO Fish Tech. Pap.* No.224. Rome, FAO.

DOCUMENTS DISPLAYED AND AVAILABLE FOR REFERENCE

- ARGONET Newsletter #1. Summer 1999. The quarterly newsletter for fishing vessel monitoring. Ramonville, France, ARGOS, 4 pp.
- Australian Fisheries Management Authority. Corporate Plan 1998-2003. Canberra? 12p.
- Boelaert-Suominen & C. Cullinan, 1994. Legal and institutional aspects of integrated coastal area management in national legislation. Rome, FAO, 118p.
- Carpenter, K.E., Krapp, F., Jones, D.A., & Zajonz, U. 1997. Living marine resources of Kuwait, Eastern Saudi Arabia, Bahrain, Qatar and the United Arab Emirates. FAO Species Identification Field Guide for Fishery Purposes. FAO, Rome. 293p. + 17 colour plates.
- FAO Fisheries Circular No. 900 (Software) and No.919 [in Arabic.],
- FAO Fisheries Report No.593
- FAO Fisheries Technical Papers nos 218, 224, 275, 320, 327, 328, 338, 339, 347, 349, 350/2, 353, 356, 368, 370, 371, 375, 377, 379, 382, 385, 386.
- FAO, 1992. Report of a Regional Workshop on Monitoring, Control and Surveillance for African States bordering the Atlantic Ocean (Accra, Ghana, 2-5 November 1992). Fisheries Management and Law Advisory Programme (FIMLAP) GCP/INT/466/NOR. Field Report 92/22 (En): 94 p.
- FAO, 1996. Coastal state requirements for foreign fishing. Prepared by Danièle Mangatelle. *FAO Legislative Study* No.57: 273p.

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- FAO, 1997. Report of a Regional Workshop on Fisheries Monitoring, Control and Surveillance, Albion, Mauritius, 16-20 December 1996. FIMLAP Field Report 97/37 (En).
- FAO, 1997a. FAO Yearbook of Fishery Statistics. Vol. 80. Catches and Landings, 1995. Rome, FAO, 713p.
- FAO, 1997b. FAO Yearbook of Fishery Statistics. Vol. 81. Commodities, 1995. Rome, FAO, 183p.
- FAO, 1998. *State of world fisheries and aquaculture*, Rome, FAO
- FAO/FISHCODE/MCS, 1999b. Report of a Regional Workshop on Fisheries Monitoring, Control and Surveillance. Kuala Lumpur and Kuala Terengganu, Malaysia, 29 June - 3 July 1998. Supplement 1: Country Reports, Regional Report and Case Studies. GCP/INT/648/NOR Field Report C-1/Suppl. 1 (En)
- FAO/Indian Ocean Programme. Reports Nos. 19 and 37
- INMARSAT Maritime Communications pamphlets. Guidelines for installation and registration of automatic location communications (includes glossary).
- LUX-Development Project AFR/010. Société Luxembourgeoise pour la coopération internationale. The Republic of Sierra Leone, Monitoring, Control and Surveillance Operations Manual.
- McElderry, H., Karp, W.A., Twomey, J., Merklein, M., Comish, V., & Saunders, M., 1999. Proceedings of the first biennial Canada/US observer program workshop. NOAA Technical Memorandum NMFS-AFSC-101, US Department of Commerce, NOAA/NMFS/Alaska Fisheries Science Center. 113p.
- Ministry of Fisheries and Marine Resources, Namibia
1. Fish identification sheets (in plastic; 10p.)
 2. Fishery Observer record book (Trip record forms)
 3. The fisheries inspector and observer course – National standard (1999), in six parts: Review and workshop report, February 1998 (Bergh)
 - (i) Occupational standard
 - (ii) Curriculum standard
 - (iii) Module descriptors
 - (iv) On-the-job record book for fisheries inspectors
 - (v) On-the-job record report for fisheries observers
 4. The Commercial Sampling Programme (1998)
 - Grade One documents, prepared by Sandy Davies and Heinrich Lesch
 - Observer Manual
 - Curriculum
 - Instructors Guide
 - Grade Two documents, prepared by Sandy Davies and Heinrich Lesch
 - Observer Manual
 - Curriculum
 - Instructors Guide
 - Grade Three – Fishery Module, prepared by Sandy Davies
 - Curriculum
 - Instructors Guide
 - Observers Workbook
- Sommer, P., Schneider, W., & Poutiers, J-M., 1996. The living marine resources of Somalia. *FAO Species Identification Field Guide for Fishery Purposes*. Rome, FAO, 376p. + 32 colour plates.
- SPFC/FFA, 1999. Vessel Monitoring System. Guidelines for installation and registration of automatic location communications (includes glossary). FFA, Honiara, Solomon Islands.

APPENDIX D

REPORTS OF THE WORKING GROUPS

REPORT OF THE WORKING GROUP ON MCS OPERATIONS

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Resource persons

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General

The group initially discussed the fact that, in its approach, MCS needed to cope with the two fleet divisions that existed in each country. The small-scale fishers required an approach that differed from that appropriate to the industrial fleet. The involvement of the community was an issue that was mentioned.

Topics that became the focus of attention included:

- Licensing.
- Training.
- Inter-agency mechanisms for cooperative and cost-effective MCS operations.
- Information sharing and regional cooperation potential.

Licensing

It was noted that for most countries there was more than one agency involved in the issuance of licences and permits for fishing vessels, e.g., issuance of licences for safety and vessel registration, another for fishing, while perhaps there was also a final port check before departure and on entry into the territorial seas and ports of a third party. Notably lacking were inter-agency mechanisms for information sharing and cross-verification of licensing requirements for fisheries, safety and communications.

Two options were presented for countries to consider:

- (i) the “one-stop shopping” concept, where all involved agencies would be co-located for license processing to minimize time and trouble for the fisher, while also minimizing the

potential for fraudulent practices with the documents as they were transmitted between agencies (the latter was not thought to be a problem in some countries); or

- (ii) the “clearance agency” concept, where one agency was designated to ensure that all documents were completed – *and correct* – prior to the vessel leaving port, e.g., Coastguard/marine police port clearances, etc.

A further difficulty identified was the fact that in some countries it appeared that either fishers were ignoring the regulations and requirements for licences due to several factors, no funds being one; or they were honestly not aware that they required a licence for such activities.

A possible solution in this case was the awareness/preventative MCS proposal to enhance the level of participation of the fishers in the management process and increase their knowledge of requirements under the fisheries legislation. A further suggestion was a phasing-in of the licensing scheme for fishers, especially those with few funds, so that they were registered as fishers and thus recorded for effort calculations in management discussions, and also to enable managers to start sampling to provide data for stock assessment purposes. This would also assist managers in the identification of target fishers’ groups for assistance as required.

Two other suggestions were presented:

- (i) Cross-regional and inter-agency information exchange on licensing systems, for information and review purposes.
- (ii) Integration of licenses to incorporate safety, communications and fisheries requirements.

Training

It was noted that in some cases the sea-going marine MCS units (navy and Coastguard) received no training in fisheries MCS and hence were ill-prepared to assist in at-sea fisheries inspections, as their training focused only on boundary violations and controls. It was suggested that this was not fully utilizing the expensive MCS resources during their sea time. Cross-training of these agencies’ personnel in fisheries inspection techniques could result in major benefits and more cost-effective deployment of these vessels, e.g., record checking for catches, fish identification, inspection check lists, mesh size control, species verification for endangered species, etc.

It was noteworthy that Indian Coastguard Officers, as part of their junior officer training, were sent to the fisheries training institute for fisheries training. In Saudi Arabia, the Coastguard and other maritime agencies attend a four-week fisheries training course every two years.

Iran found that the military was too preoccupied to effectively carry out fisheries duties, and had recently hired 1 000 new staff for MCS and were re-structuring their ministry for the inclusion of an MCS Unit. Training of these new personnel was ongoing through short courses, but it was determined that a higher level of training was required and there was interest in developing this capability.

In Eritrea, fisheries officers have had FAO MCS training in the past and through an ongoing programme of short courses. Training of trainers was seen to be a priority for Eritrea.

Further training needs

Other subjects presented for consideration for future training included:

- (i) Training in equipment procurement: specification, selection, operation and maintenance.
- (ii) Training in training methodologies, e.g., training trainers in how to train.
- (iii) Training in how to establish an appropriate MCS system.
- (iv) “Preventative” MCS techniques, e.g., information, education and communications; school programmes; coast-watch programmes; and orientation to fisheries management and MCS.

- (v) Data management for collection, analysis and systems management.
- (vi) Observer training, with a focus on data collection for both science and compliance.
- (vii) “Deterrent” MCS techniques, e.g., inspections in port and at sea; boarding, both non-hostile and hostile; etc.
- (viii) Cross-regional and inter-agency exchanges of information and knowledge.

Inter-agency cooperative mechanisms

Almost all countries noted that there was satisfactory inter-agency communications between maritime agencies: Coastguard; Navy; Telecommunications; and Fisheries. Some noted, however, that these could be enhanced by more information exchanges.

In India, the daily contacts between the Navy, Coastguard and Fisheries were noted at both the HQ and field levels. The Coastguard was now opening channels to enhance interaction with the coastal communities, e.g., weather warnings and assistance at sea for fishers, etc.

In Saudi Arabia, the three fisheries zones were patrolled by the Coastguard and relations between agencies was very close. In Yemen there were port inspections on departure and entry, as well as two observers aboard each vessel for compliance. Eritrea placed fisheries officers aboard fishing vessels.

In Oman, cooperation with the Coastguard and Navy was fairly formal. Agriculture addressed the traditional fisheries, Coastguard controlled the 12 n.mi. zone and the Navy addressed fisheries boundary violations beyond 12 n.mi.

In the United Arab Emirates, only traditional fisheries were permitted and these were controlled by the Fisheries Ministry and Coastguard.

It was noted that, in almost all cases, there appeared to be no formal planning sessions for inter-agency cooperation.

Information sharing and regional cooperation potential

Areas where FAO could possibly assist on a regional basis include:

- (i) Exchange of licensing system information between countries.
- (ii) Cross-regional MCS exchanges for information sharing, training and operations knowledge.
- (iii) The development of a fisheries information exchange agreement between States.
- (iv) Inter- and intra-regional cooperation regarding migrating stocks, based on the FAO treaty.
- (v) Assistance in the resolution of the linguistic problems with foreign vessels in the region. One suggestion being the requirement for an individual onboard with linguistic capability in the local language of the coastal State.
- (vi) Individual country MCS training.

REPORT OF THE WORKING GROUP ON FISHERIES MANAGEMENT

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Resource person

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Discussion

The working group held discussions on the management measures followed in fisheries by the countries bordering the Arabian Sea, Gulf of Oman and Red Sea. Present practices followed in implementing MCS measures in different countries related to:

- Closed seasons
- Closed areas
- Mesh size regulations
- Regulations on minimum size of fish
- Limitations of effort or entry, or both.

The members of the working group provided information on closed seasons and area applied in their countries, and the information is summarized in the following tables. They also listed MCS-related topics considered significant, and that list formed an indicative agenda for discussion.

CLOSED SEASONS				
Country	Species	Start	End	Duration (months)
Bahrain	Shrimp	1 April	31 July	4
India (west coast)	All species (but some States only)	10 June	10 August	2 (SW monsoon)
India (east coast)	Shrimp	1 May	30 June	2
Iran	Shrimp	Open for 45 days only; each species has its own closed season; when CPUE of species falls below 20 kg/vessel, the season will be closed		>10
	Trawling (except shrimp)	1 January	31 December	12
	Pomfret	1 March	30 April (at least)	>2
	Sharks	15 March	about 1 June	2-3
	Lobster	?	?	>10
Iran (Bushehr)	Cuttlefish	Depends on CPUE		About 10
Kuwait	Shrimp (mainly)	Variable (often February, based on research results)	31 August	Several
Oman	Shrimp	1 September	31 March	7
	Abalone	15 December	14 October	10
	Lobster	1 February	30 November	10
Pakistan	Major carps	1 June	1 July	2
	Shrimp	1 May	31 July	3
	All species	none		0
Saudi Arabia (Red Sea)	Shrimp	1 April	31 July	4
	Grouper	1 May	31 July	3
Saudi Arabia (Gulf)	Shrimp	?	?	?
Sudan	All trawling	15 May	31 October	5.5
UAE	Shrimp	1 January	31 December	12
	Export closed for all species	1 June	31 August	3
Yemen (Socotra)	All	1 June	30 September	4
Yemen (mainland)	Lobster	1 May	30 November	7
	Cuttlefish	1 October	31 May	8

CLOSED AREAS, BIOLOGICAL RESEARCH AND MEETINGS	
Bahrain	<p>Biological studies on shrimp</p> <p>No closed areas</p> <p>Marine protection project, divers pick up traps</p> <p>Monofilament gillnets cause more ghostfishing than multifilament gillnets.</p>
GCC area	<p>3-year shrimp survey in GCC countries</p> <p>Ghostfishing: many fishermen lose traps</p> <p>GCC will ban shrimp trawling.</p> <p>Study of kingfish fishery started November 1999. Iran may become involved. Regional workshops held annually. November 1999 workshop on fishery statistics.</p>
India	<p>Most species spawn during the SW monsoon</p> <p>Deep-sea vessels prohibited in zone from 0-24 miles. Marine parks at Gujarat and Lakshadweep Islands</p> <p>Three types of meetings:</p> <p>1st tier – Central Board of Fisheries, involves Minister as Chairman, and State Ministers as members, meets once a year.</p> <p>2nd tier – Committee of Officers. All-India meeting involving Directorates, Research Institutes, Secretaries and Commissioners together.</p> <p>3rd tier – Joint Secretary chairs meetings that include representatives of fishers to discuss closed seasons, etc.</p>
Iran	<p>Is there one shrimp stock or various?</p> <p>Closed area for one species of shrimp (<i>P. indicus</i>, Indian Ocean) during the spawning season</p> <p>Cuttlefish, two closed areas during spawning season, because cuttlefish need substrate</p> <p>Some areas in Kurdistan closed for shrimp trawlers. Industrial vessels are only allowed in the Gulf of Oman and outside 7 n.mi.</p> <p>Fishermen use GPS to locate traps, instead of buoys</p> <p>Development of a market for shark caused boom in fishing</p> <p>Trying to reduce number of licences</p> <p>Two meetings per year. Preliminary meeting: technical staff meet for two days, analysing data. Representatives of fishermen also attend this meeting. The Higher Committee of Management of SHILAT approves management policy. In each province small committee for follow-up on fisheries matters meets once a month.</p>
Kuwait	<p>Closed area, whole of Kuwait Bay is no-trawling zone, because considered to be a nursery area for small shrimp. Everywhere 0-3-mile zone banned to trawlers to protect seagrass beds, and 3-mile zone around coral reef areas closed to trawlers</p>
Oman	<p>Damiate island, in principle closed area</p> <p>Lobster collapse in 1997</p> <p>Several lagoons are closed to fishing</p> <p>In certain areas the Ministry of Environment tries to pick up left fishing gear, often breaking coral in the process. Strong currents cause traps to drift.</p> <p>Stock assessment in four projects: Shrimp; Kingfish in Oman and Kingfish in GCC; seven species of demersal fish.</p> <p>Project to study traditional regulations of artisanal fishermen. Co-management planned.</p> <p>Closed season for trawlers. Evaluation of traditional and commercial fisheries. Assemblies with all stakeholders.</p>
Pakistan	<p>No specific timing for meetings. Every two or three years scientists and vessel owners discuss problems. Closed season during June/July, scientists have suggested to also include May. Contributions have to be provided during closures. No licensing in coastal waters, no limitations to entry.</p>
Palestine	<p>No closed area, whole area only 40 km by 12 n.mi.</p>

CLOSED AREAS, BIOLOGICAL RESEARCH AND MEETINGS	
Saudi Arabia	Spawning season of grouper 3 years ago forbidden to catch lobsters
Sudan	Some areas closed during the whole year There are no strong links between research and management Lizardfish: Spanish company wanted permission to fish after 15 May, but found nothing because fish had moved to shallow areas. When Saudi Arabia has its closed season for grouper there is more pressure on grouper in Sudan
UAE	Traps contain wiring made of Mg and Fe that decays after three days, trap opens and ghost fishing avoided. GPS used to locate traps. Crown-of-thorn starfish attacks coral reefs, trying to collect them in one piece, otherwise regeneration. Realizes benefit of trawl ban. Gillnets cause problems, small boats take only part of the catch. Drift nets of 3 km, for mackerel. Data are considered to be unreliable Project for a demersal survey, one year of survey followed by one year of data analysis.
Yemen	Closed area around Socotra, because of monsoon

GENERAL POINTS
Full biological studies required before establishing a closed season, because these should be based on sound knowledge of spawning.
Hold regular meetings involving all stakeholders and raise awareness among fishermen of rules and regulations and reasons why they are imposed.
More regional collaboration on closed seasons (grouper Saudi Arabia-Sudan; lobster Oman-Yemen)
Improve training of data collectors
Stock assessments to be undertaken annually. Conduct more biological investigations on major fish species. Regional cooperation and training of scientists.
Ghostfishing by gillnets and traps: create awareness of new gear developments. Could be an area where regional information would be useful.
Improve links between Managers, Scientists and MCS.

The group, appreciating the practices followed, made the following suggestions:

- (i) Closed seasons should be based on sound knowledge of spawning seasons of the species supporting the fishery.
- (ii) Fish stock assessments should be undertaken annually.
- (iii) Difficulties faced in observing closed seasons in the region by different nations provided a case for regional cooperation.

Possible solutions to the problems identified could include:

- (i) Regular meetings between scientists, fishers, the fishing industry and managers.
- (ii) Creating awareness among the fishers and the fishing industry.
- (iii) Conducting more biological investigations in respect of major fish species.
- (iv) Implementing stock assessment studies on an annual basis.
- (v) Assessing “ghost fishing” and tackling it on a priority basis by all the countries.

- (vi) Establishing regional cooperation in training of scientists and technical personnel, possibly through systematic staff exchanges.

REPORT OF THE WORKING GROUP ON LEGAL, INSTITUTIONAL, COOPERATION AND ECONOMIC ISSUES

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1. The Code of Conduct, the UN Fish Stocks Agreement, and the FAO Compliance Agreement

The Working Group started their discussion by addressing some legal issues relating to MCS. Participants showed a great interest in learning more about the contents and status of the recently adopted international fisheries agreements, namely the FAO Compliance Agreement and the UN Fish Stocks Agreement. Concern was expressed regarding how countries could benefit from the implementation of these agreements, and what implications they could have for national fisheries management and conservation policies in the region.

Annick Van Houtte provided some background and an outline of the key provisions of the FAO Compliance Agreement. Both agreements were concerned with the activities of vessels fishing on the high seas. The Compliance Agreement applied to all vessels that were used or intended for fishing on the high seas. It was intended to avoid the practice of vessel owners or operators avoiding compliance with internationally or regionally agreed conservation and management measures by re-flagging their vessels, i.e., re-registering their vessel under the flag of a State which was not party to any such international or regional management and conservation measures. The main provisions of the FAO Compliance Agreement related to the increased responsibility of the Flag State for the activities of their high seas fishing vessels; and the flow of information on high seas activities.

At national level, undoubtedly, in respect of each agreement, each country would require either new legislation or amendments to existing legislation to regulate fishing on the high seas. However, the FAO Compliance Agreement would not need additional agreements and/or arrangements for the information collection scheme and mechanism contemplated by the Agreement to function. This is not the case with the UN Fish Stocks Agreement, which, once entering into force, would be fully implemented only when existing or future sub-regional or regional management organization(s) would be effectively competent to establish conservation and management measures for the highly migratory fish stocks which pass through their waters.

The discussion then focused on aspects of registration and licensing of fishing vessels. It was noted that in practice the operation of the FAO Compliance Agreement would rely heavily on the circulation of information on high seas fishing activities to regional fisheries bodies and to individual parties. The principal benefit to a country was likely to come from the availability of reliable information regarding vessels authorized to fish on the high seas, which could lead to an increased ability to identify those vessels fishing without authorization on the high seas. It was also noted that such vessels also fished in the national waters of the coastal States.

The nature of the Code of Conduct for Responsible Fisheries was also discussed.

In the light of the discussions, the participants in the Working Group recommended that another discussion forum be organized for the countries of the northwest Indian Ocean Region (Red Sea, Arabian Sea and the Gulfs) to discuss the implementation of the recently adopted international instruments, and the various implications they might have at national level.

2. Regional cooperation in MCS

It was noted that a number of regional fishery bodies existed in the world. The Indian Ocean Fisheries Commission (IOFC) had recently been dissolved by FAO, and hence the Gulfs Committee, which was a subcommittee of IOFC, was also dissolved. The Indian Ocean Tuna Commission (IOTC) was a young but successful FAO fishery body. The Working Group noted that the Gulfs Cooperation Council (GCC) could never set up a fully appropriate unit for managing fisheries because its mandate did not cover a wide enough area. It was proposed that a regional body that covered the Arabian Sea, Red Sea and Gulfs fisheries would be justified scientifically as a fisheries management body, in view of the oceanic and local conditions of the area. The Working Group learned also about the possible establishment of a Regional Commission on Fisheries (RECOFI), under the auspices of FAO, which would primarily group the Gulf countries of the region.

The Working Group recommended that preliminary discussions be initiated with the relevant Member States in the Region concerning the possible creation of a northwest Indian Ocean fisheries body as an appropriate framework for assessing stocks, promoting scientific and technical exchanges, MCS, training and promoting ecosystem management and sustainable development.

The Working Group asked that FAO's work in the region be intensified in support of regional cooperation in the fields of fishery management, stock assessment, MCS and training.

3. Subsidies in fisheries and the catch curve

The Working Group discussed the well known catch curve in fisheries, and agreed that public opinion, fishermen and politicians should be reminded of the grave consequences of unlimited expansion in the number of vessels, which would lead to an overall decline in catch. The Working Group discussed the need to exploit stocks at a point where profits could be maximized for the benefit of the fishermen and the State. It was noted that subsidies normally allowed fishing to continue so that the overall catch was ultimately reduced and economic losses were widespread. The Working Group recognized that subsidies should only be applied in exceptional situations, where there was a need to change the gear used, for example, or where there might be programmes for alleviation of poverty.

The Working Group recommended that FAO seek to undertake comparative studies on the positive and negative impacts that subsidies might have in the management and development of the fisheries sector of a country. Special consideration should be given to the management of artisanal fisheries in the countries of the region. However, industrial fisheries should also receive due attention.

4. Revenue generating fishing authorizations (licences, permits) for artisanal and industrial fisheries.

Participants outlined also their approach to management. In some countries this was done by the State; elsewhere this was done by central government. Approaches to the licensing of foreign fishing vessels were being worked out with a view to improvements. It was noted that there were various problems posed by fishermen of one country entering fishing waters of a neighbouring country. Some countries were also working on developing revenue generating systems for their national fleets, both industrial and artisanal. This appeared to be a difficult task and lessons from elsewhere would be always welcome.

Given the importance of raising revenue to support the cost of fisheries administration and research, participants recommended the holding of a technical consultation or working group which would aim at reviewing the various national – in the northwest Indian Ocean region – revenue policies for fisheries. Such a meeting should focus on the different ways in which the artisanal and industrial (irrespective of whether national or foreign) sectors could contribute to generate revenue for fisheries management purposes. It should also constitute an opportunity to learn from experiences in other parts of the world.

Participants recognized that the holding of formal and informal meetings among the countries of the northwest Indian Ocean region could greatly contribute towards enhancing regional cooperation. Major objectives of these meetings would be to enhance information sharing and harmonization of initiatives with respect to the policies and legal frameworks adopted by the countries for fisheries research, management and development.

5. Surveillance-related matters

The Working Group discussed the use of patrol vessels in order to reduce illegal fishing. Patrol vessels were the responsibility of different agencies in different countries. In some countries, the artisanal fisheries were controlled by one agency and industrial fisheries were controlled by another.

A shortage of evidence sometimes prevented adequate prosecution of cases presented in Court, and participants accepted that there was a need to assist evidentiary presentations to court.

It was recommended that FAO should try to enhance its activities regarding this topic and assist the nations of the region in this conceptual area.

SUMMARY OF SUGGESTIONS AND RECOMMENDATIONS MADE BY THE THREE WORKING GROUPS

- Apply the “one-stop shopping” concept, where all involved agencies would be co-located for license processing to minimize time and trouble for the fisher, while also minimizing the potential for fraudulent practices with the documents as they are transmitted between agencies (the latter was not thought to be a problem in some countries); or
- Apply the “clearance agency” concept, where one agency would be designated to ensure that all documents were completed – *and correct* – prior to the vessel leaving port, e.g., Coastguard / marine police port clearances, etc.
- Cross-regional and inter-agency information exchange on licensing systems, for information and review purposes.
- Integration of licenses to incorporate safety, communications and fisheries requirements.
- Training in equipment procurement: specification, selection, operation and maintenance.
- Training in training methodologies.
- Training in how to establish an appropriate MCS system.
- “Preventative” MCS techniques, e.g., information, education and communications; school programmes; coast-watch programmes; and orientation to fisheries management and MCS.
- Data management for collection, analysis and systems management.
- Observer training, with a focus on data collection for both science and compliance.
- “Deterrent” MCS techniques, e.g., inspections in port and at sea; boarding, both non-hostile and hostile; etc.
- Cross-regional and inter-agency exchanges of information and knowledge.
- Exchange of licensing system information between countries.
- Cross-regional MCS exchanges for information sharing, training and operations knowledge.
- The development of a fisheries information exchange agreement between States.
- Inter- and intra-regional cooperation regarding migrating stocks, based on the FAO treaty.
- Assistance in the resolution of the linguistic problems with foreign vessels in the region. One suggestion being the requirement for an individual onboard with linguistic capability in the local language of the coastal State.
- Individual country MCS training.
- Closed seasons should be based on sound knowledge of spawning seasons of the species supporting the fishery.
- Difficulties faced in observing closed seasons in the region by different nations provided a case for regional cooperation.

- Regular meetings between scientists, fishers, the fishing industry and managers.
- Creating awareness among the fishers and the fishing industry.
- Conducting more biological investigations in respect of major fish species.
- Implementing stock assessment studies on an annual basis.
- Assessing “ghost fishing” and tackling it on a priority basis by all the countries.
- Establishing regional cooperation in training of scientists and technical personnel, possibly through systematic staff exchanges.
- Preliminary discussions to be initiated with the relevant Member States in the Region concerning the possible creation of a northwest Indian Ocean fisheries body as an appropriate framework for assessing stocks, promoting scientific and technical exchanges, MCS, training and promoting ecosystem management and sustainable development.
- Intensification of FAO’s work in the region in support of regional cooperation in the fields of fishery management, stock assessment, MCS and training.
- Holding of a technical consultation or working group which would aim at reviewing the various national – in the northwest Indian Ocean region – revenue policies for fisheries. Such a meeting should focus on the different ways in which the artisanal and industrial (irrespective of whether national or foreign) sectors could contribute to generate revenue for fisheries management purposes. It should also constitute an opportunity to learn from experiences in other parts of the world.

