

TECHNICAL PAPER 10.

LEGAL ISSUES RELATING TO MONITORING, CONTROL AND SURVEILLANCE

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1. INTRODUCTION

Monitoring, control and surveillance (MCS) is an integral part of fisheries management and conservation in the world, with the view of managing and conserving the fisheries resources in a sustainable manner, i.e., to assure long-term viability of the fishing industry.

The terminology – monitoring - control - surveillance – reflects the wide range of issues involved in providing for effective regulation of the fisheries sector. In brief, the process includes the gathering of information on the basis of which to adopt appropriate rules, and the effective implementation (and, if necessary, enforcement) of those rules.

According to the 1981 FAO Expert Consultation¹:

- (i) monitoring involves the “continuing requirement for the measurement of fishing effort characteristics and catches;”
- (ii) control concerns the “legal framework within which the resource must be exploited, i.e., management schemes;” and
- (iii) surveillance “describes those measures required to ensure compliance with the regulations formulated under (ii).”

The combined reference to all three terms has been generally adopted internationally in the past two decades, reflecting the wider approach now taken with respect to fisheries law enforcement. The consideration on which such an approach is based is that effective enforcement does not involve exclusively (nor necessarily) either the use of the latest technical equipment or the use of force, or both. Rather, effective enforcement is subject to the prior realistic consideration of the state of the fish resources (the concept of *monitoring*) and to the adoption of appropriate policy and legislation (the concept of *control*).

In the light of the definition provided in the previous paragraph, one may argue that the term "control" has the most "legal" connotation. The term implies that rules for the purposes of managing the fisheries resources have to be established and enforced. This is the role of "control." Obviously, other elements both within and beyond fisheries management also have an impact on fishing activities.

The purpose of this paper is to shed some light on a few legal issues relating to MCS, and reporting requirements and enforcement related issues in particular. The paper will also outline a few provisions of the principal international fisheries instruments concerning aspects of MCS.

The last section is dedicated to a few examples of regional cooperation in MCS.

2. REPORTING REQUIREMENTS AND COLLECTION OF DATA

2.1 National laws and regulations

The fishery managers must gain an understanding of the fishery and the various biological and economic forces which influences it, prior to taking options or decisions towards achieving goals of sustainable development of the fishery resources. Hence the importance of collecting relevant data.

With regard to fishing in internal waters, archipelagic waters, territorial waters and the EEZ, national laws often stipulate a requirement to provide data as a general condition of a fishing authorization (permit/licence), when it is issued by the coastal State. The required data may include reporting of catch (species, rejected species) and effort data, of position of fishing boats or areas where, and periods during which, fishing has been undertaken. As to the information that is likely to be required, a distinction is often made between national (artisanal/commercial) and foreign fishing fleets. Data collection in respect of local fishing activities is more and more often undertaken by the authorities in close collaboration with the fishing communities. Coastal States tend to ask for more detailed information from foreign fishing vessels than from local ones. However, two situations have further to be considered here: first, where the coastal State has granted the licence directly to the foreign vessel, and second, where the coastal State has granted the authorization to fish in its EEZ under a bilateral access agreement. In the former case, the provision of data is most often a condition of the licence, while in the second case the Flag State may have agreed that it will ensure that its fishing boats collect the required information. Similar

1. FAO. 1981. Report of the Consultation on Monitoring, Control and Surveillance. Dakar. CECAF/TECH/81/35.

to the access agreement situation is where the fishing occurs under a joint venture or charter arrangement. Depending on the local law, the fact that it may be difficult to distinguish between a local vessel and a foreign-flag vessel may affect the collection of information. Further, some countries have so-called "locally-based foreign fishing vessels" because the foreign vessel is committed to land all or most of its catch in a port in the coastal State. The same situation is likely to occur in charter arrangements. As a consequence, some confusion may arise (leading to possible double-, under- or non-reporting) as to whom will collect the data and, in other words, as to whom fishing vessels will need to report.

Provisions on reporting obligations imposed on high seas fishing vessels from the northwest Indian Ocean region have not been found in the limited fisheries laws and regulations available to the author from countries in the region. In other parts of the world, where a Flag State has issue a licence to fish on the high seas, the licensed fishing vessel is likely to be obliged to report to the Flag State.

In relation to this topic, it is worth recalling a few provisions that can be found in relevant international fisheries instruments. All of them recognize the need to collect and exchange timely data for both fisheries management and enforcement purposes.

2.2 The 1982 UN Convention on the Law of the Sea

Under the 1982 UN Convention on the Law of the Sea (UNCLOS) which entered into force in November 1994, and to which Egypt, Iran, Iraq, Kuwait, Oman, Pakistan, Saudi Arabia, the Sudan and Yemen have acceded of the countries in the region, the coastal State is required, taking into account the best scientific evidence available to it, to ensure through proper conservation and management measures that the maintenance of the living resources **in the EEZ** is not endangered by over-exploitation. (Art.61 (2)). This duty would at least imply that a coastal State is responsible for collecting appropriate data if such were not available.

With regard to foreign fishing in the EEZ, it is worth recalling that articles 62, 4 (e) and (i) of the 1982 UN Convention, which deal with utilization of living resources, allow coastal States to impose on "nationals of other States fishing in the EEZ terms and conditions established in the laws and regulations of the coastal State", which may specify, *inter alia*, the "information required of fishing vessels, including catch and effort statistics and vessel position reports" and relate to "terms and conditions relating to joint-ventures or other co-operative arrangements."

Further, the 1982 UN Convention attaches a particular importance to the exchange of information through international organizations. Indeed, Article 61 (5) reads that

"available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular basis through competent international organizations, whether sub-regional, regional or global, where appropriate and with participation by all States concerned, including States whose nationals are allowed to fish in the EEZ."

This is probably the most important provision concerning data for the purposes of conservation of living resources. There exists thus an obligation to exchange available information through competent international organizations, and that would imply the capacity on the part of such bodies to set data reporting standards for States to follow.

As with the EEZ, the 1982 UN Convention does not mandate any specific responsibility with regard to the collection of scientific data **in relation to the high seas**. The principal provision is Art.119 (2) which provides:

"Available scientific information, catch and fishing effort statistics, and other data relevant to the conservation of fish stocks shall be contributed and exchanged on a regular

basis through competent international organizations, whether sub-regional, regional or global, where appropriate and with participation by all States concerned."

This obligation reflects the contents of Article 61 concerning the EEZ, namely there is an obligation to exchange information, etc. For purely practical reasons, this would only be information provided by the Flag State. Article 119 (1) assumes that the States undertaking the fishing of these high seas stocks have access to the necessary data, or are able to disclose it in order to arrive at meaningful conservation measures.

2.3 The Code of Conduct for Responsible Fisheries

The Code of Conduct, adopted in 1995, has several provisions touching on fisheries data collection and exchange. The Code attaches importance to the collection of data by the States as well as by sub-regional and regional organizations. The respective responsibility and role of both entities are fully recognized. The most important articles are 7.3.4, 7.4 (Data Gathering and Management Advice), 8.13, and 12 (Fisheries Research).

In particular, Article 7.4.4 recommends that States

"ensure that timely, complete and reliable statistics on catch and fishing effort are collected and maintained in accordance with applicable international standards and practices and in sufficient detail to allow sound statistical analysis. Such data should be updated regularly and verified through an appropriate system. States should compile and disseminate such data in a manner consistent with any applicable confidentiality requirements."

Likewise, the Code of Conduct urges

"sub-regional or regional fisheries management organizations or arrangements should compile data and make them available, in a manner consistent with any applicable confidentiality requirements, in a timely manner and in an agreed format to all members of these organizations and other interested parties in accordance with agreed procedures." (Article 7.4.7)

2.4 The 1995 UN Fish Stocks Agreement

The 1995 UN Fish Stocks Agreement, which is not yet in force, contains a much more elaborate and sophisticated approach to the collection of data and imposes quite specific obligations on States. It is worth noting, however, that the UN Fish Stocks Convention only applies to highly migratory fish stocks and straddling fish stocks beyond areas of national jurisdiction, though some of the provisions also apply in areas under national jurisdiction (essentially the EEZ for the present purpose). In particular, the coastal State is to apply *mutatis mutandis* the general principles set out in Article 5 (General Principles), while Articles 6 (Precautionary Approach) and 7 (Compatibility of Conservation and Management Measures) shall apply to such areas.

Article 5 recalls "the duty" for coastal States and States fishing on the high seas "to cooperate in accordance with the Convention." This would include the various duties under the 1982 UN Convention to cooperate, including those duties relating to the exchange of data, limited though to the straddling fish stocks and the highly migratory fish stocks to which the Agreement applies. Paragraph (j) provides "the duty" for coastal States and States fishing on the high seas

"to collect and share, in a timely manner, complete and accurate data concerning fisheries activities on, *inter alia*, vessel position, catch of target and non-target species and fishing effort as set out in Annex I, as well as information from national and international research programmes."

A copy of Annex I of the UN Fish Stocks Agreement is attached as Annex A to this paper.

Under Article 6, States, in implementing the precautionary approach shall "develop data collection and research programmes to assess the impact of fishing on non-target and associated or dependent species and their environment" Where fishing is taking place on the high seas, this measure implies a primary responsibility for the Flag State. This responsibility is actually spelt out in Articles 14 and 18 of the Agreement. Annex I sets out very elaborate provisions concerning data. Curiously and importantly, the duties are imposed on both the Flag State and more generally on States. Hence Flag States have a specific duty, but coastal States are not exempted from collecting information.

These duties are further complemented by Articles 9 (Sub-regional and regional management organizations and arrangements) and 10 (Functions of sub-regional and regional management organizations and arrangements)

2.5 The 1993 FAO Compliance Agreement

The main provisions of the FAO Compliance Agreement relate 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. The Compliance Agreement imposes obligations on the Flag State to exchange information in respect of vessels. Article VI requires parties to make readily available to FAO certain information with respect to each fishing vessel entered on its record of fishing vessels. This information is to be circulated periodically to all parties, and on request, to any individual party, and, subject to any restrictions imposed by the Party concerned regarding the distribution of information, provide such information on request individually to any global, regional or sub-regional fisheries organization. Catch data is not included in the information but nevertheless, thanks to the circulation of information, the compliance agreement is likely to play an important role in helping to detect unauthorized fishing on the high seas.

2.6 General

In the light of the above, it is convenient to note that it is important to draft legislation appropriately in order to define explicitly who needs to collect data, what data needs to be collected, and to whom it needs to be forwarded.

One problem to be addressed is that of non-reporting by fishing vessels. This brings us to the following section on issues relating to enforcement.

3. ENFORCEMENT

3.1 National law

Within a proposed legal framework, to achieve its purpose, careful consideration must be given to the enforcement aspects. Enforcement has institutional and legal connotations and it will be important to bear in mind aspects relating to the powers of the inspection officers, to the offences, to the related sanctions (penal and administrative), to the role of the judiciary and to the fisheries administration, and last but not least the role of the fishers, etc.

A variety of facilities are used to exercise surveillance, including VMS, aircraft, fisheries patrol vessels and coastal radar, in addition to licensing, observers programmes, etc.. Effective enforcement does not *per se* involve the use of the latest technical equipment and/or the use of force. Enforcement *per se* may be hampered by a variety of factors, including the nature and diversity of control services and prosecution procedures, insufficient coordination among institutions (judicial and policy), absence of appropriate proceedings, the level of penalties (not comparable to the benefits resulting from illegal fishing), the lack of knowledge of relevant fisheries legislation, and, last but not least, badly worded legislation.

Types of behaviour that could be considered as seriously infringing the fisheries rules of a country could be the following:

A. Failure to cooperate with the authorities responsible for monitoring:

- Obstructing the work of fisheries inspectors in the exercise of their duties in inspecting.
- Obstructing the work of observers in the exercise of their duties in observing.
- Non-compliance with the applicable rules.
- Falsifying or destroying evidence which could be used in the course of inquiries or judicial proceedings.

B. Failure to observe the conditions to be met when fishing

- Fishing without a fishing licence, a fishing permit or any other authorization required for fishing and issued by a coastal State or a Flag State.
- Fishing under cover of an authorization which has been deliberately falsified or which does not match the data in the fishing vessel register.
- Falsifying, deleting or concealing the name, registration or markings of the fishing vessel.

C. Failure to comply during fishing operations

- Using prohibited fishing gear or fishing methods, or devices affecting the selectivity of gear.
- Deliberate fishing for prohibited species or stocks subject to a moratorium.
- Unauthorized fishing in a given zone or during a specific period.
- Failure to comply with the rules and procedures relating to transshipment and fisheries operations involving joint action by two or more vessels.

D. Failure to comply in respect of information for monitoring

- Falsifying data in documents.
- Tampering with the satellite-tracking system for determining the position of fishing vessels.
- Failure of the master of the fishing vessel of a third country or their representative to comply with the rules on the procedure for landing catches.

Adequate provisions of the fisheries legislation must allow a clear, easily accessible response to at least the following points:

- ⊘ Which actions and omissions constitute a violation of the law? Is there a difference between administrative and criminal violations? If so, is this made clear in the legislation, and are the respective consequences specified?
- ⊘ What are the penalties envisaged for such violations?
- ⊘ Who has the power to enforce fisheries legislation? (e.g., fisheries officers, but also, for example, the police, the navy or some of its divisions, any persons appointed by the minister for this purpose, etc.). The fisheries legislation should either list empowered people or refer to other sources providing in this regard (e.g., “such persons as may be from time to time appointed by the Minister.”).
- ⊘ What powers do enforcement officers have? In particular the legislation should specify:
 - *Powers of search:* Is a warrant always necessary? May routine searches be carried out or are inspections only allowed in the event of a suspected violation? May land-based

- controls be carried out? May vessels carrying out activities related to fisheries (e.g., support vessels) be inspected?
- *Powers of seizure:* May the officers seize any objects used in the commission of an offence presumed to have been carried out, including vessels? This could be a powerful deterrent (e.g., the crew might even not mind imprisonment, but vessel owners will usually be very concerned by possible forfeiture of the vessel).
 - *Powers of arrest:* May the officers arrest people? If so, under what circumstances? What procedure must they follow in case of arrest?
- ⊘ Are there provisions which tend to facilitate the exercise of powers of enforcement officers? For example, a provision prohibiting obstruction of officers carrying out their functions is fairly common, and it is usually punished by serious penalties. Powers of arrest may even be envisaged in case of resistance by offenders, even in countries, which do not envisage imprisonment as a penalty for fisheries violations.
- ⊘ Is compounding of offences allowed, and on what conditions? Compounding gives the possibility of paying a sum to avoid further prosecution for an offence, usually within the limit of the maximum fine prescribed for that offence. This possibility may on the one hand make enforcement more effective (avoiding lengthy court cases, with subsequent uncertainty of eventually cashing fines). On the other hand, it may offer the possibility for abuses.
- ⊘ Is there a power to suspend and cancel licences in the event of violations? This may be a more powerful deterrent to the commission of offences than the provision of a fine.
- ⊘ Are any discretionary powers given to officers as to the amount of penalties or the possibility of compounding? Is the extent of such discretion adequate?
- ⊘ Are any rewards given to officers who identify violations? Are the rewards in fact actually adequate? Giving incentives for the identification of violations reduces the risk of corruption, but may make enforcement officer's attitudes excessively harsh.
- ⊘ Is recourse always allowed to the law courts to challenge decisions taken administratively on violations? Judicial and administrative procedures must be spelled out clearly in the fisheries or other relevant legislation.

The legislation of the countries considered in this study varies greatly in the area of offences and penalties. Among the countries in the region, sanctions range from withdrawal of fishing licences to confiscation of gear (e.g., Iran; UAE), boarding and bringing into port (e.g., Pakistan) and fines (e.g., UAE; Yemen). Penalties range from envisaging imprisonment in every single case, to provision of a fine exclusively. The ample discretionary powers left to the authorities imposing sanctions may partly eliminate such differences, but there remain significant differences in the treatment a violator would receive in one country relative to another. As the same vessels often fish in the other country's EEZs, this is inadequate, not only from the point of view of equity, but also from a practical point of view, as it encourages vessels to play off one jurisdiction against another. Such differences could be overcome only if the countries of the region undertook to harmonize their legislation.

However, one could wonder how to assess enforcement performance. It should not necessarily be measured in terms of the number of illegal fishing vessels detected. Indeed, a decrease in detection of infringements could mean either compliance with rules or failure in detection by the authorities. Nor should effectiveness of enforcement initiatives be assessed on the basis of the number of irregularities detected per number of controls undertaken. The decision to control is indeed likely to be subject to the inspector's expectations and suspicions of some vessel's, organization's or individual's activities. Further, weather conditions (e.g., rough seas,

poor visibility) and other natural factors may affect the ability of inspectors to carry out random checks.

Actually, the question to pose is “What is likely to affect or influence individuals to comply with regulations and management measures?” And experience shows that the following factors may influence an individual's behaviour:

- Liaison between fishery managers and fishing industry.
- Level of surveillance – surveillance should increase the fisher's perception of probability of being caught operating illegally.
- Knowledge of the legislation.
- The optimal penalty calculated on the basis of factors such as the value of the vessel, the value of the fishery, etc.

The primary function of fines and other penalties is as a deterrent, rather than means of generating revenue. Though the surveillance and enforcement activities itself bear costs, these may or may not be offset by fines paid by vessels fishing illegally that have been detected and successfully prosecuted. There is an interaction between the level of the fine set and the amount spent on surveillance but, nevertheless, the principal potential source of revenue derives from the licence fees charged to the local fishing vessels, as appropriate, and foreign-flag vessels for access to the EEZ. However, it is necessary to find a balance between an attractive licence fee and the benefits of fishing illegally inside the EEZ of a coastal State. A key problem is how to influence the fisher's behaviour in fishing legally, illegally or outside the EEZ.

3.2 Enforcement and high seas fishing

The enforcement provisions of the 1995 UN Fish Stocks Agreement are contemplated in Part VI and, in many respects, significantly extend the boundaries of existing international law. Under Article 19, Flag States are required to ensure compliance and, to this end, to enforce conservation and management measures by investigating alleged violations and, if evidence so warrants, taking appropriate enforcement action. States are required to cooperate to ensure compliance with and enforcement of conservation and management measures for straddling fish stocks and highly migratory fish stocks, including by taking cooperative action to deter vessels from fishing on the high seas until such time as appropriate enforcement action is taken by the Flag State (Article 20).

Articles 21 and 22, “Sub-regional and regional cooperation in enforcement” and “Basic procedures for boarding and inspection pursuant to Article 21,” deal with boarding and inspection of fishing vessels on the high seas. Article 21 allows a State which is a member of a regional organization or a participant in a regional arrangement, to board and inspect any fishing vessel of a State Party to the 1995 UN Fish Stocks Agreement, even if it is not party to the organization or arrangement, for the purposes of ensuring compliance with measures relating to straddling or migratory stocks. This power may be exercised on the high seas or in the waters of the boarding State. States, through sub-regional and regional organizations and arrangements, are required to establish procedures for boarding and inspection. If, within two years of the date of adoption of the Agreement, any organization or arrangement has not established such procedures, boarding and inspection is to be carried out in accordance with the basic procedures contained in Article 22.

Where, following a boarding and inspection, there are clear grounds for believing that the vessel has contravened conservation and management measures, the inspecting State is required to notify the Flag State. The Flag State must respond within three days and must either take action to fulfil its obligations under Article 19 or authorize the inspecting State to investigate the violation. In the case of a serious violation, and where the Flag State fails to respond or fails or refuses to act, the inspecting State is given additional powers to bring the vessel into port for further investigation. Serious violations are defined in Article 21 by reference to a list of

potentially serious violations. A Flag State can resume control at any time during the procedures set out in Articles 21 and 22.

Article 22 provides the basic procedures for exercising the powers under Article 21 unless the regional fisheries body agrees on its own procedures. This Article requires Flag States to ensure that vessel masters cooperate, and if one refuses to do so, to suspend the vessel's authorization to fish and order the vessel to return to port.

Measures taken by a port State are dealt with in Article 23. It allows port States to inspect fishing vessels, which are voluntarily in its ports or at offshore terminals, as well as to take measures to prohibit landings and transshipment of catches collected in a manner that undermines international conservation and management measures on the high seas.

Even though less relevant for MCS purposes, it is appropriate to note that special provision is made in the Agreement for assistance to developing States so as to enable them to fulfil their duties under the Agreement. Thus, States are required to take into account the special requirements of developing States, in particular the vulnerability of such States which are dependent on the exploitation of living marine resources for nutritional needs, and the need to avoid adverse impacts on subsistence and artisanal fishermen. Article 25 requires States to cooperate to enhance the ability of developing States, particularly small island developing States, to conserve and manage straddling fish stocks and highly migratory fish stocks and to develop their own fisheries for such stocks. Specific assistance should address collection, reporting verification and analysis of catch data; stock assessment and scientific research; MCS; and enforcement.

The 1993 FAO Compliance Agreement contains no enforcement provisions as such. The principal obligation for countries adopting the agreement will be, first, to exercise its responsibility over registered vessels fishing on the high seas, and, second, to establish a record of those fishing vessels and to provide the information required under the Agreement with respect to those vessels.

Hence the principal benefit to the countries in general will contribute to the implementation of the Agreement. This benefit comes from the availability of information regarding vessels authorized to fish on the high seas, which will lead to an increased ability to identify those vessels fishing without authorization on the high seas. This information will also be very important in the light of the increased powers that countries will acquire when adopting the UN Fish Stocks Agreement. As these Agreements become increasingly effective, countries will benefit.

4. REGIONAL COOPERATION AND MCS

4.1 Reasons for regional or sub-regional cooperation in MCS

MCS is part of the overall process of fisheries management in other regions. It is recognized that regional collaboration in MCS is desirable, but not straightforward. There is an increasing mobility of world fishing fleets and the issue of compliance with fisheries conservation and management rules cannot simply be confined to one country: this issue requires a sub-regional, regional or global perspective, depending on the particular fishery. MCS of fishing activities as well as enforcement of fisheries conservation and management measures throughout an EEZ is a major problem that few nations have been able to cope with properly.

To meet the challenge of protecting fisheries resources at a regional or sub-regional level, cooperation towards an effective MCS programme calls for an ongoing and progressive harmonization of fisheries laws and regulations of the countries bordering a relevant region. This philosophy has always been strongly supported by FAO, and is now well advanced in a number of regions, notably the Caribbean, South Pacific, and West Africa. This process should focus in

particular on those rules regulating access to fisheries resources, regulating the reporting of data, the powers of the enforcement officers and inspectors, as well as on the scale of offences and related fines and penalties. Harmonization can facilitate compliance with fisheries laws, in particular if violations have in region-wide implications. It may thus minimize opportunity for fraud. It may also minimize opportunity for fishers to play one country off against another in order to obtain the most favourable treatment. From a legal point of view, though, a major constraint may arise from the presence of different legal systems, such as Roman-Dutch systems versus Common Law systems. This may lead to important variations in the manner in which rules are enforced, in the nature of prosecution systems and in the requirements for proving evidence.

Harmonization should not imply a sacrifice of a country's sovereignty; rather it implies that rules are worded in similar broad terms. The crucial requirement is that the provisions are compatible. The responsibility for enacting conservation and management fisheries rules and enforcing them remains with the States.

A draft Agreement for the establishment of a regional fishery commission to replace the Gulfs Committee of the former Indian Ocean Fisheries Commission was to be submitted to the FAO Conference in November 1999. The aim of the Commission would be to promote the development, conservation, rational management and best utilization of living marine resources, as well as the sustainable development of aquaculture in the northwest Indian Ocean region. In principle, to this effect, the Commission would have the responsibility "to formulate and recommend ... appropriate measures for regulating fishing methods and fishing gear, for prescribing minimum fish size, for establishing open and closed fishing seasons and areas, and for regulating the amount of total catch and fishing effort and their allocation among Members." The Commission would group representatives from eight countries from the region, namely the State of Bahrain, Iraq, the State of Kuwait, the Islamic Republic of Iran, the Sultanate of Oman, the State of Qatar, Saudi Arabia and UAE. It is worth noting, however, that this possible forthcoming Commission would not cover the area constituted by the Arabian Sea, the Red Sea and the Gulfs.

4.2 Cases of regional collaboration in MCS

This section intends to highlight how MCS is part of the overall process of fisheries management in the South Pacific area and in West Africa.

For other regions, the South Pacific provides an excellent example of the benefits of regional cooperation in MCS. The regional cooperation has significantly enhanced the effectiveness of individual MCS programmes at a relatively low cost. The level of compliance with national fisheries laws and regulations has increased substantially because of the adoption of coordinated policies towards MCS. Likewise, the Regional Register and the development of a regional observer programme has contributed to gaining detailed information on vessels, vessel owners, operators and masters, as well as important scientific data.

In contrast, the West Africa case study shows the many basic goals that can be achieved through more straightforward, less politically-sensitive, initiatives, such as the establishment of a regional vessel register, the adoption of harmonized fisheries laws and regulations, and the establishment of a regional coordinating mechanism for the exchange of information.

4.2.1 The South Pacific and the South Pacific Forum Fisheries Agency (FFA)

Most of the countries in the South Pacific are classified as small-island developing states and lack the physical enforcement capability needed to apprehend foreign offenders while still in the 200 n.mi. EEZ, and then to prosecute them by conventional legal processes. Consequently, strong emphasis has been placed on sub-regional and regional cooperation in MCS through regional institutions such as the FFA, which was established in 1979 in response to a need for increased regional cooperation in fisheries matters. Most of the FFA Member States are parties to the 1982

UNCLOS Convention, and all of them have declared 200 n.mi. EEZs or fisheries zones. FFA Member States are Australia, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Marshall Islands, Nauru, New Zealand, Niue, Palau, Papua New Guinea, Solomon Islands, Tonga, Tuvalu, Vanuatu and Western Samoa.

The most important commercial fisheries in the South Pacific are the tuna fisheries of the central and western Pacific, based on skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*), albacore (*T. alalunga*) and bigeye (*T. obesus*). FAO statistics indicate that some 42% of the total world tuna catch is taken from the South Pacific region (including Indonesia and the Philippines) (FAO Statistical Area 71).

The declaration of 200-n.mi. EEZs or fisheries zones in the early 1980s enabled island States in the South Pacific to claim jurisdiction over the abundant stocks of highly migratory tunas in the region, which are for the most part harvested by distant-water-fishing-nation (DWFN) fleets. The western tropical Pacific region, which encompasses the area served by the FFA, covers an area of approximately 24.8 million km². The combined EEZs of the 14 island States that are members of the FFA cover an area of around 20.1 million km², or 81% of the total area. In contrast, the total land area of these island countries is 0.527 million km², or 2% of the total, the remaining 19% of the total area being high seas.

FFA was established in 1979, primarily as a consultative and advisory body, in response to a need for increased regional cooperation in fisheries matters. The primary purpose of FFA is to assist Member States in the exercise of their sovereign rights of management and to promote regional cooperation. A particular feature resides in the fact that the FFA Convention explicitly excludes DWFNs from membership. However, it recognizes that effective cooperation for the conservation and optimum utilization of the highly migratory species of the region will require the establishment of additional international machinery to provide for cooperation between coastal States in the region and all States involved in harvesting the resource. Funding for FFA comes from contributions by Member States and extra-budgetary funds from international aid donors. Core FFA activities include an economic and marketing programme, a legal programme, an information technology programme and an MCS programme.

The regional fisheries surveillance programme was established at FFA in 1986, in order to promote regional coordination and cooperation in fisheries surveillance and enforcement, and since 1992 has emerged as one of FFA's core and most important activities. The primary objective of the programme is to enhance the MCS capabilities of FFA Member States. This is to be achieved through:

- ∄ regional coordination of fisheries surveillance and enforcement operations;
- ∄ collating reports and information on activities of foreign fishing vessels and other appropriate information for distribution to Member States; and
- ∄ provision of technical assistance to governments in areas such as:
 - provision of information on alternative surveillance equipment, systems and arrangements;
 - evaluation of fisheries surveillance requirements;
 - evaluation of technical, legal and economic aspects of fisheries surveillance capacity and efficiency; and
 - preparation of manuals for fisheries surveillance and enforcement staff.

The programme has four sub-programmes, namely: Regional Register; Observation and Monitoring; Vessel Monitoring Systems (VMS); and the Maritime Surveillance Communications Network.

The regional collaboration led to:

- ∓ coordination of conventional air and surface surveillance, with the assistance of Australia and New Zealand;
- ∓ national and regional observer programmes, which provide specialized training for observers, and collect, analyse and disseminate observer data;
- ∓ training programmes and manuals for all those involved in the prosecution of fisheries offences, including investigators and prosecutors;
- ∓ sub-regional and regional consultations of legal experts to discuss issues of interest, one of which has led to the Niue Treaty on Cooperation in Fisheries Surveillance and Law Enforcement in the South Pacific Region;²
- ∓ harmonization of fisheries legislation, in particular with regard to the legal powers given to enforcement officers in each jurisdiction, to the scale of offences, and terms and conditions of access for foreign fishing vessels;³
- ∓ a regional register of foreign fishing vessels in order to keep track of all foreign fishing vessels active in the FFA Region. Registration is an annual requirement and the registration year runs from 1 September to 31 August.⁴ Before any foreign fishing vessels can be licensed by any FFA Member State, it must be in good standing on the Regional Register; and
- ∓ the promotion of regional standards for VMS. Discussions with a view of identifying possible solutions to legal problems relating to the use of VMS as a management and enforcement tool are currently ongoing.⁵

Additional MCS developments are likely to be guided by the 1995 UN Fish Stocks Agreement, as this agreement contains far-reaching provisions in relation to enforcement, including provisions relating to boarding and inspection on the high seas and port State control.⁶

4.2.2 West Africa and the Sub-Regional Fisheries Commission

The Convention establishing the Sub-Regional Fisheries Commission (West Africa) (SRFC) dates back to 1985.⁷ The Commission is competent to deal with fisheries matters within its area of

2. The Niue Treaty was adopted by the FFA Member States at Alofi, Niue, in May 1992, and entered into force in May 1993. It was elaborated with the assistance of the FAO Legal Office.

3. See the *Agreement on Harmonised Minimum Terms and Conditions of Access*. The focus is in particular on terms and conditions relating to the marking of fishing vessels, the report details of catch and position, the use of standardized catch and effort logsheets; requests for observers on board, the appointment of agents to respond to legal process, as well as transshipment matters.

4. In the 1995/96 registration year, some 1 400 fishing and support vessels were on the Register.

5. Two VMS Legal Workshops have been convened under the auspices of FFA, in September 1997 and February 1998. The first looked into the possible options available for requiring legally the installation and utilization of VMS, and the second considered the legal issues related to the "post-installation" period, such as the use of VMS information for enforcement and for management purposes. Both Legal Workshops were attended by a representative of the FAO Legal Office.

6. Since 1994 there has been underway a consideration of an arrangement with respect to the highly migratory species (tuna stocks) in the South Pacific. Meetings were held at Honiara (the Multilateral High-level Conference on South Pacific Tuna Fisheries. Honiara, Solomon Islands, December 1994); at Majuro (Second High-level Conference on the Conservation and Management of Highly Migratory Fish Stocks in the Western Central Pacific. Majuro, Republic of the Marshall Islands, June 1997); and Tokyo (Multilateral High-Level Conference on the conservation and management of highly migratory fish stocks in the western and central Pacific, Third Session, Tokyo, Japan, 22-26 June 1998).

The meetings were attended by FFA Member States, DWFNs such as Japan and the USA, and other observers for international fisheries organizations. The broad objective of the meetings is to work towards an arrangement under the 1995 UN Fish Stocks Agreement. A target date of June 2000 has been set for completion of the work.

7. Member States of the SRFC currently are Cape Verde, the Gambia, Guinea Bissau, Guinea, Mauritania and Senegal.

competence.⁸ Its main objective is to harmonise the long-term policies of Member-States in the preservation, conservation and exploitation of fisheries resources for the benefit of their respective populations. It provides a general framework for its Member States to harmonize fisheries legislation and cooperate in MCS matters.

Substantial demersal and pelagic fish stocks can be found in the region and traditionally there has been a significant number of foreign vessels fishing high-value species such as shrimp, cephalopods and hake. In some countries, competition occurs between industrial fishing fleets and the important artisanal fishing sector.

Over the past 2 decades there has been an increasing awareness in the sub-region of the benefits of cooperation in fisheries matters, and in particular in MCS matters. The objectives of cooperation include the harmonization of fisheries laws and regulations, as well as the development of cooperation in matters of surveillance and research.

From 1987 onwards, SRFC adopted several legal instruments, including a convention relating to sub-regional cooperation in the exercise of the right of maritime hot pursuit, and a protocol relating to certain practical measures for the coordination of surveillance operations. As a result of technical meetings, SRFC has also endorsed reference documents on the status of observers and the marking of fishing vessels. The international legal instruments have not yet come into force but, in both cases, several countries, recognizing the importance of cooperation and working towards common policies in the areas of common concern, have started to implement a number of the provisions.

The regional collaboration in MCS focuses on the following areas:

- ≠ harmonization of laws and regulations in order to ensure conservation and management measures which are compatible with each other within different Member States and to develop similar enforcement powers and scale of penalties.⁹ As a result of the efforts being developed in this area, the licensing systems and procedures as well as observers-related rules¹⁰ and the surveillance procedures are similar¹¹;
- ≠ standardization of the marking of fishing vessels in accordance with FAO's Standard Specifications for the Marking and Identification of Fishing Vessels;
- ≠ establishment of a sub-regional register of fishing vessels. The national legislation of five countries in the sub-region has provided for national registers. Efforts are being developed towards the adoption of a uniform vessel registration form and a sub-regional register. The disparity of the data collected is still substantial; and
- ≠ coordination of sub-regional air surveillance¹² with a view to collecting air surveillance data and assisting countries in taking appropriate steps in case of infringements.

Attempting to cooperate at sub-regional level in MCS in West Africa is a very challenging task. Apart from the significant cultural, geographical and political differences, additional

8. The area of competence is geographically not specifically defined, but the Convention contains references to the "Sub-region and the EEZs" of the Contracting Parties.

9. See also Report of the Seminar on the Harmonization of Fisheries Legislation of the States Members of the Sub-Regional Fisheries Commission, Senegal, Dakar, 28 November - 2 December 1994. Field Document No.7 of Project [FAO] GCP/RAF/302/EEC.

10. Report of the Technical Consultation on Fisheries Observers in West Africa. Dakar, Senegal, 11-13 December 1995. Field Document No.34 of Project [FAO] GCP/RAF/302/EEC.

11. On 14 July 1993, SRFC adopted a Convention regarding the determination of conditions of access to and exploitation of fisheries resources off the coasts of SRFC Member States.

12. See Lux Development Project on Sub-Regional Air Surveillance, based in the Gambia.

obstacles are limiting progress in areas of co-operation, such as the various legal systems (common law, civil law and Portuguese system); language; diversity of control services and prosecution procedures; and the absence of common software to handle data. SRFC must continue to build on what has been started and show determination in the implementation of common policy decisions towards cooperation in MCS.

5. CONCLUSION

MCS is a key component in fisheries management and it deserves a national policy at country level as well as a common policy at regional or sub-regional level.

A critical requirement for enabling effective MCS is the establishment of a data collection policy. Such policy needs to define the contents of the data required, the manner in which the data will be collected and who will be responsible for respectively providing and collecting data (officers, Flag State, coastal State and/or fishing vessel owner, etc.) Obviously such policy ought to be translated into in carefully drafted rules under a fisheries law.

Legislation is a major component of the control aspect of MCS. However, fisheries laws and regulations need to be properly implemented to attain their objectives. This requires the insertion of an enforcement section within a fisheries law, which is drafted in such a manner as to contribute positively to the credibility of all those involved in enforcement. Additional crucial elements towards successful enforcement include training and awareness-creating initiatives for observers, for officers involved in prosecution as well cooperation between institutions involved in the enforcement.

Effective regional MCS requires the establishment of a coordinating mechanism, with well-defined objectives and a clear work plan. It is also true that the working of MCS cooperation is also due to a strong political commitment to regional cooperation in MCS and to making it work. A situation is unlikely to improve unless political resistance is overcome, and systems put in place to collect data, to elaborate and enforce management measures. However, there are areas for collaboration – such as harmonization of laws and regulations – which could constitute easily a first modest step for action towards regional collaboration in MCS.

ANNEX A TO TECHNICAL PAPER 10

Extract from

AGREEMENT FOR THE IMPLEMENTATION OF THE PROVISIONS OF THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA OF 10 DECEMBER 1982 RELATING TO THE CONSERVATION AND MANAGEMENT OF STRADDLING FISH STOCKS AND HIGHLY MIGRATORY FISH STOCKS

ANNEX I STANDARD REQUIREMENTS FOR THE COLLECTION AND SHARING OF DATA

Article 1 General principles

1. The timely collection, compilation and analysis of data are fundamental to the effective conservation and management of straddling fish stocks and highly migratory fish stocks. To this end, data from fisheries for these stocks on the high seas and those in areas under national jurisdiction are required and should be collected and compiled in such a way as to enable statistically meaningful analysis for the purposes of fishery resource conservation and management. These data include catch and fishing effort statistics and other fishery-related information, such as vessel-related and other data for standardizing fishing effort. Data collected should also include information on non-target and associated or dependent species. All data should be verified to ensure accuracy. Confidentiality of non-aggregated data shall be maintained. The dissemination of such data shall be subject to the terms on which they have been provided.

2. Assistance, including training as well as financial and technical assistance, shall be provided to developing States in order to build capacity in the field of conservation and management of living marine resources. Assistance should focus on enhancing capacity to implement data collection and verification, observer programmes, data analysis and research projects supporting stock assessments. The fullest possible involvement of developing State scientists and managers in conservation and management of straddling fish stocks and highly migratory fish stocks should be promoted.

Article 2 Principles of data collection, compilation and exchange

The following general principles should be considered in defining the parameters for collection, compilation and exchange of data from fishing operations for straddling fish stocks and highly migratory fish stocks:

- (a) States should ensure that data are collected from vessels flying their flag on fishing activities according to the operational characteristics of each fishing method (e.g., each individual tow for trawl, each set for long-line and purse-seine, each school fished for pole-and-line and each day fished for troll) and in sufficient detail to facilitate effective stock assessment;
- (b) States should ensure that fishery data are verified through an appropriate system;

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- (c) States should compile fishery-related and other supporting scientific data and provide them in an agreed format and in a timely manner to the relevant sub-regional or regional fisheries management organization or arrangement where one exists, or States should cooperate to exchange data either directly or through other cooperative mechanisms as decided;
- (d) States should agree, within the framework of sub-regional or regional fisheries management organizations or arrangements, or otherwise, on the specification of data and the format in which they are to be provided, in accordance with this Annex and taking into account the nature of the stocks and the fisheries for those stocks in the region. Such organizations or arrangements should request non-members or non-participants to provide data concerning relevant fishing activities by vessels flying their flag;
- (e) such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement; and
- (f) scientists of the Flag State and from the relevant sub-regional or regional fisheries management organization or arrangement should analyse the data separately or jointly, as appropriate.

Article 3 Basic fishery data

1. States shall collect and make available to the relevant sub-regional or regional fisheries management organization or arrangement the following types of data in sufficient detail to facilitate effective stock assessment in accordance with agreed procedures:
- (a) time series of catch and effort statistics by fishery and fleet;
 - (b) total catch in number, nominal weight, or both, by species (both target and non-target) as is appropriate to each fishery. [Nominal weight is defined by the Food and Agriculture Organization of the United Nations as the live-weight equivalent of the landings];
 - (c) discard statistics, including estimates where necessary, reported as number or nominal weight by species, as is appropriate to each fishery;
 - (d) effort statistics appropriate to each fishing method; and
 - (e) fishing location, date and time fished and other statistics on fishing operations as appropriate.
2. States shall also collect where appropriate and provide to the relevant sub-regional or regional fisheries management organization or arrangement information to support stock assessment, including:
- (a) composition of the catch according to length, weight and sex;
 - (b) other biological information supporting stock assessments, such as information on age, growth, recruitment, distribution and stock identity; and
 - (c) other relevant research, including surveys of abundance, biomass surveys, hydro-acoustic surveys, research on environmental factors affecting stock abundance, and oceanographic and ecological studies.

Article 4 Vessel data and information

1. States should collect the following types of vessel-related data for standardizing fleet composition and vessel fishing power and for converting between different measures of effort in the analysis of catch and effort data:
- (a) vessel identification, flag and port of registry;

- (b) vessel type;
 - (c) vessel specifications (e.g., material of construction, date built, registered length, gross registered tonnage, power of main engines, hold capacity and catch storage methods); and
 - (d) fishing gear description (e.g., types, gear specifications and quantity).
2. The Flag State will collect the following information:
- (a) navigation and position fixing aids;
 - (b) communication equipment and international radio call sign; and
 - (c) crew size.

Article 5 Reporting

A State shall ensure that vessels flying its flag send to its national fisheries administration and, where agreed, to the relevant sub-regional or regional fisheries management organization or arrangement, logbook data on catch and effort, including data on fishing operations on the high seas, at sufficiently frequent intervals to meet national requirements and regional and international obligations. Such data shall be transmitted, where necessary, by radio, telex, facsimile or satellite transmission or by other means.

Article 6 Data verification

States or, as appropriate, sub-regional or regional fisheries management organizations or arrangements should establish mechanisms for verifying fishery data, such as:

- (a) position verification through vessel monitoring systems;
- (b) scientific observer programmes to monitor catch, effort, catch composition (target and non-target) and other details of fishing operations;
- (c) vessel trip, landing and transshipment reports; and
- (d) port sampling.

Article 7 Data exchange

1. Data collected by Flag States must be shared with other Flag States and relevant coastal States through appropriate sub-regional or regional fisheries management organizations or arrangements. Such organizations or arrangements shall compile data and make them available in a timely manner and in an agreed format to all interested States under the terms and conditions established by the organization or arrangement, while maintaining confidentiality of non-aggregated data, and should, to the extent feasible, develop database systems which provide efficient access to data.

2. At the global level, collection and dissemination of data should be effected through the Food and Agriculture Organization of the United Nations. Where a sub-regional or regional fisheries management organization or arrangement does not exist, that organization may also do the same at the sub-regional or regional level by arrangement with the States concerned.

ANNEX B TO TECHNICAL PAPER 10.

Extract from

AGREEMENT TO PROMOTE COMPLIANCE WITH INTERNATIONAL CONSERVATION AND MANAGEMENT MEASURES BY FISHING VESSELS ON THE HIGH SEAS

Article VI Exchange of Information

1. Each Party shall make readily available to FAO the following information with respect to each fishing vessel entered in the record required to be maintained under Article IV:
 - (a) name of fishing vessel, registration number, previous names (if known), and port of registry;
 - (b) previous flag (if any);
 - (c) International Radio Call Sign (if any);
 - (d) name and address of owner or owners;
 - (e) where and when built;
 - (f) type of vessel;
 - (g) length.
2. Each Party shall, to the extent practicable, make available to FAO the following additional information with respect to each fishing vessel entered in the record required to be maintained under Article IV:
 - (a) name and address of operator (manager) or operators (managers) (if any);
 - (b) type of fishing method or methods;
 - (c) moulded depth;
 - (d) beam;
 - (e) gross register tonnage;
 - (f) power of main engine or engines.
3. Each Party shall promptly notify to FAO any modifications to the information listed in paragraphs 1 and 2 of this Article.
4. FAO shall circulate periodically the information provided under paragraphs 1, 2, and 3 of this Article to all Parties, and, on request, individually to any Party. FAO shall also, subject to any restrictions imposed by the Party concerned regarding the distribution of information, provide such information on request individually to any global, regional or sub-regional fisheries organization.
5. Each Party shall also promptly inform FAO of -
 - (a) any additions to the record;
 - (b) any deletions from the record by reason of -

- (i) the voluntary relinquishment or non-renewal of the fishing authorization by the fishing vessel owner or operator;
 - (ii) the withdrawal of the fishing authorization issued in respect of the fishing vessel under paragraph 8 of Article III;
 - (iii) the fact that the fishing vessel concerned is no longer entitled to fly its flag;
 - (iv) the scrapping, decommissioning or loss of the fishing vessel concerned; or
 - (v) any other reason.
6. Where information is given to FAO under paragraph 5 (b) above, the Party concerned shall specify which of the reasons listed in that paragraph is applicable.
7. Each Party shall inform FAO of
 - (a) any exemption it has granted under paragraph 2 of Article II, the number and type of fishing vessel involved and the geographical areas in which such fishing vessels operate; and
 - (b) any agreement reached under paragraph 3 of Article II.
8.
 - (a) Each Party shall report promptly to FAO all relevant information regarding any activities of fishing vessels flying its flag that undermine the effectiveness of international conservation and management measures, including the identity of the fishing vessel or vessels involved and measures imposed by the Party in respect of such activities. Reports on measures imposed by a Party may be subject to such limitations as may be required by national legislation with respect to confidentiality, including, in particular, confidentiality regarding measures that are not yet final.
 - (b) Each Party, where it has reasonable grounds to believe that a fishing vessel not entitled to fly its flag has engaged in any activity that undermines the effectiveness of international conservation and management measures, shall draw this to the attention of the Flag State concerned and may, as appropriate, draw it to the attention of FAO. It shall provide the Flag State with full supporting evidence and may provide FAO with a summary of such evidence. FAO shall not circulate such information until such time as the Flag State has had an opportunity to comment on the allegation and evidence submitted, or to object, as the case may be.
9. Each Party shall inform FAO of any cases where the Party, pursuant to paragraph 5 (d) of Article III, has granted an authorization notwithstanding the provisions of paragraph 5 (a) or 5 (b) of Article III. The information shall include pertinent data permitting the identification of the fishing vessel and the owner or operator and, as appropriate, any other information relevant to the Party's decision.
10. FAO shall circulate promptly the information provided under paragraphs 5, 6, 7, 8 and 9 of this Article to all Parties, and, on request, individually to any Party. FAO shall also, subject to any restrictions imposed by the Party concerned regarding the distribution of information, provide such information promptly on request individually to any global, regional or sub-regional fisheries organization.
11. The Parties shall exchange information relating to the implementation of this Agreement, including through FAO and other appropriate global, regional and sub-regional fisheries organizations.