



CARIBBEAN REGIONAL FISHERIES MECHANISM SECRETARIAT

PROJECT REPORT

**REVIEW OF THE CURRENT SITUATION ON IUU FISHING
AND MONITORING, CONTROL AND SURVEILLANCE (MCS)
IN THE FISHERIES SECTOR OF THE CARICOM / CARIFORUM
REGION**

AND

**A STRATEGY FOR ENHANCING THE EFFECTIVENESS OF
MCS AND A PROPOSAL FOR A PROJECT TO ENHANCE
THE EFFECTIVENESS OF MCS**

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**A Strategy for enhancing the effectiveness of
MCS and a proposal for a project to enhance
the effectiveness of MCS**

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ACRONYMS

CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum
CECAF	Fisheries Committee for the Eastern Central Atlantic
COFI	(FAO) Committee on Fisheries
CRFM	Caribbean Regional Fisheries Mechanism
EEZ	Exclusive Economic Zones
FAO	Food and Agriculture Organisation
ICCAT	International Commission for the Conservation of Atlantic Tunas
IUU	Illegal, Unreported and Unregulated (Fishing)
IPOA	International Plan of Action
MCS	Monitoring Control and Surveillance
MSY	Maximum Sustainable Yield
NPOA	National Plan of Action
OECS	Organisation of Eastern Caribbean States
RFMO	Regional Fisheries Management Organisation
SADC	South African Development Community
SIDS	Small Island Developing States
UNCLOS	United Nations Convention on the Law of the Sea
WECAFC	West Central Atlantic Fisheries Commission

Executive Summary

Illegal, unreported and unregulated (IUU) fishing poses significant problems for managing fisheries resources globally. A system for monitoring, controlling and surveillance (MCS) is a vital and effective tool in managing these resources. In CARIFORUM / CARIFORUM countries, the ability to effectively manage living resources is determined in large measure by their ability to conduct appropriate MCS activities. But because of severe financial and human resource constraints many Member States do not have the capacity to fully monitor the activities of the industry, nor the necessary up to date legislation to regulate the industry, nor the hardware to conduct surveillance and enforcement at sea.

In reviewing the IUU situation and the status of MCS in the region, the context must include the ocean environment, the nature of the fisheries in the region and its socio-economic importance, as well as the extent of the maritime zones available to the states. It must be recognized that the region is made up of SIDs and that situation presents certain problems for MCS as it encourages IUU fishing.

The global response to the problems of IUU fishing is stimulated by the provisions of UNCLOS that provide the framework for countries to exercise effective fisheries management. Further development of the framework is found in the mandatory instruments such as the United Nations Fish Stocks Agreement 1982, the FAO Compliance Agreement and such voluntary instruments as the FAO Code of Conduct for Responsible Fisheries and the resulting International Plans of Action.

The nature of the fisheries of the region, which stretches from Suriname to Belize and The Bahamas, is varied. It ranges from the shrimp and ground fish stocks off Guyana and Suriname to the pelagic stocks off Trinidad and Tobago. The region also contains reef species of the Eastern Caribbean, and the conch and lobster of Jamaica, Bahamas and Belize. Meanwhile the migratory pelagic such as wahoo, tuna, flying fish and dolphin fish roam through the area.

The magnitude and extent of the stocks in the Caribbean Sea are not well known. However, the estimates in 1970 of MSY for demersal, pelagic and shellfish resources ranged between 400,000 and 800,000 tonnes. Scientific assessments of stocks in the CARICOM/CARIFORUM region have revealed high levels of exploitation resulting in a number of fully fished species, such as shrimp, spiny lobsters, conch, reef species and some small pelagics such as flying fish.

The fishing industry makes an important contribution to development and the attainment of food security in the region. It is a source of animal protein for the population providing 18.8% of total food production. In 2000, marine production was 172 thousand tonnes, or 0.2% of the world total. Against a background of the world average per capita consumption of 16.3 Kg, in 2003, consumption was as high as 59.8 Kg in Guyana.

Two major indicators of the importance of the fishing industry to the region are the employment opportunities that the industry provides in the primary and secondary sectors, and the contribution it makes to the economy of each country. The fisheries sector in the Caribbean

provides stable full-time direct employment for more than 120,000 fishers and indirect employment opportunities for thousands of others in the processing, marketing, and support services. In terms of contribution to the economy, it is held by some experts that contribution to GDP is not a true measure of the importance of the industry. However, the figures do indicate the important contribution that fisheries make, and those figures vary throughout the region as they range from 7.2 % in Belize to 0.02% in Trinidad and Tobago. An additional indicator is the level of exports, in that fisheries exports in 2000 totaled US \$211 million, representing 0.4% of the world total.

IUU fishing is particularly threatening for fisheries management in developing states. Efforts to deal with the problem are hampered by a number of factors including the large area of ocean space relative to land area, the migratory nature of fleets and fisheries resources, the lack of financial and technical resources and the lack of skilled manpower.

The extent of IUU fishing in the region is not quantified. At the national level, there is not sufficient capacity to assess the extent, but in all states, the fisheries authorities reported that IUU fishing is considered significant as for example, the poaching of conch and lobster stocks in Jamaica and The Bahamas. In order to develop MCS systems to combat IUU fishing, certain factors must be considered. Among others, they include the following critical issues facing fisheries administrations:

Monitoring:

- (i) Information on IUU vessels, catch rates, fishers, fishing effort and scientific information on the stocks is not available at the regional level.
- (ii) The capacity of Flag States to effectively monitor their flagged vessels operating on the High Seas must be improved.
- (iii) Capacity at the national level within fisheries administrations for carrying out the MCS functions is very low.

Control:

- (i) In most instances legislation or related regulations concerning fisheries management and development in the region needs to be updated in accordance with international agreements and guidelines.
- (ii) The prospect of a Common Fisheries Policy and Regime for CARICOM States suggests that there must be an appropriate organization for its implementation. This may also require harmonization of legislation throughout the region, which would create an enabling environment for increased effectiveness of surveillance and enforcement.
- (iii) Non-compliance by national and foreign fishers with the conditions of their licences. This is due to the inadequacy of the enforcement mechanisms, as well as awareness that would engender voluntary compliance.

Surveillance and Enforcement:

- (i) In many instances the limits of the maritime zones, especially EEZs, are yet to be determined. This issue has implications for enforcement of jurisdictions.
- (ii) There is a shortage of appropriate surface and air surveillance units in most countries. Some Coast Guard organizations face severe financial and human resource constraints that limit the extent of operation and serviceability of their existing vessels.
- (iii) MCS for illegal fishing is not given as high a priority as for example, counter-narcotics operations, especially in cases where the funding for equipment and operations is provided by external sources.
- (iv) There is need to utilize available electronic surveillance technologies, for example VMS. This would require changes in policy and legislation as they relate to jurisdiction over the marine spaces and the vessels, confidentiality of fishing information that has commercial value and admissibility of such forms of evidence in the courts.

In developing a strategy for enhancing the effectiveness of MCS in the region, the objectives must include the following:

1. Establishing an integrated cost-effective monitoring, control, surveillance and enforcement system nationally and regionally, thereby: (a) increasing the level of compliance with fisheries and related regulations; (b) raising the cost of operations of IUU fishing; and, (c) reducing the relative benefits to illegal fishers.
2. Making management more efficient as inefficient domestic fisheries management works as a driver for IUU fishing.
3. Establishing effective penalties as a deterrent to IUU fishing. In most countries, the current level of penalties and the risk of being apprehended is not generally a sufficient deterrent to IUU.

The strategy for effective MCS at the national and regional levels involves a two-pronged, parallel approach:

- (i) The preventive approach to encourage voluntary compliance through a process of education and awareness to obtain support for the fisheries management strategies.
- (ii) The deterrent / enforcement approach to ensure compliance by fishers and other stakeholders who resist the regulatory regime.

The elements of these approaches will form part of the National Plans of Action (NPOA) of Member States. They include:

- (a) Enacting appropriate legislation;
- (b) Institution of accurate verifiable data collection regimes;
- (c) Enhancement of community/fisher folk awareness and understanding of management practices and MCS through public education and sensitization campaigns;
- (d) Continued development of participatory management approaches that promote the concept of joint stewardship between government, fishers and industry;
- (e) Verification of voluntary compliance through fisheries liaison/extension officers;
- (f) Inspection of vessels, processing plants and other facilities;
- (g) Investigation of infractions;
- (h) Surveillance, both onshore, offshore; and
- (i) Arrests, sanctions and administrative penalties

Other aspects of the strategy include the use of cost effective “no force” tools such as:

- (a) Establishment of national or regional registry systems where the threat of removal of “good standing” is often enough to ensure compliance.
- (b) Implementation of Port State control mechanisms whereby there would be a regional agreement for the inspection and enforcement of fisheries legislation on any vessels operating in the entire region. This is an effective, low cost control using the potential of any country in the region to detain non-compliant vessels and crews as a counter-incentive to non-compliance with respected international maritime principles, be they for fisheries, pollution control or safety-at-sea.
- (c) Implementation of Flag State responsibility for the activities of vessels flying its flag.
- (d) Implementation of the use of observers without enforcement powers, which, while being effective for data collection, has also been found to be a deterrent to non-compliant activities.
- (e) The development of Vessel Monitoring Systems (VMS) for timely catch and position information. Application of these technologies can be cost effective, and where they can be applied appropriately, they can be of little cost to the State other than the investment of time for coordination because industry should bear the cost of establishing the system. (See Annex 5 for benefits of VMS).

The essential MCS activities are to be undertaken at the national level. However, because of the geographical spread of CARICOM/CARIFORUM and the number of sovereign independent states involved, a regional / sub-regional strategy must also be adopted. At this level, the strategy focuses on coordinating and networking the national MCS systems, of building cooperation between states for harmonizing fisheries legislation, sharing information through a Regional Information System and to support the development of electronic monitoring systems, such as VMS, at the national level. These activities may be best carried out by a regional organization such as the CRFM Secretariat.

The priority actions of the CRFM Secretariat with respect to IUU Fishing should therefore include the following:

- (i) Develop a regional network of databases into a Regional Information System. This network will link all MCS units of national fisheries administrations to allow for data access, exchange of data to monitor the fishing efforts of local and foreign fishing vessels that fish in the waters under national jurisdiction of member states or adjacent High Seas. This network could be linked to the International Network for the Cooperation and Coordination of Fisheries Related Monitoring, Control and Surveillance Activities. The Regional Information System will be operated by the CRFM Secretariat.
- (ii) Develop a concept of "Good Standing" in the regional database of the Regional Information System for all national and foreign fishing vessels, including locally based foreign fishing vessels, engaging in fishing in waters under national jurisdiction and on the High Seas. Details on the vessel, flag, owner, operator, and master must be included. This data will be available to Member States.
- (iii) Develop a network of national VMS systems to track vessels authorized to fish in the EEZs and on the High Seas.
- (iv) Promote the development of National Plans of Action to prevent, deter and eliminate IUU fishing.
- (v) Promote coordination and coordination among states, and in particular, regional cooperation on Port State Control.
- (vi) Encourage ratification, accession, acceptance or adoption, where necessary, to the relevant international instruments for fisheries management and MCS for IUU fishing.
- (vii) Promote improved and harmonized fisheries legislation throughout the region.
- (viii) Promote among Member States the will to negotiate, where necessary, and to establish their maritime boundaries.

- (ix) Promote development of sub-regional MOUs or other mechanisms to share information, surveillance and enforcement resources among neighbouring states in order to improve surveillance and enforcement.
- (x) Promote ratification and implementation of the Compliance Agreement and UN Fish Stocks Agreement.
- (xi) Encourage countries to meet their obligations with regard to operating their Registers in a manner compatible with internationally acceptable standards.
- (xii) Promote the development of a policy for sanctions against Flag States of extra-regional IUU vessels.
- (xiii) Strengthen national and regional institutional capacity and infrastructure through the assistance of international agencies and organizations.
- (xiv) Promote the implementation of internationally agreed market measures.

Conclusion

The similarity in the socio-economic importance of fishing to each Member State in providing food supply, employment and hard currency requires that the fisheries resources must be managed in a manner to ensure sustainability. IUU fishing is a threat that will undoubtedly affect CARICOM States because it is a threat to sound management of the fishing industry. The responses should be through cooperative and coordinated measures.

The Fisheries Administrations in the region face severe human and financial resource constraints, as such the existing MCS and enforcement functions are not as effective as is required. In terms of the objectives of enhancing MCS, there should be a clear preference towards those MCS practices, which prevent IUU fishing at the outset rather than those strategies aimed largely at apprehension and prosecution. Apprehension and prosecution remain the ultimate sanction and cannot be ignored but such measures are necessary only when other deterrent measures have failed. The aim is to seek compliance from fishers.

Management of the fisheries resources at both national and regional levels must be based on accurate assessments of the fish stocks as a result of sound scientific knowledge and information. This situation therefore requires the support of a strict monitoring and control regime. Again, close cooperation is required between national fisheries administrations and the CRFM Secretariat to manage the total fishing effort in various fisheries and to avoid overexploitation and collapse of stocks.

NPOAs for preventing IUU fishing must therefore be implemented early to carry out its important role in preventing such collapse. Member States must therefore develop their NPOAs for IUU fishing with making legislative amendments and establishing the relevant databases high on the priority list. Control of fishing activities is to include the registration and licencing of

vessels and fishers. As such, a Fishing Vessel Register with a list of vessels in “Good Standing” should be developed. The information flow to make the systems successful will depend on a Regional Information System.

A review of the current situation on IUU fishing and MCS in the fisheries sector of the CARICOM / CARIFORUM region

1. The Caribbean and the Fishing Industry

1.0 Introduction

Illegal, unreported and unregulated (IUU) fishing poses considerable problems for managing fisheries resources globally and, as a result, systems for monitoring, controlling and surveillance (MCS) of marine fishery resources have become effective management tools. CARICOM / CARIFORUM countries constitute an important regional block within the Caribbean, and the sustainability of their fisheries resources is an important feature for the economic and social development these countries. The success of management of the resources to assist in the development of the countries and the region is determined, in large measure, by their ability to implement appropriate monitoring, control surveillance and enforcement measures.

In order to review the current situation on IUU fishing and MCS in the region, it is necessary to understand the ocean environment of the Caribbean; the nature of the fisheries in the region and the role that the fishing industry plays in the societies of CARICOM / CARIFORUM countries. In addition, since CARICOM States are seeking to exercise control over their maritime spaces and the resources therein, it is necessary to review the status of the ocean spaces over which they exercise or intend to exercise jurisdiction. Delimiting those maritime areas has presented certain issues. Therefore, in reviewing the status of IUU fishing, the delimitation situation of the region must be outlined.

1.1 The Ocean Environment

The ocean environment of the CARICOM / CARIFORUM region includes: the semi-enclosed Caribbean Sea surrounded by the Greater and Lesser Antilles; the Central Atlantic Ocean off the coast of South America from Suriname to Trinidad and Tobago, and the east of the island chain from the Lesser Antilles to The Bahamas. This area of 14.5 million sq. km. is included in the FAO fishing area No. 31 in which ICCAT manages the tuna and tuna-like species on the High Seas.

The currents in this area, with the exception of the North Equatorial and Guyana currents, flow clockwise. The Caribbean Basin is shallow while the continental shelves are generally narrow except those of Guyana and Suriname that are about 40% of the respective EEZs.

Extending along the northeast coast of South America is the continental shelf, sometimes referred to as the "Guiana Banks". It includes the marine zones of Guyana, Suriname, French Guyana and Brazil where numerous rivers, carrying freshwater and nutrients from the hinterland, drain into the ocean. Because of the slow-moving westward-flowing south equatorial current, the nutrients and sediment from the various rivers, principally the Amazon and Orinoco are deposited along the coast, resulting in shallow and highly productive waters. The region also

includes countries with reef environments such as Belize and some Eastern Caribbean islands as well as countries with offshore banks rich with demersal species as in Jamaica and the Bahamas. This diverse ocean environment of the region has given rise to a variety of fisheries.

On the western side of the Caribbean, the marine areas of Belize is a complex system consisting of the largest barrier reef in the Atlantic (220 m in length), three offshore atolls, patch reefs, sea grass beds, several hundred cayes of sand and mangrove, extensive mangrove forests, coastal lagoons and estuaries. Total area fished is estimated to be about 4700 km² within a depth range of 1.5 - 10 m².

1.2 Ocean Governance

The main international instruments that provide the framework for countries to exercise effective fisheries management are:

Conventions

- The United Nations Convention on the Law of the Sea Convention 1982 (UNCLOS)
- The United Nations Fish Stocks Agreement 1982¹.
- The FAO Compliance Agreement².

Voluntary Instruments

- The FAO Code of Conduct for Responsible Fisheries and the resulting International Plans of Action³.

CARICOM / CARIFORUM states are signatories to the 1982 United Nations Convention on the Law of the Sea. All but three of the Member States are coastal states on the Caribbean Sea, Guyana and Suriname being on the South American sub-continent with an Atlantic seafront, while The Bahamas lies just outside the semi-enclosed basin, north of the Greater Antilles. Under UNCLOS, the Caribbean Sea enjoys a special regime of co-operation with respect to the management, conservation, exploration and exploitation of living resources⁴.

Although some boundary agreements have been concluded, most states cannot receive the full extent of the maritime zones allowed under the Convention because of the close proximity of neighbouring states, particularly in the island chain of the Eastern Caribbean. Nevertheless, they have established the limits of their territorial seas, by negotiations where necessary, over which they exert full sovereignty.

¹ Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea, 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, September 1995.

² Agreement to promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, November 1993.

³ FAO 1995

⁴ Arts 122 and 123 of UNCLOS

Maritime boundary delimitation is the principal means by which the limits of the national jurisdiction of a coastal state are defined. National jurisdiction over resources extends to the limit of the Exclusive Economic Zone for the water column and of the Continental Shelf for the sub-soil.

In the Caribbean Sea, there are twenty-two sovereign independent states and eighteen dependent territories. There are numerous islands, islets, rocks and sandbanks that present particular challenges, such as that posed by Aves Island⁵ with respect to the delimitation of maritime zones of the Eastern Caribbean island states. Another feature is that six CARICOM / CARIFORUM states meet the requirements of an archipelagic state⁶.

There are at present forty-eight (48) potential maritime boundaries to be delimited by CARICOM Member States. The independent member states of CARICOM have entered into eight (8) maritime boundary delimitation treaties with some boundaries demarcated in both the Caribbean Sea and the Atlantic Ocean⁷. Guyana and Barbados have made provisional arrangements establishing a zone of cooperation in the overlapping outer limits of their jurisdiction. There will be joint jurisdiction over this zone. The dependent Member State of Montserrat has an agreement with Guadeloupe. Associate Members of CARICOM have had five (5) treaties concluded on their behalf by the United Kingdom. (Annex 1).

The breadth of the EEZs of many of the islands are not fully delimited owing to the close proximity of neighbouring states, except where the open Atlantic allows for the full claim of 200 miles as in the case of Barbados, The Bahamas, Guyana, Suriname and many Eastern Caribbean islands. Unfortunately, because of geography many states and territories of the Caribbean Sea have very narrow EEZs. The EEZ of Dominica, for example, is no more than 32 miles at its widest point throughout its 200 miles length.⁸

Fish stocks migrate freely across the narrow EEZs of the islands and even straddle the adjacent maritime zones of neighbouring countries. As fishers cross borders in pursuit of various stocks, exploitation of the fisheries of the Caribbean region has persistently caused jurisdictional difficulties, even for CARICOM States. As a result, fishermen of several countries experience difficulties through allegedly entering waters under the jurisdiction of neighbouring states without authorization. There are several examples: Jamaican fishers have experienced problems in Nicaraguan and Colombian waters; French fishers from Guadeloupe and Martinique often fish in waters of Antigua and Barbuda, Dominica and St. Lucia; fishers from Trinidad and Tobago and Grenada have encountered difficulties in Venezuelan waters, while Barbadian fishers have also been arrested in Trinidad and Tobago waters.

⁵ Under Venezuelan sovereignty since 1865. Aves lies 300 miles north of Venezuela and 125 miles west of Dominica. If Aves is accorded full weight as an island it will cost Dominica, Montserrat, St. Kitts and Nevis, and St Vincent and the Grenadines approximately 7350 sq. miles of EEZ.

⁶ Antigua and Barbuda, The Bahamas, Grenada, Jamaica, St. Vincent and the Grenadines, and Trinidad and Tobago.

⁷ Boundaries delimited in the Atlantic are Trinidad and Tobago - Venezuela; Dominica - France (with respect to Guadeloupe and Martinique);

⁸ Dundas, Carl A. , Mitchell, Carlyle. *Common Fisheries Regime for the Caribbean Sea*, June 20004

1.3 The Nature of the Fishery in the Region

The fishery in the CARICOM / CARIFORUM region is characterized by the highly migratory nature of the resource, by the presence and location of straddling stocks due to delimitation, and by ecological and environmental factors. The marine fisheries resources of the region are offshore, coastal and reef fish fisheries.

The biological productivity of the Caribbean Sea is relatively low because of the following: the topographical features, characterized by the relatively small shelf areas around the islands and by ocean troughs; by distance, in that the small island areas are far enough away to receive only minimal effects of the large river discharges from South America; and, by climatic factors, in that warm tropical waters are generally not as productive as are waters in temperate and higher latitudes.

The biological productivity of the marine area from Suriname to Trinidad and Tobago is higher than in the Caribbean Sea because of the relatively large continental shelf which is about 40% of the EEZ area, and because of the clockwise flow of the currents. This allows for high nutrient retention in the area, thus leading to the abundance of demersal and pelagic resources.

The living marine resources exploited within the coastal waters of Guyana and Suriname are mainly the demersal resources with an active shrimp and sea-bob fishery, and to a limited extent, the pelagic resources over the continental shelf and towards the continental slope.⁹ The target species offshore is red snapper and groupers. Mainly Venezuelans exploit this fishery under bilateral or other arrangements. In these countries there are substantial inland fisheries including those targeting fish for the ornamental fishery. Both countries are also developing their aquaculture industry.

The reef fishery, the demersal bank fisheries (snapper and grouper), and the lobster and conch fisheries characterize the fisheries in the island chain of the Eastern Caribbean Islands. Migratory pelagics such as dolphin fish, tuna and tuna-like species, and flying fish also populate the waters of the Caribbean. In similar manner, the commercial fishing industry in The Bahamas and the Turks and Caicos Islands is based largely on spiny lobster and queen conch.

There are many similarities between the fisheries of the Eastern Caribbean and Jamaica. However, fisheries in Jamaica are categorized as Inshore and Offshore with the inshore area being the island shelf while the offshore fishing banks such as the Pedros Bank comprise the offshore area. The coral reef finfish accounts for the largest catch category in Jamaica fisheries.

The highly migratory tuna and tuna like resources are exploited by Caribbean vessels from Venezuela to Cuba and The Bahamas, and by distant water fishing fleets. ICCAT has determined that these stocks are highly exploited, thus the sustainability of these fisheries in the region may be in jeopardy, and that management is critical.

⁹ Status Report, Fisheries Dept., Ministry of Agriculture

The flying fish fishery involves a much smaller migratory pattern, with the resources being exploited in the fishery waters of Barbados, St. Vincent and the Grenadines, Grenada, St. Lucia, Dominica and Trinidad and Tobago.

The magnitude and extent of the stocks in the Caribbean Sea are not well known. The estimates in 1970 of MSY for demersal, pelagics and shellfish resources ranged between 400,000 and 800,000 tonnes.¹⁰ Scientific assessments of stocks in the CARICOM / CARIFORUM region have revealed high levels of exploitation resulting in a number of fully fished or over exploited fish stocks in the region, such as shrimp, spiny lobsters, conch, reef species and some small pelagics such as flying fish. The resource situation indicates that there are few known surplus stocks in the region.

At a Workshop on the Elaboration of National plans of Action to Prevent, Deter, and Eliminate IUU Fishing (Port of Spain, Trinidad 22 – 26 November 2004), a number of species were cited as having collapsed e.g. Nassau Grouper and sea urchin, as a result of poor management and/or IUU fishing. There has been some success in rebuilding the stocks of sea urchins following moratoria imposed by fisheries administrations in consultation with fishers under participatory management arrangements.

Regional issues in fisheries result from (a) the highly migratory nature of resources, (b) straddling stocks due to delimitation, (c) ecological and environmental factors. With reference to the migratory species, there are two problem areas: (1) the regional tuna fishery (2) the flying fish fishery in the Eastern Caribbean.

1.4 Importance of the Industry

The fishing industry makes an important contribution to development and the attainment of food security in the region. It is a source of animal protein for the population and a means of employment. The industry also generates import-substitution effects and earns hard currency from exports and recreational fishing.

Nutrition

In terms of food production, the industry contributes in large measure to the nutrition and food security needs within the Caribbean. Fish as a share of animal protein was, in 1996, 18.8% of the total food production of the region¹¹. This is reflected in the high per capita consumption of fish in most states between 1997 and 1999¹². Some countries consume their total production, as is done in St Lucia. The world average per capita consumption was 16.3 Kg during the same period. In 2003, consumption ranged from 59.8 Kg in Guyana, 19 Kg in the Lesser Antilles and 9.3 Kg in the Greater Antilles¹³. In 2000, marine production was 172 thousand tonnes, or 0.2% of the world total - an increase from 107 thousand tonnes in 1996.

¹⁰ Dundas, Carl A. , Mitchell, Carlyle. *Common Fisheries Regime for the Caribbean Sea*, June 20004

¹¹ The State of World Fisheries and Aquaculture 2002

¹² FAO. 2001. FAO Fisheries Database. FAO Website at <http://www.fao.org>

¹³ Data taken from country presentation

Livelihoods

Two major indicators of the importance of the fishing industry to the region are employment opportunities that the industry provides in the primary and secondary sectors, and the contribution it makes to the economy of each country. In a situation where underemployment and unemployment are still pressing problems, the fishing industry is seen as an important vehicle for providing income and sustenance to rural coastal communities. Fishing sustains communities, maintains rural stability and shapes the culture and social life of many communities through the primary activity as well as the support and downstream processing, packaging and marketing. These support activities provide employment for large segments of the communities particularly for women in the processing sector. The impact can be seen in Jamaica where there are 184 landing sites, most of which are attached to communities.

The fisheries sector in the Caribbean provides stable full-time direct employment for more than 120,000 fishers and indirect employment opportunities for thousands of others in the processing, marketing, boat building, net making and other support services. For example, in Suriname, approximately 7000 persons, or 4.6% of the population are employed in the primary and secondary sectors; in Guyana, the fisheries primary sector employs 4800 persons in catch operations on a fleet of 1400 vessels, and a further 5800 persons in secondary activities of processing and marketing; in St Lucia 2200 fishers are employed on 700 vessels; and Belize has 3975 registered fishers and a fleet of 1246 vessels.

Economic Factors

In terms of the contribution to GDP: in Guyana, fishing is the third largest contributor within the agricultural sector with an overall contribution to GDP of 1.59%; in Trinidad and Tobago it is estimated to contribute 0.02% to GDP¹⁴; in Jamaica 0.3%¹⁵; 7.2 %¹⁶ in Belize; and in Suriname, the contribution to GDP of 4% is the largest within the agricultural sector. However, within the region, the view has been expressed that GDP is not an accurate indicator of the importance of the fisheries sector.

The region exports shrimp (Guyana and Suriname), spiny lobster, conch (Belize, Jamaica, The Bahamas, and St. Lucia), tuna and other fish species mainly to North America. In 2000, exports in fishery commodities from the region totaled US \$211 million, representing 0.4% of the world total.¹⁷ Export in finfish and by-product from Guyana was 9849.6 mt. while sea bob and large penaeid shrimp were 1901.7mt and 726mt respectively. In the Turks and Caicos Islands, where harvesting of lobster and conch, the two most important fisheries represents almost 100% of the fisheries export, the annual harvest is 1100 tonnes.

¹⁴ Fisheries accounts for 15% of Agriculture's 3% contribution to GNP.

¹⁵ <http://www.caricom-fisheries.com/members/jamaica.asp>

¹⁶ <http://www.caricom-fisheries.com/members/belize.asp>

¹⁷ see note 11

Benefits to other ocean users

Fishing has also become an important activity for the growing population of recreational fishers and diving enthusiasts. The Caribbean is being rated as a prime destination for international anglers for billfish, such as marlins and sailfish and several other species of game fish. International, regional and national fishing tournaments are held each year throughout the region. The popular sports fishing destinations include The Bahamas, Belize, Antigua and Barbuda, Barbados, Grenada, Jamaica, St. Lucia, Trinidad and Tobago and the Turks and Caicos Islands. The region is also regarded as a top dive destination.

1.5 The Fishing Fleets

The fishing fleet structure of the region is characterized by:

1. A large artisanal fisheries sector in states where the majority of fishers operate on day trips utilizing small boats and limited technology. However, some countries define artisanal fisheries differently and it is often used interchangeably with small-scale fisheries. The vessels range in size from small open canoes to larger open or covered pirogues of either wood or fibreglass, (4.3-16 m in length), and propelled by outboard engines. They are generally involved in fishing with nets or hand lines, and in trap fisheries. In Suriname and Guyana they engage in fishing out to a depth of 18 metres or more and may spend more than one day at sea. The artisanal fleet accounts for most of the commercial fishing in the region. These vessels operate from various points along the coasts and often, catches are underreported or unreported.
2. An industrial and semi-industrial fleet sector of large, modern, capital intensive vessels ranging in size and technology from those that operate (a) for shrimp off the coast of Guyana and Suriname, (b) for flying fish in the Eastern Caribbean, (c) for tuna and other highly migratory species in the EEZs of the wider Caribbean such as the longliners ranging in lengths of 40 – 80 feet; and (d) the High Seas fishing vessels as listed on the Open Registries of St. Vincent and the Grenadines and Belize.

The industrial and semi-industrial fleets are supported by modern fishing ports and complexes where catches are landed, inspections are carried out by fisheries authorities and where ice, water, fuel, and provisions for the offshore fishing vessels are acquired. Other fishers go to fishing community landing sites along the coasts.

1.6 Organizations for Fisheries Management

At the national level

The national Fisheries Administrations perform MCS functions to the level permitted by the constraints they face. The major constraints to effectively carrying out the monitoring and control functions are lack of financial and human resources. This has affected their ability to collect and analyze data on the stocks, the fishing effort and the fishers.

At the Sub-Regional Level.- The Organization of Eastern Caribbean States (OECS)

An example of sub-regional cooperation is the OECS approach to fisheries surveillance. The OECS has made some progress towards integrating MCS into management. In the early 1980s, Member States of the OECS through the enactment of their harmonized fisheries legislation developed a harmonized sub-regional fisheries management regime. This legislation included enforcement provisions, regulatory conditions and penalties. In 1987, the OECS Fisheries Unit was established and a fisheries surveillance and enforcement programme started in 1988 “to optimise the use of the slender resources available to undertake the task.”¹⁸. In 1991, Member States signed an “Agreement Establishing Common Fisheries Surveillance Zones of Participating Member States of the Organisation of Eastern Caribbean States”. This placed the waters of the OECS under a single regime whereby any Authorized Officer, for the purposes of surveillance of the Common Fisheries Zones can enforce fisheries laws of Participating Member States. The Agreement removed the requirement for Coast Guard vessels to embark an Authorized Officer from the local Member State to give legality to fisheries enforcement activities undertaken in its waters. The Agreement further provided for Delineation of Common Fisheries (Surveillance) Zones¹⁹. This approach allowed for arrests for fishing violations in any of the waters under the jurisdiction of an OECS state. Arrested vessels would be escorted to the appropriate port in the member country in whose Territorial Waters or EEZ the arrest was made. The harmonized High Seas Act drafted with the assistance of the FAO was promulgated in only one OECS Member State. It remains a draft for the remainder of states.

The planned zonation was utilized for joint surveillance activities notwithstanding that national legislation had not been promulgated. Surveillance missions were carried out by hiring private aircrafts to work in association with national Coast Guard surface assets as part of a CIDA funded project. The OECS Fisheries Unit coordinated the mission with some limited input from the RSS. Unfortunately, when the project ended these missions could not be maintained because of the high cost.

At the Regional level - Caribbean Regional Fisheries Mechanism

In keeping with the United Nations General Assembly Resolution 51/225 of February 2000 for Promoting an Integrated Management approach to the Caribbean Sea in the context of sustainable development and the revised Treaty of Chaguaramas, the Heads of Government of CARICOM approved, in 2002, the establishment of the Caribbean Regional Fisheries Mechanism (CRFM) with the following objectives:

- (a) The promotion of efficient management and sustainable development of the marine and other aquatic resources in the Caribbean Region in conformity with the economic objectives of its Member States.

¹⁸ OECS/NRMU Fisheries Monitoring, Control & Surveillance Programme, “Fisheries Enforcement Standard Operating Procedures Manual” 1997

¹⁹ Four zones were proposed – Northern Zone – British Virgin Islands’ fishery waters, North Central – Antigua-Barbuda’s, St Kitts-Nevis’ and Montserrat fishery waters, South Central – Dominica’s fishery waters, and Southern – Grenada’s, St.Lucia’s and St Vincent & Grenadines fisheries waters.

- (b) The promotion and establishment of cooperative regional arrangements for the management of shared and highly migratory marine and other aquatic resources
- (c) The provision of technical, advisory and consultative services to national fisheries divisions in the development, management and conservation of their marine and other aquatic resources.

The structure of the CRFM is: (1) A Ministerial Council; (2) The Caribbean Fisheries Forum; and (3) The Technical Unit.

The Technical Unit which serves as the CRFM Secretariat is the executing arm of the Mechanism, and has among its roles:

- To collaborate with national fisheries authorities;
- To provide management and development advice and assistance, particularly in the areas of coordination, communication and technical scientific operations.

The CRFM Secretariat is therefore an important actor in developing MCS functions at the national and regional levels. The organization is particularly well placed to promote the development and implementation, by Member States, of National Plans of Action for IUU fishing, to promote cooperation and coordination among member states and to establish networks and standards.

Regional Fisheries Bodies

Two relevant Regional Fisheries Bodies that impact on the Caribbean region are the FAO / Western Central Atlantic Fishery Commission (WECAFC) and the International Commission for the Conservation of Atlantic Tunas (ICCAT). The former facilitates the coordination of research, encourages education and training, and assists its members in establishing policies to promote the rational management of resources that are of interest for two or more countries. WECAFC has an advisory management function but has no regulatory powers.

ICCAT is an inter-governmental fishery organization responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and its adjacent seas. Science underpins the management decisions made by ICCAT, one of which is a management strategy for Blue Fin Tuna and Swordfish on the High Seas.

The body does the following:

- Compiles fishery statistics from its members and from all entities fishing for these species in the Atlantic Ocean;
- Coordinates research, including stock assessment, on behalf of its members;
- Develops scientific-based management advice;

- Provides a mechanism for contracting parties to agree on management measures, and produces relevant publications.

In 2002, ICCAT established a list of IUU fishing vessels. (*Annex 2*)

1.7 Management Measures

In general, the policy in the region is for open access to fisheries stocks by nationals. However, applying a precautionary approach to the management of the fish resources, some countries have put measures in place to protect specific resources. Member states apply measures relevant to their particular fisheries in accordance with the importance of the fishery. These measures include: licences, closed seasons, closed areas, gear restrictions, prohibited areas, turtle exclusion devices, marine protected areas; input controls, and participatory management. Foreign fishers may gain access to the resources of a country through the negotiation of access agreements.

Some examples of management measures being applied by Member States are: closed season for conch (July – September), a ban on turtle fishing; imposition of TEDs; vessel licences and export licence regimes by Belize; and closed seasons for lobsters and turtles by OECS Member States. In St. Lucia, the Soufrière Marine Management Area established in 1995, includes a number of closed areas, called marine reserves under the Fisheries Act. In the latter instance, this management measure has resulted in dramatic increases in fish stocks.²⁰ A study conducted by the Department of Fisheries of St Lucia and University of York found that average catches from small cane fish pots increased by 95% and the average catches for the larger wire-mesh pots increased by 46%.²¹

In Jamaica, Fishery Management Areas have been designated for the operations of the conch fishery²², with the Licensing Authority monitoring the fishing activity. In the case of Guyana, a closed season (September to October) has been established for the sea-bob fishery. Also, the Authorities have established limited entry fisheries for sea bob, large penaeid shrimp and red snapper resources.

²⁰ State of the Environment, August 1998 published by the Government of St Lucia

²¹ Press Release on the Benefit of Marine Reserves in the Soufrière Management Area – 11 October 2001.

²² The Fishing Industry (Conservation of Conch (Genus Strombus)) Regulations 2000. (Pedro Bank, Morant Bank Formigas Bank, Henry Holmes Bank, Albatros Bank, Grappler Bank).

2. THE CURRENT SITUATION OF IUU FISHING

2.0 Background

In 1995, Member States of the Food and Agricultural Organization (FAO) of the United Nations adopted the Code of Conduct for Responsible Fisheries with the objective being the conservation and management of the world's fisheries. The Code is voluntary rather than mandatory, and aimed at everyone working in, and involved with fisheries. Despite the adoption of the Code, irresponsible fishing activities that directly undermine efforts at proper management of fisheries persist. The term "Illegal, Unreported and Unregulated" (IUU) fishing emerged to describe a wide range of such fishing activities but not with precise definition. Illegal fishing is taken to cover not just fishing without authorization, but also fishing contrary to the conditions of an otherwise valid authorization.

In 2001, the FAO Committee on Fisheries (COFI) adopted an International Plan of Action to Prevent, Deter and Eliminate IUU Fishing (IPOA – IUU). According to the IPOA-IUU illegal fishing refers to activities:

- conducted by national or foreign vessels in waters under the jurisdiction of a state, without the permission of that state, or in contravention of its laws and regulations;
- conducted by vessels flying the flag of States that are parties to a relevant RFMO but operate in contravention of the conservation and management measures adopted by that organization and by which the states are bound, or relevant provisions of the applicable international law;
- conducted in violation of national laws or international obligations, including those undertaken by cooperating states to a relevant RFMO.

Unreported fishing refers to fishing activities:

- that have not been reported, or have been misreported to the relevant national authority, in contravention of national laws and regulations; or
- undertaken in the area of competence of a relevant RFMO, which have not been reported or have been misreported, in contravention of the reporting procedures of that organization.

The importance of the concern about unreported fishing is two-fold. First, it lies in the fact that UNCLOS and the 1995 UN Fish Stocks Agreement²³ recognize that the collection of data is of fundamental importance to management. Second, the purpose of addressing IUU fishing is to achieve a situation where all fishing activity and related operations are reported more effectively,

²³ The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 Dec. 1982 relating to the Convention and Management of Straddling Stocks and Highly Migratory Fish Stocks

primarily to achieve more reliable stock assessments and a better understanding of the implications for fisheries management.

Unregulated fishing refers to fishing activities:

- in the area of application of a relevant RFMO that are conducted by vessels without nationality, or by those flying the flag of a State not party to that organization, or by a fishing entity, in a manner that is inconsistent with or contravenes the conservation and management measures of that organization; or
- in areas or for fish stocks in relation to which there are no applicable conservation or management measures and where such fishing activities are conducted in a manner inconsistent with State responsibilities for the conservation of living marine resources under international law.

Unregulated means not only that there is no management regime applying to a particular fishery, or for a fishery not covered by any fisheries organization or arrangement, but it also means that while there is a management regime in place, much of the fishing activity is not effectively controlled or regulated. This includes fishing in areas under national jurisdiction, as well as on the high seas.

2.1 The Extent of IUU Fishing

The scope of the IUU fishing problem in the region encompasses fishing and related activities by nationals and foreign fishers in waters under national jurisdiction and on the adjacent High Seas. It includes:

- Fishing in areas under national jurisdiction without the authorization of the coastal state;
- Fishing that contravenes or undermines conservation and management efforts;
- Failure to effectively exercise the required jurisdiction or control over vessels and nationals in the maritime zones;
- Failure by states to monitor and control vessels flying their respective flags and fishing on the High Seas.
- Failure to fully and accurately meet fishery and fishing vessel data collection and reporting requirements.

IUU fishing poses one of the biggest threats to fisheries management for developing states and the problem is compounded by a number of factors, such as:

- The large area of ocean space relative to land area.

- The close proximity of the states leading to situations of stocks straddling the borders of neighbouring states.
- The migratory nature of some fisheries resources and the fishing fleets that follow them.
- The lack of financial and technical resources for surveillance and enforcement.
- The lack of skilled manpower for maintaining adequate management systems.

The extent of IUU fishing in the CARICOM / CARIFORUM region is not quantified, nor is there the capacity to fully assess its extent throughout the region. The capacity to detect IUU fishing varies according to the ability of the country to provide the human and physical resources to conduct the necessary surveillance and enforcement. Nevertheless, some countries can provide indications that illegal fishing is taking place.

A reliable indicator of IUU fishing is the number of sightings of such activity and/or arrests. The existing record of arrests shows that IUU fishing in some countries can be considered to be significant. In others countries, the records cannot convey an accurate picture because surveillance and enforcement patrols cannot be sustained.²⁴ In contrast, the Conservation Compliance Unit of the Department of Fisheries within the Ministry of Agriculture of Belize arrested fifty-four (54) vessels in the period March – November 2004 and sixteen vessels in January and February 2005 with 75% of the arrested vessels being local

Authorities in both Guyana and Suriname reported that owing to severe financial constraints, there is very little capacity to ascertain the extent of IUU fishing for the highly migratory species such as tuna and tuna-like species in the far reaches of their EEZs or the adjacent High Seas. Nevertheless, authorities in Guyana estimated that IUU fishing by artisanal fishing is a bigger threat than fishing by distant water fleets and that they affect the industry by as much as 20%.

Suriname indicated that it was aware that under-reporting or mis-reporting is taking place through comparison of data on the quantity of fish landed with that on the quantity exported. They also reported that the economy loses approximately US \$5 million annually²⁵ resulting from IUU fishing that includes poaching and non-compliance by foreign vessels, particularly those from Guyana. Other IUU issues for Suriname involve registered boats that fish in prohibited zones; boats that land their catch outside Suriname, and boats that fish illegally in the EEZ

In The Bahamas where the fishery is mainly spiny lobster and conch, IUU fishing vessels come from Cuba, Honduras and Dominican Republic. In addition, there is a significant sport fishery dominated by US sport fishing vessels which are given permission to fish with specific conditions laid out for number of lines and catch quota. This fishery is unfortunately unregulated and the catch unreported, as vessels are not required to report on departure. There is therefore no

²⁴ The records of St. Vincent and the Grenadines indicate that between 1985 and 1998, 18 vessels were arrested including (4 USA, 10 Venezuela, 1 Trinidad & Tobago and 3 Barbados). No information was available for subsequent periods.

²⁵ Information based on interviews with Fisheries Officers and private sector managers.

knowledge about whether the vessel complied with the conditions of the licence, nor is there statistics about the catch. There is similar concern about the unrecorded catches of the recreational fishery (tuna, dolphin fish, kingfish, wahoo, barracuda and sharks) that is proving to be of significant economic value to St. Lucia.²⁶, as evidenced by the amount spent on goods and services by the participants of this fishery.

Poaching is a significant problem for countries with demersal species, such as conch and lobster in The Bahamas, Jamaica, in the Eastern Caribbean islands of Antigua and Barbuda, St Vincent and the Grenadines, and St Lucia. In many cases, the effect of poaching for conch is aggravated by the use of prohibited equipment and techniques. Turks and Caicos Islands reported that on average eight (8) vessels with 60 – 80 persons per year are arrested as a result of its 'no tolerance' policy against poaching.

Authorities in St Vincent and the Grenadines also reported significant IUU fishing by long-liners from Barbados, Venezuela, and Grenada. They estimate that as many as ten vessels per day may be seen setting lines as near as sixteen miles from the shore in the case of St Vincent and the Grenadines. In many instances arrests were made but the offences could not be proven to the satisfaction of the court. This was mainly the result of the lack of expertise with respect to prosecuting fisheries offences.

Occasionally, there are verbal reports of sightings of foreign vessels off the Eastern Caribbean. Fisher folk in St. Vincent and the Grenadines alleged that those vessels fish in the EEZ on the Atlantic side of the island for about three months per year and offload to a mother ship. Records from the surveillance authorities cannot fully substantiate the claims since the number of sightings and arrests is extremely low. The arrest of three US long-line vessels fishing for tuna and swordfish in 1986 by St Vincent Coast Guard shows that distant water fleets are likely to be involved in IUU fishing in the area. The last recorded arrests were two vessels in 2002.

Illegal fishing in closed areas or seasons by local fishers has occurred in St. Lucia and is driven by the demand of hotels and restaurants for certain species and certain sizes. The Fisheries Authorities also advised that nationals using illegal gear and methods carry out IUU fishing.

As was described earlier, because of the closeness of the coastal states, the fact that some countries share common stocks, and the open access nature of the fisheries, there is what may be considered significant occurrence of unauthorized fishing by vessels of one state in waters under the jurisdiction of another. In addition, the lack of clearly delimited boundaries may also contribute to the incursion into waters under national jurisdiction by vessels of another state.

Many of the problems are similar across the Caribbean region although the severity of the problems varies among the countries. As a result, bilateral and regional cooperation is needed to address a number of the IUU fishing problems and to develop appropriate MCS systems and strategies.

²⁶ Ministry of Agriculture, Government of St. Lucia: Report on the Marine and Coastal Ecosystems August 1998

2.2 Plan of Action to Combat IUU

The problems of IUU fishing have encouraged the international community in 2001 to adopt an International Plan of Action for IUU fishing (IPOA-IUU). The IPOA is a voluntary instrument within the framework of the FAO Code of Conduct for Responsible Fisheries and which will serve as a comprehensive toolbox of measures to address IUU fishing. The IPOA provides States with comprehensive, effective and transparent measures by which to act. It also provides that States may act through appropriate Regional Fisheries Management Organizations (RFMOs) established in accordance with international law.

The principles and strategies of the IPOA-IUU are:

- Participation and Coordination. – IPOA should be implemented by all states either directly or in cooperation with other states, or indirectly through a regional fishery management organization, or an international organization such as FAO. It seeks to encourage the full participation of all stakeholders in combating IUU fishing.
- Phased Implementation – Measures should be based on implementation of national, regional and global action. This requires that within two (2) years of adoption of the IPOA, States should develop and implement policies and actions in their NPOAs to deter, prevent and eliminate IUU fishing, and within five (5) years of its adoption, States should have completed the implementation of the key elements of their plans.
- Comprehensive and integrated approach. – All factors affecting capture fisheries must be addressed. Measures must include Flag state, Port state and Market related measures. States should take measures to ensure that their nationals do not support or engage in IUU fishing and these measures must address all economic, social and environmental impacts of IUU fishing.
- Conservation measures – The measures must be consistent with long-term and sustainable use of fish stocks and the protection of the environment.
- Transparency – This principle is contained in Article 6.13 of the Code of Conduct for Responsible Fisheries which states: “States should, to the extent permitted by national laws and regulations, ensure that decision making processes are transparent and achieve timely solutions to urgent matters....”.
- Non-discrimination – The IPOA should be applied without discrimination against any state or its fishing vessels.

The IPOA calls on States to develop and implement National Plans of Action (NPOAs) by June 2004. To date Member States have not yet elaborated their Plans of Action.

3. REVIEW OF CURRENT SITUATION OF MCS

3.0 Introduction

UNCLOS 1982 has brought the subject of monitoring, control and surveillance to the fore as a concern for the international community²⁷ (*Annex 3*). The Convention details enforcement responsibilities for each of these obligations.

The 1981 FAO Expert Consultation formulated a commonly accepted definition of MCS functions. However, these definitions have been enhanced to clarify the concept that MCS covers more than just fisheries enforcement. They now emphasize that MCS functions are integral to a fisheries management regime. Since then, a further enhancement of the definitions evolved out of the 2001 SADC Protocol. (*Annex 4*). Although both definitions are broadly similar, there are some essential differences between them reflecting some change in the perception of the scope of MCS activities over a 20-year period. FAO (1981) defines 'monitoring' as a 'requirement' while SADC regards it as a set of 'activities'. SADC defines control not merely as the stipulation of the regulatory conditions but includes enforcement activities. SADC further considers surveillance as actively checking and supervisory activity rather than as 'observations'. The current situation of MCS in the region will be reviewed with both definitions in mind and will include enforcement.

MCS as a management tool is successful only in so far as players in the fishing industry comply with the laws, regulations and administrative measures. Haughton reported that in surveys conducted among CARICOM / CARIFORUM states, lack of enforcement and compliance with fisheries regulations have been identified as a major constraint that needs to be addressed to effectively protect and manage fisheries. He further stated that compliance and enforcement vary significantly across the region from almost no enforcement in Haiti, very little enforcement in the Dominican Republic and Jamaica to a reasonable level of enforcement in Belize.²⁸

Throughout the region, the capability for monitoring, control, surveillance and enforcement is inadequate to ensure compliance with existing legislations and regulations. The level of non-compliance with fisheries regulations is therefore high. Several factors account for this. Among them is the apparent lack of political will to control domestic fishing effort or to impose fines and penalties particularly within the artisanal fisheries. This may be partly because the fishery sector is often times considered the employer of "last resort" and that there are limited alternative employment opportunities. On the other hand, political will and desire to enforce regulations against illegal foreign fishing is perceived to be quite high. Often the means to enforce this will, i.e. vessels, aircraft, manpower and fuel to conduct surveillance and to effect arrests, are not available. This may be because MCS is not given as high a priority as counter-narcotics operations, especially in cases where the funding is provided by external sources. In the OECS countries this obtains, notwithstanding a decision by the Heads of Government to allocate 15 days per year patrol time specifically for fisheries surveillance. This state of affairs exists

²⁷ Ref Articles from UNCLOS - Art 61, 62, 73, 192, 194, 197

²⁸ Haughton, M. "Compliance and Enforcement of Fisheries Regulations in the Caribbean" ; Proceedings of the Gulf and Caribbean Fisheries Institute 54:188-201.

although there are obligations agreed to arising out of the states accession to international agreements.

3.1 Legislation

Generally legislation needs updating. However, some countries such as Belize with its Fisheries Act 2003 and High Seas Fishing Act 2003, St. Vincent and the Grenadines with its 2001 High Seas Fishing Act, Guyana with its Fisheries Act 2002 and the 2001 revised Fisheries Law of Suriname have updated their legislation while others, such as Antigua and Barbuda, Jamaica and St. Lucia are in the process of revising their fisheries laws. Jamaica's new legislation will include provisions to manage aquaculture operations, and will introduce some new measures for a licensing regime for both the boats and the fishers. In the Eastern Caribbean there is harmonized fisheries legislation among the OECS while the RSS treaty also provides for fisheries protection. In some countries where the legislation has been amended, implementation is delayed because the associated regulations are yet to be promulgated, as is the situation in Guyana and Suriname.

3.2 Licensing Regimes

One method of control that is employed by several countries is the use of licences for fishing vessels and registration for fishers. The policy in Belize, Guyana, Suriname and the OECS countries is that all vessels are to be registered and licensed. It is to be noted, however, that with the exception of Belize and St. Vincent and the Grenadines, the interpretation of fishing vessel registration and a Register of fishing vessels is not consistent with the IMO terminology of a Register and all that it entails.

In Belize, The International Merchant Marine Registry of Belize (IMMARBE) registers High Seas fishing vessels, and applications for licences are screened by both the Fisheries Department and IMMARBE. Licences are granted by the Fisheries Department on an annual basis. A somewhat similar situation exists in St. Vincent and Grenadines with regard to its licensing of High Seas fishing vessels.

The Licensing and Registration Programme of fishers and fishing vessels in St Vincent and the Grenadines is mandatory, and the Fisheries Administration is seeking to incorporate proper boat building and safety standards through the implementation of secondary legislation. In addition, other OECS countries and Barbados have recently considered similar standards.

An examination of how fishers comply shows varying results. In Guyana 90% of the industrial vessels and fishers are licensed, while 60% of the semi-industrial vessels and fishers and only 33% of the artisanal vessels and fishers are licensed.

3.3 Surveillance and Enforcement

All CARICOM / CARIFORUM countries do enforce some fisheries regulations and carry out some very limited surveillance. Some countries have more comprehensive surveillance systems than others and this is a result of favourable budget allocations and political will. For example, Trinidad and Tobago Coast Guard, a Defence Force Unit, is well outfitted with a fleet of 8 Patrol

vessels ranging from 60 – 15 metres and 5 fixed wing aircraft, as well as access to 3 helicopters. These assets are used for routine security patrols during which fisheries surveillance and enforcement functions are carried out. In comparison, in Belize with its long coastline, surveillance is carried by the Conservation Compliance Unit of the Fisheries Department that is outfitted with five (5) small open interceptors that undertake three to five day patrols in the territorial waters on a monthly basis. Surveillance activities are also carried out in the fish vending establishments, hotels and, by means of roadblocks, on vehicles. Coordinated inter-agency operations with the Police, Defence Force, Customs and the Belize Audubon Society have proven to be effective. High Seas fishing vessels are monitored on a real time basis by IMMARBE, and should a vessel be caught in breach of the High Seas Act, it is deregistered and its licence revoked.

In Guyana, the private sector led by the Georgetown Seafoods Ltd., has instituted its own surveillance and patrol system, including Vessel Monitoring System (VMS) for monitoring the activities of their own vessels. During the closed season, they also assist the Coast Guard with surveillance.

Most countries rely on the Coast Guard, Marine Police and the Fisheries Officers for fisheries monitoring, surveillance and enforcement. However, in some countries there appears to be some uncertainty as to the agency with primary responsibility for fisheries enforcement. There is therefore a need for clearly defined roles, and an awareness of each other's responsibility as this would lead to improved cooperation among agencies. Further, among Fisheries Officers in some countries, there is a reluctance to be involved in enforcement as it conflicts with their role as technical advisor and extension officer.

Enforcement of the law is a challenge for most states because of the lack of vessels and aircraft to conduct surveillance patrols in the region. Many states have difficulty in conducting routine surveillance over the waters under their jurisdiction because of financial constraints and, as a result, their inability to sustain routine patrols. Instead, the Coast Guard/Marine Police or other law enforcement organizations react to reports of sightings of foreign vessels fishing illegally according to the quality of the reports, to the serviceability of their vessels, availability of manpower, and to the operational priority of fisheries surveillance and enforcement over other types of operations.

Among the challenges the enforcement agency faces is that the reports of observations by fishers are not always very reliable, because either the positions were not accurate or the submission of the information was very much later than when the observation was first made. Often, they report when they return from their fishing trip rather than immediately by radio. On the other hand, in two OECS countries, fishers commented that they were not enthusiastic to make reports because, in their perception, the Coast Guard either did not respond or took too long to respond.

The available information suggests that in many cases, the "monitoring, control, surveillance and enforcement" function of fisheries management is not adequately integrated into an overall strategy and plan for protection and management of fisheries and marine resources at the national level. The extent of IUU fishing is therefore difficult to ascertain.

3.3 Flag State Control

According to Article 94 of UNCLOS, it is incumbent upon any state that allows the registration of vessels under its flag to effectively exercise its jurisdiction and control over them. IUU fishing flourished because flag states failed to meet this obligation. While there are several reasons why vessels choose to operate under a “flag of convenience”, FAO (2000) reports that the reflagging of fishing vessels has often been associated with the avoidance of management regulations designed to protect fisheries.

In CARICOM, Antigua and Barbuda, Belize, Jamaica and St. Vincent and the Grenadines operate “Open Registries”²⁹. Jamaica has not registered fishing vessels and the authorities in St Vincent and the Grenadines have reported, however, that no additional fishing vessels have been registered.

Since most Caribbean states do not have resources to adequately monitor and control the operation of those reflagged fishing vessels, which may operate thousands of miles from the state, they pose a special challenge for the state. In order to meet this challenge, Belize and St. Vincent and the Grenadines have established VMS systems.

3.5 Port State Control

The 1995 UN Fish Stocks Agreement imposes a duty on Port States to take measure, on a non-discriminatory basis and in accordance with international law, to promote the effectiveness of sub-regional, regional and global conservation and management measures³⁰. Other international instruments, including the Code of Conduct, the FAO Compliance Agreement and the IPOA-IUU Fishing, also call upon Port States to use their powers to promote sustainable fisheries.

The capacity for Port State inspections is limited throughout the region. Inspections of fishing vessels were generally not carried out. In countries where transshipment is carried out, there are no port state control measures currently in place, as in The Bahamas and in Trinidad and Tobago. However, the latter country is seeking to establish an MOU with the operators of the transshipment facility.

3.6 Observer Programmes

Some CARICOM states have introduced Observer Programmes into their management regime, while others are considering such programmes. In Jamaica, industrial fishing vessels are required to carry observers on board as a condition of their licences. The programme is reported to have worked effectively but cost and the inadequacy of human resources have affected the effectiveness of the programme. Also, an observer programme was instituted in Guyana but met

²⁹ Open Registries in the Caribbean are: Antigua and Barbuda, Bahamas, Barbados, Belize, Cayman Islands (UK), Honduras, Netherlands Antilles, Panama, St. Vincent and the Grenadines.

³⁰ 1995 UN Fish Stocks Agreement Art.23

with limited success to date. Suriname has established the framework for implementation of such a programme while Trinidad and Tobago is considering its introduction.

The major constraint is the shortage of trained personnel and lack of financial resources to implement and sustain such programmes. Included among the many challenges are the concern for the safety and insurance coverage of observers while on board, and indeed, the willingness of vessels to accommodate observers.

3.7 Critical Issues Affecting MCS

The critical issues facing fisheries administrations with respect to MCS are:

Monitoring

- (i) Information on IUU vessels, catch rates, fishers, fishing effort and scientific information on the stocks is not available at the regional level. There is therefore need to develop and maintain a regional fisheries information system which could include data on IUU vessels, as well as a database of vessels and fishers authorized to fish and to make such information accessible to Fisheries Administrations in Member States.
- (ii) The capacity of Flag States to effectively monitor their flagged vessels operating on the High Seas.
- (iii) Capacity at the national level within fisheries administrations for carrying out the monitoring and control functions is very low. In all states, the authorities indicated that there was a severe shortage of trained human resources.

Control

- (i) In most instances legislation or related regulations concerning fisheries management and development in the region needs to be updated in accordance with international agreements and guidelines.
- (ii) The prospect of a Common Fisheries Policy and Regime for CARICOM States suggests that there must be an appropriate organization for its implementation. This may also require harmonization of legislation throughout the region, which would create an enabling environment for increased effectiveness of surveillance and enforcement.
- (iii) Non-compliance by national and foreign fishers with the conditions of their licences. This is due to the inadequacy of the enforcement mechanisms, as well as awareness that would engender voluntary compliance.

Surveillance and Enforcement

- (i) In many instances the limits of the maritime zones, especially EEZs, are yet to be determined. This issue has implications for enforcement of jurisdictions.
- (ii) There is a shortage of appropriate surface and air surveillance units in most countries. Some Coast Guard organizations face severe financial and human resource constraints that limit the extent of operation and serviceability of their existing vessels.
- (iii) MCS for illegal fishing is not given as high a priority as for example, counter-narcotics operations, especially in cases where the funding for equipment and operations is provided by external sources.
- (iv) There is need to utilize available electronic surveillance technologies, for example VMS. This would require changes in policy and legislation as they relate to jurisdiction over the marine spaces and the vessels, confidentiality of fishing information that has commercial value and admissibility of such forms of evidence in the courts.

Other General Issues

- (i) The need to increase awareness among public and private sector stakeholders and the public at large about compliance and the negative effects of IUU fishing. To achieve effective reduction in IUU fishing, such programmes should target the policy makers, the judiciary, law enforcement and other agencies, the fishing communities and industry.
- (ii) The need for regional/sub-regional cooperation and coordination. There are proven cost savings that can be accrued through cooperation with respect to acquisition of MCS resources, training, and negotiating reasonable compensation for access to surplus and underutilized resources.
- (iii) The establishment of MCS systems on a national or regional basis. The determination of such strategies would depend on several critical factors including: whether there is an existing organization which will serve the purpose; whether there is the level of commitment of states in the region; what are the common interests in fisheries which would benefit from such collaboration; what are the criteria for determining the cost sharing arrangements to support implementation of MCS on a regional basis.
- (iv) Cooperation and coordination among fisheries management and development, surveillance and enforcement and other stakeholders at the national level need to be improved. An integrated approach towards carrying out the MCS function needs to be taken at the national level to ensure efficiency and effectiveness in the conduct of MCS operations.

4. Strategy to Enhance the Effectiveness of MCS in the CARICOM / CARIFORUM Region

4.0 Introduction

The CARICOM / CARIFORUM region is spread over a very large area of the Caribbean Sea and includes several SIDs. The capacity for carrying out MCS activities varies from state to state as is demonstrated by: the paucity of resources made available by most countries to the tasks of surveillance and enforcement; the current state of legislation; the low level of systems for monitoring and the apparent lack of political will to enforce fisheries regulations. As a result, the level of compliance varies throughout the region.

Most fishery resources are under national jurisdiction thus making the development of national strategy a key element in their management. However, in the Caribbean situation where countries are in close proximity to each other, both regional/sub-regional and national approaches to solutions are required. Furthermore, owing to the migratory nature of tuna and tuna-like species, and the sharing of other stocks, the impact of IUU fishing is being felt regionally. An approach to management and MCS must therefore be built on cooperation, coordination and exchange of information.

IUU fishing is a dynamic and multi-faceted problem and, as such, no single strategy is sufficient to eliminate or reduce it. A concerted and multi-pronged approach is required nationally and regionally, and by type of fishery. The considerations that would influence the design of MCS systems are:

- (a) There are no universally acceptable models and each system in operation is in fact, adapted to the cultural, geographic, political and legal framework of the country or region.
- (b) The operational character of the system will depend on the fisheries management strategies being applied.
- (c) The national and regional MCS systems are complementary, with effective mechanisms being put in place for coordination.

Assuming that there is a shared commitment for effective management of the living resources of the region, the strategy for conducting monitoring, control, surveillance and enforcement, as part of any fisheries management structure, must be developed within the framework of National Plans of Action (NPOAs). These plans would encompass robust institutional capacity, effective planning, adequate funding and cooperative arrangements between institutions at the national level and between neighbouring states at the regional/sub-regional level. By so doing, states will become capable of undertaking MCS operations in a manner that will maximize their ability to prevent, deter and eliminate IUU fishing and related activities.

In accepting the instrument on IPOA–IUU fishing, states are required to develop and implement NPOAs that contain measures to combat IUU fishing individually and in collaboration with other

states. It should be noted that no CARICOM / CARIFORUM Member State has elaborated its NPOA-IUU to date.

4.1 Objectives of the strategy

The strategy is aimed at the following:

- (i) Establishing an integrated cost-effective monitoring, control, surveillance and enforcement system nationally and regionally, thereby: (a) increasing the level of compliance with fisheries and related regulations; (b) raising the cost of operations of IUU fishing; and, (c) reducing the relative benefits to illegal fishers.
- (ii) Making management more efficient as inefficient domestic fisheries management works as a driver for IUU fishing.
- (iii) Establishing effective penalties as a deterrent to IUU fishing. In most countries, the current level of penalties and the risk of being apprehended is not generally a sufficient deterrent to IUU.

4.2 Strategies to enhance MCS

The strategy for effective MCS at the national and regional levels involves a two-pronged, parallel approach, with these being:

- (i) The preventive approach
- (ii) The deterrent/enforcement approach.

The resources for effecting MCS will reside mainly at the national level. Consequently, the approach at that level will be both preventive and deterrent, whereas at the regional level the approach will be more preventive.

The preventive approach is to encourage voluntary compliance through a process of education and awareness to obtain support for the management strategies. This includes:

- (a) Enacting appropriate legislation.
- (b) Institution of accurate verifiable data collection regimes;
- (c) Enhancement of community / fisher folk awareness and understanding of management practices and MCS through public education and sensitization campaigns;
- (d) Continued development of participatory management approaches that promote the concept of joint stewardship between government, fishers and industry;
- (e) Verification of voluntary compliance through fisheries liaison/extension officers.

The deterrent / enforcement approach is to ensure compliance by fishers and other stakeholders who resist the regulatory regime to the detriment of both the fishery and the economic returns to the fishing industry. Voluntary compliance will not succeed if stakeholders see non-compliant participants evading the law and receiving economic returns at the expense of those who comply. This approach includes:

- (a) Inspection of vessels, processing plants and other facilities.
- (b) Investigation of infractions
- (c) Surveillance, both onshore, offshore.
- (d) Arrests, sanctions and administrative penalties

The strategy also envisages the use of cost effective “no force” tools such as:

- (a) Establishment of national or regional registry systems where the threat of removal of “good standing” is often enough to ensure compliance.
- (b) Implementation of Port State control mechanisms whereby there would be a regional agreement for the inspection and enforcement of fisheries legislation on any vessels operating in the entire region. This is an effective, low cost control using the potential of any country in the region to detain non-compliant vessels and crews as a counter-incentive to non-compliance with respected international maritime principles, be they for fisheries, pollution control or safety-at-sea.
- (c) Implementation of Flag State responsibility for the activities of vessels flying its flag.
- (d) Implementation of the use of observers without enforcement powers, which, while being effective for data collection, has also been found to be a deterrent to non-compliant activities.
- (e) The development of Vessel Monitoring Systems (VMS) for timely catch and position information. Application of these technologies can be cost effective, and where they can be applied appropriately, they can be of little cost to the State other than the investment of time for coordination because industry should bear the cost of establishing the system. (See Annex 5 for benefits of VMS)

The elements of the strategies, utilizing both the preventive and deterrent approaches for effective MCS must be incorporated, where appropriate, in the National Plans of Action (NPOAs) of Member States.

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The elements of the strategies, utilizing both the preventive and deterrent approaches for effective MCS must be incorporated, where appropriate, in the National Plans of Action (NPOAs) of Member States.

At the regional level:

The strategy at this level would be to undertake the following:

- (a) Strengthen the capacity of regional fisheries bodies such as the CRFM Secretariat to take a coordinating role with respect to developing the regional MCS capability
- (b) Revive and support the coordinating role played by sub-regional organizations such as was done in the OECS.
- (c) Develop a Regional MCS Network.
- (d) Promote cooperation in data and information sharing.
- (e) Promote harmonization of laws and standards.

4.3 Development of National Plans of Action (NPOA)

The NPOA-IUU is an integral part of the process towards improved fisheries management and long-term sustainability. It includes policy development, as a valuable tool upon which other mechanisms can be built, such as legislative review, communication strategies, interagency MOUs to develop cooperation and coordination between agencies where necessary, and securing financial resources.

- **Legislation.** The IPOA states that national legislation should address, in an effective manner, all aspects of IUU fishing.

Fisheries legislation forms a major component of the control aspects of MCS in which the fisheries management plan becomes a legal requirement that form the base for the MCS operations. It is to be noted that the policy decisions in the control phase of fisheries management relate to the strategy for implementation of the MCS operations and will be different for each fishery and state.

Actions necessary

- (a) Amend existing legislation, or create new legislation where necessary, to accommodate the application of evidentiary information from modern electronic surveillance technologies.
- (b) Amend legislation to apply civil procedure as opposed to criminal procedure for processing most fishery infractions and to introduce a system of civil penalties where the burden of proof is different from what obtains in criminal proceedings. This puts the onus of proof on the master of the vessel. This approach is particularly advantageous because matters are likely to be dealt with more expeditiously and the resulting penalties could be enhanced.

- (c) Amend legislation, where necessary, to promote participatory management.
- (d) Promulgate and enforce regulations to allow for implementation of legislation where required.
- (e) Introduce a vessel licensing regime, where required.
- (f) Develop and implement the appropriate legal framework for the establishment and maintenance of a Fishing Vessel Register for vessels and their operators engaged in EEZ.
- (g) In association with (f) above, develop and implement the appropriate legal framework for the establishment and maintenance of a Fishing Vessel Register that is compatible with internationally acceptable standards. This Register is for vessels and their operators engaged in fishing in areas outside national jurisdiction. Fishing vessels will be licenced and those licences will include terms and conditions of operations and reporting requirements.

• **Monitoring, Control, Surveillance and Enforcement.** The IPOA calls on all States to undertake comprehensive and effective MCS of fishing from its commencement, through the point of landing, to final destination.

Actions necessary

At the national level, management of fisheries must address the following:

Monitoring

- (a) Establish fishers and vessel monitoring databases / systems.
- (b) Establish a catch and effort monitoring systems.
- (c) Adopt appropriate catch documentation for species caught in areas outside national jurisdiction.

Control

- (a) Vessels licenced for fishing in the EEZ and areas outside national jurisdiction must be VMS compliant and must make provisions for carrying observers on board, where appropriate.
- (b) Develop a reporting system for fishing in the EEZ and areas outside national jurisdiction and the information database of licences and registered vessels. National systems would be linked as part of a Regional Information System.

- (c) Foster cooperation and coordination between agencies at the national level, and among Member States at the regional level, in order to enhance capability at the policy and operational levels.
- (d) Develop, improve and implement systems for the inspection and certification of operations in the fisheries sector.

Surveillance

- (a) Provide the resources necessary to acquire and sustain a fisheries surveillance programme.
- (b) Establish VMS where necessary.

- **State control over nationals.** The IPOA calls on States, to take measures or cooperate to ensure that their nationals do not support or engage in IUU fishing and to cooperate to identify those who are operators or beneficial owners of IUU vessels.

Actions

- (a) Member States must maintain a register of operators or beneficial owners of vessels flying their flag including their nationality. Member States must also exercise the Coastal State controls recommended in the IPOA.

- **Sanctions.** The IPOA provides that sanctions for IUU fishing by vessels and nationals should be of sufficient severity to effectively prevent, deter and eliminate IUU fishing and to deprive offenders the benefits accruing from such fishing.

Members States must develop the capacity to successfully prosecute IUU fishers and impose suitable fines as a deterrent. IUU vessels may be considered not in Good Standing on the Regional Fisheries Information System. This would deny it the ability to be registered and licenced by any Member State.

Action

- (a) Train appropriate personnel in fisheries prosecution and related areas.
- (b) Increase the level of the penalties to increase the cost of IUU fishing and to act as an effective deterrent.
- (c) Establish a concept of Good Standing in the regional register.

- **Economic Incentives.** The IPOA provides that States should avoid conferring economic support, including subsidies, to companies, vessels, or persons involved I IUU fishing.

Action.

Member states must withhold support, particularly access to any existing incentives from vessels and companies involved in IUU fishing.

- **Flag State Responsibilities.** The IPOA calls on States to ensure that their flag vessels and vessels under charter do not engage in IUU fishing.

Flag states are to issue licenses for their vessels operating on the High Seas and apply terms and conditions to these licenses. However, Flag States must ensure effective control over fishing vessels flying their flag, in particular, by maintaining and further developing the ability to oversee reflagging, chartering and fishing operations. This is particularly relevant to those CARICOM / CARIFORUM states with Open Registers.

Flag States should cooperate with each other and countries within whose jurisdiction owners or operators reside, through information exchange and other means to ensure compliance. They should also ensure effective national and regional boarding and inspection regimes by flag and inspecting States.

The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas is intended to assist in the promotion of conservation practices on the high seas. Flag States will be required to register all vessels authorized to carry their flags and forward this information to FAO, be responsible for the control of said vessels, and their nationals onboard to ensure they fish in a responsible manner, share information on these vessels with the international community and act on information regarding activities of its flag vessels which undermine the effectiveness of international conservation practices.

FAO has established global standards for fisheries. They include vessel markings, gear identification and marking and, the flagging of vessels fishing on the high seas and the responsibility for Flag State enforcement. The NPOA must ensure that the necessary standards are attained and maintained.

Actions

- (a) Maintain a record of all fishing vessels authorized to carry the flag of the country;
- (b) Be responsible for the control of said vessels and their nationals onboard to ensure they fish in a responsible manner;
- (c) Share information on these vessels with the international community and act on information regarding activities of its flag vessels, which undermine the effectiveness of international conservation practices.
- (d) Require all vessels authorized to fish in the EEZ and in waters beyond national jurisdiction to participate in the applicable VMS programme.

- **Port State Measures.** The IPOA calls on States to use measures, in accordance with international law, to control port access by fishing vessels in order to prevent, deter and eliminate IUU fishing.

Port State Control mechanisms must include fisheries interests with respect to port inspections, safety certification, information exchange, maintaining regional standards and developing cooperation among agencies and countries for fisheries control. This is an attractive and useful tool in sub-regional, regional, or bi-lateral arrangements.

Member States must implement Port State control measures in accordance with the IPOA over vessels involved in High Seas fishing, fishing in the waters of another State, and in transshipment. Where there is evidence of IUU fishing activity, the Port State is to prohibit landing and transshipment, as well as to notify the Flag State. This does not require investment of enormous financial and human resources. But it would require training to improve boarding and inspection skills.

Action

- (a) Institute Port State Control mechanism for inspections; safety certification; monitoring transshipment, information exchange and regional cooperation.

- **Cooperation between States.** The IPOA calls on States to coordinate their activities and cooperate directly, and as appropriate through relevant RFMOs, against IUU fishing

Member States must participate fully in all regional MCS related programmes including developing and implementing a Regional Fisheries Information System and the development of a network of VMS systems. Cooperation through the CRFM Secretariat on information collection, sharing and exchange is to be strengthened.

Action

- (a) Develop a data and information exchange mechanism between and among States in the region. This will be the basis for a Regional Fisheries Information System.

▪ **Public Education Programme**

Promote awareness of MCS and related issues within national judicial systems and conduct public information and education programmes to foster voluntary compliance by fishers with management measures and regulations.

Public education programmes will also be used to build capacity of community institutions for participatory management.

Action

- (a) Arrange training and awareness programmes on MCS and related issues for policy makers, the judiciary, law enforcement and other agencies.
- (b) Establish education and public information programmes aimed at developing willingness for voluntary compliance among the fishing communities and industry.

▪ **Development of Participatory Management**

Member States must foster and support the building and strengthening, of appropriate institutional structures for participatory management arrangements, especially where enforcement resources are scarce.

Action

- (a) Educate and train resource users for participating in management with particular attention to their role in MCS.

• **Market Related Measures**

The IPOA-IUU advises that States must prevent IUU caught fish from being traded or imported, and through cooperative efforts they should assist other states in deterring trade in their jurisdiction. A number of means are prescribed. They include: catch documentation, certification, and adoption of harmonized commodity description and coding systems. These means allow for the traceability of fish in markets.

Actions.

- (a) Adopt laws prohibiting such business and introduce catch documentation and certification controls.
- (b) Develop an awareness programme about the detrimental effects of trading in IUU caught fish. Among the target audience will be importers, consumers and bankers.
- (c) Enhance inter state cooperation to include these internationally agreed measures.

4.4 Summary of Actions to be taken to enhance the effectiveness of MCS

At the national level (NPOA-IUU)

- (i) Amend or create and implement fisheries legislation as necessary.

- (ii) Establish and/or strengthen a licensing regime for national and foreign vessels.
- (iii) Develop a Fishing Vessel Register where all vessels and their operators must be registered in a Member State prior to applying for a fishing licence. Such licences will include terms and conditions of access, operational restrictions and reporting requirements.
- (iv) Establish and / or strengthen data collection systems.
- (v) Develop an information database of licences and registered vessels.
- (vi) Establish a national, or sub-regional where appropriate, VMS system to which industry should contribute funding. A sub-regional system can be achieved through cooperation among relevant Member States.
- (vii) Ensure that vessels licensed for fishing in the EEZ and in waters beyond national jurisdiction are VMS compliant and must make provisions for carrying observers on board.
- (viii) Conduct periodic inspections including Port State inspections on all vessels.
- (ix) Develop a reporting system for EEZ and High Seas fishing.
- (x) Promote public awareness on IUU fishing issues.
- (xi) Promote Private Sector MCS.
- (xii) Develop cooperation and coordination between agencies at the national level and between States at the regional level. Coordinating mechanisms must be instituted in order to enhance capability at the policy and operational levels.
- (xiii) Build capacity within fisheries administrations through training for personnel involved in MCS operations, inspectors in evidence gathering, and workshops for prosecutors and appropriate members of the judiciary.

Strategies at the regional / sub-regional level

At the regional level, the CRFM Secretariat will be responsible for implementing the strategy. The priority areas are:

- (i) Develop a regional network of databases into a Regional Information System. This network will link all MCS units of national fisheries administrations to allow for data access, exchange of data to monitor the fishing efforts of local and foreign fishing vessels that fish in the waters under national jurisdiction of member states or areas outside national jurisdiction. This network will be linked to the International Network for the

Cooperation and Coordination of Fisheries Related Monitoring, Control and Surveillance Activities. The Regional Information System will be operated by the CRFM Secretariat.

- (ii) Develop a concept of "Good Standing" in the regional database of the Regional Information System for all national and foreign fishing vessels, including locally based foreign fishing vessels, engaging in fishing in waters under national jurisdiction and areas outside national jurisdiction. Details on the vessel, flag, owner, operator, and master must be included. This data will be available to Member States.
- (iii) Develop a network of national VMS systems to track vessels authorized to fish in the EEZs areas outside national jurisdiction.
- (iv) Promote the development of National Plans of Action to prevent, deter and eliminate IUU fishing.
- (iv) Promote coordination and co-operation among Member States, and in particular, with respect to Port State Control.
- (v) Encourage ratification, accession, acceptance or adoption, where necessary, to the relevant international instruments for fisheries management and MCS for IUU fishing.
- (vi) Promote improved and harmonized fisheries legislation throughout the region.
- (vii) Promote among Member States the will to negotiate, where necessary, and to establish their maritime boundaries.
- (viii) Promote development of sub-regional MOUs or other mechanisms to share information, surveillance and enforcement resources among neighbouring states in order to improve surveillance and enforcement.
- (ix) Promote ratification and implementation of the Compliance Agreement and UN Fish Stocks Agreement.
- (x) Encourage countries to meet their obligations with regard to operating their Registers in a manner compatible with internationally acceptable standards.
- (xi) Promote the development of a policy for sanctions against Flag States of extra-regional IUU vessels.
- (xii) Strengthen national and regional institutional capacity and infrastructure through the assistance of international agencies and organizations.
- (xiii) Promote the implementation of internationally agreed market measures.

4.5 Conclusion

The similarity in the socio-economic importance of fishing to each Member State in providing food supply, employment and hard currency requires that the fisheries resources must be managed in a manner to ensure sustainability. IUU fishing is a threat to sound management of the fishing industry. The responses to IUU fishing should be through cooperative and coordinated measures. The Fisheries Administrations in the region have human and financial resource constraints. In addition, since scientific data required for the management of the resources is scarce, cooperation and information exchange between states become vital.

In terms of the objectives of enhancing MCS, there should be a clear preference towards those MCS practices, which prevent IUU fishing at the outset rather than those strategies aimed largely at apprehension and prosecution. However, apprehension and prosecution remain the ultimate sanction and cannot be ignored but such measures are necessary only when other deterrent measures have failed. The aim is to seek compliance from fishers.

Management of the fisheries resources at both national and regional levels must be based on accurate assessments of the fish stocks as a result of sound scientific knowledge and information. This situation therefore requires the support of a strict monitoring and control regime. Again, close cooperation is required between national fisheries administrations and the CRFM Secretariat to manage the total fishing effort in various fisheries and to avoid overexploitation and collapse of stocks. MCS systems must therefore be implemented early to carry out its important role in preventing such collapse.

5. Project Proposal for Enhancing the Effectiveness of MCS

(1) Project Name

A project to create and sustain suitable institutional, legal, regulatory, and self-policing mechanisms to enhance the effectiveness of MCS at the national, sub-regional and regional levels.

(2) Project Summary

This project seeks to enhance effectiveness of Monitoring, Control, Surveillance and Enforcement mechanisms at the national and regional levels as part of the management regime for fisheries. This will be achieved through the development and execution of National Plans of Action to deter, prevent and eliminate illegal, unregulated and unreported (IUU) fishing and related activities with the support of adequate human and financial resources. These plans will include instituting harmonized fisheries legislation in all Member States, improving institutional capacity to effectively carry out the regulatory, monitoring, surveillance and enforcement functions in each state. In addition, the project seeks to encourage cooperation among member states so that the sharing of data and information at the regional level will assist in managing the resources and enhancing the effectiveness of MCS.

The cost of the activities of this project is \$2,130,000 (USD).

(3) Project Rationale

IUU fishing is known to be occurring in the region by local and foreign fishing vessels. The level of compliance in the region with fisheries regulations varies from country to country and it is dependent on the state's ability to execute its MCS functions. The extent of IUU fishing cannot be properly quantified because resources for monitoring, surveillance and enforcement are insufficient throughout the region. Furthermore, some states find that operating and maintaining its existing surveillance fleet and aircraft are expensive. Fisheries surveillance patrols therefore are not given priority.

Because of the potential for fishing to contribute more significantly to food security, hard currency earnings, social development and employment, there is a growing interest in fishing in the EEZs of CARICOM/CARIFORUM states by nationals and foreign fishers and the consequent investment in larger more capable industrialized vessels to venture out to the far reaches of the maritime zones. Meanwhile the large fleets of artisanal vessels throughout the region that exert considerable pressure on near-shore stocks continue to grow. In both cases, there is need for surveillance, monitoring and control.

An effective MCS program is critical if the CARICOM/CARIFORUM Members States are to exercise their sovereign rights over the waters under national jurisdiction and to satisfy their obligations under UNCLOS and other fisheries and related binding and non-binding international instruments. To this end, this project seeks to enhance the CRFM Member States' institutional capacity and legal frameworks, the culture for participatory management, and resource support to prevent and reduce IUU fishing activities on a sustainable basis.

Monitoring, Control, Surveillance and Enforcement activities (MCS) as part of the management of the living resources have become important for the maintenance of sustainability in the resources. Modern MCS systems include Vessel Management Systems that allow for monitoring the activities of vessels, position data and catch data.

The conclusion is that the Caribbean region, and certainly each CRFM country will be required to introduce and sustain effective monitoring control and surveillance, which is a critical success factor for effective management and sustainable development of their fisheries.

(4) Dynamics of the Problem

IUU fishing is a dynamic and multi-faceted problem and no single strategy is sufficient to eliminate or reduce this problem. A concerted and multi-pronged approach is required nationally and regionally, and by type of fishery.

The considerations that would influence the design of MCS systems are that:

- (a) There are no universally acceptable models and each system in operation is in fact, adapted to the cultural, geographic, political and legal framework of the country or region.
- (b) The operational character of the system will depend on the fisheries management strategies being applied.
- (c) National and regional MCS systems are complementary, with effective mechanisms being put in place for coordination.

(5) Issues to be addressed by the project

Such issues to be addressed in order to enhance the effectiveness of MCS include the following:

- (i) The inadequacies in the legal and regulatory frameworks in Member States;
- (ii) Delimitation of national maritime zones, and the boundaries between states in order to establish limits of national jurisdiction;
- (iii) Human resource constraints in the fisheries administrations of Member States. This issue includes shortage of personnel, the need for adequate training;
- (iv) The attitude towards compliance by fishers with fisheries regulations in some countries;
- (v) The need for national governments to fulfill their international obligations under binding agreements, as well as their voluntary commitments to the non-binding agreements;
- (vi) The need for political will to enforce fisheries regulations on local fishers as is imposed on foreign fishers;
- (vii) The lack of adequate craft, equipment and information technologies, such as aircraft, vessels, and vessel management systems;
- (viii) The need to mobilize financial resources on a sustainable basis to support MCS;
- (ix) The need to improve cooperation and coordination between fisheries authorities, enforcement agencies, fisher's organizations to improve the effectiveness of MCS;
- (x) The need to establish a regional network for the exchange of data and information relevant for deterring, preventing and eliminating IUU fishing in the region;

- (xi) The need to develop appropriate participatory management strategies.

(6) Project Objective

The objective is to enhance the effectiveness of MCS above its current state by creating and sustaining the necessary harmonized and contemporary legislative and regulatory regimes; by structuring efficient and effective monitoring and surveillance systems; by building capacity in national fisheries administrations, and by fostering an attitude of compliance among fishers. This objective is intended to facilitate and support the management of fisheries nationally and regionally.

(7) Key Project Activities

Activities at the National Level

Activity 1.	Amend existing legislation, or create new legislation where necessary in accordance with the NPOA: (xiv)
Activity 2.	Establish fisheries and vessel monitoring information databases.
Activity 3	Establish a national Fishing Vessel Register where required.
Activity 4	(xv) Install national or sub-regional VMS system, as appropriate. (xvi)
Activity 5	Develop an Observer Programme for EEZ and High Seas fishing.
Activity 6	Promote a programme of public awareness of IUU fishing issues.
Activity 7	Arrange training programmes on MCS and related issues for policy makers, the judiciary, law enforcement and other agencies.
Activity 8	Establish Port State Control mechanisms for inspections, safety certification and to monitor transshipment.

Activities at the Regional Level

Activity 9	Develop a Regional Fisheries Information system and data exchange mechanism between Member States. Included in the data will be the list of vessels in Good Standing.
Activity 10	Develop a network of VMS systems
Activity 11	Strengthen the CRFM Secretariat to be able to deliver with regard to MCS activities in the region

(8) Project Outputs

The key outputs will include the following:

- National Plans of Action that will include amended and updated legislation in all Member States. Such legislation will include provisions that accommodate evidence from the new technologies, will place the burden of proof on the fisher, and will institute harmonized penalties that serve as an appropriate deterrent.
- Participatory management regimes in each country that will enhance compliance by fishers.
- National or sub-regional VMS systems and a regional network of systems.
- Enhanced Institutional capacity for MCS at the national level.
- Public awareness and targeted education programmes.
- A Regional Data Network.
- A Regional Fisheries Information System
- An enhanced role for the CRFM Secretariat in MCS.

(9) Implementing Agencies and Countries

Activities in each Member State will be executed through a cooperative effort between Fisheries Administrations, fishers, legal and enforcement authorities and other stakeholders. The CRFM Secretariat will facilitate all national programmes. and will execute activities at the regional level.

(10) Consequences of non-implementation

At the national level, monitoring, control, surveillance and enforcement will be ineffective in most countries and there is a high probability that IUU fishing activities in all its forms by local and foreign vessels, will continue. Without scientific data and data on fishing vessel activities, the region will be unable to determine fully the level of the stocks and the extent of IUU fishing. Consequently, the region would not be in a position to implement appropriate protection and conservation measures. This will significantly undermine national and regional fisheries management and conservation efforts. Ultimately, this will lead to further reduced catches and increased likelihood of over-exploitation resulting in: collapse of important fisheries, loss of gainful employment and income for fishing industry members primarily fishers, and significant economic loss to CARICOM/CARIFORUM Countries. The impact on coastal communities will be severe.

(11) Expected Benefits

The direct beneficiaries of these project activities will comprise:

- The fishers representing a population of more than 70,000, will realize increased yields and income.
- The fishing and coastal communities and the secondary fishing industry members who will experience continued employment.
- The national communities that will receive a sustained protein supply.

- National fisheries authorities and enforcement agencies through improved legislative and regulatory frameworks.

(12) Implementation Timetable

This project will be implemented over a 3-year period.

(13) Cost Projections

In US \$,000

ACTIVITY	EXPERTISE	EQUIPMENT/ MATERIALS/ SUPPLIES	Local Input	Total
Activity 1 - Amend existing legislation, or create new legislation where necessary in accordance with the NPOA:	20	10	20	50
Activity 2 - Establish fisheries and vessel monitoring information databases.	10	10	25	45
Activity 3 - Establish a national Fishing Vessel Register where required.	10	20	25	55
Activity 4 - Install national or sub-regional VMS systems, as appropriate. ³¹	100	1000	125	1225
Activity 5 - Develop an Observer Programme.	10	50	50	110
Activity 6 - Promote a programme of public awareness of IUU fishing issues.	20	40	20	80
Activity 7 - Arrange training programmes on MCS and related issues for policy makers, the judiciary, law enforcement and other agencies.	150	60	40	250
Activity 8 - Establish Port State Control mechanisms for inspections, safety certification and to monitor transshipment.	10	20	40	70
Sub Total	330	1210	345	1885

³¹ The costs are for installing base stations and associated equipment only. It is envisaged that vessels will bear the cost of installing the necessary on-board equipment, or some assistance programme may be made available to vessel owners. Five base stations are contemplated: Guyana, Suriname, Jamaica, St. Lucia and Trinidad and Tobago.

<u>Activities at Regional Level</u>				
Activity 9 - Develop a regional network of databases for exchange of information on vessels, to improve surveillance, and for scientific information.	25	100	5	130
Activity 10 - Develop a regional List of vessels in Good Standing	25	10	0	35
Activity 11 - Develop a network of VMS systems	25	50	5	80
Sub Total	75	160	10	245
<u>GRAND TOTAL</u>	405	1370	355	2130

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ANNEX 1**Delimitation Agreements Concluded by CARICOM Member States and Associate Member**

	Agreement Signed	In Force	Remarks
St. Lucia / France (Martinique)	1981	1981	
Dominica / France (Guadeloupe and Martinique)	1987	1988	
Trinidad and Tobago / Venezuela	1990	1991	
Jamaica / Colombia	1993	1994	
Jamaica / Cuba	1994	1995	
Barbados / Guyana	2003	Not Yet In Force	An EEZ co-operation treaty establishing provisional arrangements under which a zone of cooperation was created.
UK (Montserrat) / France (Guadeloupe)	1996	1997	Montserrat is a dependent Member State of CARICOM
Haiti / Cuba	1977	1978	
Haiti / Columbia	1978	1979	
<u>Associate Members</u>			
UK (Anguilla) / France (St. Martin and St. Bethelmy)	1996	1997	
UK (British Virgin Is) / US (Puerto Rico and US Virgin Islands)	1993	1995	
UK (Anguilla) / US (US Virgin Islands)	1993	1995	
UK (Turks and Caicos) / Dominica Republic	1996	Not in Force	
UK (Cayman Islands) / Honduras	2001	2002	

ANNEX 2

List of Vessels Presumed to Have Carried Out IUU Fishing Activities in the ICCAT Convention Area*

* Established pursuant to the 2002 Recommendation by ICCAT to Establish a List of Vessels Presumed to Have Carried out Illegal, Unreported and Unregulated Fishing Activities in the ICCAT Convention Area [02-23]

Serial Number	Reporting CPC	Date Informed	Entry #	Current Flag	Previous Flag	Name of Vessel (Latin)	Owner Name	Address
20040001	JAPAN	24/08/2004	1788	ST. VINCENT & GRENADINES		NATIONAL NO. 101	KWO-JENG MARINE SERVICES Ltd.	TRINIDAD & TOBAGO
20040003	JAPAN	24/08/2004	1788	ST. VINCENT & GRENADINES	E. GUINEA	CHANG YOW NO. 212	CHANG YOW FISHERY / CONTINENTAL HANDLERDS	ST.VINCENT
	<u>JAPAN</u>			<u>ST. VINCENT</u>	-	<u>AQUARI</u>	-	
	<u>JAPAN</u>			<u>PALAU</u>	-	<u>BRAVO</u>	-	
	<u>JAPAN</u>			<u>UNKNOWN</u>	-	<u>OCEAN I</u>	-	
	<u>JAPAN</u>			<u>UNKNOWN</u>	-	<u>MADUR/</u>	<u>(P.T. PROVISIT)*</u>	<u>(INDONESIA)*</u>
	<u>JAPAN</u>			<u>UNKNOWN</u>	-	<u>MADUR/</u>	<u>(P.T. PROVISIT)*</u>	<u>(INDONESIA)*</u>

Notes:

* According to 2002 ICCAT IUU Vessel List

Article 61

Conservation of the living resources

1. The coastal State shall determine the allowable catch of the living resources in its exclusive economic zone.
2. The coastal State, taking into account the best scientific evidence available to it, shall ensure through proper conservation and management measures that the maintenance of the living resources in the exclusive economic zone is not endangered by over-exploitation. As appropriate, the coastal State and competent international organizations, whether sub-regional, regional or global, shall co-operate to this end.
3. Such measures shall also be designed to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield, as qualified by relevant environmental and economic factors, including the economic needs of coastal fishing communities and the special requirements of developing States, and taking into account fishing patterns, the interdependence of stocks and any generally recommended international minimum standards, whether sub-regional, regional or global.

Article 62

Utilization of the living resources

1. The coastal State shall promote the objective of optimum utilization of the living resources in the exclusive economic zone without prejudice to article 61.
2. The coastal State shall determine its capacity to harvest the living resources of the exclusive economic zone. Where the coastal State does not have the capacity to harvest the entire allowable catch, it shall, through agreements and other arrangements and pursuant to the terms, conditions, laws and regulations referred to in paragraph 4, give other States access to the surplus of the allowable catch, having particular regard to the provisions of articles 69 and 70, especially in relation to the developing States mentioned therein

Article 73

Enforcement of laws and regulations on the coastal State

1. The coastal State may, in the exercise of its sovereign rights to exploit, conserve and manage the living resources in the exclusive economic zone, take such measures, including boarding, inspection, arrest and judicial proceedings, as may be necessary to

ensure compliance with the laws and regulations adopted by it in conformity with this Convention.

Article 192

States have the obligation to protect and preserve the marine environment.

Article 194

Measures to prevent, reduce and control pollution of the marine environment

1. States shall take, individually or jointly as appropriate, all measures consistent with this Convention that are necessary to prevent, reduce and control pollution of the marine environment from any source, using for this purpose the best practical means at their disposal and in accordance with their capabilities, and they shall endeavour to harmonize their policies in this connection.

Article 197

Co-operation on a global or regional basis

States shall co-operate on a global basis and, as appropriate, on a regional basis, directly or through competent international organizations, in formulating and elaborating international rules, standards and recommended practices and procedures consistent with this Convention, for the protection and preservation of the marine environment, taking into account characteristic regional features

Alternative definitions or descriptions of MCS

Source	Monitoring	Control	Surveillance
FAO Expert Consultation, 1981	The continuous requirement for the measurement of fishing effort characteristics and resource yields	The regulatory conditions under which the exploitation of the resource may be conducted	The degree and types of observations required to maintain compliance with the regulatory controls imposed on fishing activities
CECAF, 1981	The collection, measurement, and analysis of fishing activity on catch, species composition, effort, discards, and area of operation, inter alias, which is necessary for fisheries managers to arrive at management decisions	The specifications of the terms and conditions under which resources can be harvested, and normally contained in national legislation, and provides a basis for which management arrangements are enforced.	The checking and supervision of fishing activity to ensure national legislation and terms and of access and management measures are observed. This activity is critical to ensure that resources are not overexploited, poaching is minimized and management arrangements are implemented.
SADC Protocol 2001	The follow-up of a fishery through collection, compilation, analysis, and reporting of information on fishing and related activities, including fish processing, fish trade and aquaculture	The establishment and enforcement of the legal and administrative measures under which living aquatic resources and aquatic ecosystems can be exploited	The checking and supervision of fishing activity to ensure compliance with control measures

Benefits of a VMS System

VMS is an electronic tool to increase the effectiveness of the MCS measures in use. It provides monitoring agencies with accurate locations of the vessels participating in the system. The essential components of the VMS function are: tracking vessel locations, identifying possible fishing activity and providing a means of communication. The technology meets two basic functions for the management of fish stocks:

- (i) Compliance with fisheries management rules by providing information on the position of vessels.
- (ii) Collection of fishing catch and effort data. This is the primary source of information relating to the status of fisheries. It is derived from timely delivery of accurate data out of direct interaction between the vessel and the monitoring agency.

For effective application of VMS to a fisheries management objective, the rules to achieve the objective must relate to VMS capabilities. This is particularly relevant to rules that refer to restrictions related to geographic areas, such as:

- areas that are closed for fishing, navigation or other activity such as, transshipment of fish
- areas which are closed at particular times
- areas which are restricted for fishing activity, to certain vessels on the basis of nationality, type, size, licence status etc.,
- areas for which access is to be timed or counted; and
- areas which are subject to quota or other catch restrictions

Implementation of a VMS system will result in direct and indirect benefits:

Direct Benefits will emerge from fines imposed on illegal fishing vessels, the cost of licences and other charges such as royalties, if imposed. Unauthorized vessels will be easily identified and arrested by means of aircraft verification, and of surface craft completing interdiction.

Indirect Benefits. The primary benefit is in improvement in the state of the resources. More accurate catch and effort information essential for stock assessment is derived from the system. Other indirect benefits will include the avoidance, or reduction of negative impacts characterized by the following:

- Unauthorized foreign fishing and illegal trans-shipments.
- Depletion of spawning and juvenile stocks.
- Declining levels of production thus reducing employment both at sea and ashore.
- Reduced profitability of fisheries, reduced economic rent and fleet efficiency.
- Reduction in legitimacy of management measures perceived to be based on inaccurate information.

MISSION REPORT

Review of the current situation on IUU fishing and monitoring, control and surveillance in the fisheries sector of the CARICOM / CARIFORUM Region

Prepared by

Commodore Anthony S Franklin

for:

CARIBBEAN REGIONAL FISHERIES MECHANISM (CRFM) SECRETARIAT

1.0 Introduction

In accordance with Section 5.1 of the Terms of Agreement dated 24 February 2004 for the consultancy on Illegal, Unreported and Unregulated (IUU) Fishing and the effectiveness of Monitoring, Control and Surveillance (MCS) systems in the CARICOM/CARIFORUM Region, the following Mission Report is submitted.

1.1 Terms of Reference for Section 5.1 of the Letter of Agreement

- Work Undertaken
- Countries Visited
- Persons met
- General Observations and findings, problems and difficulties encountered.
- Conclusions

1.1.1 Work Undertaken

During the period 9th June – 17th Aug, the consultant visited six CARICOM countries: See *Annex I* - Travel Itinerary. The CRFM office in St. Vincent and the national fisheries administrations in each country made arrangements and appointments for field consultations in the respective countries. The aim of the mission was to assess the status of IUU fishing, the policies and strategies in place to deal with IUU fishing and the capacity to deal with the MCS requirements. Based on the mission output and additional research, the consultant is required to develop a strategy and proposal to enhance the effectiveness of MCS at the national, sub-regional and regional levels and eliminate or minimize IUU fishing activities in the region.

In the mentioned countries, the consultant met with Fisheries Directors, staff of the fisheries departments, Coast Guard officials, law enforcement agents, officials responsible for maritime administrations, representatives of fishing cooperatives, fishers and fish marketing representatives. In some countries representatives from Ministries of Foreign Affairs or the Attorney General's Office were made available. (Annex II – Meeting Participants List)

The objectives of the project are:

- To review and document the extent of IUU fishing in CARICOM / CARIFORUM States.
- To review and assess the situation regarding MCS in the fisheries CARICOM / CARIFORUM Region.
- To identify the critical issues affecting the use of MCS as an effective mechanism for fisheries resource management and sustainability.
- To define a strategy and project proposal to enhance the effectiveness of MCS at the national, sub-regional and regional levels and eliminate or minimize IUU fishing activities in the region.

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During the mission, the areas for examination, analysis and discussion covered were:

- The extent of IUU fishing in the region, both by foreign and national fishers.
- Existing policies and strategies put in place by member states to meet their obligations under UNCLOS II and other international agreements;
- Existing legislation and regulations in place to meet fisheries requirements and other secondary fisheries related tasks, such as pollution and environmental monitoring.
- The capacity of the organizations responsible for MCS at national, regional and local levels, the resources available for fisheries operations and the strengths and weaknesses of those organizations.
- The existing level of coordination and cooperation among different organizations with respect to fisheries MCS.

1.1.2 Countries Visited

Fieldwork was scheduled to be undertaken in a representative sample of nine (9) CARICOM / CARIFORUM countries. However, owing to logistical and financial constraints, the consultant was able to conduct successful field missions in six (6) countries only: St. Vincent and the Grenadines, St. Lucia, Suriname, Guyana, Jamaica and The Commonwealth of The Bahamas. Countries not visited were Barbados, Haiti and The Dominican Republic.

1.1.3 Persons Met

See *Annex II* –“Meeting Participants List”

1.1.4 Questionnaire

As part of the preparation for the field mission, a questionnaire was prepared and submitted to the Fisheries Directors in advance of the mission. See *Annex III*.

1.1.5 Additional Information

In addition to the countries visited, the questionnaire was sent to the Fisheries Director in Trinidad and Tobago and a response was received. The Director was also interviewed. Further, the consultant was able to obtain information from a FAO / GOTT sponsored regional workshop on VMS systems held in Trinidad and Tobago from July 28th – 30th, 2004.

1.1.6 General Observations and Findings.

The findings are addressed under four headings: IUU Fishing, MCS in CARICOM, Legal Matters and Institutional arrangements. They are the main findings relevant to assessing the regional situation and to the development of a strategy for improvement. The mission examined existing policies and strategies, existing legislation, the capacity of the enforcement agencies, and the level of cooperation among agencies.

The fishing industry makes an important contribution to development and the attainment of food security in the region. It accounts for 18.8% of total food production. The fisheries sector in the region provides stable full-time direct employment for more than 120,000 fishers and indirect employment opportunities for thousands of others in the processing, marketing, and support services. The contribution to GDP is as high as 7.2 % in Belize and exports total US \$211 million, representing 0.4% of the world total.

IUU Fishing

The extent of IUU fishing in the region is not quantified. At the national level, there is not sufficient capacity to assess the extent. The effect of IUU fishing is significant and it is therefore a major problem for the region.

MCS in CARICOM

Some of the critical issues facing fisheries administrations include the following:

Monitoring - Capacity at the national level within fisheries administrations for carrying out the MCS functions is very low.

Control - In most instances legislation or related regulations concerning fisheries management and development in the region needs to be updated in accordance with international agreements and guidelines.

Surveillance and Enforcement - In many instances the limits of the maritime zones, especially EEZs, are yet to be determined. There is also a shortage of appropriate surface and air surveillance units in most countries as some Coast Guard organizations face severe financial and human resource constraints that limit the extent of operation and serviceability of their existing vessels. It appeared that MCS for illegal fishing is not given as high a priority as for example, counter-narcotics operations, especially in cases where the funding for equipment and operations is provided by external sources.

There is little use of electronic surveillance technologies, for example VMS.

1.1.7 Follow-up

Following the completion of the field mission and the preparation of a draft strategy and project proposal to create and sustain suitable institutional, legal, regulatory mechanisms to enhance the effectiveness of MCS at the national, sub-regional and regional levels, the CRFM Secretariat will organize and convene a regional workshop of senior fisheries and enforcement personnel to review the strategy and project proposal. The consultant will present the strategy and project proposal and use the recommendations from the workshop to refine the document.

2.0 Conclusion

Fishing is an important economic and food security activity for the CARICOM Region, but IUU fishing poses severe problems for the region because MCS systems at the national level are

generally weak. This is a result of several constraints: human resources, financial resources, lack of vessels and aircraft for EEZ patrols and beyond. The cost of operating a marine surveillance system is a significant burden for some countries and this situation leads to a prioritization of use of the surveillance assets. Consequently fisheries surveillance is not the top priority.

The inadequacy of Fisheries legislation in most countries allows IUU fishing activities to continue. When aligned with the fact that, there are several maritime boundaries yet to be delimited, national surveillance and control over fisheries resources become difficult.

ANNEX I

Travel Itinerary

St Vincent	June 6 th - June 9 th
St Lucia	June 13 th - June 15 th
Barbados	June 15 th – June 16 th
Suriname	June 21 st – June 24 th
Guyana	June 24 th – June 25 th
Jamaica	August 8 th – August 12 th
The Bahamas	August 12 th – August 16 th

Persons Met

St Vincent and the Grenadines

Ms. Jennifer Cruickshank	-	Senior Fisheries Officer
Mr. Geoffrey Pompey	-	Fisheries Officer
Mrs. Sylvia Ambris-Dick	-	Attorney General's Office
Mr. Colin Davis	-	Fishing Cooperative
Mr. Sylvan Peters	-	Fishing Cooperative
Mr. Augustus Williams	-	Fishing Cooperative
Lt. Cdr. David Robin	-	Commanding Officer Coast Guard

CRFM

Dr. Susan Singh-Renton	-	Programme Manager, Research and Resource Assessment
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St. Lucia

Mr. Vaughn Charles	-	Chief Fisheries Officer
Mrs. Sarah George	-	Senior Fisheries Officer
Ms. Williana Joseph-Jean Baptiste	-	Senior Fisheries Officer
Mr. Vincent Peters	-	St. Lucia Fish Marketing Corp.
Cpl. St. Bryce	-	St. Lucia Coast Guard

OECS Secretariat

Mr. Peter Murray	-	Programme Officer
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Suriname

Mr. M. Mahadew	-	Director of Fisheries
Mr. R. Bansie	-	Senior Fisheries Officer
Capt. D. Baal	-	Ministry of Defence (Navy)
Capt. R. Bhola	-	Ministry of Defence (Navy)
Maj. H. S. Amatmochrin	-	Police
Inspector H. Dhoeme	-	Police
Mr. M. Alcenman	-	Director CEVITAS

Guyana

Ms. Dawn Mason	-	Chief Fisheries Officer
Mr. Lloyd Piggott	-	Managing Director Georgetown Seafoods & Trading Co.
Mr. Reuben Charles	-	Former Fisheries Director
Lt. Cdr. D. Erskine	-	Coast Guard
Mr. Michael Tennant	-	Maritime Administration
Mr. Winston Earl Thom	-	Fisheries Department
Mr. Brian Daly	-	Fisheries Department

Jamaica

Mr. Andre Kong	-	Chief Fisheries Officer
Mr. David Smichael	-	Deputy Chief Fisheries Officer
Mr. Ian Jones	-	Senior Fisheries Officer
Ms. Tennele Grant	-	Fisheries Officer
Mr. Peter Espeut	-	NGO
Two representatives from the Marine Police		
Deputy Director Jamaica Maritime Administration		
Representative from NEPA		
Representative from JDF Coast Guard		

Bahamas

Mr. Michael Braynen	-	Chief Fisheries Officer
Mr. Gilford Lloyd	-	Senior Fisheries Officer
Capt. Lloyd Farquahson	-	Acting Chief of Defence
Mr. William E. Poitier	-	Assistant Comptroller, Customs
Mr. B Bethel	-	Customs
Mr. Earl Seymour	-	Customs
Mr. Jordan Ritcjie	-	Ministry of Foreign Affairs

QUESTIONNAIRE

- What is the nature of the fishery around this country?
 - **Species Tonnage**
- What legislation and regulations are in place to meet:
 - fisheries requirements,
 - other secondary fisheries related tasks, e.g. pollution and environmental monitoring?
- What is the status of ratification, implementation or acceptance of international instruments relevant to management of fisheries around this country, and for the prevention of IUU?
- What are the Fisheries Management strategies?
- Is your country a Contracting Party to ICCAT?
- What is the contribution to the economy of the fishing industry?
- How extensive is IUU fishing in the waters of this country?
- Are there fishery conservation zones or protected zones?
- Is there an Observer Programme?
- Are there Self Policing systems?
- Is there a compliance and inspection programme?
- Are Port inspections carried out?
- At sea boardings and inspections carried out?
- Countries from which vessels engaged in IUU fishing come?
- What is the social impact of IUU?
- What is the system for registration and licensing of fishing vessels, both local and foreign?
- What policies and strategies exist to stop IUU including sanctions?

- Which organizations are responsible for:
 - Monitoring
 - Control
 - Surveillance
 - What are the hindrances to effective MCS?
 - What is the capacity of the organizations responsible for the conduct of MCS?
 - resources available
 - strengths
 - weaknesses
 - Is aircraft available for surveillance patrols?
 - Are there routine patrols of the waters under the country's control?
 - VMS. Will it work? Can it be implemented?
 - What was expenditure on MCS for 2002, 2003 and what is allocated for 2004?
 - How many reports of illegal fishing by (a) foreign fishing vessels, and (b) local vessels were received during 2002, 2003 and so far for 2004?
 - How many arrests?
 - Was ICCAT informed?
 - How are reports made?
 - Are there any regional arrangements for MCS for fishing?
 - If so, with which countries?
-