

## Remembering Minister Satyadeow Sawh

by: Hugh Saul, Executive Director, CRFM Secretariat

We are saddened by the announcement of the death of the Hon. Satyadeow Sawh, Minister of Agriculture and Fisheries – Guyana.

Minister Sawh was a friend and a committed member of the regional political directorate. He was possessed with a sense of commitment to the cause of Fisheries, Agriculture and Rural Development and fought in support of the fisher folk, farmers and rural peoples. He was a soldier in the fight for sustainable use and development of Guyana's fisheries resources and by extension CARICOM fisheries resources.

I first met Minister Sawh at a CFRAMP handing-over ceremony of a four seater pick-up truck and equipment to the Ministry of Agriculture where he served as Minister. He impressed me as being optimistic and full of energy and ideas. He always wanted things to happen and to be seen as a force for change.

At our last meeting a few months ago he discussed the need for assistance from the CRFM Secretariat to restructure the Department of Fisheries in Guyana, in order to build greater technical capacity so that problems related to the shrimp, seabob, groundfish and red snapper fisheries could be addressed within a sustainable environment. He saw aquaculture development as an activity that had great promise for Guyana and asked that consideration be given by the CRFM Secretariat to the establishment of an aquaculture pilot project under a regional initiative soon to be funded by the CRFM Secretariat with international donor support.



*The Late Minister Satyadeow Sawh*

Minister Sawh always found time to meet with us, and always had ideas that enriched our discourse. He will be remembered as a friend, believer in, and supporter of the Caribbean Regional Fisheries Mechanism.

To the Government and people of Guyana, to his wife, children and extended family, to the staff of the Ministry of Agriculture and Fisheries, we extend deepest sympathies.

In closing, I quote from an address given by Minister Sawh at one of our (CRFM) Institutional Strengthening Workshops for CARICOM Fisherfolk.

*... "In order to realize the full potential of the fisheries resources of the region in a sustainable manner; the principles of responsible fishing and sustainable fisheries management need to be promoted. The Code of Conduct for Responsible Fisheries, adopted in October 1995, provides a framework for national and international efforts to ensure sustainable exploitation of living aquatic resources in harmony with the environment. It establishes principles and standards applicable to the conservation, management and development of all fisheries. Fishermen and fishing communities need to play a more active role in the decision making process. In order to achieve this, fishers need to form strong professional organizations in order to effectively play the role of resource co-managers.*

*Governments of the countries of the CARICOM region recognize the important role that fisheries play in their respective countries and are committed to en-*

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suring continued contribution to present and future generations.

In Guyana, the fundamental orientation of fisheries policies is to promote a gradual shift in emphasis in the sector, so that areas with greatest potential are encouraged to expand and at the same time safeguards are put in place to ensure that important species are not overexploited or exhausted and as a result, deprive our fishermen of a source of livelihood.

Emphasis is now being placed on development of the aquaculture industry as a means of supplementing the declining production of the capture fisheries. Construction of an Aquaculture Demonstration Farm and Trading Centre is now underway at Mon Repos and is due to be completed in April. This facility will assist in the training of fishermen in aquaculture, with the hope that some diversification of their operations can occur and subsequently reduce pressure on the marine resources.

Fishermen have some very important responsibilities and should be assisted to organize themselves into active groups. The existing fishermen's groups should

be strengthened through intensified training and education of its members to take up their role in the fisheries management process. Fishers can also, in the long term, be trained in processing, fish handling (HACCP), marketing and other areas.

Promotion of the co-management of the fisheries resources of the region is necessary. Rather than for government to remain actively in fisheries management, there should be the creation of a "level field" through which various stakeholders are given a means to articulate their demands for access to a certain good or service and where actions result from consensus, or at least majority agreement among a group of stakeholders.

This democratic element would be infused in the process of such empowerment, and benefits to respective groups would be realized. It would also assist in garnering the involvement and support of fishers and other stakeholders for measures geared towards the sustainable management of the resource." ...

**MAY HIS SOUL REST IN PEACE.**

## FISHERIES DEVELOPMENT & POLICY

### Regional concerns regarding fisheries subsidies disciplines in the World Trade Organisation

*by Peter A. Murray, Programme Officer (OECS/ESDU)*

A number of Caribbean Community (CARICOM) governments have facilitated investment in the fisheries sector through subsidy schemes and tax holidays, and have given concessions including import duty reduction on capital equipment, rebates on the duty paid on fuel and tax exemptions. Across these States, subsidies vary in their degree, the inputs that are covered, and the method of implementation. They may have long term implications and possibly negative effects on other sectors of the economy if investment capital is in short supply.

According to the WTO Agreement on Subsidies and Countervailing Measures (ASCM), a subsidy has 3 basic elements: (i) a financial contribution (ii) by a government or any public body within the territory of a Member (iii) which confers a benefit. All three of these elements must be satisfied in order for a subsidy to exist. However, it can be contested (a) whether there can be a subsidy without a charge on the public account, or (b) whether other forms of government intervention that do not involve an expense to the government but which nevertheless distort competition should be considered to be subsidies. Given such con-

tentions, the ASCM notes that subsidies do require a financial contribution. It has listed the types of measures that represent a financial contribution, e.g., grants, loans, equity infusions, loan guarantees, fiscal incentives, the provision of goods or services, the purchase of goods etc. The argument that has been advanced, though not universally supported, is that fisheries subsidies have had deleterious effects upon sustainable fish catches. It can be argued that these issues are not necessarily an appropriate subject matter for the WTO and are probably best addressed in other, more appropriate fora, such as the FAO.

In the context of most CARICOM states, "subsidies" are necessary developmental incentives for the industry. Fisheries activities in small vulnerable coastal states like those of the Caribbean Community come under three separate categories: revenue generation from access fees; domestic and foreign fishers operating for export in the EEZ and territorial sea to supply canneries, loining facilities and domestic processing facilities; and, artisanal fisheries for export and domestic markets. Any new fisheries subsidy

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disciplines on distant water and local fleets as suggested by the proponents of such disciplines would generally impact on a large number of small, vulnerable, coastal states. Hardening of subsidies disciplines must take into account the contribution of fisheries in small vulnerable coastal communities to food security, employment, income generation and household livelihoods, sustenance of social order and programmes to eradicate poverty.

A number of issues are considered pertinent in light of the concerns expressed by small coastal States. The CARICOM States, being environmentally fragile and vulnerable, have historically strongly supported initiatives to protect the environment. However there is concern that measures developed in the Negotiating Group on Rules may not adequately address the environmental concerns that motivate their development. The prohibition of measures that may increase fishing capacity in a responsible manner, without negatively affecting the productivity of the resource and sustainability of the ecosystem, would unduly limit the ability of certain states to develop and utilize their fisheries resources for sustainable development, food security and poverty reduction.

A top down approach to fisheries subsidies would only address the goal of sustainable development of the fisheries sector in developing coastal states if the appropriate exceptions are made to allow for the realization of development objectives. Regardless of the approach employed, development assistance granted to small vulnerable coastal states does not constitute a subsidy and, therefore, does not fall under the remit of subsidies disciplines. Any new measures on fisheries subsidies should take into account the importance of the fisheries sector to developing countries. Small vulnerable coastal states like those of CARICOM should seek appropriate special and differential treatment in any disciplines on fisheries subsidies; necessary because of the unique characteristics of their economies and environments that are intrinsically linked.

Any sudden changes create increased vulnerabilities. In this regard the following should not be subject to subsidies disciplines: development assistance to artisanal or small-scale fishers; access fees, emanating from state to state agreements, which are important sources of income for many small economies, fiscal incentives to facilitate the development of capabilities of small vulnerable coastal states. Indeed, fiscal incentives and subsidies are not objectively negative. In the context of certain countries, they can have very positive effects on industries and competitiveness, often leading to an increase in participation in international trade. These incentives in small economies are often minuscule in nature but fundamental in importance. Examples include, assistance for infrastructure, export capabilities, technological transfer, tax incentives

and rebates, insurance schemes, to name but a few. The special and differential treatment provisions of the ASCM for Least Developed Countries should also be maintained in future disciplines.

Under any approach, there is a need to consider subsidies that would not be prohibited. These might include, but not be limited to: government expenditures for management frameworks, including those relating to surveillance, monitoring, enforcement and associated research; government expenditures for general infrastructure; certain fisheries-related social insurance programmes (e.g. job training to assist the transition out of the industry); government expenditures for access; appropriately structured decommissioning subsidies. A number of issues, of a “cross – cutting” nature, need to be considered with regard to fisheries trade. These include, but are not limited to exceptions and longer transition periods for small vulnerable



*Officials discussing the issues*

coastal states to play catch up; capacity building and development assistance to assist in meeting their development and trade needs. Consideration of environmental issues on trade related matters need to be discussed with environmental technical experts such as the FAO. Development assistance and support towards establishment and operation of RFMOs and support for community-based fisheries management are also necessary, and clarification on MEAs and trade related issues need to be resolved sooner than later.

The primary aim should be to ensure that developing countries, specifically LDCs, are able to enhance their level of development and increase their integration in the multilateral trading system, hence the rules should not unfairly constrain or limit programmes or assistance which can lead to the realization of these ministerial commitments for developing countries.

## FISH HUMOUR

**How do you stop a fish from smelling?**

**Cut off its nose.**

# Empowering fisher folk organizations for Effective Participation in Regional Policy Decision Making

*by David N. Brown,  
Coordinator for Advocacy, Policy and Planning, CRFM Secretariat.*

In this era of globalization and internationalism, it is no longer permissible to maintain narrow, insular perspectives in our business affairs. External pressures are exerted on our internal businesses by foreign governments and institutions, such as through the imposition of stringent post-harvest standard certification measures and penalties for deviation. Cooperative efforts in the industry are needed, not only at the national level but also at the regional, to ward off these intrusions. It is high time to begin formulating strategies beyond national boundaries into the wider regional arena, planning and implementing joint strategies in resource policy formulation and management. We, as critical stakeholders, should create strategic alliances to collectively poke our noses into the decisions made externally but which ultimately affect our businesses and livelihoods.

The CRFM, through its Secretariat, in close collaboration with the Caribbean Fisheries Forum, and with the blessing of the Ministerial Body, will, among other things, promote the sustainable development and management of the shared fisheries resources; plan and implement strategies for the resolution of regional conflict among competing users of the resources from Member States and between them and third countries; monitor and address issues relating to the arbitrary application of international laws and regulations; provide technical support for the development of regional harmonized legislation; and with the mandate of member states, arrange for the representation of the region, member states and fishers' organizations at international fisheries fora.

There are critical matters involved that should be of central concern to the fisher folk organizations, and therefore warrant their seeking to influence decision making in those areas of concern. Regional fisher folk organizations are among organizations that would have Observer Status on the Forum of the CRFM, and could be invited to participate in meetings of the Forum but would have no voting rights. Even so, there are avenues through which the fisher folk organizations as a united body could influence decision making. First, when matters of crucial importance to the primary Fishers' Cooperatives and Associations are to be deliberated upon by the Forum, the national umbrella organizations could lobby for their representatives to be included in the national delegations so

that they could influence the outcomes of the processes. Second, they could influence the Ministerial body through active participation in the operations of the national Fisheries Advisory Committees (FAC). Third, they could influence decision-making by the Caribbean Fisheries Forum through working closely with the Fisheries Administrations and exerting pressure. Fourth, they could exert influence through the CRFM Secretariat by the proposed Caribbean Regional Network of National Fisher Folk Organizations.

The national umbrella organizations must: coordinate programmes and activities of the primary organizations at the national level, facilitate the promotion of capacity building programmes for the primary organizations towards resource co-management, be the mouthpiece of the primary organizations at national and regional decision-making fora, participate in resolving conflicts among the primary organizations, and develop consultative and feedback links with the primary organizations on matters of national and regional importance. In the wider regional arena, the national apex organizations should strengthen the regional network by regularly sharing valuable and strategic information with one another, regularly consulting with each other for the development of common strategies on regional policy matters, and establish strong linkages with relevant NGOs, and other research institutions and funding agencies.

To prepare the national umbrella organizations for the task of spearheading the regional movement, we recommend a three-pronged strategy. First, the generality of the members should be committed to conservation of the resources, to ensure sustainable resource use. Second, there must be commitment to institutional strengthening, through broadening of the membership base of the organizations, the diversification of the economic bases and the development of alternative livelihood programmes, so as to reduce poverty among the members and their households. Third, members should support capacity building through education, training, awareness building, communication management and information exchange. The establishment and effective operation of the Caribbean Regional Network of National Fisher Folk Organizations would enhance the implementation of these strategies.

## FISH HUMOUR

**Why do they call him "Fish"?**  
Because he cannot keep his mouth shut.

# Status and Trends in the Fisheries Sector of Antigua and Barbuda

By Ian S. Horsford, Fisheries Officer/Marine Biologist  
Fisheries Division, Antigua & Barbuda

Over the past thirty years, the fishing fleet of Antigua and Barbuda has undergone significant modernisation. Most of the wooden sloops and dories that dominated the sector in the early seventies have been gradually replaced by modern fibreglass launches and pirogues with the latest fishing equipment (global positioning systems, depth sounder, trap haulers, etc.). While there have been significant changes in terms of vessel construction and fishing technology, traps or “fish pot” remain the dominant gear. Trap-fishing vessels comprised 48% of the active fishing vessels in 2003, followed by “hook and line” vessels (16%). The distribution by primary fishing method for the rest of the fleet was: trolling, 15%; gillnetting, 11%; SCUBA diving, 6%; free diving, 2%; and longlining, 2%.

With regards to the registration of fishers and vessels which started in 1995, there has been consistent improvement. However, this has shown that the numerous hurricanes experienced over the past decade have significantly reduced the level of fishing activity. For example, of the 695 vessels registered at the end of 2003, only 292 (42%) were actively fishing, accounting for 724 fishers or 2% of the labour force of 33,000. These values should be taken as conservative estimates since the sector continues to act as a “safety-net” for other economic activities. In other words, when there is a downturn in others sectors (e.g., tourism and construction) individuals re-enter or increase their activity in the fisheries sector.

In 2002, total production of finfish, spiny lobster (*Panulirus argus*) and queen conch (*Strombus gigas*) was 5.23 million pounds and valued at EC\$ 30.86 million. The spiny lobster, being one of the most valuable resources, contributed 19.7% of the total value of production. With the growth in the number of fishing vessels over the past eight years, fisheries production continues to rise, contributing 50% of the agricultural GDP of EC\$ 62.6 million or 1.6% of the national GDP (in current prices) for 2002. In terms of the composition of the finfish landings, the grouper family (red hind, coney, etc.) was the most dominant group followed by the snappers, grunts and parrotfish (“chub”). Value of production for these two major fish groups was EC\$ 4.8 million and EC\$ 5.4 million, respectively. The difference in value, despite larger landings for the groupers, was due mainly to the higher prices offered for the snappers.

Total export of fishery products from Antigua and Barbuda in 2002 was 169,000 pounds and valued at EC\$ 1.59 million (based on local prices). This represented an increase of 26.4%, in terms of quantity from the previous year, with Barbuda contributing 67.4%. While this represents a substantial increase, the levels of export have not recovered to the levels that they were prior to the European Union harmonising their trade regulations in 1992. This harmonisation drastically affected the export sector since the European Union, specifically the French territories in the region, are our main export market. Prior to

1992, as much as 473,000 pounds of fishery products (or EC\$ 3.27 million) were exported mainly to the French territories of Guadeloupe, Martinique and St. Barthelemy.

In recent times, live lobster has dominated the export of fishery products due in part to Article 5 of Directive 91/493 of the European Community legislation, which forbids the placing on the market of fishery products containing ciguatera toxins – the toxins responsible for “fish poisoning”. This legislation has restricted exports to mainly live lobster since local exporters cannot guarantee that their products are free from such toxins. Fish poisoning has long been recognised as a serious health problem endemic to the Leeward and Virgin Islands, with Antigua and Barbuda having some of the highest number of reported cases in the sub-region (295 cases in 2001 and 276 cases in 2002). With such figures, fish poisoning will continue to be detrimental to trade and a burden on our health care system.

At present, the fisheries sector is struggling to meet the stringent trade requirements of the European Union, as well as overcome trade sanctions (in the case of conch) resulting from failure to meet our obligations under the Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES). This Convention protects certain endangered species from overexploitation by means of a system of trade permits. The local conch, *Strombus gigas*, falls under the protection of CITES since Antigua-Barbuda acceded to the Convention in 1997 and is subject to the provisions of the Convention. Since 1999, trade sanctions have been imposed on Antigua-Barbuda for failure to meet its obligations with respect to reporting as well as failure to enact CITES enabling legislation required to implement the Convention. In order to improve management of the conch resources and to meet our obligations to CITES, a morphological study was conducted in 1999, followed by an abundance survey. Both form the first steps in determining a “sustainable yield” for the stock. In terms of vulnerability, the Barbudan economy is highly at risk due to its heavy reliance on lobster exports as a foreign exchange earner. As much as 84% of the lobsters landed are shipped to the French territories in the region. Hence, trade sanctions resulting from failure to meet international standards, can have dire implications, particularly when the lobster fishery offers the highest per capita earnings, with 26% of the population (of 1,400) financially dependent on this fishery.

Studies should continue to be conducted on the problem of ciguatera poisoning in order to reduce its damaging effect on production levels and the health care system, as well as increase export earnings from the European Union and other overseas markets.

*This article is an excerpt from a longer version that was first published in “What’s Up In Agriculture”, Vol.9 No.1.March – May, 2004. Ministry of Agriculture, Lands and Marine Resources.*

# Regional Technical Cooperation Promotion Program (RTCPP)

*By Jaime Villanueva, Assistant Fisheries Officer, Fisheries Dept., Belize*

The Regional Technical Cooperation Promotion Program (RTCPP) is a program under the Regional Fisheries Training Project (RFTP) sponsored by the Japanese International Cooperation Agency (JICA) and targeting fisheries personnel in the Caribbean. The RTCPP provides training in Marine Engineering, Marine Fisheries Resource Management, Capture Fishery Technology and Fishing Gear Development, Seafood Technology and Marketing, and Fisheries Technology. The program's main objective is to assist and provide relevant training in fisheries to the Caribbean countries. In October 2005, Belize participated in the RTCPP by nominating two Officers from the Fisheries Department to attend courses in Marine Fisheries Resource Management, Capture Fishery Technology and Fishing Gear Development. The courses were held at the Caribbean Fisheries Research and Development Institute (CFTDI), Trinidad and Tobago. Lectures and practical exercises were conducted and executed by Japanese Experts and their Trinidadian counterparts.

As a follow-up, there was a similar four-day training workshop during 14 – 19 February 2006 in Belize. This workshop was facilitated by a Japanese Capture Fishery Expert, Mr. Motoko Fujii, and a Trinidadian counterpart, Mr. Llewellyn Ellis. During the four days of the workshop in Belize, there were lectures, and gear construction practices, including verti-

cal long line fishing, targeting deep water demersal and pelagic fish species in the non-traditionally fished (deep-sea) waters of Belize.

An experimental fishing operation for diamondback squid was also conducted in the deep waters beyond the Barrier Reef. This was the first

time that this type of fishing was done in the country, although one fisherman had reported an accidental catch of a diamondback squid in our waters. Diamondback squid have been previously caught in Trinidad and Tobago, and Saint Lucia. Diamondback squid can grow up to a weight of 18 kg. On the completion of the RTCPP workshop in Belize, more of our fishermen have begun venturing into the deep sea to exploit our demersal and pelagic fish resources which are currently under-utilized. Fifteen fishermen from the various fishermen co-operatives countrywide were selected to attend the Workshop in Belize. All fishing gears for this training were provided by JICA. The potential for diversification from the conch and lobster fisheries is expected to help efforts to improve stock recruitment in these fisheries that are believed to be almost over fished. These new fisheries also offer the potential of an alternative source of income to commercial fishers wishing to engage in new harvesting ventures.



*"Diamondback Squid" captured in experimental fishing off Tobago. This valuable species was first discovered by the Project in 2002.*

## A Description of the Commercial Fisheries of Anguilla

*By James C. Gumbs, Director, Fisheries & Marine Resources, Anguilla*

Anguilla, located at 18°8'N, 63°17'W, is the most northerly of the Leeward Islands in the Eastern Caribbean island chain. It is a low-lying coralline limestone island dominated by shrub, with no rivers, streams or standing bodies of freshwater. Salt ponds are the only permanent water bodies found on Anguilla. The island is 91 km<sup>2</sup> in size, with a maximum elevation of 65 meters. Anguilla is surrounded by 4660 km<sup>2</sup> of coralline marine habitat and eight small uninhabited cays. Anguilla has an Exclusive Fishery Zone (EFZ) of some 85,500 km<sup>2</sup> and shares common boundaries with the French islands of St. Martin and St.

Barthelemy to the south, The British Virgin Islands to the west, and Antigua and Barbuda to the east. The EFZ extends the full 200 miles into the Atlantic Ocean to the north. Just over 2000 km<sup>2</sup> of the EFZ is submerged shelf and it is this area, which currently supports the commercial fisheries of Anguilla.

Historically, fishing has been an important activity in Anguilla, supplying residents with fresh fish, which comprised and continues to comprise an important part of their protein diet. Although the available statistical data relat-

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## A Description of the Commercial Fisheries of Anguilla (Continued)

ing to the fisheries is sparse, the fishing industry over the past 15 years has on average contributed about 2.6% to the Gross Domestic Product. A dramatic expansion in the tourism industry, beginning in the early 1980s, has seen export of fish products decrease from around 60% of the total landings in the mid 1980s to below 10% in the 1990s. In the early days exports were made to St. Martin, St. Thomas, and Puerto Rico. At present, only limited exports are made to St. Martin.

There are about 500 fishermen operating in Anguilla, with the majority being part-time fishermen. The fishermen mainly use open vessels or canoes, with approximately 300 being in operation. These fishing vessels range in size from 12ft to 50ft, with the majority (86%) being between 15ft and 35ft. Of the remaining vessels, about 10 % are below 15 ft in length and 4 % are above 35 ft. All of the vessels are powered by engines, primarily twin outboards. Fishing operations in Anguilla are mainly for “one day”, with fishermen going out to sea primarily between 5am and 2pm. However, some fishermen line fish at night for several hours on the reefs and slopes relatively close to the coastline, while there are one or two fishing operations that will spend up to 24 hours at sea.

**The finfish trap fishery** is characterized by the use of fish traps constructed of hexagonal wire mesh (legal size 1.5 inches). Traps, baited with previously caught “undesirable” fish, are usually set in shallow reef and seagrass areas or in deep reef areas of depths up to 150 fathoms. In the shallow reef and seagrass areas (< 25 fathoms) landings commonly consist of mixed reef fish, such as hinds, butterfish, old wife, grunts, doctor fish, goatfish and squirrel fish. Deep reef areas are primarily fished for deepwater red snappers that are found at depths below 40 fathoms. The peak period for the inshore fishery is usually between May and November, while the peak period for the deep reef fishery is during the winter months (November-January).

**The lobster fishery** has been established in Anguilla since the 1960s and is by far the most prosperous fishery on the island. The spiny lobster (*Panulirus argus*) is the targeted species, and in like manner as the finfish trap fishery it is characterized by the use of Antillean fish traps. The traps are set at depths between 5 and 30 fathoms and are baited with cowhide specially imported for this purpose from neighbouring islands. Over the last two decades, fishermen have been targeting the smaller spotted spiny lobster (*Panulirus guttatus*), locally called ‘crayfish’, in the shallow reef areas. The most productive months for lobster fishing for both species are from October to April.

**The line fishery** is a non-seasonal fishery characterized by the use of baited hooks, handlines, poles and rigs (a series of baited hooks on a vertical line) on both shallow and deep reef areas. Snappers, hinds, butterfish and groupers are the targeted species on the shallow reef,

while snappers and groupers are the targeted species on the deeper reefs.

**The seine net fishery** is a seasonal fishery that is usually conducted during the summer months when there is inshore schooling of coastal pelagic fish. The targeted species are horse-eye jacks, crevalle jacks, bonitos and bar jacks. Fish are encircled using 150 ft long and 40 ft deep nets either from the beach or in the open water.



*Fishing Beach with fishing boats in Anguilla*

Similar to the seine net fishery **the conch fishery** is a minor fishery targeting the queen conch (*Strombus gigas*). Less than five boats operate in this fishery and SCUBA gear has now replaced the traditional free diving method of capture.

The Fisheries Protection Act of 1986 and the Fisheries Protection Regulations of 1988, with subsequent amendments, are the sole legal instruments governing the commercial fisheries of Anguilla. Embedded in the Regulations are a number of conservation measures which prohibit, amongst other things, the use of gillnets; the taking of sea turtles; the use of wire mesh with a size less than 1.5 inches; the taking of undersized, berried (egg bearing), and moulting lobsters; and the taking of undersize conchs. There are also provisions in the Regulations for closed seasons and areas closed to fishing. However, the latter two measures are currently not being utilized for some species and for ecologically important areas.

In addition to the above conservation measures, no persons are allowed to fish with the use of explosives, lime, bleach, or any other noxious substances. However, the illegal use of such devices and substances in Anguilla is rare. Surveillance and enforcement of the laws fall under the joint jurisdiction of the Department of Fisheries and Marine Resources and the Marine Police and take place through a system of sporadic surveillance on the fishing grounds, at landing sites, and at roadside fish-vendor spots.

# Meeting of the Ad Hoc Working Group on the Social, Economic and Linkage Issues

*by Terrence Phillips, Programme Manager,  
Fisheries Development and Management, CRFM Secretariat*

The Ad Hoc Social and Economic Working Group held its first Meeting at the Cascadia Hotel, St. Ann's, Trinidad & Tobago, on March 19, 2006, to discuss the format and content of the Study; outline a schedule of work for its completion; and review the bibliographic references on the subject compiled by the Study Team. In attendance were Dr. Arthur Potts, representative of GORTT/Rapporteur; Mr. Peter A. Murray, Programme Officer OECS-ESDU; Dr. Patrick McConney, Senior Lecturer UWI-CERMES; Mr. Milton Haughton, Deputy Executive Director/Co-ordinator of the Ad Hoc Legal Working Group of the CFP&R, and Mr. Terrence Phillips, Programme Manager, Fisheries Management and Development/Chairman, of the CRFM Secretariat.

Based on a strategy to consider the preferred end product(s) from the Study, and work backwards to create an outline and work plan, using the "headings", such as, The Special Case of Artisanal, Inshore Fisheries and Fishers; Semi-Industrial and Industrial Fisheries; Monitoring and Measuring Socio-Economic Change; etc. under Section 4.0 Activities of the TOR as criteria for the analysis, and seeking references or key points and issues for the analysis from within the document "Common Fisheries Policy and Regime - Revised Framework". The Group noted that although the Ad Hoc Legal Working Group had recommended that the goal of the Common Fisheries Policy and Regime (CFP&R) be re-drafted, there was consistent repetition of its main thrust and language in the objectives, fundamental principles and scope of policies sections for it to be dissected for use as the reference for analysis. As such, they undertook the exercise of 'unpacking' the goal into component parts and linking these parts

to the most recent available text of the Revised Framework Document.

By this means, the Group was able to extract five broad themes or headings as follows: Ecological sustainability; Management effectiveness; Regional governance; International governance and Socio-economics and equity. It was concluded that although these headings were broader than desirable, they should allow the analysis of social, economic and linkage issues to proceed with a reasonably clear relationship to the existing Revised Framework Document. Hence, it was agreed that these themes derived from the goal, and the issues suggested by the objectives, fundamental principles and scope of policies sections of the text, would be used in conjunction with the headings derived from the TOR in order to meet the objective of the Study.

In addition, a Communications Strategy was outlined as it was thought that its implementation should ensure a better understanding of the social, economic and linkage aspects of the CFP&R by the various stakeholders.

The Group reviewed the draft bibliography on the subject of the Study and agreed that this product was essential, but noted that more work needed to be done in terms of the literature search and the arrangement of the document. As such, they recommended that a TOR with guidelines for the completion of the bibliography be prepared, and the implementation be done by a resource person contracted by the CRFM Secretariat.

Based on the agreed approach to conducting the Study, the Group identified and assigned tasks to its members and developed a schedule of activities.

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## Fourth Meeting of the Caribbean Fisheries Forum (The Forum)

*by Anthony Mills, Corporate Services Manager, CRFM Secretariat*

The Fourth Meeting of the Forum considered, *inter alia*: progress made on the development of the Common Fisheries Policy and Regime (CFP&R), the recommended management measures emanating from the CRFM Second Annual Scientific Meeting, held in Trinidad and Tobago during March 13 – 22, 2006, to ensure the sustainable utilization of the Region's Fisheries, a status report on the Queen Conch and sanctions imposed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and the move towards a regional approach to the management of Queen Conch and Lobster.

The Forum convenes in regular sessions once a year and in such special sessions as it considers necessary to perform its functions. It is currently chaired by Trinidad and Tobago, with the Turks and Caicos Islands as Deputy Chair. It receives and reviews, *inter alia*, the reports of the CRFM Secretariat and recommends such to the Ministerial Council for approval. The Forum comprises one representative of each Member of the Mechanism, one representative of each Associate Member of the Mechanism, and representatives of fisher folk organizations, private fishing companies, regional bodies and institutions, and NGOs.

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Among other matters agreed by the Forum during its Fourth Meeting were the prioritization by Member States of the Common Fisheries Policy and Regime, through the allocation of financial resources in their National Budgets to support its development; the development of a Framework for a regional approach/commitment for the management and rehabilitation of the Queen Conch and Lobster fisheries; the integration of recommendations on management measures for important fisheries with national fisheries management plans; the need for the greater involvement of fisheries officials in fisheries related trade

negotiations at the level of the WTO, ACP/EU etc.; the consideration of Observer Status at the Forum for the Caribbean Regional Negotiating Machinery (CRNM); and the Work Plan and Budget of the CRFM Secretariat, 2006 /07.

The recommendations arising from the deliberations of the Fourth Meeting of the Forum were presented to the Council of Ministers on Trade and Economic Development (COTED) at its Twenty-First Meeting, for consideration and approval.

# CRFM Secretariat participates in the National Agriculture and Trade Show in Belize

*by Mr. Michael Salton, Biologist, CRFM Secretariat*

The CRFM Secretariat participated in the National Agriculture and Trade Show, 28- 30 April, 2006, Belmopan Belize. The Show, organized by the Ministry of Agriculture, had an attendance of over twenty- seven thousand people between Saturday and Sunday. The National Agriculture and Trade Show is the biggest single annual event in Belize's administrative capital featuring agricultural and commercial exhibits, rodeo events, music and food.

The CRFM Secretariat and the Belize Department of Fisheries exhibited their displays under the same roof and together brought issues pertaining to the development and management of fisheries in Belize and the wider Caribbean to the attention of national and visiting stakeholders. The CRFM Secretariat's booth displayed a series of informative posters and fact sheets giving general information on the CRFM, the Common Fisheries Policy and Regime, and assistance and support provided to Belize and other CRFM Member States. During the three-day event, a wide cross section of persons visited the booth. Visitors included students and professionals interested in learning about the organization and the steps it was taking to facilitate the promotion of the sustainable development and management of the Region's fisheries and aquaculture resources. Many persons made enquiries and engaged in the follow up discussions on the likely impacts the CSME would have on Belize's marine resources.

The CRFM Secretariat's staff in the booth responded to the many queries made

by the public and distributed knowledge packages. Many persons were pleased with the joint effort of the CRFM Secretariat and the Belize Fisheries Department to promote the sustainable development and management of the fisheries resources of Belize, and the wider Caribbean.

The CRFM Secretariat will continue to participate in similar Agriculture Trade Shows and Exhibitions in its other Member States, in collaboration with the relevant national Fisheries Departments, to raise public awareness of the national importance of the fisheries and aquaculture resources and to promote CRFM Secretariat's support for the sustainable development and management of national and shared fisheries resources.



*Interested visitors to the booth view the CRFM Secretariat's display.*

# FISHERIES RESEARCH AND TECHNOLOGY

## Highlights of the Second Annual CRFM Scientific Meeting

*By S. Singh-Renton, Programme Manager,  
Research and Resource Assessment Programme, CRFM Secretariat.*

The CRFM held its Second Annual Scientific Meeting in Trinidad and Tobago during 13-22 March 2006. During this Meeting, three CRFM Resource Working Groups met to review and analyse several fisheries datasets. The selected analyses were conducted based on formal approval granted by the Third Annual Meeting of the Caribbean Fisheries Forum when it met in April 2005 to review the findings and recommendations of the First Annual Scientific Meeting. The Second Annual Scientific Meeting also reviewed and adopted the Report of the First Meeting of the Ad Hoc Working Group on Methods, with minor amendments, and supported the request for experts to attend and advise the Second Meeting of the Ad Hoc Working Group on specific approaches to fisheries assessment.

The Conch and Lobster Resource Working Group (CLWG) attempted analyses of the lobster fishery of St. Lucia, and the queen conch fisheries of The Turks and Caicos Islands, Jamaica, and The Bahamas. The most complete assessment result obtained was for the Turks and Caicos Islands, which indicated that the local queen conch populations were stable and that catch rates were operating at a constant level. The CLWG encountered some difficulties in analyzing and interpreting certain datasets, and while some errors were corrected, the Working Group highlighted the need for countries to review the quality of their field sampling programmes and statistical systems in the near future. The CLWG recommended that both queen conch and spiny lobster data from all countries be prepared for review and analysis by the Working Group at the next annual meeting.

The Shrimp and Groundfish Resource Working Group (SGWG) attempted analyses of four fisheries: the shrimp and lane snapper fisheries of Trinidad and Tobago, and; the seabob and red snapper fisheries of Guyana. All fisheries, except the lane snapper fishery, showed indications of overfishing, and specific management recommendations were made, taking into account the practicality of their implementation. In terms of general recommendations, the SGWG noted the necessity of collaborating with neighbouring non-CRFM countries in order to obtain more complete datasets for assessments, and also emphasized the importance of officers maintaining contact throughout the year to facilitate the completion of key tasks inter-sessionally. The SGWG recommended that the next

meeting's analyses should focus on examining the shrimp fisheries of Guyana and Suriname, as well as several groundfish fisheries operating in the southern Caribbean.

The Large Pelagic Fish Resource Working Group (LPWG) also met, and analysed data on the king mackerel and dolphinfish fisheries. The LPWG found that within the Eastern Caribbean, catch rates of dolphinfish had remained more or less constant over a ten year period beginning 1995. On the other hand, in the case of king mackerel, there was evidence that this stock might be overfished. Both species were identified for re-examination at the next annual meeting, if additional and improved data could be obtained by then. In view of the migratory nature of large pelagic fish resources, and that many of these species were included in the mandate of ICCAT, the LPWG recommended that it developed closer working relations with ICCAT, to facilitate essential sharing of data, information and expertise for successful completion of assessments of the small tuna and tuna-like species.

The recommendations of the three Working Groups were fully endorsed during the formal plenary sessions of the Second Annual Scientific Meeting, during which chairpersons and rapporteurs to serve the various Resource Working Groups for the period 2006-07 were also selected. The Meeting stressed the importance of Working Group members continuing to work closely during the inter-sessional period.

The Meeting also considered issues pertaining to the formulation of a Data Policy and the establishment of a Scientific Committee, and developed a recommendation to facilitate the sharing of data, pending a formal agreement.

Most CRFM Member States were represented at the Meeting, which was also attended by scientists from The Institute of Marine Affairs, The University of the West Indies, and The National Marine Fisheries Service (Southeast Fisheries Science Center, Miami), Japan International Cooperation Agency, and a regional research project with overlapping interests, ECOST. Also in attendance were representatives from the Organization of Eastern Caribbean States, and the Food and Agriculture Organization. A senior representative from the Trinidad and Tobago Industrial Fishing Association also actively contributed to various debates during the plenary sessions.

# Assessment of the King Mackerel (*Scomberomorus cavalla*) fishery of Trinidad and Tobago

by Louanna Martin, Fisheries Officer,  
Fisheries Division, Trinidad & Tobago

In March 2006 at the CRFM Second Annual Science Meeting held in Port of Spain, the CRFM Large Pelagic Fish Resource Working Group completed an assessment of the king mackerel (*Scomberomorus cavalla*) fishery of Trinidad and Tobago. King mackerel is important in commercial and recreational fisheries throughout its geographic range in the Western Atlantic from Massachusetts (USA) to Rio de Janeiro (Brazil). It is highly valued among finfish species in Trinidad and Tobago and is even targeted at local, annual game fishing tournaments.

The Working Group assumed a 'southern Caribbean' stock of king mackerel, inhabiting at least the waters of Trinidad and Tobago, Venezuela and Guyana. However, with large catches also recorded in Brazil, and small catches in Grenada, it is possible that the unit stock extends more widely along the shelf waters of the South American coast (see catch chart). Due to the relatively low catches in central Caribbean waters, away from the continental shelves, the southern stock was assumed to form a separate unit from those stocks found in the coastal waters of the Gulf of Mexico and around the Dominican Republic and Florida.

Length frequency data, collected in Trinidad and Tobago during 1996 to 1998 and also in 2004, were used to estimate mortality caused by fishing ( $F$ ) and reference (or check) points related to fishing mortality. In this assessment, one of the key reference points used was the fishing mortality level at which spawning stock biomass

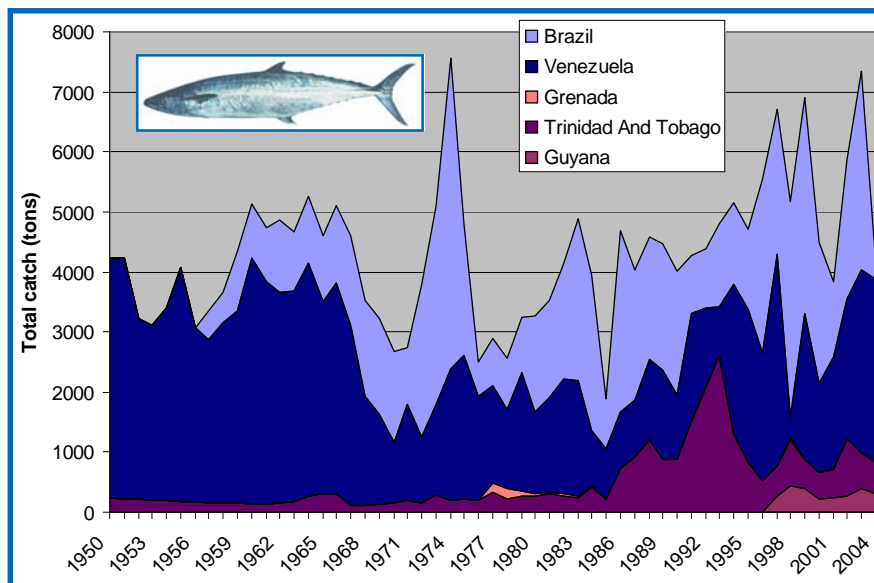
per recruit (SPR) was estimated to be at 20% of the unfished level ( $F_{20\%SPR}$ ), as this is often considered to represent a 'safe' lower limit of spawning biomass. For each of the data sets it was determined that two estimates of  $F$  were equally plausible. During 1996-98 mortality due to fishing was either 16% lower than or 80% higher than  $F_{20\%SPR}$ . The 2004 estimates of fishing mortality, however, both suggest that the fishery is operating far beyond the levels of the  $F_{20\%SPR}$  reference point (i.e.  $F$  in 2004 was as much as 85% or 202% higher than  $F_{20\%SPR}$ ).

The king mackerel resource, therefore, requires urgent attention. Given Trinidad and Tobago's stated objective of maintaining the sustainability of the fishery, the analysis suggests that reductions in the fishing mortality rate by as much as two-thirds, in addition to introducing a limited entry regime to replace the current free access, may be required to reduce the risk of stock collapse. Alternative management tools such as a closed season and the enforcement of fish and/or mesh size limits to increase the size of fish captured or combinations of these measures could also be used to achieve the necessary reduction in fishing mortality.

Due to the uncertainty regarding which two of the (four) estimates of  $F$  are the more likely the Working Group recommended that the fishery be re-assessed as soon as possible to confirm or update the management advice. The Group further recommended that in the meantime, no increase in fishing pressure should be permitted until stock dynamics are better understood and called for additional length frequency data to be collected in 2006 to clarify

whether the current fishing mortality rates are really as dangerously high as estimated in the assessment.

For this wide-ranging species, effective control of exploitation levels will require the cooperation of all states sharing each local (sub-) stock. No national or sub-regional regulations are currently in place to regulate the numbers of fishing effort units allowed on southern stocks of king mackerel, though some national size and gear restrictions are in place. Although ICCAT has responsibility for ensuring regional coordination of conservation efforts for king mackerel, no specific regulations are set for the species, which, on a wider regional scale, is of less importance than, for example, large tunas. ICCAT, however, endorses a sub-regional approach for managing king mackerel. It is of interest to note that the northern Caribbean stocks are managed by the US management councils, at least within US territorial waters.



**Catch chart: Total king mackerel catches by country for years 1950-2004, as reported in the FAO FishStat+ database, including recent adjustments to the Trinidad catches for artisanal fishing. Venezuela catches are given as zero in the ICCAT database for 1950-63.**

# NEWS BRIEFS

## TOWARDS PARTICIPATORY FISHERIES MANAGEMENT

Wageningen International, formerly called International Agricultural Centre – IAC, based in the Netherlands, is organizing a training programme in co-operation with Wageningen University. The title of the programme is “Towards participatory fisheries management” and it consists of 2 modules. The first module, “*Fisheries management: perspectives, information and co-management*” will be held during October 9 – 27, 2006. The second module, “*Information for fisheries co-management*” will be held during October 30 – November 17, 2006.

The courses are intended for staff of government departments and non-government organizations, including fisher’s organizations and academic institutions, with functions such as fisheries policy making, monitoring and implementation of fisheries management and development programmes, research, training and extension. The first module is more general in character, and deals with approaches and concepts, especially co-management. The second course is dealing with tools and techniques for collection and assessment of information necessary for fisheries management. One can apply for only one or both courses. More detailed information and application forms may be obtained from:

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URL: [www.wi.wur.nl](http://www.wi.wur.nl), click on  
News & Calendar, then scroll to October 2006

## REGIONAL NEWS

### St. Kitts and Nevis Gearing Up for International Whaling Summit

Wednesday, May 24, 2006

A scientific committee of marine scientists will begin a summit here Friday to lay the foundation for next month’s International Whaling Committee Convention.

Representatives from 66 countries including Iceland, Greenland, Japan, Europe, North, South and Central America and Africa will be in attendance.

The committee will be locked in talks concerning the more than 80 species of whales known, and will produce journals for the convention, which moves into debating and voting sessions from mid-to 21 June, 2006.

The journals produced by the scientific committee are regarded as the bible for the study of whales worldwide, and are designed to ensure that whales, particularly the Great Whales, are utilized in a sustainable manner.

*Excerpt from the Sun Newspaper (St. Kitts and Nevis)*



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