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CRFM ADMINISTRATIVE REPORT

Caribbean Regional Fisheries Mechanism Second Medium Term Plan 2008 – 2011

Including a Review of the First Medium Term Plan 2004 - 2007

*Towards Sustainable Development of Fisheries
For the People of the Caribbean*

CRFM ADMINISTRATIVE REPORT

Caribbean Regional Fisheries Mechanism Second Medium Term Plan 2008 - 2011

including a Review of the First Medium Term Plan

CRFM Secretariat
2009

CRFM ADMINISTRATIVE REPORT
Caribbean Regional Fisheries Mechanism
Second Medium Term Plan
2008 - 2011
including a Review of the First Medium Term Plan

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LIST OF ACRONYMS

ACP	Asia, Caribbean and Pacific
AGRIFOR	Agrifor Consulting SA
CARDI	Caribbean Agricultural Research and Development Institute
CARICAD	Caribbean Centre for Development Administration
CARICOM	Caribbean Community
CARIFIS	Caribbean Fisheries Information System
CARIFORUM	Caribbean Forum of African, Caribbean and Pacific (ACP) States
CARISEC	CARICOM Secretariat
CBD	Convention on Biodiversity
CBO	Community Based Organization
CDERA	Caribbean Disaster Emergency Response Agency
CERMES	Centre for Resource Management and Environmental Studies
CFO	Chief Fisheries Officers
CFRAMP	CARICOM Fisheries Resource Assessment and Management Program
CIDA	Canadian International Development Agency
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLME	Caribbean Large Marine Ecosystem
CO	Competent Organization
CRFM	Caribbean Regional Fisheries Mechanism
CSME	CARICOM Single Market and Economy
CTA	The Technical Centre for Agricultural and Rural Cooperation
EC	European Commission
EEZ	Exclusive Economic Zones
ENSO	El Nino- Southern Oscillation
EPA	Environmental Protection Agency
EU	European Union
FAC	Fisheries Advisory Committee
FAD	Fish Aggregating Device
FAO	Food and Agricultural Organization
FISMIS	Fisheries Management Information System
GDP	Gross Domestic Product

GEF	Global Environment Facility/ Fund
GMP	Good Management Practices
HACCP	Hazard Analysis and Critical Control Point
IATTC	The Inter-American Tropical Tuna Commission
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICRAFD	Integrated Caribbean Regional Agriculture Caribbean Fisheries Development
IICA	Inter-American Institute for Cooperation on Agriculture
IPOA	International Plans of Action
IUU	Illegal Unreported and Unregulated
IWC	International Whaling Commission
JICA	Japan International Cooperation Agency
LARS	Licensing and Registration System
MCS	Monitoring Control and Surveillance
MDG	Millennium Development Goals
MOU	Memorandum of Understanding
MSY	Maximum Sustainable Yields
MTP	Medium Term Plan
NGO	Non Government Organizations
NRMU	Natural Resources Management Unit
OECS	Organization of Eastern Caribbean States
OLDEPESCA	Latin American Organization for Fisheries Development
OPEC	Organization of the Petroleum Exporting Countries
PMU	Programme Management Unit
RFU	Regional Facilitation Unit
RPT	Regional Preparatory Task Force
SCRS	Sea Conditions Rating System
SPS	Sanitary and Phytosanitary Systems
SST	Sea Surface Temperature
TRAGSATEC	Tecnologías Y Servicios Agrarios, S.A
UNCED	United Nations Conference on Environment and Development
UNCLOS	United Nations Convention on the Law Of the Sea
UNDP	United Nations Development Program
UNESCO	United Nations Educational, Scientific and Cultural Organization

WECAFC	Western Central Atlantic Fishery Commission
WG	Working Groups
WSSD	World Summit on Sustainable Development (UN)

WHAT IS THE CARIBBEAN REGIONAL FISHERIES MECHANISM (CRFM)

I. Background

Due to challenges in the management of fisheries resources experienced by the Caribbean Community (CARICOM) Member States, CARICOM Heads of Government mandated the CARICOM Secretariat to spearhead a Caribbean regional approach to meeting these challenges. As a result, a Technical Cooperation Agreement between CARICOM and Canadian International Development Agency (CIDA) known as CARICOM Fisheries Resource Assessment and Management Program (CFRAMP) was implemented in 1991 to promote and support the development and management of the regional fisheries sector in a sustainable manner. CFRAMP had the following key objectives, namely:

- Establishment of a core group of Technical Expertise from the Caribbean Region to advise CARICOM Member States on fisheries matters.
- Increasing the awareness of the importance of the fisheries sector.
- Improving and strengthening the capabilities of national fisheries authorities in CARICOM Member States.
- Expanding the cadre of trained personnel in CARICOM countries.
- Improving the knowledge of conservation and fisheries management.
- Improving and expanding fisheries management information.
- Demonstration of the benefits of a collaborative approach to fisheries management in the Region and fostering the establishment of the CARICOM Regional Fisheries Mechanism.

The Caribbean Regional Fisheries Mechanism (CRFM) was, therefore, an output of CFRAMP. CRFM was established in 2003 to further develop the Region's institutional capacity in the fisheries sector. CRFM promotes the sustainable use of fisheries and aquaculture resources in and among its Member States, by developing, managing and conserving these resources in collaboration with stakeholders for the benefit of the people of the Caribbean region.

The objectives of the CRFM are:

- Efficient management and sustainable development of marine and other aquatic resources within the jurisdictions of its Member States;
- Promotion and establishment of co-operative arrangements among interested Member States for the efficient management of shared, straddling or highly migratory marine and other aquatic resources;
- Provision of technical advisory and consultative services to fisheries divisions of Member States to assist with the development, management and conservation of their marine and other aquatic resources.

I. Vision and Mission Of the Caribbean Regional Fisheries Mechanism

Vision

“The sustainable use of the fisheries and aquaculture resources in and among member states, by the development, management and conservation of these resources in collaboration with stakeholders to the benefit of the people of the Caribbean region.”

Mission

“To promote and facilitate the responsible utilization of the region’s fisheries and other aquatic resources for the economic and social benefits of the current and future population of the region.”

II. Structure of the CRFM

CRFM comprises three institutional arrangements as follows:

- *A Ministerial Group* - an oversight body that has responsibility for, *inter alia*, policies, programme appraisal, resource allocation, fisheries cooperative agreements and related decision-making;
- *The Caribbean Fisheries Forum* which provides technical leadership to CRFM; provides technical advice to the Ministerial Council; reviews and recommends work programmes to CRFM; and provides oversight to the operations of the Technical Unit;
- *The CRFM Secretariat/Technical Unit* which is responsible for day-to-day coordination of the execution of work programmes; collaborating with national fisheries authorities; mobilizing resources; and managing the institutional networking to promote its optimal involvement and the efficient functioning.

III. Membership

Article 3 of the Agreement establishing the CRFM outlines criteria for membership in the regional body. Membership in CRFM is open to all CARICOM countries as full members. However, provision is made for accession to Associate Membership by three categories of other countries in the Caribbean:

- CARIFORUM States
- Non-CARICOM Caribbean states;
- Caribbean Dependent Territories, which obtain special empowerment from their metropolitan powers to join.

CRFM's member countries are:

- | | |
|----------------------------|----------------------------------|
| • Anguilla | • Haiti |
| • Antigua and Barbuda | • Jamaica |
| • The Bahamas | • Montserrat |
| • Barbados | • St. Kitts and Nevis |
| • Belize | • St. Lucia |
| • Dominica | • St. Vincent and the Grenadines |
| • Grenada | • Suriname |
| • Turks and Caicos Islands | • Trinidad and Tobago |
| • Guyana | |

IV. Guiding Principles

The Caribbean Regional Fisheries Mechanism (CRFM) is guided by principles derived principally from the Food and Agricultural Organization's (FAO) Code of Conduct for Responsible Fisheries¹ which is an international instrument that promotes globally the adoption of practices and standards for the sustainable use, management, development and conservation of all fisheries and aquaculture resources through the voluntary compliance of governments, fishing industries, non-governmental organizations and other entities associated with fisheries.

In pursuance of its objectives, the CFRM is guided by the following principles:

- Maintaining bio-diversity in the marine environment using the best available scientific approaches to fisheries management, supported by comprehensive data collection and the networking thereof;
- Managing fishing capacity and fishing methods so as to facilitate resource sustainability;
- Encouraging the use of precautionary approaches to sustainable use and management of fisheries resources;
- Protecting and rehabilitating critical fisheries habitats and the environment generally through, *inter alia*, establishment of effective mechanisms for monitoring, control and surveillance;
- Promoting the use of post-harvest practices that maintain nutritional value and quality of products;
- Fostering the co-management philosophy in all aspects of fisheries management, planning and development as well as transparency in fisheries decision-making processes;
- Conducting trade in fish and fishery products according to applicable agreements;
- Fostering cooperation among Member States in order to prevent disputes or resolve them in a peaceful manner;
- Promoting awareness of responsible fisheries exploitation through education and training;
- Ensuring safe, healthy and fair working and living conditions for fishery workers;
- According due recognition to the contribution of small scale and industrial fisheries to employment, income and food security, nationally and regionally; and
- Promoting aquaculture as a means of enhancing employment opportunities and food security, nationally and regionally.

¹ www.fao.org

CHAPTER 1: INTRODUCTION

The Second Medium Term Plan (MTP), 2008 - 2011 defines the course of action to be followed by the CRFM during the period 2008 to 2011. This Second MTP document is based on the Strategic Plan 2002, the First Medium Term Plan 2004/2007 and the Draft Operations Manual 2008. The methodological approach used in the preparation of the CRFM Second Medium Term Plan entailed the following steps:

- (i) a comprehensive review and interpretation of the specific terms of reference identified for the preparation of the Second MTP, based on discussions with the management of CRFM
- (ii) a joint meeting between the CRFM management and the Caribbean Centre for Development Administration (CARICAD) staff which discussed the linkages between CRFM's Second Medium Term Plan and its proposed Operations Manual, which is being prepared by CARICAD
- (iii) an analysis of the international, regional and national contextual situation with respect to the fisheries situation
- (iv) surveys / interviews with Chief Fisheries Officers (CFOs) in the majority of CRFM Member States: St. Lucia, Dominica, Guyana, St. Kitts and Nevis, Anguilla, The Bahamas, Turks and Caicos Islands, Belize, Montserrat, Trinidad & Tobago and Suriname to assist in the determination of thematic areas under each programme
- (v) analysis and synthesis of survey data on CRFM performance and the First Medium Term Plan projects
- (vi) review of the First Medium Term Plan
- (vii) review of CRFM's Strategic Plan
- (viii) formulation of the Second MTP
- (ix) review of the draft Second MTP by CRFM's Management Team and Executive Committee of the Forum
- (x) review of the draft Second MTP by the Caribbean Fisheries Forum

The Second MTP centres its activities around the **nine programme areas** outlined in the Strategic Plan as follows:

- (i) Research and Data Analysis for Policy Formulation and Decision Making
- (ii) Preparation for Global Competitiveness
- (iii) Resource Assessment and Management
- (iv) Human Resource Development and Institutional Strengthening
- (v) Strengthening of Fishers' Organizations and Improved Community Participation

- (vi) Promotion of the Expansion and Utilization of Unutilized and Underutilized Aquatic Resources
- (vii) Development and Promotion of Aquaculture
- (viii) Development and Promotion of Risk Reduction Programmes for Fishers
- (ix) Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts

Since the preparation of CRFM's First Medium Term Plan 2004/2007, there have been a number of fundamental changes in the international, regional and national situations as these impact CRFM Member States. Available data indicate that in terms of fisheries output in the region, there will be a significant domestic supply deficit necessitating policies targeting increases in output to meet the projected supply shortfall. Therefore, policies related to increased output, especially targeting aquaculture, should form critical elements for any strategy to deal with the food deficit currently impacting the region.

According to the World Bank's *Rising Food Prices: Policy Options and World Bank Response* (2008) increases in global wheat prices reached 181 percent over the 36 months leading up to February 2008, and overall global food prices increased by 83 percent during the same period. Food crop prices are projected to remain high in 2008 and 2009 and then begin to decline, but are likely to remain well above the 2004 levels through to 2015 for most food crops. FAO reports that world food prices have raised by almost 50 percent over the last three months of 2008. Over the last two years, a combination of factors, including reduced production due to climate change, historically low levels of food stocks, higher consumption of meat and dairy products in emerging economies, increased demand for biofuels production and the higher cost of energy and transport have contributed significantly to surges in food prices.

Fisherfolk, due to their vulnerability will be negatively impacted by rising cost of food. The rising cost of fuel has also impacted negatively on fishers by increasing the costs of fishing activities. Fishers may find it difficult to pass the increase in production costs to consumers.

All indices suggest that climate change will impose serious constraints on the world's ability to feed its growing populations. Climate change brings new threats to arable land areas, livestock rearing and fisheries through droughts, water shortages and pollution of land, air and sea. It is important to recognize that agricultural, livestock and fisheries production provide raw materials that are basic to facilitate human existence – especially food.

Historically, periods of food price increases were temporary and typically lasted only two or three years. However, the current increases have a structural component that is likely to persist because of the close links with rising in global energy prices. If energy prices remain high, food and fisheries prices are unlikely to decline significantly. Over the long run, food supplies are projected to increase and prices to fall, but the current price increases are expected to continue for several years, and thus most countries may not be able to cushion their consumers against these price increases. In addition, current food price increases have a temporary component generated by low stocks and production shortfalls stemming from droughts.

Approximately 25% of the world's marine fish stocks are considered overexploited and an additional 50% are fully exploited. The depleted state of wild fish stocks is due to overfishing and increasing degradation of coastal, marine and freshwater ecosystems and habitats, as growing coastal populations exert increasing pressures on natural resources. Aquaculture production has grown at almost 9% per year since 1970; aquaculture now provides 40% of the world's fish supply for direct human consumption, and brings new challenges to sustainable use of aquatic resources and environment. Improving smallholder competitiveness in high- and medium-potential areas—where returns to investment are highest—and improving livelihoods, food security, and environmental resilience in remote and risky environments are identified as priorities.

Chapter 2 further details the context in which the fisheries sector in the Caribbean region operates.

Organization and Structure of the Second Medium Term Plan

The Second Medium Term Plan is presented in six (6) Chapters and three (3) Annexes.

Chapter 1 presents the methodological approach taken in the development of the Second Medium Term Plan (MTP) and the organization and structure of the document.

Chapter 2 locates the Second MTP in the international, regional and national contexts.

Chapter 3 outlines the strategic framework in which CRFM operates and from which the Second Medium Term Plan is derived.

Chapter 4 details the main elements of the Second Medium Term Plan and corresponding projects associated with each programme area.

Chapter 5 outlines the mechanisms through which the Plan will be implemented via CRFM's operational framework.

Chapter 6 details the financing requirements for the Second Medium Term Plan.

Appendix I outlines the project profiles supporting each programme area.

Appendix II describes the primary beneficiaries of the Second Medium Term Plan.

Appendix III shows the performance indicators relating to the Programme and respective "Areas".

CHAPTER 2: THE CONTEXTUAL SITUATION - OVERVIEW OF GLOBAL AND CARIBBEAN FISHERIES

2.1 Global Overview

2.1.1 Consumption

The FAO² reports that in 2004, fish provided more than 2.6 billion people throughout the world with at least 20 percent of their average per capita animal protein intake. FAO (2007) also highlights that fish protein as a share of total world animal protein supplies increased from 14.9 percent in 1992 peaking at 16.0 percent in 1996, and then declining to about 15.5 percent in 2003. Global fish consumption was 16.5 kg per capita in 2003. FAO noted that China accounts for most of this increase and its exclusion would result in per capita supply of 14.2 kg for the rest of the world in 2003. Preliminary estimates for 2004 indicate a slight increase of global per capita fish supply, to about 16.6 kg.

2.1.2 Production

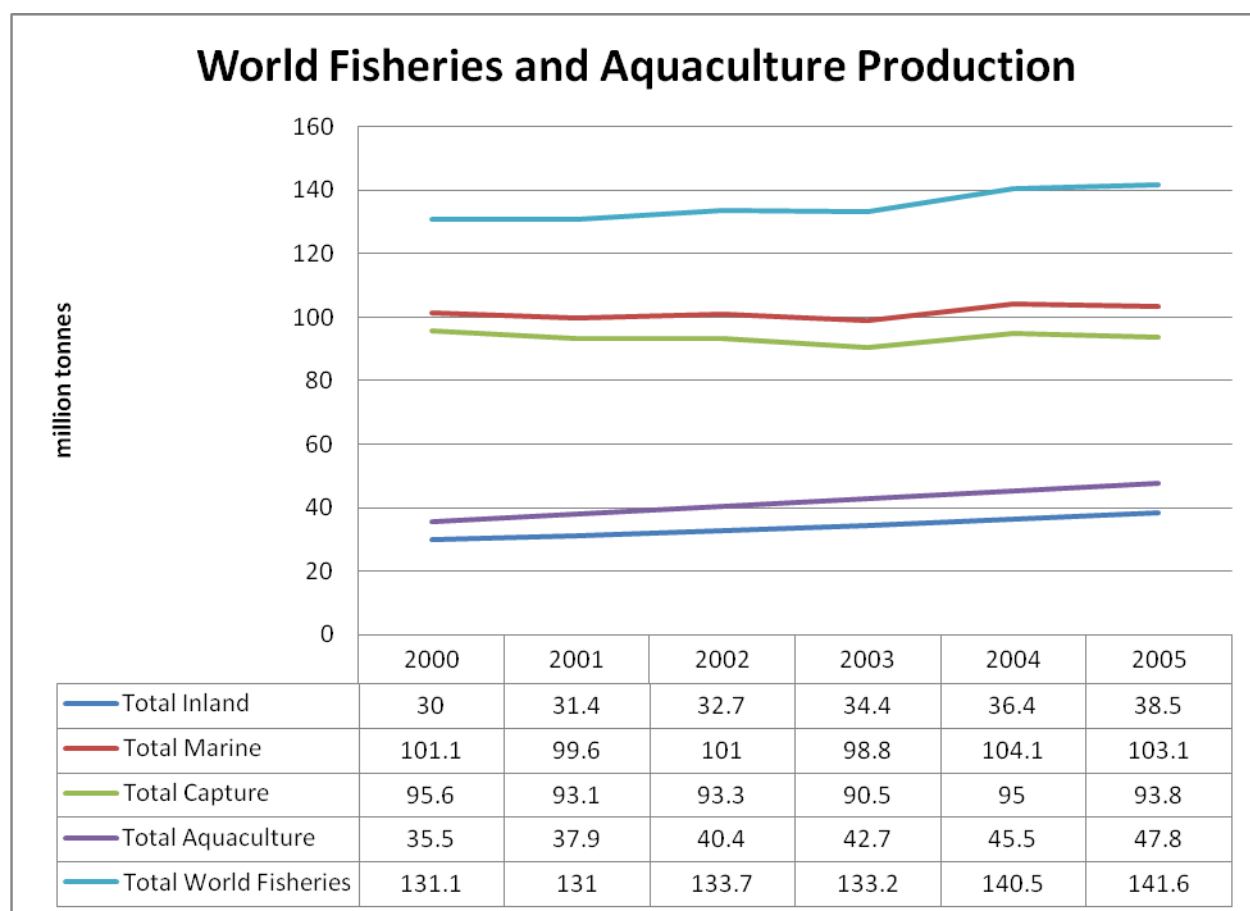
Preliminary estimates (FAO, 2007) show that total world fisheries production was 141.6 million tonnes in 2005 (see Figure 2.1 below). World fisheries production increased by 8% between 2000 and 2005. Inland and marine fisheries increased by 28% and 2% respectively, for the same period. Capture fisheries production, however, decreased by 2% between 2000 and 2005, while aquaculture production increased by 35% during the period. Aquaculture has accounted for much of the increase in world fisheries production.

Preliminary estimates in 2005 indicate that inland fisheries contributed 27% of total fisheries production, while marine fisheries supplied 73% of total. Inland fisheries as a percentage of total world fish production increased from 23% in 2000 to 27% in 2005. However, marine fish production as a percentage of total world fish production decreased from 77% to 73% during the same period.

Preliminary estimates show that capture fisheries supplied 66% of total world fisheries production in 2005. This is a decrease in its contribution to total world fisheries in 2000 which was 73%. Aquaculture supplied 34% of world fisheries in 2005, and shows a 7% increase over its contribution relative to 2000.

² Food and Agriculture Organization. *The State of World Fisheries and Aquaculture 2006*. Rome 2007.

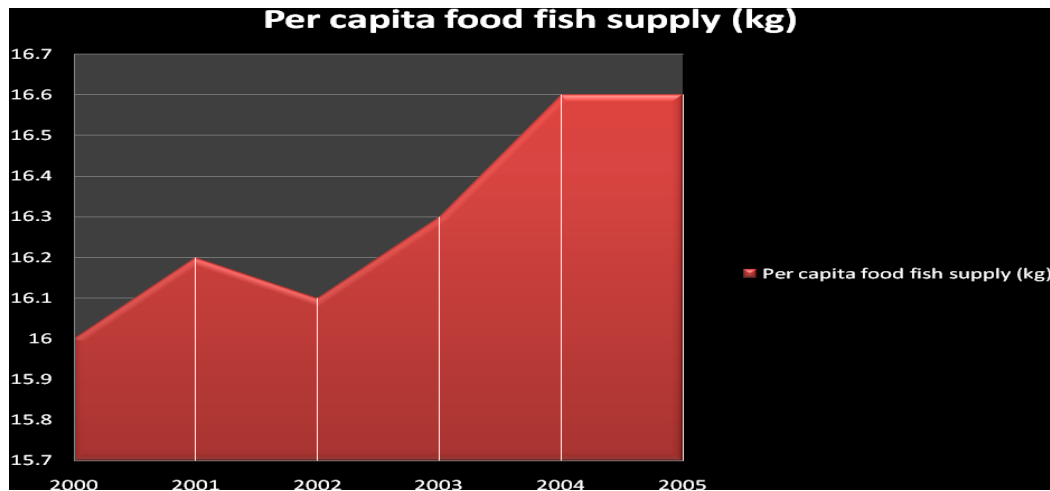
Figure 2.1



Source: FAO, State of the World Fisheries and Aquaculture, 2006

FAO (2007) estimates that 76% of total fisheries production in 2005 was used for human consumption, with 24% for non-food uses. Per capita food fish supply was 16.6 kg in 2005, increasing by 4% since 2000 (see Figure 2.2). Estimates indicate that per capita food fish supply was 13.4 kg in 2005, if data for China are excluded. Excluding China, per capita supply of fish has experienced a modest growth rate of about 0.4 percent annually since 1992. Aquaculture increased fish supplies, as its growth has more than offset the effects of static capture fishery production and a rising world population.

Figure 2.2

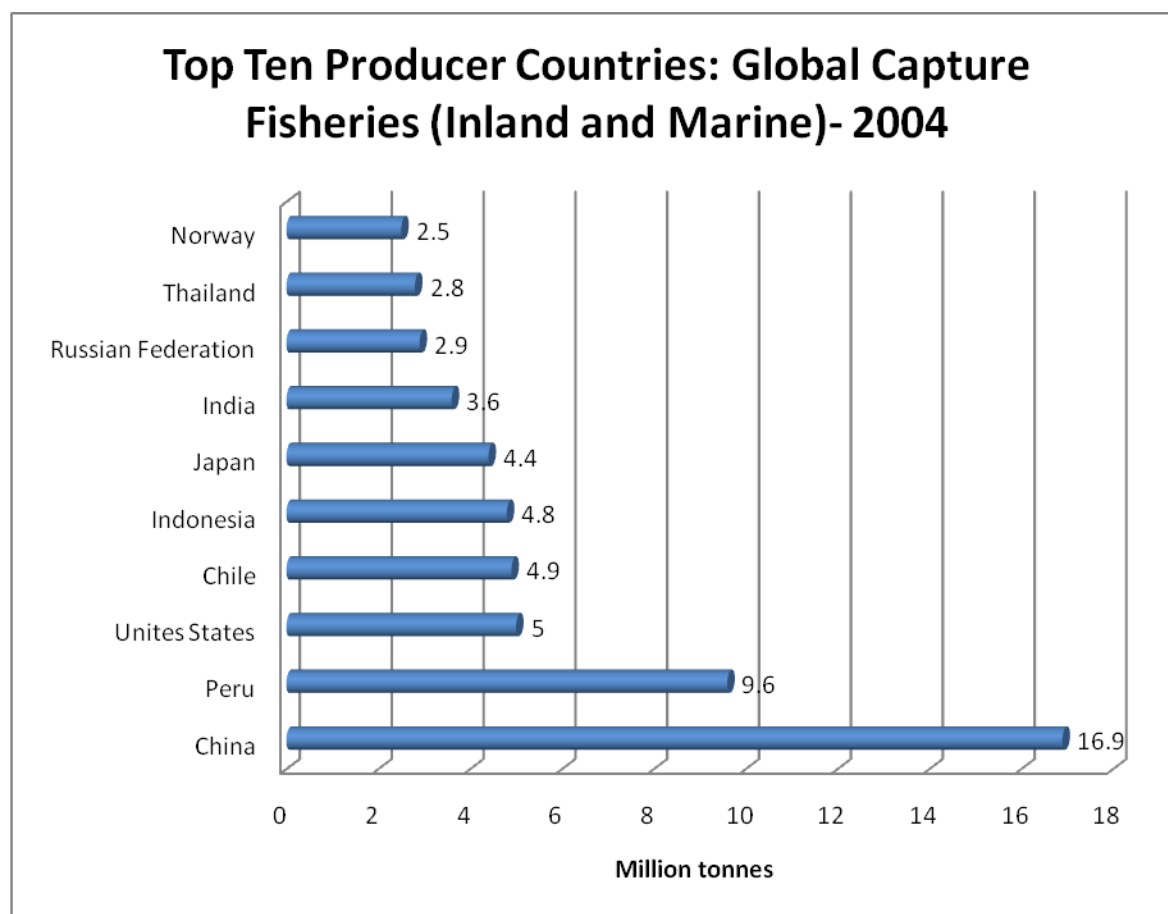


Source: FAO, State of the World Fisheries and Aquaculture 2006

China, with total fisheries production of 47.5 million tonnes (16.9 and 30.6 million tonnes from capture fisheries and aquaculture, respectively) in 2004, remains the world largest producer in the fisheries sector, providing an estimated domestic food supply of 28.4 kg per capita. Output from this sub-sector is also exported and used for non-food purposes.

Total global capture fisheries production (inland and marine) was 95 million tonnes in 2004 (See Figure 2.1). The estimated first-sale value of this output was US\$84.9 billion. In Figure 2.3, total global capture fisheries production is presented. China, Peru, the United States of America, Chile and Indonesia were the top five producers with output of 16.9, 9.6, 5.0, 4.9 and 4.8 million tonnes of fish, respectively. Chile and Peru were the only countries in Latin America and the Caribbean represented in the world's top ten producing countries.

Figure 2.3

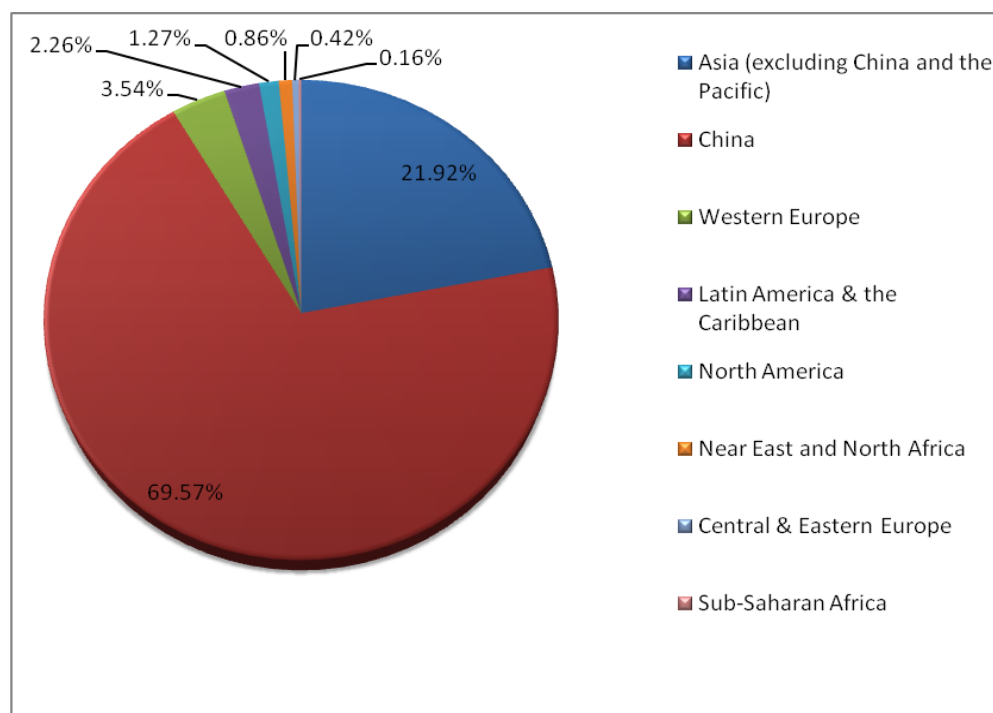


Source: FAO, State of the World Fisheries and Aquaculture 2006

2.1.3 Aquaculture

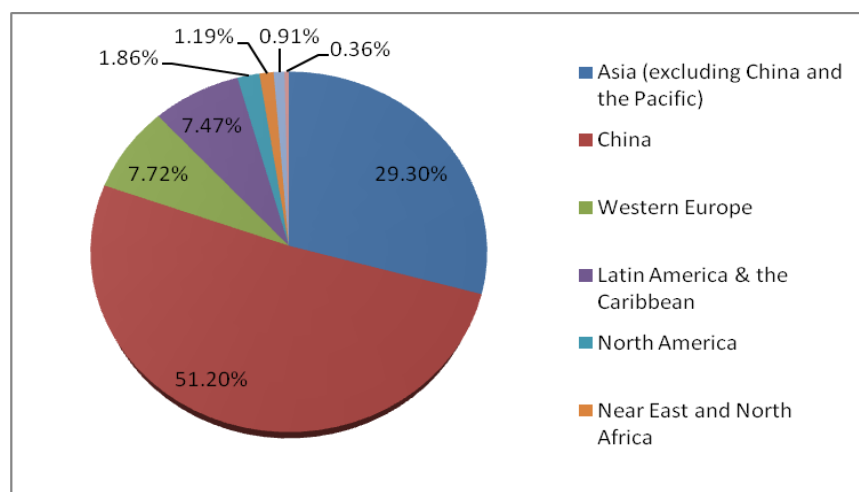
Aquaculture continues to grow more rapidly than all other animal food-producing sectors, with an average annual world growth rate of 8.8 percent since 1970, compared with 1.2 percent for capture fisheries and 2.8 percent for terrestrial farmed meat production systems. Total aquaculture production in 2004 was 45.5 million tonnes, with a value of US\$63.3 billion. Total aquaculture production including aquatic plants was 59.4 million tonnes, with a value of US\$70.3 billion. In 2004, Asia and the Pacific region accounted for 91.5% of the total world production by quantity and 80.5 percent of the value (see Figure 2.4 below). Further disaggregation of data from this region reveals that China accounted for nearly 70 percent of the quantity of total world aquaculture production and over half its global value.

Figure 2.4: Aquaculture Production by Region (Quantity) – 2004



Source: FAO, State of the World Fisheries and Aquaculture 2006

Figure 2.5: Aquaculture Production by Region (Value) – 2004



Source: FAO, State of the World Fisheries and Aquaculture 2006

In terms of food fish supply, the world aquaculture sector (excluding China) produced about 15 million tonnes of farmed aquatic products in 2004, compared with about 54 million tonnes from capture fisheries destined for direct human consumption. Corresponding figures reported for China were about 31 million tonnes from aquaculture and 6 million tonnes from capture fisheries; this reflects the dominance of aquaculture in China. The top five producing countries for food fish supply from aquaculture in 2004 were China, India, Viet Nam, Thailand and Indonesia.

FAO reports that all regions of the world showed increases in aquaculture production between 2002 and 2004, led by the Near East and North African region and Latin America and the Caribbean with 13.5 and 9.6 percent average annual growth, respectively. The leading five countries in terms of annual growth in aquaculture production for 2002 - 2004 were Myanmar, Viet Nam, Turkey, Netherlands and Republic of Korea.

2.1.4 Trade

Total export value in fish and fishery products reached a record value of US\$71.5 billion in 2004 (see Table 2.1). This represented a 23 percent increase over 2000. In real terms (adjusted for inflation), exports of fish and fishery products increased by 17.3 percent between 2000 and 2004. In terms of quantity, exports in live-weight-equivalent terms in 2004 accounted for 38 percent of total fisheries and aquaculture production, confirming fish as one of the most highly traded food and feed commodities.

China has been the world's main exporter since 2002. In 2004, China's fish exports were valued at US\$6.6 billion (see Table 2.1). Norway, Thailand, United States and Denmark were the other four top exporters in the world. However, Viet Nam, China, Spain, Chile and the Netherlands experienced the greatest average annual growth rates in exports between 1994 and 2004, ranging from 17.4% for Viet Nam to 5.5% for the Netherlands. The top ten exporters account for approximately 50 percent of the world's fishery exports. FAO (2007) notes that net exports of fisheries from developing countries indicate a rising trend over the past two decades, growing from US\$4.6 billion in 1984, to US\$16.0 billion in 1994 and rising to US\$20.4 billion in 2004. These figures are significantly higher than those for other agricultural commodities such as rice, coffee and tea.

The most recently available data show that the total value of world fish imports is US\$75.29 billion (Table 2.1). Japan continues to be the world's main importer of fish and fishery products. Total value of fish imports into Japan in 2004 was US\$14.56 million, declining by 10% when compared with 2002. United States, Spain, France and Italy are the world's other top importers of fish and fishery products. Available data (Table 2.1) also shows that the top ten importers accounted for 71% of world fish and fishery imports. China, Republic of Korea, Spain, Italy and United States experienced the largest average annual growth rates in imports between 1994 and 2004, ranging from 13.8% for China to 5.4% for the United States.

Shrimp continues to be the most important commodity traded in value terms, accounting for 16.5 percent of total value of internationally traded fishery products in 2004, followed by groundfish (10.2 percent), tuna (8.7 percent) and salmon (8.5 percent). In 2004, fishmeal represented around 3.3 percent of the value of exports and fish oil less than 1 percent.

Table 2.1

Top ten exporters and importers of fish and fishery products

	1994	2004	APR
	(US\$ millions)		(Percentage)
Exporters			
China	2 320	6 637	11.1
Norway	2 718	4 132	4.3
Thailand	4 190	4 034	-0.4
United States of America	3 230	3 851	1.8
Denmark	2 359	3 566	4.2
Canada	2 182	3 487	4.8
Spain	1 021	2 565	9.6
Chile	1 304	2 484	6.7
Netherlands	1 346	2 452	5.5
Viet Nam	484	2 403	17.4
TOP TEN SUBTOTAL	21 243	35 611	5.3
REST OF THE WORLD TOTAL	26 267	35 897	3.2
WORLD TOTAL	47 511	71 508	4.2
Importers			
Japan	16 140	14 560	-1.0
United States of America	7 043	11 967	5.4
Spain	2 639	5 222	7.1
France	2 797	4 176	4.1
Italy	2 257	3 904	5.6
China	856	3 126	13.8
United Kingdom	1 880	2 812	4.1
Germany	2 316	2 805	1.9
Denmark	1 415	2 286	4.9
Republic of Korea	718	2 233	12.0
TOP TEN SUBTOTAL	38 063	53 090	3.4
REST OF THE WORLD TOTAL	13 104	22 202	5.4
WORLD TOTAL	51 167	75 293	3.9

Note: APR refers to the average annual percentage growth rate for 1994–2004.

Source: FAO, *State of the World Fisheries and Aquaculture 2006*

2.1.5 Employment

Over the past three decades, the number of fishers and aquaculturists has grown faster than the world's population, and faster than employment generation in traditional agriculture. An estimated 41 million people worked as fishers and fish farmers in 2004, with the most significant numbers in developing countries, principally Asia (primarily China and Indonesia). This is mainly due to the expansion of aquaculture activities, especially in Asian countries. In 2004, fish farmers accounted for one-quarter of the total number of fish workers in the primary sector (FAO 2007). China had approximately 13 million fishers and fish farmers in 2004, representing 30% of the world's total. The numbers engaged in fishing and aquaculture in most industrialized economies have been declining or remained stationary. The number of persons engaged in fishing on the Asian and Oceania continents increased in 2004 by 6% and 10%, respectively, compared to 2000. However, there was a decrease in the number of persons engaged in this activity in African, North & Central American, South American and European countries by 4%, 3%, 1%, and 14%, respectively over the same period.

2.2 Critical Issues in World Fisheries

2.2.1 Overfishing and Habitat Degradation

Fishing activities often cause large-scale damage to the aquatic environment. Most of the environmental damage is caused by overfishing in seas and oceans. Overinvestment in fishing and the resulting overcapacity have led to excessive exploitation of fish stocks, especially by developed country fleets. Increasing demand for fishmeal and fish oil may place pressure on the wild stocks from which these products are derived. Some fishing practices—like bottom trawling, blast fishing, and poison fishing—destroy marine habitats. Fishing itself can also harm ecosystems by removing massive quantities of a species and creating wholesale changes in the food web dynamics of those systems.

Unsustainable fishing has also threatened global biodiversity, in contributing to reduction in the population of species of global significance such as turtles and marine mammals, local extinctions and possibly loss of endemic species (Heileman, 2007)³. Approximately 25% of the world's marine fish stocks are considered overexploited and an additional 50% are fully exploited. The depleted state of wild fish stocks is due to overfishing and increasing degradation of coastal, marine and freshwater ecosystems and habitats, as growing coastal populations exert increasing pressures on natural resources. Moreover, wild-fishing operations capture, kill, and discard a massive quantity of bycatch—fish that are the wrong size, wrong species, or otherwise undesirable. Global discarded bycatch of fish and other marine organisms is currently estimated at more than 20 million tons a year, nearly one-quarter of the world fish catch.

³ Sherry Heileman 2007. *Caribbean LME project: Insular Caribbean Thematic Report*. CLME Project Implementation Unit. Centre for Resource Management and Environmental Studies (CERMES). University of the West Indies, Cave Hill Campus, Barbados.

2.2.2 Challenges to Sustainable Aquaculture Development

Aquaculture production has grown at almost 9% per year since 1970 and aquaculture now provides 40% of the world's fish supply for direct human consumption, and brings new challenges to sustainable use of aquatic resources and environment. Improving smallholder competitiveness in high- and medium-potential areas—where returns to investment are highest—and improving livelihoods, food security, and environmental resilience in remote and risky environments, are priorities.

However, FAO (2007) notes that as aquaculture production becomes more widespread and intensive, the movement of live aquatic animals and products has increased, making the accidental spread of disease more likely. Effluent from aquaculture ponds and pens, like fertilizer, undigested feed, and biological waste, is often released directly into surrounding waterways. Over the past few decades, coastal aquaculture development, especially shrimp farming, has caused the destruction of mangrove forests, which are crucial for filtering nutrients, cleansing water and protecting ecosystems from floods and storms. In addition, farmed fish that escape into the wild can threaten native species by acting as predators, competing for food and habitat, or interbreeding and changing the genetic pools of wild organisms. Concern over escaped species is likely to intensify in coming years as genetically modified fish are developed for aquaculture.

2.2.3 Climate Change

Another important factor likely to impact fisheries production is climate change. Climate change is expected to pose a major challenge to fishers in the near future. Yohe et al, (2007), purport that vulnerability to specific impacts of climate change will be most severe when and where they are experienced together with stresses from other sources such as changes in the ecosystem, demography and the socio-political and economic environments. Non-climatic stresses can include poverty, unequal access to resources, food security, environmental degradation and risks from natural hazards.

All available indices suggest that climate change poses serious constraints on the world's ability to feed its growing populations. Climate change brings new threats to arable land areas, livestock rearing and fisheries through droughts, water shortages and pollution of land, air and sea. However, it is important to recognize that agricultural, livestock and fisheries production provide the raw materials that are basic to facilitate human existence, especially food.

Easterling (2007)⁴ identifies both positive and negative impacts of climate change on the aquaculture and freshwater fisheries sector. The negative impacts identified are: stress on fisheries resources due to increased temperature and oxygen demand and increased acidity (lower pH); uncertain future water supply; extreme weather events; increased frequency of disease and toxic events; sea level rise and conflict of interest with coastal defence needs; and uncertain future supply of fishmeal and oils from

⁴ Easterling, W.E., P.K. Aggarwal, P. Batima, K.M. Brander, L. Erda, S.M. Howden, A. Kirilenko, J. Morton, J.-F. Soussana, J. Schmidhuber and F.N. Tubiello, 2007: Food, fibre and forest products. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 273-313.

capture fisheries. Positive impacts include increased growth rates and food conversion efficiencies; increased length of growing season; and range expansion and use of new areas due to decrease in ice cover. With respect to climate's change potential impact on marine production, Brander (2006)⁵ highlights that it is not possible, given the current state of knowledge to make quantitative predictions of changes in global marine primary production due to climate.

The challenges being experienced by the fisheries sector worldwide are similar to those existing in the Caribbean. Section 2.4 gives an overview of the fisheries sector in the Caribbean and highlight the challenges that currently exist especially in light of the current price increases in grains and oil on the world market.

2.3 Outlook for Global Fisheries

Global fish consumption has nearly quadrupled over the period 1961 -2001, increasing from 28 million tonnes in 1961, to 96.3 million tonnes in 2001. Per capita consumption has multiplied by a factor of 1.7 over the same period and this trend is expected to continue in the future. The perception of fish as a health food is a key factor contributing to increased demand for fish and fish products. FAO (2007) notes that this increased demand will only be satisfied by an expansion of aquaculture production, as capture fisheries will not be able to satisfy demand requirements in the future. Growth in aquaculture has outpaced that of capture fisheries over the 30 year period, 1971-2001. Output from capture fisheries increased at an average annual rate of 1.2%, while growth from aquaculture (excluding aquatic plants) averaged 9.1% over the period.

Concerning capture fisheries, Delgado, et al (2003)⁶ support FAO's (2007) assertion that most wild fisheries are near maximum sustainable exploitation levels and that production from these fisheries will continue to grow at a slow rate in the future. Although fishers could probably produce more by targeting underexploited species that have been in lower demand, it is not clear whether consumers will accept these species for consumption. More important, such a change could cause large shifts in species composition and indirectly harm predator species, with severe consequences for the environment.

Delgado et al (2003) assert that despite the expected expansion of aquaculture production to meet increased global demand, it will face serious competition from other users for land and water resources. Disease and scarcity of fishmeal and fish oil derived from wild-caught fish may constrain aquaculture production. Growth in aquaculture production will depend on heavily increased levels of public and private investment in the sector. The level of aquaculture production is expected to play a large role in determining the relative prices of fisheries commodities mainly because of the slow growth in capture fisheries.

Table 2.2 shows projections made by FAO (2007) for 2010, 2015, 2020 and 2030. Total fisheries production is forecasted to increase by 3.9% in 2010 relative to 2004 production figures. Production is

⁵ Brander, Keith 2006. Assessment of Possible Impacts of Climate Change on Fisheries.

⁶ World Fish Centre (2003). The Future of Fish: Issues and Trends to 2020. Christopher L. Delgado, Nikolas Wada, Mark W. Rosegrant, Siet Meijer, and Mahfuzuddin Ahmed

then expected to range between 163 and 176 million tonnes between 2020 and 2030. Capture fish production is estimated to decrease slightly in 2010 by 2 million tonnes, when compared with the 2004 production of 95 million tonnes. Forecasts indicate that production will fluctuate over the period under review. Production from marine capture fish will remain stable over the period under review, while production from inland capture fisheries are expected to decrease by 3.2 million tonnes to 6 million in 2010 and remain constant over the remaining period. However, FAO (2007) notes that the projections for inland capture fisheries are based on incomplete information. Aquaculture production is expected to reach 53 million tonnes in 2010 and increase to 83 million tonnes by 2030.

Aquaculture is expected to account for an increasing share in world fisheries production by 2030. By 2010, aquaculture is expected to account for approximately 36% of total world fisheries production. Its share in world production will increase by 47% in 2030. Available projections show that fish used for food will range between 82% to 85% of total production between 2010 and 2030, indicating that a greater proportion of fish production will be used to meet human consumption needs. It is important for Governments and related policy makers to ensure that sustainable development of aquaculture resources for the sector continues to meet increasing world demand for fish, especially as it relates to human consumption.

Table 2.2: Fish Production in 2004 and Projections for 2010 and beyond

	Simulation target year						
	2000	2004	2010	2015	2020	2020	2030
Information source	FAO statistics ¹	FAO statistics ²	SOFIA 2002 ³	FAO study ⁴	SOFIA 2002 ³	IFPRI study ⁵	SOFIA 2002 ³
Marine capture	86.8	85.8	86		87	—	87
Inland capture	8.8	9.2	6		6	—	6
Total capture	95.6	95	93	105	93	116	93
Aquaculture	35.5	45.5	53	74	70	54	83
Total production	131.1	140.5	146	179	163	170	176
Food fish production	96.9	105.6	120		138	130	150
Percentage used for food fish	74%	75%	82%		85%	77%	85%
Non-food use	34.2	34.8	26		26	40	26
<p><i>Note:</i> All figures – other than percentages – are in million tonnes.</p> <p>¹Based on the statistics available to the FAO Fishery Information, Data and Statistics Unit in 2000.</p> <p>²Based on latest statistics of the FAO Fishery Information, Data and Statistics Unit.</p> <p>³FAO. 2002. <i>The State of World Fisheries and Aquaculture 2002</i>. Rome.</p> <p>⁴FAO. 2004. <i>Future prospects for fish and fishery products: medium-term projections to the years 2010 and 2015</i>. FAO Fisheries Circular FIDI/972-1. Rome.</p> <p>⁵International Food Policy research Institute. 2003. <i>Fish to 2020: supply and demand in changing global markets</i>, by C. Delgado, N. Wada, M. Rosegrant, S. Meijer and M. Ahmed. Washington, DC.</p>							

Source: FAO, *State of the World Fisheries and Aquaculture 2006*

2.4 Overview of the Fisheries Sector in CARICOM

The fisheries sector is critical for the Caribbean region since, *inter alia*, it provides employment for many rural communities, as well as enhancing food security and export earnings. The ocean environment relevant to CARICOM Member States includes the Caribbean Sea and the central Atlantic region off the coasts of Latin America, from Suriname to Trinidad and Tobago⁷. The Caribbean Sea encompasses a semi-enclosed area of 2.6 million km², while the area from Suriname to Trinidad and Tobago, based on length of coastlines and 200- nautical-mile limit exclusive economic zones (EEZs), covers 310,000 km². The entire area is encompassed within FAO fishing area No. 31, which has a space of 14.5 million km². CARICOM states, because of their EEZs, have sovereign and jurisdictional rights over most of this area, which is endowed with fisheries and other mineral resources.

The magnitude and extent of the stocks in the Caribbean Sea are not well known, as the last extensive survey was carried out by FAO in the 1960's. However, in 1970, estimates of maximum sustainable yields (MSY) for demersal (bottom feeding fish), pelagic (surface feeders which move long distances) and shellfish resources ranged between 400,000 and 800,000 tonnes (CRFM, 2004). CRFM (2004) notes that although data on the pelagic resources are limited⁸, a UNDP/FAO study (1976) estimated that stocks in the area are probably as large as are the demersal fish resources. This indicates that total sustainable yields from fish stocks in the Suriname, Guyana and Trinidad and Tobago areas are about 260,000 tonnes, about 94% of which are in the Guyana- Suriname area.

Heileman (2007) reports that the living marine resources in the Caribbean Sea include queen conch (*Strombus gigas*), spiny lobster (*Panulirus argus*), crabs, molluscs, and penaeid shrimps, as well as a variety of fish species associated with the range of habitats (e.g. reef fish, muddy bottom species, small and medium sized coastal pelagic species, large migratory pelagic species, and deep slope snapper and groupers) to turtles and marine mammals.

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 the reef species of the Eastern Caribbean, and the conch and lobster stocks of Jamaica, The Bahamas and Belize. The migratory pelagic such as wahoo, tuna, flying fish and dolphin fish typically roam through the area (CRFM 2004).

Haughton⁹ notes that within the Caribbean region most of the traditional commercially important species and species groups are reported to be either fully developed or over-exploited. These include queen conch (*Strombus gigas*), spiny lobster (*Panulirus argus*), shrimp (including *Penaeus subtilis*, *Penaeus schmitti*, *Penaeus brasiliensis*, *Penaeus notialis* and *Xiphopenaeus kroyeri*), shallow shelf reef-fishes (particularly members of the Lutjanidae (snappers) and serranidae (groupers) families and some of the large pelagic species which are managed by the International Commission for the Conservation of Atlantic Tunas (ICCAT). There are, however, some species that are under-utilized such as some regionally distributed pelagic fishes, namely, wahoo (*Acanthocybium solandri*), dolphinfish (*Coryphaena hippurus*), and blackfin tuna (*Thunnus atlanticus*); squids such as the diamondback squid (*Thysanoteuthis rhombus*)

⁷ CRFM. A Common Fisheries Regime for the Sea. July 2004.

⁸ CARICOM Fisheries Unit. Strategic Plan for Regional Fisheries Mechanism. December 9, 2002.

⁹ Milton O. Haughton. Fisheries Subsidy and the Role of Regional Fisheries Management Organisations: The Caribbean Experience. UNEP Workshop on Fisheries Subsidies and Sustainable Fisheries Management, Geneva Switzerland, 26 – 27 April, 2004.

(Aiken et al, 2007); deep-slope snappers and groupers, and some small coastal pelagic species including members of the carangidae, clupeidae, and engraulidae families.

The CARICOM fisheries industry comprises of capture and culture fisheries. CARICOM (2002) notes that the marine capture component is the most economically important fisheries activity in CARICOM countries. This is due to the large EEZ that is allocated to CARICOM countries. Inland capture fishery activities are limited to the larger countries such as Guyana, Jamaica and Belize. The marine capture component comprises harvesting of shrimp, prawns, spiny lobsters, conch, reef fishes, deep slope and bank fishes, offshore pelagic, costal pelagic and flying fish. Other species which are of less importance include sea turtles, sea urchins, whales and porpoises. There is little available information on inland capture fisheries which exist mostly in larger countries such as Belize, Guyana and Jamaica.

Culture fisheries are at varying stages of development in the region (CARICOM 2002). However, inland culture fisheries are more established in the larger territories, such as Jamaica and Belize where the dominant species are red tilapia and shrimp, respectively. Guyana is currently seeking to establish a commercial aquaculture subsector. Less developed food fish culture exists in St. Lucia (sea moss) and Trinidad and Tobago (tilapia).

CRFM (2004) reports that the structure of the fishing industry in the CARICOM region is characterised by:

- a large artisanal fisheries sector in CARICOM States, where the majority of fisherfolk operate on a small scale basis concentrating on mostly primary production, utilising small boats and limited technology which is comprised of traps, cast nets and hook and line;
- an industrial fleet sector of large, modern, capital-intensive vessels which operate mainly in offshore areas, largely targeting high priced and valued added species. Targeted species include spiny lobsters (Jamaica and the Bahamas), conch (Jamaica, the Bahamas and Belize), shrimp and prawns (Guyana and Belize), tuna (wider Caribbean) and flying fish (Eastern Caribbean);
- a processing, distribution and marketing sector; and
- an unquantified, recreational fisheries sub-sector spanning various aspects of tourism, including domestic and international sports fishing tournaments, yachting, fishing, weekend group and family fishing events. The Caribbean is rated by international magazines as a prime destination for international anglers for billfishes, such as marlins and sailfish, and for several other species of game fishes.

Artisanal catches are mainly sold on the domestic market through the informal economy in most Caribbean countries. CARICOM (2002) noted that some of the artisanal catches are sold to fish processing plants, from which these enter various export markets. Processing is limited primarily to the industrial sector and produces output mainly for export, rather than for domestic consumption (tuna and shrimp).

Many of the persons employed in the industrial fisheries sub-sector function in the areas of harvesting and marketing. However, a large number of these benefit from related occupations such as boat building and supplies, as well as repairs and maintenance. A notable feature of the industry is its high proportion of female workers who are engaged in critical aspects of seafood operations, including but not limited to processing, distribution and retailing in local markets.

Several CARICOM Member and Associate Member States provide direct and indirect subsidies to their fisheries sectors. These are administered in the form of incentives aimed at stimulating growth and development of fisheries and aquaculture, primarily by reducing input costs. Measures typically include the provision of subsidized fuel, duty concessions on the purchase of fishing gear and equipment, including fishing boats and engines, and the provision of subsidized loans to fishermen through special credit schemes. The level of incentives and support provided vary from country to country, but is considered negligible overall.

2.4.1 Economic Importance of the Fisheries Sector in the Caribbean

The fisheries sector is an important contributor to income, employment, food security and social and economic stability, especially in coastal communities throughout the Caribbean. Using available data, at the national level across the Region, fisheries is an important contributor to the Gross Domestic Product (GDP) of many countries as well as an important foreign exchange earner.

Table 2.3 shows the contribution of the fisheries sector to GDP in selected Caribbean countries from 2001 to 2006. The data indicate that, on average, the fisheries sector contributed from a low of 0.13% to a high of 6.85% to national GDP for Trinidad and Tobago and Guyana, respectively. The sector contributed less than 1 % of GDP for other countries such as Jamaica, Montserrat, and St. Lucia. However, the sector contributed between 1% and 2% of GDP for St. Vincent and the Grenadines, Anguilla, Antigua & Barbuda, Dominica, St. Kitts & Nevis, The Bahamas, Suriname and Turks and Caicos Islands. In general, the sector's contribution to GDP declined in nine (9) countries over the period under examination, while six (6) countries recorded an increase in the fisheries' sector contribution to GDP.

Table 2.3: Contribution of Fisheries Sector to GDP of Caribbean Countries (2001-2006)

Countries	Contribution to GDP (%)						Average (2001-2006)
	2001	2002	2003	2004	2005	2006	
Anguilla	1.80	1.80	1.90	1.80	1.70	1.40	1.73
Antigua and Barbuda	1.90	1.90	1.90	1.90	1.80	1.70	1.85
The Bahamas	1.30	1.90	1.70	1.50	1.50	1.50	1.57
Barbados	NA	NA	NA	NA	NA	NA	NA
Belize	3.40	3.40	5.00	4.50	3.80	3.00	3.85
Dominica	1.80	1.90	1.90	1.90	1.80	2.00	1.88
Grenada	1.90	2.40	2.60	2.20	2.00	2.10	2.20
Guyana	6.93	6.60	6.81	6.76	7.36	6.63	6.85
Haiti	NA	NA	NA	NA	NA	NA	NA
Jamaica	0.45	0.44	0.41	0.39	0.41	0.41	0.42
Montserrat	0.35	0.33	0.37	0.32	0.50	0.45	0.39
St. Kitts and Nevis	1.00	1.10	1.00	1.20	1.40	1.30	1.17
St. Lucia	1.12	0.84	0.75	0.72	0.68	0.75	0.81
St. Vincent and the Grenadines	1.30	1.00	1.20	1.00	0.90	0.90	1.05

Countries	Contribution to GDP (%)						Average (2001-2006)
	2001	2002	2003	2004	2005	2006	
Suriname*	3.50	2.40	2.00	1.40	0.76	0.75	1.80
Trinidad and Tobago	0.20	0.20	0.10	0.10	0.10	0.09	0.13
Turks and Caicos Islands	NA	0.94	1.19	1.25	1.17	1.13	1.14

Source: CRFM 2007

* 2005 and 2006 figures are calculated using data from the National Bureau of Statistics

The sector also provides employment and livelihood opportunities for some of the most socio-economically disadvantaged in Caribbean societies, including the least educated, rural poor, and women. Haughton (2007) reports that approximately 182,000 persons were employed by the fisheries sector (direct and indirect) throughout the Region. The majority of those persons engaged in fishing often have low levels of formal education, limited access to capital and limited occupational and geographic mobility.

Table 2.4 shows the contribution of the fisheries sector to direct and indirect employment in some Caribbean states. In terms of numbers, the Jamaican fisheries sector contributes to the largest number of persons that benefit from the fisheries sector in terms of employment, followed by Trinidad and Tobago, Suriname, Belize and St. Vincent and the Grenadines. The fisheries sector in Montserrat, Turks and Caicos Islands and Anguilla have the lowest levels of employment for countries reported in the Table.

Table 2.4: Contribution of the Fisheries Sector to Direct and Indirect Employment in Caribbean States (2001-2006)

Countries	Employment - Primary and Secondary						Average (2001-2006)
	2001	2002	2003	2004	2005	2006	
Anguilla	400	400	400	400	400	400	400
Antigua and Barbuda	NA	NA	NA	NA	NA	NA	NA
The Bahamas	NA	NA	NA	NA	NA	NA	NA
Barbados	NA	NA	NA	NA	NA	NA	NA
Belize	2,889	3,129	3,191	2,913	3,208	3,254	3,097
Dominica	NA	NA	NA	NA	NA	NA	NA
Grenada	NA	NA	NA	NA	NA	NA	NA
Guyana	NA	NA	NA	NA	NA	NA	NA
Haiti	NA	NA	NA	NA	NA	NA	NA
Jamaica	14,287	14,998	15,682	16,789	17,647	18,305	16,285
Montserrat	110	65	80	120	140	140	109
St. Kitts and Nevis	NA	NA	NA	NA	NA	NA	NA
St. Lucia	2102	2137	2163	2204	2267	2319	2,199
St. Vincent and the Grenadines	NA	3,000	3,000	3,000	3,000	3,000	3,000

Suriname			3,847	4,069	8,379	3,692	4,997
Trinidad and Tobago	6,000	6,000	6,000	6,000	6,000	6,000	6,000
Turks and Caicos Island	361	560	536	514	554	407	488.7

Source: Caribbean Regional Fisheries Mechanism
2007

Table 2.5 presents data on fisheries production for some CRFM Member States. Based on an average of 2000 - 2006 data, Guyana, Suriname, Trinidad, Jamaica, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago and the Bahamas had the highest production levels, while Montserrat, Anguilla, Dominica, Montserrat and St. Kitts and Nevis had the lowest production levels. With respect to production trends, Antigua & Barbuda, The Bahamas, Belize, Haiti, Jamaica, Montserrat, Suriname and Turks and Caicos Islands experienced increase in production levels, while output declined in Barbados, Dominica, Grenada, Guyana, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines and Trinidad and Tobago.

Table 2.5: Fisheries Production in Caribbean Countries (2001 - 2006)

Countries	Total Fish Production (Metric Tonnes)							
	2001	2002	2003	2004	2005	2006	Average (2001- 2005)	Average (2001- 2006)
Anguilla	250	250	250	250	250		250	-
Antigua and Barbuda	1,827	2,374	2,587	2,527	2,999	3,092	2,463	2,568
The Bahamas	9,291	12,183	12,652	11,391	11,078	10,580	11,319	11,196
Barbados	2,676	2,500	2,502	2,000	1,869		2,309	2,309
Belize	4,977	4,913	11,545	11,899	10,650	7,659	8,797	8,607
Dominica	1,200	1,270	950	700	579	-	940	-
Grenada	2,250	2,171	2,544	2,039	2,050	-	2,211	-
Guyana	55,107	47,259	56,303	51,509	48,715	36,722	51,779	49,269
Haiti	6,800	7,300	7,800	8,300	8,300		7,700	7,700
Jamaica	11,328	14,338	8,405	13,696	14,068	21,087	12,367	13,820
Montserrat	31	30	30	30	41	37	32	33
St. Kitts and Nevis	555	355	400	484	450	-	449	-
St. Lucia	1,967	1,607	1,446	1,519	1,386	1,440	1,585	1,561
St. Vincent and the Grenadines	-	38,433	811	4,794	5,301	4,729	12,335	10,813
Suriname	15,334	22,992	26,290	31,032	27,899	29,582	24,709	25,522
Trinidad and Tobago ¹	17,196	19,201	14,772	14,918	17,123	13,249	16,642	16,077
Turks and Caicos Islands	1,051	837	998	1,068	1,105	1,128	1,012	1,031

Source: CRFM 2007 and FAO

¹ **Total Production (metric tonnes):** Includes estimates for the artisanal pirogue, semi-industrial long line and trawler (3 types) fleets and sport-fishing tournament landings derived from established data collection systems; as well as estimates for the semi-industrial fish spot and line fleet, recreational fleet and Tobago fleets based on point estimates assumed the same each year.

Table 2.6 below shows the value of exports of fish from CRFM Member States. Export products are dominated by high-value commodities such as shrimp, spiny lobster, tunas, queen conch, deep-water snappers and groupers, which command premium prices on the international market. Caribbean fisheries are generally competitive on the international export market. Foreign exchange earnings from fisheries exports are highest in Guyana, Suriname, Belize and the Bahamas and the lowest in Anguilla, St. Kitts & Nevis and St. Lucia.

Table 2.6: Fisheries Exports from Caribbean Countries (2001 - 2006)

Countries	Total Fish Exports (US\$ '000)				
	2001	2002	2003	2004	2005
Anguilla	n/a	12	n/a	10	n/a
Antigua and Barbuda	n/a	n/a	n/a	n/a	295
The Bahamas	72,127	n/a	n/a	n/a	n/a
Barbados	1,364	924	878	874	1,467
Belize	12,020	9,511	99,917	53,910	42,217
Dominica	n/a	1	172	1	32
Grenada	4,051	3,877	3,227	3,103	n/a
Guyana	61,912	54,490	54,149	62,100	62,841
Haiti	n/a	n/a	n/a	n/a	n/a
Jamaica	11,846	5,529	8,178	7,502	n/a
Montserrat	n/a	n/a	n/a	n/a	n/a
St. Kitts and Nevis	131	149	267	2	n/a
St. Lucia	9	108	100	n/a	n/a
St. Vincent and the Grenadines	629	711	548	62	23
Suriname	39,675	n/a	n/a	n/a	n/a
Trinidad and Tobago	10,481	11,436	10,096	6,892	7,724
Turks and Caicos Islands	4,005	3,789	3,499	2,499	n/a

Source: International Trade Centre

Fishery are critical in terms of nutrition and food security in the Caribbean region, as these represent vital sources of animal protein and minerals. Per capita consumption of fish in the Region is between 23 kg

and 25 kg per year, which is well above the world average (Haughton 2007). Per capita consumption of fish is approximately 67 kg in Guyana, representing the highest in the region.

Table 2.7 shows shares of fish and fish products in total dietary protein consumption of selected CARICOM states. On average, fish and fish products account for 9.9% of the total share of dietary protein in the region. Grenada, Guyana, Barbados, Suriname and St. Lucia have the highest share of fish and fish products in total dietary consumption, while St. Vincent and the Grenadines, Trinidad and Tobago, Jamaica and Belize have the lowest.

Table 2.7: Fish's Share in Total Dietary Protein Consumption (percent)

Country Name	Average 2001 - 2003
Bahamas	8
Barbados	13
Belize	7
Dominica	12
Grenada	16
Guyana	15
Jamaica	7
Saint Kitts and Nevis	9
Saint Lucia	10
Saint Vincent/Grenadines	6
Trinidad and Tobago	6
Suriname	10
Average	9.91667

Source: FAOSTAT

2.4.2 Organization and Management of the Fisheries Sector in CRFM Member States

Regional Level

CRFM was established in 2003 to further develop the Region's institutional capacity in the fisheries sector. CRFM promotes the sustainable use of fisheries and aquaculture resources in and among Member States, by developing, managing and conserving these resources in collaboration with stakeholders so as to benefit the people of the Caribbean region.

CRFM's activities will continue to be influenced by the policies outlined in the Agreement Establishing the Common Fisheries Policy and Regime which is currently being discussed by CARICOM Member States. This Agreement is guided by the principles outlined in the Revised Treaty of Chaguaramas Establishing the Caribbean Community including the CARICOM Single Market and Economy, 2001. In the Revised Treaty, Article 60 deals with Fisheries Management and Development and states that the Community will "promote the development, management and conservation of fisheries resources in and among the Member States on a sustainable basis". Further, the Article indicates that the institutional capabilities in the fisheries sectors in areas including policy formulation, resource management and assessment, and harvesting and post-harvesting technologies, are to be enhanced. Development programmes for aquaculture are also highlighted as priority areas.

More recently, fisheries as part of agriculture and along with forestry, has been listed as an important "economic driver" of regional economic development in the Strategic Vision for CARICOM's development outlined in "Towards a Single Development Vision and the Role of the Single Economy". The Strategic Vision encompasses the sustainable use of the fisheries and aquaculture resources in and among Member States, through the development, management and conservation of these resources in collaboration with stakeholders to benefit the people of the Caribbean region.

The proposed regional plan for collaboration among Member States is expected to include:

- Management of straddling and highly migratory fish stocks;
- Ongoing surveillance of exclusive economic zones;
- Delimitation of maritime boundaries;
- Safeguarding the marine environment from pollutants and hazardous wastes;
- Strengthening of Fisheries' Organizations and improved Community participation;
- Development and promotion of Programmes for Conflict Resolution among Multi-users and Coastal Zones.

The Agreement Establishing the Common Fisheries Policy and Regime is currently being negotiated. This Agreement will focus on co-operation and collaboration of Member States in the "conservation, management and sustainable utilization of fisheries and related ecosystems" for the welfare and well-being of Caribbean peoples. The Agreement lists the following objectives:

- the management and development of the living marine resources and ecosystems of the region to ensure social and economic benefits to present and future generations of the people of the Region.
- sustainable fisheries resource use through harmonised regional management of shared resources.
- strengthened cooperation and collaboration and development of harmonised positions on fisheries management issues for presentation and discussions at international fora.
- Promotion of a viable fishing industry with particular attention to subsistence and artisanal fishers.

- Strengthen the shared fisheries information base and promote research in support of fisheries resource assessment and management.

The Agreement further states that the Common Fisheries Policy and Regime is based on a series of fundamental principles that are similar to the FAO Code of Conduct (see section 2.6.2) and CRFM's Guiding Principles; these include:

- better management and development of the living resources and ecosystems of the Region to ensure social and economic benefits to present and future generations of the people of the Region.
- sustainable fisheries resource use through harmonised regional management of shared resources.
- strengthened cooperation and collaboration and development of harmonised positions on fisheries management issues for presentation and discussions at international fora.
- increased protection of biodiversity in the marine environment of the Region.
- increased levels of food security in the Region.
- advancement of social and economic development of the fisheries sector in the Region resulting in the improvement of incomes of fishers, and consequently alleviating poverty.
- promotion and facilitation of the Region's market and economic competitiveness.
- enhanced opportunities for CARICOM entrepreneurs to invest in the fisheries sector.
- minimisation of intra and inter-sectoral conflicts in the region.
- increased institutional and human resources capacity building in the fisheries sector in CRFM Member States.
- harmonised regional and national data and information systems, including data sharing and access by all stakeholders.
- better research in support of fisheries development and management.
- improved and harmonised standards for quality assurance and seafood safety.
- improved regional fisheries Monitoring, Control and Surveillance, and reduction in illegal fishing.

Jagdeo Initiative

The Jagdeo Initiative began in late 2002 when President Jagdeo of Guyana, as Lead Head responsible for Agriculture in CARICOM, requested that the Directors General of FAO and IICA to assist with repositioning agriculture in the Region. The regional Directors of these two institutions consulted with the CARICOM Secretariat concerning the implementation of this request. This was supported and in June 2003, IICA made a presentation to Ministers of Agriculture which dealt with the then existing situation

and outlook for Agriculture in the Region. This presentation detailed the challenges facing the sector and identified characteristics for a “new” Agriculture. These were endorsed by the Ministers of Agriculture and subsequently, the first proposal outlining the initiative’s vision, scope and focus and the process for its development was presented by President Jagdeo to the Conference of CARICOM Heads of Government in July 2004, who endorsed it at that time.

Between 2004 and January 2005, national and regional consultations were held across the Region by IICA; ten (10) Key Binding Constraints and Interventions were identified, as listed below:

Constraints	Necessary Interventions
1. Limited financing and inadequate new investments	Establishment of a Regional Agricultural Modernisation Fund.
2. Outdated and inefficient agriculture, health and food safety systems	Establishment of a Caribbean Agricultural Health and Food Safety Agency (CAHSFA).
3. Inadequate research and development	Definition and implementation of a regional R&D policy and Action Plan.
4. Fragmented and unorganized private sector	Strengthening of private sector organisations and collaboration.
5. Inefficient land and water distribution and management systems	Establishment of a system of incentives for improved land and water use.
6. Deficient and uncoordinated risk management measures including praedial larceny	Development of integrated regional risk mitigation (natural disasters) and relief (including agricultural insurance).
7. Inadequate transportation system particularly for perishables	Determination of freight needs, upgrading of ports and consolidation of services.
8. Weak and non-integrated information and intelligence systems	Integration and modernisation of industry and national information systems and services.
9. Weak marketing systems, linkages and participation in growth markets	Strengthening of joint marketing opportunities and facilitation of access to EXIM-type financing.
10. Lack of skilled human resources	Upgrading and integration of curriculum and training at all levels.

Source: Caribbean Agriculture Policy Network (www.carapn.net)

Implementation of the Jagdeo Initiative has been somewhat slow. Consequently, at the 26th Special Council of Trade and Economic Development Meeting (May 2008), it was decided that in order to strengthen the Lead Country/Lead Agency arrangement under which the Initiative was being implemented, Management Advisory Committees for each of the constraints would be established. This arrangement is expected to entail the Lead Country Minister for each constraint or his nominee chairing the Committee. The Lead Agency would have responsibility for providing technical support and coordinating the development and implementation of the (Annual) Work Programme. The respective Permanent Secretaries would be designated as the Focal Points in each of the lead countries and will have responsibility as Executive Secretary of the Management Advisory Committees.

National Level

All CRFM Member States operate a Fisheries Division or Ministry with functional responsibility for management of the sector. These are functionally structured to carry out a wide range of regulatory and service tasks, including:

- extension services spanning practices and methods, training and providing technical interventions;
- research – supported by varied forms of laboratory, biological and statistical capabilities;
- resource management with focus on licensing, inspection or monitoring and other conservation practices;
- aquaculture¹⁰/mariculture¹¹ with emphasis on development and promotion of activities in the sub-sector; and
- administration with responsibility for accounting, personnel, services and other secretariat support services.

Each division is headed by a Director or Chief and the Ministry with portfolio responsibility that is usually related to agriculture. In addition, there are some countries (for example, Belize) where there exist several fishers cooperatives with significant representation and advocacy capacities especially in the areas of rationalization of entry to the industry, as well as policies and marketing for the industry.

Fisherfolk Organizations

Fisherfolk organizations exist in each CRFM Member State. These are either incorporated as Cooperatives or Associations, depending on the territory and the organization's objectives (CRFM 2004)¹². CRFM (2004) reports that there are different types of fisherfolk organisations which include:

- marketing or producer types which focus on harvesting, distribution of the product, and sometimes processing.
- consumer or supplier types which provide gear, equipment, parts and other inputs to their members at more reasonable prices than exist on the open market.
- service types which supply simple daily production inputs, such as ice and fuel to the traditional areas of offering cultural and social assistance, such as housing, defraying of funeral expenses, day care facilities and health insurance.

¹⁰ FAO defines aquaculture as the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants.

¹¹ FAO defines mariculture as the cultivation, management and harvesting of marine organisms in their natural habitat or in specially constructed rearing units, e.g. ponds, cages, pens, enclosures or tanks.

¹² CRFM 2004. Report of Organizational Needs Assessment of Caribbean Fisherfolk Organizations. Funded by the Technical Centre for Rural and Agricultural Development.

- lobby or pressure group types representing the new emerging types of fisher organizations where represent the interests of members to Government and other organisations.
- credit or financial types provide avenues for members to save their monies for pecuniary profit, sometimes through investment such as the Cooperative Credit Unions.

It should be noted that many of these organisations are multifaceted and may be involved in not only the fisheries sector, but other areas of the economy.

Fisheries Advisory Committees / Boards

Fisheries Advisory Committees / Boards operate in all Member States that participated in CFRAMP (CRFM 2004). The Committee / Board is appointed by the Minister with portfolio responsibility for the fisheries sector and consists of stakeholders from this sector. Typically, it provides an avenue for stakeholders to participate in the decision making process in fisheries resource development and management. This is a body that meets at regular sessions to deliberate key issues and problems facing the industry, discuss contending views, and develop plans for the sustainable development and management of the fisheries resources. Committees and Boards can play an important role in the co-management of fisheries resources.

2.5 Main Challenges Being Experienced by the Fisheries Sector in the Caribbean

Like global fisheries resources, the Caribbean is also experiencing enormous challenges in the management of its fisheries resources. Capture fisheries resources are fully exploited or over exploited due in part to unsustainable and ineffective management of these resources. CRFM (2003)¹³ reports that all major, traditional commercially targeted species and specie groups in the near-shore waters are either fully developed or over-exploited. As early as 1997, Murray¹⁴ reported that the island shelf resources are either fully exploited or overexploited, but concluded that offshore resources appear to offer some scope for development. These include conch, lobsters, shrimp and shallow shelf reef-fishes, and some of the large tunas and tuna like species which are targeted by the international fishing fleet and managed by the International Commission for the Conservation of Atlantic Tunas (ICCAT).

Illegal, unreported and unregulated fishing (IUU) activities by nationals and non-nationals and inadequate delimitation of the Exclusive Economic Zone (EEZ) also have implications for fisheries management. The increase in the number of unlicensed fishers also compounds this problem. Local fishers frequently disregard regulations related to licensing and registration of fishers and fishing boats, gear limitations, closed seasons, closed areas, minimum harvest size of fishes, among other measures designed to protect and conserve the fishery resources (Haughton, undated).

Many fishers have had to change fishing grounds over the years because of declining catches. Other issues include a large and increasing number of fishers (negatively impacts on the carrying capacity of the natural resources); increased year round fishing activity; extensive use of inappropriate size mesh; and

¹³ CRFM (2003). EU/Caribbean ACP States Cooperation in Fisheries. Workshop on the Future of the EU-ACP Countries Fisheries Relations Brussels, Belgium. 7 – 9 April.

¹⁴ Peter A. Murray (1997). An Approach to the Assessment of the Finfish Fisheries of the CARICOM Community. Naga, The ICLARM Quarterly. July - December.

increasing use of destructive gears. Countries are also reporting declining trends in catch weight and size (Aiken and Haughton, 1987¹⁵).

Dundas and Mitchell (2004) assess that the biological productivity of the Caribbean Sea is relatively low with regards to fisheries¹⁶. This is due to three main influences: topological features, characterised by relatively small shelf areas, particularly around the islands, and by ocean deeps and troughs; distance, because the small island areas are far enough away to receive only minimal effects of the river discharges from South America; and climatic factors, in that warm tropical waters are generally not as productive as those in temperate and higher latitudes.

The capacity for effective fisheries management (including systems for monitoring, control and surveillance) varies significantly between the different countries of the Caribbean. There are significant institutional and human capacities in some countries for assessing, monitoring and managing fisheries; in others, fisheries are either managed in an elementary manner or unmanaged (Haughton, 2004). One of the most serious problems is that most Caribbean states allocate limited financial, institutional and human resources to fisheries management. These States have maintained significant reliance on external support for sustainable fisheries development and management. Fisheries management systems in the CARICOM countries, particularly the legal, regulatory and institutional frameworks tend to be weak and ineffective and consequently require upgrading to ensure adequate protection of resources and sustainable fisheries. These institutional issues will need to be addressed in order for countries to benefit from optimal use of their fisheries resources.

Many CRFM Member States typically lack the capacity to formulate and implement appropriate fisheries sector policies and developmental and management strategies. This is because critical inputs into this process which ought to revolve around political commitment, institutional capacity and effective stakeholder participation, are generally inadequate in the Region.

Member States also lack the capacity for value chain development in the fisheries sector. The Caribbean imports significant amounts of value added fish products, but produces very little fish by- products. Therefore, the opportunities to implement value added should be explored to identify the feasibility of such ventures.

Climate change and rising sea levels threaten biodiversity and economic livelihoods in the Region. Mimura et al (2007)¹⁷ argue that small islands, whether located in the tropics or higher latitudes, have characteristics which make them especially vulnerable to the effects of climate change, sea-level rises and extreme events. Characteristics such as limited size, proneness to natural hazards, and external shocks enhance the vulnerability of islands to climate change. Mimura et al (2007) highlight that, in most cases, small island states have low adaptive capacities, and adaptation costs are high relative to Gross Domestic Product (GDP). Mimura et al (2007) further report that sea-level rise is expected to exacerbate inundation, storm surge, erosion and other coastal hazards, thus threatening vital infrastructure, settlements and

¹⁵ **Aiken, K.A., Haughton, M.O. (1987).** Status of the Jamaica reef fishery and proposals for its management. In: Proceedings of the 38th Annual Gulf and Caribbean Fisheries Institute Meeting, pp. 469 - 484.

¹⁶ Carl Dundas and Carlyle Mitchell (2004). A Common Fisheries Regime for The Caribbean Sea. CARICOM Secretariat.

¹⁷ Mimura, N., L. Nurse, R.F. McLean, J. Agard, L. Briguglio, P. Lefale, R. Payet and G. Sem, 2007: Small islands. *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, 687-716.

facilities that support the livelihood of island communities and could even lead to a reduction in the size of islands.

Climate change is likely to heavily impact coral reefs, fisheries and other marine-based resources. Changes in the occurrence and intensity of El Niño- Southern Oscillation (ENSO) events are likely to have severe impacts on commercial and artisanal fisheries. Increasing sea surface temperature and rising sea levels, increased turbidity, nutrient loading and chemical pollution, damage from tropical cyclones, and decreases in growth rates due to the effects of higher carbon dioxide concentrations on ocean chemistry, are likely to affect the health of coral reefs and other marine ecosystems which sustain island fisheries. Such impacts will exacerbate non-climate-change stresses on coastal systems.

Mimura's analysis (2007) supports Brander (2006) who concludes that mobility of fish makes it difficult to estimate future changes in marine fish resources for small island states. Furthermore, since the life cycles of many species of commercially exploited fisheries range from freshwater to ocean water, land-based and coastal activities will affect populations of those species. Coral reefs and other coastal ecosystems which may be severely affected by climate change will also impact fisheries output.

Singh-Renton (2002) agrees that global environmental changes will negatively affect the biology and ecology of marine resources in the Caribbean region with respect to increase in sea surface temperature (SST), sea level rise, increased frequency of El Niño/Southern Oscillation events, increased frequency and intensity of storms and hurricanes, changes in rainfall patterns and changes in sea current systems. Many of the anticipated global environmental changes seriously threaten the health and long-term survival of mangroves, seagrass beds, coral reefs and wetlands that support complex ecosystems in inshore and coastal areas, and the human communities dependent on them. Heileman (2007) has agreed that based on global projections and studies in other regions, a 30-55cm rise in the sea level is projected for the Caribbean over the next 50 years. It is anticipated that this will have very serious implications for the social and economic development of Caribbean States.

Climate change has negatively affected weather patterns as evidenced by the frequency of hurricanes in the Caribbean. The passing of these systems has adversely impacted the fisheries sectors in some Member States. Hurricane Ivan (September 2004) generated severe problems for many fish farmers in Jamaica, as 25% of this group suffered loss and destruction to their farm infrastructure, while 62% suffered loss or destruction of fish stocks and equipment. The impact of Hurricane Ivan on the fishing sector was most devastating for Jamaican fishers on Pedro Bank and the South Shelf. The majority of these fishers lost their fishing equipment and supplies.

As a result of Hurricane Dean (2007), there was massive damage to Jamaica's general coastline, infrastructure (including buildings, wharves, utility poles and fences) and fishing equipment (including gear, boats and engines). The southern coast of Jamaica experienced substantial damage and many beaches were inundated with significant amounts of sand and debris, changing the landscape, while some beaches have been totally eroded. Many traps and other fishing gear were lost at sea; this can subsequently lead to "ghost-fishing" which poses a major threat to the viable existence of the fishery. The income generating capacity of the fishers has been severely impacted due to the hurricane. In addition to losses within the sector, some fishers have experienced personal losses such as houses, cars and furniture. Many commercial entities operating on fishing beaches were also affected.

Oil prices on the world market have increased significantly over the past year, from around US\$50 in March 2007 to US\$115 per barrel in August 2008. This trend is expected to continue into the near future due to rising oil consumption, low global surplus production oil capacity, supply concerns on the

international market, and insufficient non-OPEC oil supply growth relative to demand. The World Bank¹⁸ projects that oil markets are expected to remain finely balanced over 2007–09, in part because of production discipline by exporters, and prices are expected to remain above US\$75 a barrel for the 2009–2010.

CRFM (2002) reports that total fishing vessels operating in the CARIFORUM region were approximately 17,753. Out of this total, artisanal and small vessels were 11, 569 and 3,215, respectively. Fishers have faced and will continue to experience high fuel costs, leading to increased operating costs. These costs are expected to be passed on to consumers via higher prices for fish and fish products.

Due to difficulties in the management of the region's resources, cooperation among Member States required to effectively manage these resources. Critical issues associated with the management of shared marine resources include¹⁹: inadequate policy and institutional framework for management; ineffective management of stocks; overexploitation of many fisheries species such as, conch, shrimp, groundfish, large pelagics and some species of reef fishes; inadequate biological, social and economic data and information for policy formulation; irresponsible fishing and inappropriate use of equipment; inadequate participation of resource users in fisheries management planning; and IUU fishing activities both by nationals and foreigners; and inadequate delimitation of the Exclusive Economic Zone (EEZ). This is also compounded by climate change, rising sea levels and the frequency of natural disasters that threaten the livelihoods of fishers.

In light of these challenges, CRFM's Second Medium Term Plan will continue to focus on initiatives to improve the management of fisheries in the Caribbean region through the implementation of various programmes and projects in Member States.

2.6 Major International Treaties on Fisheries Ratified by CRFM Member States

This section summarizes the major international treaties ratified by CRFM Member States.

2.6.1 *United Nations Convention on the Law of the Sea*

This Convention is the globally recognised regime which deals with all matters relating to the sea, as it lays down a comprehensive regime of law and order in the world's oceans and seas establishing rules governing all uses of the oceans and their resources. The Convention enshrines the notion that all problems of ocean space are closely interrelated and need to be addressed holistically. The Convention was opened for signature on 10 December 1982 in Montego Bay, Jamaica and entered into force in accordance with its article 308 on 16 November 1994.

The Convention comprises 320 articles and nine annexes, governing all aspects of ocean space, such as delimitation, environmental control, marine scientific research, economic and commercial activities, transfer of technology and the settlement of disputes relating to ocean matters. Rankine, et al (2004)²⁰

¹⁸ www.worldbank.org

¹⁹ CRFM (year unknown). Improving Regional and National Mechanisms for the Management and Sustainable Development of Shared Fisheries Resources in the Caribbean ACP Countries. CRFM Project Concept Note.

²⁰ Lloyd Rankine, Govind Seepersad and Ranjit Singh (2004). The Effects of Liberalization and Trade Related Policies on Fisheries and Measures required for their Sustainable Development in the CARIFORUM / CARICOM Region. Project Commissioned by CRFM Secretariat. December.

note that the agreement recognizes the sovereignty of all States and through legal order, facilitates international communication and promotes the peaceful uses of the seas and oceans. It also addresses the equitable and efficient utilization of its resources, conservation of the living resources and allows for study, protection and preservation of the marine environment. The Convention seeks to develop the principle that the area of the sea-bed and ocean floor are beyond the limits of national jurisdiction and are the common heritage of mankind. Thus, exploration and exploitation of this common area shall be carried out for the benefit of mankind as a whole, irrespective of the geographical location of States. All CRFM Member States have ratified this UN Convention.

2.6.2 *FAO Code of Conduct for Responsible Fisheries*

The 1995 FAO Code of Conduct for Responsible Fisheries, which has its roots in the 1982 United Nations Convention on the Law of the Sea (1982 Convention), was concluded in the aftermath of the International Conference on Responsible Fishing (Cancun, Mexico, 6 - 8 May 1992) and the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, Brazil, 3 - 14 June 1992). The Code of Conduct for Responsible Fisheries was adopted by the 28th session of the FAO Conference in on 31 October 1995.

The Code, which is voluntary, aims, *inter alia*, to establish principles for responsible fishing, in accordance with the relevant rules of international law, and to serve as an instrument of reference to help states establish or improve the legal, institutional and managerial arrangements required for responsible and sustainable fishing. It applies globally to all fisheries, including fisheries within the EEZ and the territorial sea as well as those on the high seas and to all stages of the fishing process, including capture and post-harvest production and trade.

The International Plans of Actions (IPOAs) relating to the Code of Conduct are the:

- International Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries;
- International Plan of Action for Conservation and Management of Sharks;
- International Plan of Action for the Management of Fishing Capacity; and
- International Plan of Action for Illegal Unregulated Unreported Fishing.

Like the Code of Conduct, the IPOAs are voluntary and not intended to give rise to any legally binding obligations.

One hundred and twenty six (126) Countries are signatory to the Code.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

The Convention on International Trade in Endangered Species of Wild Fauna and Flora Levels (CITES) is based on the premise that exploitation and trade in certain animal and plant species together with other factors such as habitat loss, are capable of rapidly depleting their populations and even threaten to bring some species close to extinction. Its aim, therefore, is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. While many other wildlife species in the trade are not endangered, the existence of such an agreement aims to ensure the sustainability of the trade, thereby

safeguarding these resources for future generations. This Convention directly impinges on fisheries with respect to trade in queen conch (*strombus gigas*).

Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago are contracting parties to CITES.

2.7 International and Regional Organizations Involved in Fisheries Management

The Inter-American Tropical Tuna Commission (IATTC)

The IATTC, established by international convention in 1950, is responsible for the conservation and management of fisheries for tunas and other species taken by tuna-fishing vessels in the Eastern Pacific Region. Each member country of the IATTC is represented by up to four Commissioners appointed by the respective Government. Currently, CRFM Member States are not members of IATTC. However, Belize is a cooperating non-party to the Commission.

The International Commission for the Conservation of Atlantic Tuna (ICCAT)

The International Commission for the Conservation of Atlantic Tunas (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.

About 30 species are of direct concern to ICCAT: Atlantic bluefin (*Thunnus thynnus thynnus*), skipjack (*Katsuwonus pelamis*), yellowfin (*Thunnus albacares*), albacore (*Thunnus alalunga*) and bigeye tuna (*Thunnus obesus*); swordfish (*Xiphias gladius*); billfishes such as white marlin (*Tetrapturus albidus*), blue marlin (*Makaira nigricans*), sailfish (*Istiophorus albicans*) and spearfish (*Tetrapturus pfluegeri*); mackerels such as spotted Spanish mackerel (*Scomberomorus maculatus*) and king mackerel (*Scomberomorus cavalla*); and, small tunas like black skipjack (*Euthynnus alletteratus*), frigate tuna (*Auxis thazard*), and Atlantic bonito (*Sarda sarda*).

Through the Convention, ICCAT is established as the only fisheries organization that can undertake the range of work required for the study and management of tunas and tuna-like fishes in the Atlantic. Such studies include research on biometry, ecology, and oceanography, with a principal focus on the effects of fishing on stock abundance. The Commission's work requires the collection and analysis of statistical information relative to current conditions and trends of the fishery resources in the Convention area. The Commission also undertakes work in the compilation of data for other fish species that are caught during tuna fishing ("bycatch", principally sharks) in the Convention area, and which are not investigated by another international fishery organization.

Trinidad and Tobago, Barbados, St. Vincent and the Grenadines and Belize are contracting parties to ICCAT.

International Whaling Commission

The International Whaling Commission (IWC) was set up under the International Convention for the Regulation of Whaling which was signed in Washington DC on December 2, 1946. The purpose of the Convention is to provide for the proper conservation of whale stocks and thus facilitate the orderly development of the whaling industry.

The main duty of the IWC is to review and revise as necessary the measures outlined in the Schedule to the Convention which govern the conduct of whaling throughout the world. These measures, *inter alia*, provide for complete protection of certain species; designate specified areas as whale sanctuaries; set limits on the numbers and size of whales which may be taken; prescribe open and closed seasons and areas for whaling; and prohibit the capture of suckling calves and female whales accompanied by calves. The compilation of catch reports and other statistical and biological records is also required.

In addition, the Commission encourages, co-ordinates and funds whale research, publishes the results of scientific research and promotes studies into related matters such as the humaneness of the killing operations.

Antigua and Barbuda, Dominica, Grenada, Belize, St. Kitts Nevis, St. Lucia and St. Vincent and the Grenadines are members of IWC.

The Latin America Organization for Fishery Development

The Agreement establishing the Latin American Organization for Fisheries Development (OLDEPESCA) was signed on 29 October 1982, and entered into force on 2 November, 1984, the date on which its first Conference of Ministers was held. The Agreement, as its title suggests, established the OLDEPESCA organization, which began functioning formally on 2 January 1985. The main purpose of the organization is to meet Latin American food requirements adequately, making use of Latin American fishery resource potential for the benefit of Latin American peoples, by concerted action in promoting the constant development of the countries and the permanent strengthening of regional cooperation in this sector.

Belize and Guyana are currently members of OLDEPESCA.

Western Central Atlantic Fishery Commission

Western Central Atlantic Fishery Commission (WECAFC) was established in 1973 by Resolution 4/61 of the FAO Council under Article VI (1) of the FAO Constitution. Its Statutes were amended by the FAO Council at its Seventy-Fourth Session in December 1978 and by the Hundred and Thirty-first Session of the FAO Council in November 2006. The general objective of the Commission is to promote the effective conservation, management and development of the living marine resources of the area of competence of the Commission, in accordance with the FAO Code of Conduct for Responsible Fisheries, and address common problems of fisheries management and development faced by Members of the Commission. The Commission does not have any regulatory power and can only perform advisory functions.

The work of the Commission is guided by the following three principles:

- promote the application of the provisions of the FAO Code of Conduct on Responsible Fisheries and its related instruments, including the precautionary approach and the ecosystem approach to fisheries management;
- ensure adequate attention to small-scale, artisanal and subsistence fisheries; and
- coordinate and cooperate closely with other relevant international organizations on matters of common interest.

Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Dominican Republic, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago are members of the Commission.

Other Conventions / Agreements/Plans Relevant to Regional Fisheries

These are a range of other Conventions/Agreements and Plans which are relevant in the context of Regional Fisheries Development. These include:

- 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean region
- 1990 Protocol Concerning Specially Protected Areas and Wildlife in the Wider Caribbean
- 1994 Barbados Programme of Action for Sustainable Development of Small Island Developing States
- 2002 Johannesburg Declaration on Sustainable Development
- Plan of Implementation of the World Summit of Sustainable Development
- Mauritius Strategy for the Implementation of the Barbados Plan of Action
- 1993 Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas
- 1995 United Nations Agreement for Implementation of the Provisions of the Convention and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks
- 1992 United Nations Convention on Biological Diversity

2.8 Other Agreements Impacting the Fisheries Sector

Economic Partnership Agreement

The Economic Partnership Agreement (EPA) between the CARIFORUM states and the European Community (EC) was initiated in Barbados on December 16, 2007 by the Principal Negotiators representing the two regions. It is reportedly to be signed and finalized by June, 2008. The EPA 'comes into force' when a sufficient number of Parties have ratified it. The Parties to the EPA are the 15 member states of CARIFORUM, the European Commission (EC), and the 27 member states of the European Union. The signing of the EPA is scheduled for October 2008. However, Guyana has indicated that it will not sign the Agreement.

Fisheries, linked with agriculture, is one of the areas identified in the EPA. The Agreement is expected to contribute to increasing the competitiveness of production, processing and trade in agricultural and fishery products in both traditional and non-traditional sectors, between CARIFORUM and EC countries, consistent with the sustainable management of natural resources. On fisheries, EPA states where both CARIFORUM and EC countries acknowledge the economic and social importance of activities relating to fisheries and the utilization of the living marine resources of CARIFORUM States, and the need to maximize those benefits in relation to such factors as food security, employment, poverty alleviation, foreign exchange earnings and social stability of fishing communities. Further, the Agreement states that the fisheries and marine ecosystems of the CARIFORUM States are complex, biologically diverse and fragile. It also indicates that exploitation should take into account these factors through effective

conservation and management of fisheries resources and related ecosystems based on sound, scientific advice and the precautionary principle as defined by the FAO Code of Conduct on Responsible Fisheries. In terms of regional integration, the Agreement promotes the integration of the agricultural, food and fisheries sectors across CARIFORUM States, through the progressive removal of the remaining trade barriers and the provision of an appropriate regulatory framework. This is expected to contribute to the deepening of regional production enhancing the regional integration process. In terms of stated goals, the Agreement targets improvement in the competitiveness of potentially viable production, including downstream processing, through innovation, training, promotion of linkages and other support activities, in agricultural and fisheries products, including both traditional and non traditional export sectors. Emphasis is also to be placed on improvements in the ability of CARIFORUM operators to comply with national, regional and international technical, health and quality standards for fish and fish products. In terms of sustainable trade in fisheries products, including aquaculture, the Agreement seeks to build or strengthen scientific, technical, human and institutional capability at the regional level.

CHAPTER 3: STRATEGIC FRAMEWORK

The Strategic Plan 2002 outlines the framework for the operations of CRFM and its First Medium Term Plan. It outlines CRFM's role as this relates to improvement of the fisheries sector in the CARICOM region, programme development and coordination, resource mobilization, advocacy and policy, institutional development, resolution of conflicts and trade negotiation.

The First Strategic Plan of CRFM was prepared mainly via a consultative approach with Member States, and implemented initially through a Medium Term Plan 2004 / 07, along with supporting Annual Work Plans and Budgets. The Strategic Plan outlines nine (9) Programme Priority areas which were formulated to address the challenges that were being experienced in the Caribbean fisheries sector at one time. The programme areas that formed the CRFM Strategic Plan are described in Table 3.1 below.

Table 3.1: Programme areas of CRFM Strategic Plan, 2002

Programme Area	Description
1. Research And Data Analysis For Policy Formulation And Decision Making	This programme seeks to enhance the data collection and management capabilities, and rationalize and strengthen institutions and facilities. It will also facilitate integrated planning as well as enhance decision making, policy formulation and collaborative management of shared fisheries resources, involving straddling and migratory species.
2. Preparation For Global Competitiveness	This programme focuses on building institutional, infrastructural and technical capability and capacity to meet international standards of food safety and agricultural health. It will encompass the development and enactment of legislation, as well as processing standards and post harvest technologies to ensure that the community can overcome the technical barriers to entering foreign markets.
3. Resource Assessment And Management	This programme will impact within national boundaries as well as across borders and will be directed towards the creation of a conducive environment for the management of marine resources. Within national boundaries, the focus will be on enhancing the co-management strategy of fisheries management. Across national borders, efforts will be directed towards increased collaboration among countries and with relevant international agencies.
4. Human Resource Development And Institutional Strengthening	This programme is intended to enrich the stakeholders' knowledge capital in the region.
5. Strengthening of Fisherfolk Organizations And Improved Community Participation	This programme is intended to encourage vibrant fishers' organizations and promote community organizations as the major change agents in the fisheries sector.
6. Promotion Of The Expansion And Utilization Of Unutilized And Underutilized Aquatic Resources	This programme is intended to promote expansion and optimize the use of aquatic resources achieving

Programme Area	Description
	sustainability of the aquatic resource endowment.
7. Development And Promotion Of Aquaculture	The development of this sub-sector will follow a two tiered strategy. The first involves the establishment of a policy framework and regulatory environment to promote commercial aquaculture ventures, while the second relates to research on aquaculture initiatives in support of strengthening the marine fisheries sector.
8. Development And Promotion Of Risk Reduction Programme For Fishers	This programme aims to facilitate increases in fisherfolk's access to credit, to invest in responsible fishing methods and safety practices and also to give insurance provisions against loss of income arising from the range of occupational and environmental risks. The programme aims to facilitate development and promotion of the implementation of harmonized mechanisms for avoiding and resolving conflicts relating to exploitation of fishing resources, preservation of the marine environment, and trading of fish.
9. Development And Promotion Of Programs For Conflict Resolution Among Multi-Users In Coastal Zones	This programme is intended to focus on the development and promotion of mechanisms which will minimize or prevent conflicts and/or allow for the resolution of conflicts between fisher folk and other coastal zone users or between States.

Source: Strategic Plan for CRFM, 2002

CRFM's strategic framework is also guided by the Jagdeo Initiative, which is detailed in Section 2.4.

An important element which is to be integrated into the Strategic Framework relates to the United Nations Millennium Development Goals (MDGs). Of the eight (8) broad goals, four (4) are directly relevant to fisheries activities and projects in the CRFM countries. These are:

Goal 1- Eradicate extreme poverty and hunger- This goal aims to halve the proportion of people whose income is less than US\$ 1 per day by 2015;

Goal 3- Promote gender equality and empower women- This goal aims to eliminate gender disparity in primary and secondary education, preferably by 2005, and to all levels of education no later than 2015;

Goal 7- Ensure environmental sustainability- This goal aims to integrate principles of sustainable development into countries' policies and programmes and reverse the loss of environmental resources; and

Goal 8- Global partnership for development- In relation to fisheries, this goal aims to: address the special needs of landlocked countries and small island developing states (Target 14); and develop further an open, rule based, predictable, non-discriminatory trading and financial system, which includes commitment to good governance, development and poverty reduction, both nationally and internationally. Based on the limited data available, many of the CRFM Member States have been making only limited progress towards achieving these targets.

CHAPTER 4: THE SECOND MEDIUM TERM PLAN

4.1 Introduction

The First Medium Term Plan 2004 - 2007 detailed fifteen projects drawn from CRFM's nine programme areas. The Plan was designed as a compendium of project profiles with the primary objective of using these profiles as the basis to explore donor interest and mobilize financial and related support. In addition, an important additional objective was to expand the areas of interest into project proposals that were expected to complement the critical core work of the CRFM Secretariat, which is financed through Member States' contributions. The fifteen projects which form the basis of the first Medium Term Plan 2004 - 2007 are listed below in Table 4.1, and are linked to the programmes / priority areas.

Table 4.1: First Medium Term Plan (2004-2007) - Programme Areas and Proposed Projects

Programme Area	Projects Addressing Programme Area
1. Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management 15. Establishment of a Regional Fisheries Information System
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade
3. Resource Assessment and Management	1. Development and Implementation of a Programme for enabling and promoting monitoring, control and surveillance. 3. Development and implementation of fisheries management policies and plans. 4. Development and Implementation of Mechanisms for the Management of Shared resources. 8. Development and Implementation of Regional Management Systems
4. Human Resource Development and Institutional Strengthening	7. Human Resource Development and Institutional Strengthening
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support. 10. Strengthening of Fishers' Organizations
6. Promotion of Expansion and Utilization of Un-utilized Aquatic Resources	5. Promotion of the expansion of Pelagic Fishery and Other Un-utilized resources
7. Development and Promotion of Aquaculture	2. Development and Promotion of Aquaculture (including Mariculture) in the Caribbean
8. Development and Promotion of Risk Reduction Programmes for Fishers	12. Reduction of the Vulnerability to Natural Disasters 13. Harmonized Credit and Personal Insurance Schemes
9. Development and Promotion of Programmes for Conflict Resolution among Multi-users in Coastal Zones	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts

Source: CRFM Medium Term Plan, 2002

The Second Medium Term Plan (2008 - 2011) will continue implementation of the projects outlined in the First Medium Term Plan (2004 - 2007) and build on the initiatives of the CARICOM Fisheries Resource Assessment and Management Programme (CFRAMP) and CRFM. CFRAMP set the stage for initiating Programmes to enable the region to: increase the awareness of the importance of the fisheries

sector; strengthen the capabilities of its national fisheries authorities; expand its cadre of trained personnel in fisheries; improve the knowledge of conservation and fisheries management; deepen the integrated approach to addressing issues in fisheries; promote aquaculture and expand fisheries management information; and facilitate the establishment of the CARICOM Regional Fisheries Mechanism (CRFM). Since 2003, CRFM has replaced CFRAMP and is the lead organization involved in regional fisheries development.

4.2 The Programme Direction

The Second MTP will focus on nine programme areas, namely:

1. Research and Data Analysis for Policy Formulation and Decision Making
2. Preparation for Global Competitiveness
3. Resource Assessment and Management.
4. Human Resource Development and Institutional Strengthening.
5. Strengthening of Fishers' Organizations and Improved Community Participation.
6. Promotion of Expansion and Utilization of Unutilized and Underutilized Aquatic Resources.
7. Development and Promotion of Aquaculture.
8. Development and Promotion of Risk Reduction Programme for Fishers.
9. Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts at the National and Regional Levels

In the section that follows, individual programme / areas / expected outcomes, which comprise the Second MTP are presented. Specific performance indicators related to each programme / area are listed in Annex III.

4.2.1 Research and Data Analysis for Policy Formulation and Decision Making

Overall Objective

To enhance the data collection and management capabilities, decision making, policy formulation and collaborative management of shared fisheries resources in CRFM Member States.

The programme will focus on two Areas, namely:

- (i) Improvement of Data Collection and Management
- (ii) Establishment of a Regional Fisheries Information System

Area # 1: Improvement of Data Collection and Management

Specific Objective

To improve the data management systems in order to facilitate development and implementation of sound policies and fisheries management plans for the sector.

Actions

- Conduct a comprehensive analysis of the current data collection systems employed in all Member States.
- Assess the institutional and technological capacity of Fisheries Authorities to process and manage data.
- Host national and regional consultation fora to build consensus on the required course of action.
- Develop harmonised national and regional programmes for data collection and management.
- Implement national and regional programmes for data collection and management

Expected Outcomes

- Enhanced fisheries policy development processes, fisheries management and developmental planning in CRFM Member States.
- Increased regional collaboration in management of appropriate species, such as highly migratory and straddling stocks.
- Improved institutional capacity of National Fisheries Authorities for data collection, management and dissemination.
- Enhanced quality of data collected by CRFM Member States.

Area #2: Establishment of a Regional Fisheries Information System

Specific Objective

To create and maintain a comprehensive data and information system and regional policy network dedicated to facilitating the development and implementation of sound policies and fisheries management plans within CRFM member countries.

Actions

- Undertake a comprehensive assessment and cataloguing of the information needs of the Fisheries Authorities in each of CRFM's Member States.
- Assess the specific requirements of the CRFM Secretariat to serve as the hub of the data and information system.

- Develop and promote linkages between countries and specific agencies for information sharing.
- Develop an Information Portal or Network and relevant user interface.
- Establish a Regional Fisheries Policy Network, building on the existing Regional Agricultural Policy Network.

Expected Outcomes

- Increased access of decision makers to data and information to facilitate more informed decision making, policy formulation and planning for the fisheries sector.
- Increased availability and access to information by stakeholders in the private and public fisheries sector, academia and the general public.
- Greater communication among fisheries stakeholders, fisher groups and Fisheries Authorities across the region, especially as this relates to policy matters.
- Increased collaboration among CRFM Member States on policy and other related issues.

4.2.2 Preparation for Global Competitiveness

Overall Objective

To build institutional, infrastructural and technical capability and capacity in CRFM Member States to meet international standards in food production and food safety and health for the purpose of domestic consumption and international trade.

Actions

- Undertake analysis in each CRFM Member State to determine its ability to meet global standards.
- Promote consensus building among CRFM Member States to determine priority programmes and a Plan of Action.
- Develop and implement technical assistance programmes and secure grant funding for priority interventions relating to agricultural health and food safety systems, training and legislation.
- Develop and recommend a harmonized incentives regime to encourage the private sector to invest in food processing safety standards, quality assurance technology and systems in the primary and secondary production processes.
- Develop and implement mechanisms and instruments for monitoring compliance with export trade and international, regional and national fisheries management and conservation requirements.

Expected Outcomes

- Enhanced capacity of CRFM Member States to meet international sanitary and food safety standards.
- Improved institutional and regulatory framework to ensure compliance of fishers and fish processing facilities with international standards.
- Increased compliance of fishers and fish processors with international sanitary and food safety standards.
- Increased public and private investment in fishing vessels, landing sites, processing plants and laboratories that are compliant with international standards.
- Reduced levels of fish poisoning.

4.2.3 Resource Assessment and Management

Overall Objective

To create a conducive environment for the management of marine resources in CRFM Member States and promote increased collaboration among countries and with relevant international agencies.

The programme will focus on three Areas, namely:

- (i) Development and Implementation of Fisheries Management Policies and Plans.
- (ii) Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and Surveillance.
- (iii) Development and Implementation of Regional Management Systems.

Area #1: Development and Implementation of Fisheries Management Policies and Plans

Specific Objective

To strengthen the capacity of CRFM Member States in the formulation and implementation of fisheries management policies and plans in order to ensure sustainable exploitation of both shared and national resources.

Actions

- Sensitize political decision-makers, national fisheries agencies, fishers and the general public to the current and potential social and economic value of fisheries and the benefits of responsible fisheries management.
- Review and evaluate existing fisheries policies, policy instruments and plans with political decision makers, national agencies and other stakeholders.

- Evaluate the structure and capacity of existing fishers' organizations and formulate strategies for their strengthening.
- Assist countries in establishing appropriate institutional structures for effective fisheries management.
- Assist in establishing Fisheries Advisory Committees geared towards spearheading the policy and planning process for fisheries management in CRFM Member States.
- Support capacity building of staff in national fisheries agencies, Fisheries Advisory Committees, fishers' organizations to effectively participate in the national and regional policy formulation and planning process.
- Finalize and implement the Agreement Establishing the Common Fisheries Policy and Regime.

Expected Outcomes

- Improved capacity of CRFM Member States to formulate and implement policies and plans for the fisheries sub-sector.
- Increased awareness of stakeholders about the socio-economic importance of the fisheries sub-sector.
- Increased stakeholder participation in management of fisheries resources.
- Strengthened institutional structures for promulgation and implementation of policies and plans for the fisheries sector.

Area # 2: Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and Surveillance

Specific Objective

To determine, prevent and eliminate illegal, unregulated and unreported fishing activities in accordance with the CRFM Declaration on Illegal, Unreported and Unregulated Fishing and the FAO Code of Conduct for Responsible Fisheries.

Actions

- Review and analyse the current status of monitoring, control and surveillance systems of all CRFM Member States and make recommendations for improvements.
- Develop and encourage implementation of an Action Plan for multisectoral interventions with respect to monitoring, control and surveillance in CRFM Member States.
- Determine the economic value of the fisheries sector in each CRFM Member State, including IUU.
- Assessment of economic loss to regional fisheries as a result of IUU.

- Implement monitoring, control and surveillance programmes in Member States comprising: institutional strengthening, legal and regulatory improvements, public awareness, institutional cooperation, and mechanisms for financing.
- Mobilize multi-sectoral support to secure material commitments to execute programmes for monitoring, control and surveillance.
- Assist countries in the implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.

Expected Outcomes

- Improved monitoring, control and surveillance mechanisms for fisheries resource management in CRFM Member States.
- Enhanced institutional, legal and regulatory frameworks that promote effective monitoring, control and surveillance in Member States.
- Improved stakeholder and general public awareness of the importance of monitoring, control and surveillance.
- Enhanced institutional capacities for monitoring, control and surveillance.
- Effective co-operation between fishers, fisheries and other enforcement authorities on monitoring, control and surveillance.
- Reduction in illegal unreported and unregulated fishing activities in CRFM Member States.

Area #3: Development and Implementation of Regional Management Systems

Specific Objective 1

To encourage the management of shared fisheries resources in a sustainable manner among CRFM Member States.

Specific Objective 2

To facilitate an improved institutional framework for fisheries management at the regional level and in CRFM Member States.

Actions

- Sensitize primary stakeholders on the issues and implications for the development and management of shared resources and the required actions.
- Conduct assessment to identify the range of shared fisheries resources and the respective countries that share them.

- Design and encourage implementation of cooperative assessment and management arrangements among international, regional and sub-regional partners.
- Draft co-operative management plan(s) that include monitoring measures and penalties and encourage its adoption by Member States.
- Participation in ICCAT, CLME and WECAFC.
- Create and/or strengthen mechanisms for regional planning, assessment, resource management and decision-making.
- Develop a Regional Protocol for sustainable fisheries management and corresponding Framework for Policy and Institutional Reform.
- Create and Support Additional Working Groups for Resources not covered by current Working Groups.
- Formulate Memoranda of Understanding for implementation of regional management systems between CRFM, National Fisheries Authorities and fisheries organizations.

Expected Outcomes

- Increased stakeholders' awareness on issues related to shared fisheries resources.
- Increased cooperation among CRFM Member States in the exploitation and management of common fisheries resources.
- Improved management of regional fisheries resources by CRFM Member States.
- Improved management and conservation of ICCAT-managed resources.
- Improved policy and institutional frameworks for sustainable marine resources management.
- Harmonized regional management systems and legislation.
- Improved regional planning, assessments, resource management, decision-making and monitoring, control and surveillance.
- Sustainable development of fisheries and aquaculture resources in CRFM Member States.

4.2.4 Human Resource Development and Institutional Strengthening

Overall Objective

To increase the human resource capacity of stakeholders in the fisheries sector to promote sustainable management of the region's fisheries resources.

Actions

- Determine training needs of fisheries agencies and organizations.
- Develop and implement training programmes for fisheries staff in national fisheries agencies and organizations in CRFM Member States.
- Develop “Restructuring and Institutional Strengthening Programmes”, with specific emphasis on human resources.

Expected Outcomes

- Improved management of fisheries resources at the national and regional levels.
- Improved institutional capability in fisheries management at both the national and regional levels.
- Improved capacity of stakeholders in the fisheries sector to effectively manage fisheries resources.

4.2.5 Strengthening of Fishers’ Organizations and Improved Community Participation

Overall Objective

To empower community organizations to be effective partners in the co-management of regional and national fisheries resources.

The programme will focus on three Areas, namely:

- (i) Promotion of Community Participation and Public Support
- (ii) Strengthening of Fishers’ Organizations
- (iii) Small Business Development

Area #1: Promotion of Community Participation and Public Support

Specific Objective

To mobilize and enable communities to be effective advocates for responsible fishing and sound fisheries management.

Actions

- Conduct investigations to identify active, credible and competent advocacy groups.
- Develop and execute public awareness/social marketing programmes on the importance of the fishing industry; the need for responsible fishing; and utilization of other coastal resources by other users.

- Develop and provide institutional enabling support to groups to sustain advocacy.
- Develop and deliver public education programmes to community groups.

Expected Outcomes

- Increased co-management of fisheries resources in the region.
- Greater public awareness about the economic and social importance of the fishing industry and responsible utilization of coastal resources in general.
- Increased advocacy by coastal communities for responsible resource management by fishers and other stakeholders in the fisheries sector.

Area #2: Strengthening of Fishers' Organizations

Specific Objective

To empower fishers' organizations for more effective involvement in the productive use of fisheries resources in CRFM Member States, and maximize the use of available business opportunities.

Actions

- Conduct training and institutional needs assessment of fishers' organizations.
- Develop and implement training and institutional strengthening programmes in fishers' organizations.
- Restructure selected fishers' organizations.
- Promote good governance of CRFM Member States' fisherfolk organizations.
- Initiate formal partnerships between national Governments and fishers' organizations for the co-management of fisheries resources.
- Facilitate the establishment of a Regional Fisherfolk Organization.

Expected Outcomes

- Improved management of fisheries resources in CRFM Member States.
- Improved capacity of fishers' organizations to participate in the co-management of fisheries resources in Member States.
- Increased collaboration between national Governments and fishers' organization in the co-management of national fisheries resources.
- Improved socio-economic situation of fisherfolk.

- Sustainable practices by fisherfolk
- Increased interaction among regional fisherfolk on the management and exploitation of fisheries resources in the Region.

Area #3: Small Business Development

Special Objective

Improve the enabling environment and support services for small business development in the fisheries sectors of CRFM's Member States.

Actions

- Conduct studies to assess the current business and regulatory frameworks
- Provide business services support to small-scale artisanal fishers
- Assist CRFM Member States to develop export marketing capabilities for their fish and fisheries products.
- Assist small scale fishers in identifying sustainable, new business opportunities in the fisheries sector.
- Encourage increased levels of private sector investment in the fisheries sector.
- Convene business development workshops in CRFM Member States for all categories of fishers.
- Publish and distribute literature on business support and investment for fishers.
- Assist in increasing access to credit for fishers.

Outcomes

- Increased investment in the fisheries sector.
- Increased diversification of economic activities within the fisheries sector.
- Improved livelihoods for fishers, their families and the broader community.
- Increased contribution of the fisheries sector to employment and national income.
- Improved capability and capacity of fishers to undertake business activities.
- Increased exports of fish and fishery products from CRFM Member States.

4.2.6 Promotion of Expansion and Utilization of Unutilized and Underutilized Aquatic Resources

Overall Objective

To promote development and expansion of the large pelagics, under-developed and undeveloped fisheries in CRFM Member States.

Actions

- Evaluate current framework in CRFM Member States for supporting fisheries development for specified target species.
- Evaluate the potential for developing/ expanding specified targeted species.
- Conduct assessment of the biology, ecology, and stock status of specific targeted species which have potential for further development.
- Develop and implement pilot projects in targeted Member States to examine the feasibility of exploitation of these targeted species.
- Formulate Master Plan for sustainable fisheries development.
- Mobilize technical assistance for CRFM Member States to develop large pelagics, under-utilized and un-utilized fisheries.
- Promote increased research and development for identifying value added product opportunities.
- Develop guidelines for an investment incentive regime to promote private investment in CRFM Member States.
- Develop project profiles to attract potential investors.
- Host an investment forum to promote opportunities in new fisheries in the CARICOM region.

Expected Outcomes

- Increased exploitation of large pelagic fisheries and other non-traditional species.
- Increased levels of investment in large pelagic and non-traditional fisheries by commercial fishers and other investors.
- Increased public awareness about the opportunities in large pelagic and non-traditional fisheries.
- Increased awareness and use of new fishing technologies.
- Wider range of value added products developed and made available to consumers.

4.2.7 Development and Promotion of Aquaculture²¹ (including Mariculture)

Overall Objective

To promote and facilitate the development of aquaculture as one of the strategies for increasing the sustainable supply of fish, shell fish and other marine products for domestic consumption, and foreign exchange earnings.

Actions

- Conduct an assessment on the status of aquaculture in CRFM Member States.
- Evaluate the existing enabling environment (institutional, policy and legal frameworks) in CRFM Member States for the promotion of an aquaculture industry.
- Determine the most appropriate species for aquaculture development based on marketability, available technology, sustainability and economic viability.
- Develop and implement pilot projects to test feasibility of research findings and identify appropriate technologies for small-scale aquaculture.
- Formulate Master Plan for development aquaculture with focus on small-scale aquaculture and stock enhancement.
- Develop programmes for increasing interest and promoting investment in aquaculture.
- Develop action plans for public sector support for aquaculture enterprises.
- Identify the need for, and develop framework for regionalizing research and training in aquaculture.
- Develop a Regional Protocol for sustainable aquaculture development and management and corresponding Framework for Policy and Institutional Reform.

Expected Outcomes

- Increased supply of fish and other marine products from aquaculture.
- Increased investment in aquaculture in CRFM Member States.
- Development of a research and training programme for aquaculture in CRFM Member States.
- Enhanced public sector support for aquaculture development and expansion.

²¹ CRFM Member States have different capacities related to aquaculture.

4.2.8 Development and Promotion of Risk Reduction Programme for Fishers

Overall Objective

To increase the capacity of fishers to minimize risks involved in fisheries activities.

The programme will focus on three Areas:

- (i) Disaster Risk Reduction
- (ii) Credit
- (iii) Personal Insurance

Area #1: Disaster Risk Reduction

Specific Objective

To build regional capacity to plan for, and implement measures to minimize the vulnerability of its fisher folk to the effects of climate change, natural disasters and other safety related risks at sea.

Actions

- Develop National Disaster Preparedness and Mitigation Plans for the fisheries sector for each CRFM Member State.
- Collaborate with CDERA to develop Risk Reduction Plans for the fisheries sector at the national and regional levels.
- Assess and document the range, category and intensity of economic and personal risks of fishers resulting from natural disasters and climate change.
- Facilitate consensus building on, and the development of Modular Plans, Procedures and Standards for dealing with natural disasters, climate change and personal safety at sea.
- Train representatives of National Fisheries Authorities and fishers' organizations to apply the Modular Plans, Procedures, and Standards.
- Identify strategic institutions that could be used to institutionalize the Modular Plans and Procedures selected, as well as safety standards.
- Provide support to the National Authorities and fishers' organizations to enable them to institutionalize the Modular Plans, Procedures and Practice.
- Develop safety standards and implement a promotional programme to sensitize fisherfolk in CRFM Member States.
- Conduct studies to assess the impact of climate change on fisheries species (of economic importance) and the fisheries sector of CRFM Member States.

Expected Outcomes

- Reduction in vulnerability of fishers to natural disasters and the effects of climate change.
- Reduction in financial losses incurred by fishers after natural disasters or adverse weather conditions.
- Reduction in the impact of natural disasters and climate change on fisheries sector.
- Increased collaboration among CRFM Member States on risk management and mitigation.
- Enhanced capacity within fishers' organizations to execute risk management and mitigation programmes.
- Increased awareness among fisher folk about risk management and mitigation methods.

Area #2: Credit

Specific Objective

Develop and promote a framework for a viable credit scheme for fishers and mobilize interested financiers.

Actions

- Conduct study to determine appropriate mechanisms for delivery of credit to fishers, flexible terms and conditions for loans.
- Liaise with appropriate financial institutions such as development banks and other financial intermediaries at the national level to promote alternative models of credit delivery to fishers.
- Encourage Governments of CRFM Member States and Regional Development Banks to provide specialized lines of credit to the fisheries sector, utilizing alternative modes of credit delivery.
- Sensitize fishers on the importance of utilising credit in expanding, upgrading and modernizing their operations.

Expected Outcomes

- Increased access to loan financing by fishers.
- Increased availability of loans on flexible terms and conditions to the fisheries sector.
- Improved knowledge of fishers about the importance of utilizing loan financing in their business operations.

Area #3: Personal Insurance

Specific Objectives

Develop and promote guidelines to implement appropriate personal and other insurance schemes for fishers at the national level.

Actions

- Conduct study on the access of fishers to insurance schemes operated by Governments and private financial institutions in CRFM Member States.
- Conduct study in selected CRFM Member States to assess demand for personal insurance by fishers.
- Conduct studies on the feasibility of vessel insurance for all types of fishers.
- Develop guidelines for a vessel insurance scheme that incorporates small-scale fishers.
- Collaborate with Governments, providers of insurance services and related institutions to develop appropriate personal insurance schemes for fishers.
- Liaise with Governments and Insurance Service Providers in CRFM Member States to develop and implement a specialized personal insurance scheme for fishers.
- Liaise with Governments and Insurance Service Providers in CRFM Member States to offer vessel insurance to all types of fishers
- Host fora for fishers in CRFM Member States to promote the importance of personal and vessel insurance.

Expected Outcomes

- Availability of specialized personal insurance schemes for fishers.
- Increased awareness among fishers concerning the importance of personal insurance.
- Increased numbers of fishers subscribing to personal insurance schemes.
- Increased availability and access to vessel insurance by all fishers.
- Increased awareness among fishers concerning the importance of vessel insurance.

4.2.9 Development and Promotion of Programmes for Conflict Resolution at the National and Regional Levels

Overall Objective

Develop and promote mechanisms which will minimize or prevent conflicts and allow for the resolution of conflicts between fisher folk and other coastal zone users.

Actions

- Conduct research and analysis to identify and categorize existing, emerging and potential conflicts.
- Build consensus on the range of existing and potential conflicts, in order to create or build on existing mechanisms to avoid and resolve them.
- Develop a users' manual for conflict management.
- Train stakeholders' representatives to effectively execute conflict management mechanisms.
- Identify and support strategic institutions for institutionalization of fisheries conflict management in the Caribbean region.

Expected Outcomes

- Reduction in conflicts among Member States, fisher folk and other coastal users over coastal resources.
- Increased cooperation in the use of fisheries resources.
- Institutionalization of fisheries conflict management in the Caribbean region
- Improved mechanisms for managing conflicts such as integrated coastal zone management, and demarcate areas for fisheries activities.

4.3 Projects Supporting Programmes

The Second Medium Term Plan encompasses fifteen (15) projects drawn from the above Programmes. The Table below groups the Projects and links them with the respective Programmes.

Table 4.2 shows the projects that are linked to these programme areas. The project summaries can be found in Appendix I.

Table 4.2: Programme Areas and Related Projects for the Second Medium Term Plan

Programme Area	Projects Addressing Programme Area
1-Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management. 13. Establishment of a Regional Fisheries Information System and Policy Network.
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade
3. Resource Assessment and Management	1. Development and Implementation of a Programme for enabling and promoting monitoring, control and surveillance. 3. Development and implementation of fisheries management policies and plans. 4. Development and Implementation of Mechanisms for the Management of Shared resources. 8. Development and Implementation of Regional Management Systems.
4. Human Resource Development and Institutional Strengthening	7. Development of Human Capital
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support. 10 Strengthening of Fishers' Organizations
6.Promotion of Expansion and Utilization of Un-utilized and Under-Utilized Aquatic Resources	5. Promotion of the expansion of Pelagic Fishery and Other Un-utilized and Underutilized resources.
7. Development and Promotion of Aquaculture	2. Development and Promotion of Aquaculture (including Mari-culture) in the Caribbean
8. Development and Promotion of Risk Reduction Programmes for Fishers	12. Reduction of the Vulnerability to Natural Disasters. 15. Harmonized Credit and Personal Insurance Scheme
9. Development and Promotion of Programmes for Conflict Resolution at the National and Regional Levels	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts

CHAPTER 5: OPERATIONAL FRAMEWORK

5.1 Overview

CRFM's *modus operandi* is detailed in its Operations Manual. CRFM executes its operations through a programme mode. The Secretariat is managed through six programmes, namely: Corporate Services; Advocacy, Policy and Planning; Fisheries Statistics and Information; Fisheries Research and Resource Assessment, Fisheries Resource Management and Development and Communication and Documentation. These programmes are led by Programme Managers who report to the Deputy Executive Director and Executive Director. The process of programme management/development is expected to ensure that the final outputs of the projects are in keeping with the CRFM's goals, and subsequently the needs of Member States of the CRFM.

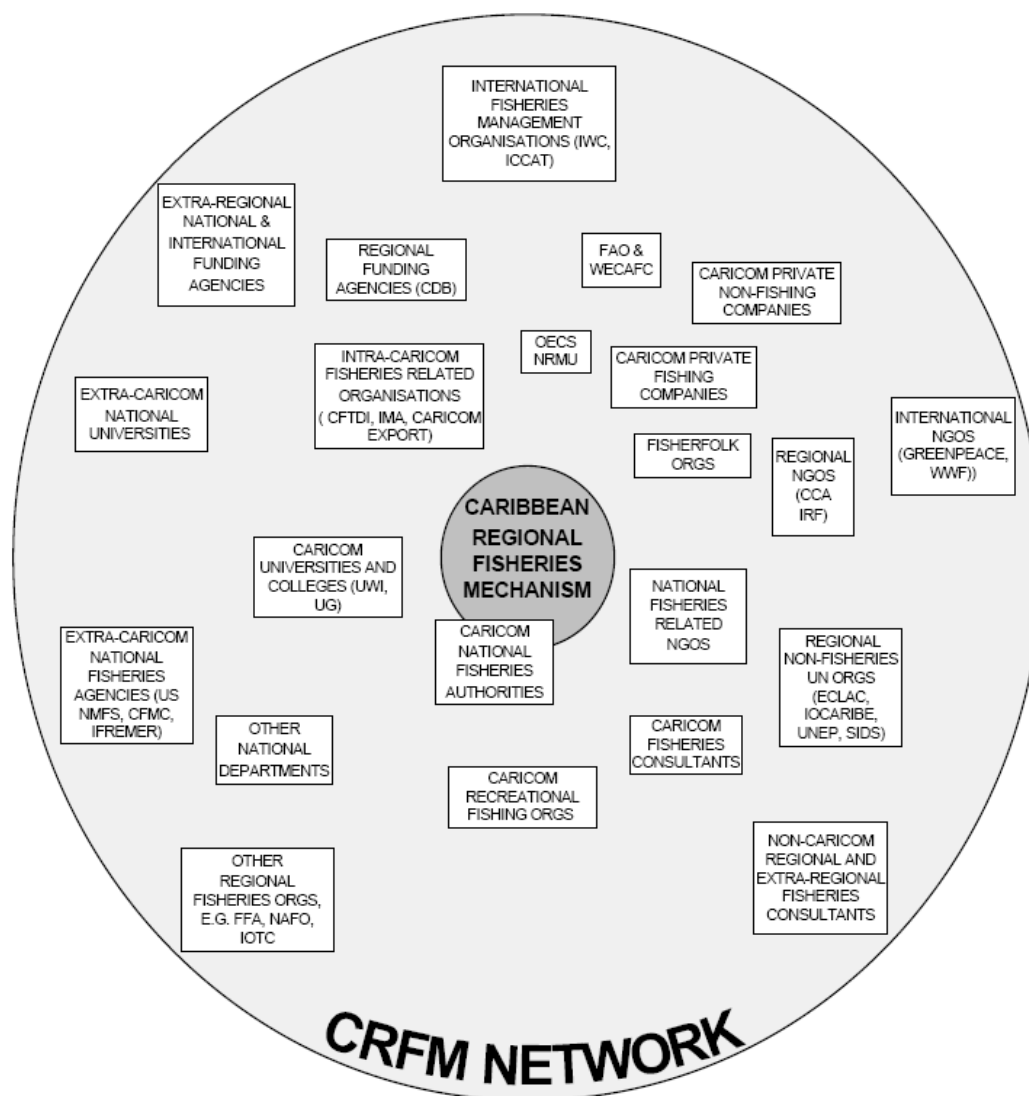
Programmes / projects are planned, implemented, monitored and assessed through the Annual Work Plan. This Annual Work Plan flows directly from the MTP and is comprised of a phased set of activities which specify, schedule and cost the activities outlined in the MTP, on an annual basis. All requests for funds, from Member States or Donors, disbursements, and spending are reflected in the approved Annual Work Plan.

5.2 Partnership with Stakeholders

CRFM works with other organizations at the national, regional and international levels (see figure 5.1) to implement its projects and programmes. The contributions of these organizations include the following:

- Identification of national and regional needs for fisheries management and development;
- Collaboration in the formulation of strategies and work programmes to address identified needs;
- Identification of human resource development needs, including staffing and training;
- Cooperation in the implementation of projects and activities in the approved work programme;
- Undertaking research in support of fisheries management and development;
- Provision of information and technical expertise; and
- Provision of financing for projects and other inputs.

Figure 5.1: The Network of Stakeholders with Which CRFM Interacts



Source: CRFM Operations Manual, 2008

5.3 Process of Updating the Second Medium Term Framework

The CRFM Secretariat organizes consultations and workshops periodically to provide a general direction of the organization. The outputs of the consultations and workshops, after approval by the Forum, contribute, in part, to the CRFM Secretariat's Medium Term Plan and the agreed and acceptable outline of the work programme focus to be addressed within a specific time frame. This time frame varies between three and six years.

In the implementation of its Medium Term Plan, the CRFM Secretariat's system acknowledges an annual consultative process with Member States, inclusive of Meetings of the Executive Committee of the Forum, and of the Forum itself which recommends the output; this then becomes the Draft Annual Work Plan and Budget presented to the Ministerial Council (COTED) for approval.

5.4 Monitoring and Evaluation

Progress on the implementation of the Second MTP will be monitored through the following periodic reports:

- The Annual Work Plan;
- The Quarterly Technical Progress and Financial Reports;
- The Annual Technical Progress and Financial Report; and
- The Annual Report of the CRFM Secretariat

At the end of the implementation period for the Second MTP, a comprehensive review will be conducted and a related report produced.

CHAPTER 6: FINANCING OF CRFM'S ACTIVITIES

6.1 Nature of Funding

CRFM's regular Budget is comprised of the following:

- Annual contributions from Member States and Associate Members;
- Contributions from co-operating partners or other contributors;
- Grant funds received from regional and international donor agencies;
- Funds paid by donor agencies to CRFM for project execution services provided by the Mechanism with respect to projects financed by the donor agencies;
- Earnings above cost for special services provided by CRFM to commercial operators in the fishing industry and to other bodies;
- Income derived from the sale or the licensing of intellectual property created and owned by CRFM; and
- Any other source of funding.

6.2 Budget for Projects in the Second Medium Term Plan

The Medium Term Plan contains fifteen (15) projects will require approximately US\$18.79 million, which includes at least US\$ 3.17 million (16.9 %) in regional counterpart financing. The balance is expected to be financed by the international donor community. The required investment and counterpart financing is summarized in Table 6.1 that follows:

Table 6.1: CRFM Second Medium Term Plan: Required Investment and Regional Counterpart Financing (US\$000)

PROGRAMME AREA	PROJECT NAME	TOTAL REQUIRED INVESTMENT US\$000	COUNTERPART FINANCING US \$000	STATUS OF FUNDING*
1-Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management	732	78	Funding obtained from donors and Member States for the First MTP. Additional resources currently being mobilized from JICA.
	13. Establishment of a Regional Fisheries Information System and Policy Network.	2,623	139	Resources currently being mobilized from JICA and EU.
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade.	2,160	384	Funding obtained from donors and Member States for the First MTP. Funding currently being sought from EU.
3. Resource Assessment and Management	1. Development and Implementation of a Programme For Enabling and Promoting Monitoring, Control and Surveillance (MCS).	516.25	85	Funding obtained from CARISEC and Member States for the First MTP. Discussions are currently being held with potential international Donor Agencies.
	3. Development and Implementation of Fisheries Management Policies and Plans	694.8	157.2	Funding obtained from EU and Member States for the First MTP. Funding being sought through EU Global ACP Project.
	4. Development and Implementation of Mechanisms for the Management of Shared Resources.	483.6	106.8	Funding obtained from EU and Member States for the First MTP. Funding being sought through EU Global ACP Project.
	8. Developing and Implementing Regional Management Systems.	762	118.8	No funding was obtained for the First MTP. Currently funds being

PROGRAMME AREA	PROJECT NAME	TOTAL REQUIRED INVESTMENT US\$000	COUNTERPART FINANCING US \$000	STATUS OF FUNDING*
				sought EU-ACP Programme (ACP Fish II), as well as GEF, CLME Project.
4. Human Resource Development and Institutional Strengthening	7. Development of Human Capital	3,960	690	Funding obtained from EU and Member States for the First MTP. No funding source currently identified for Second MTP.
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support.	792	138	Funding obtained from Member States for the First MTP. Funding currently being sought under JICA Project.
	10. Strengthening of Fishers' Organizations	2,274	492	Funding obtained from CTA for the First MTP. CTA funds currently being used for project implementation.
6. Promotion of Expansion and Utilization of Unutilized and Underutilized Aquatic Resources	5. Promotion of the Expansion of Pelagic Fishery and Other Unutilized and Underutilized Resources.	1,302	234	No funding obtained for First MTP. Funding currently being sourced under JICA Project.
7. Development and Promotion of Aquaculture	2. Development and Promotion of Aquaculture (including Mariculture) in the Caribbean.	996	276	No funding obtained for First MTP. Funding currently being sourced under JICA Project.
8. Development and Promotion of Risk Reduction Programmes for Fishers	12. Reduction of Vulnerability to Disasters	855	156	No funding obtained for First MTP. Discussions on project implementation currently ongoing with CDERA.
	15. Harmonized Credit and Personal Insurance	180	23	No funding obtained for First MTP. Possible

PROGRAMME AREA	PROJECT NAME	TOTAL REQUIRED INVESTMENT US\$000	COUNTERPART FINANCING US \$000	STATUS OF FUNDING*
	Schemes			funding sources being explored.
9. Development and Promotion of Programmes for Conflict Resolution at the National and Regional Levels	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts	456	96	No funding obtained for First MTP. Possible funding sources being explored.
	TOTAL	18,786.65	3,173.80	

*Please see Table 2.1 for further details

6.3 Resource Mobilization

In order to fund project activities outlined in the Second Medium Term Plan, CRFM will continue to mobilize resources from Caribbean regional and international sources. As at March 31, 2008, US\$0.628 million has been spent on eight projects from the First Medium Term Plan, all of which will be carried forward to the Second Medium Term Plan. Of this amount, US\$0.234 million (or 37% of total expenditure) was provided by Member States. Other funding sources included ICRAFD and CTA, which accounted for 27% and 26% of total financing, respectively. (For further details, please see Table 2.2 on page 37).

APPENDICES

APPENDIX I - PROJECT SUMMARIES

Project 1

Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and Surveillance (MCS)

This project seeks to enhance institutional capability, the legal and regulatory environment, and responsible fishing culture to reduce and prevent illegal, unregulated and unreported (IUU) fishing activities in CRFM Member States. This will be achieved through improved legal, regulatory and institutional frameworks; implementation of programmes to improve awareness of MCS and IUU; the introduction of databases that monitor fishing and vessel activities; and development of information systems and databases to facilitate information exchange among CRFM Member States.

The estimated budget is US\$516,250, inclusive of US\$85,000 of CRFM Member States' inputs in kind. The project will be implemented over a period of three years and will be partially financed by the Inter-American Development Bank. The MCS programme will be implemented in each CRFM country, through their national fisheries authorities, in collaboration with other enforcement authorities and other users of the marine space.

Project 2

Development and Promotion of Aquaculture²² (including Mariculture²³) in the Caribbean

This project aims to promote and facilitate the development of aquaculture in CRFM Member States through the formulation of country specific plans for the aquaculture sub-sector comprising: strategies for sustaining the production levels of the capture fisheries sector through aquaculture techniques; production profiles for selected environments, targeted to specific markets for food and aquarium fish; promotion of research and the use of appropriate technology; training activities and investor friendly policies for the mobilization of private investment. Total cost of the project is approximately US\$996,000 including regional and national counterpart support in-kind valued at about US\$276,000. This project will be implemented throughout CRFM Member States. The CRFM will be the executing institution working in close collaboration with designated national agencies. The project can be implemented over a three-year period.

Project 3

Development and Implementation of Fisheries Management Policies and Plans

This project will strengthen the capabilities of CRFM countries to formulate policies and plans for the fisheries sub-sector, with particular reference to plan preparation in those countries. It is intended to sensitize stakeholders about the socio-economic importance of the sub-sector and the range of threats that it faces. It is also designed to develop a model institutional framework for promulgating policies and plans for the sector, supporting the establishment and effectiveness of Fisheries Advisory Committees,

²² FAO defines mariculture as the cultivation, management and harvesting of marine organisms in their natural habitat or in specially constructed rearing units, e.g. ponds, cages, pens, enclosures or tanks.

²³ FAO defines aquaculture as the farming of aquatic organisms, including fish, molluscs, crustaceans and aquatic plants.

and training stakeholder representatives to participate more effectively in the co-management process for the sustainable utilization of fisheries resources. The required financial support is estimated at US\$694,800, inclusive of US\$157,200 counterpart support. The Project will be implemented over a period of four (4) years. This project will be implemented in all CRFM countries. The sponsoring institution for each member country will be the national institution responsible for fisheries, with CRFM having regional coordinating responsibility.

Project 4

Development and Implementation of Mechanisms for the Management of Shared Resources

This project is intended to promote effective participation of all CRFM Member States in ICCAT, catalyze collaboration in resource assessment and management, formulate shared management agreements, and promote and facilitate shared management of resources. The outputs will include sensitized CRFM countries on the consequences of inaction on cooperative agreements, facilitation and assessment of effective participation in ICCAT, and facilitation of regional, sub-regional and bilateral management agreements and management plans. The estimated budget is US\$483,600, including US\$106,800 for regional counterpart funding in kind. This is a regional project which will be coordinated and implemented by CRFM, in which all CRFM member countries will participate. The project can be successfully implemented over four (4) years.

Project 5

Promotion of the Expansion of Pelagic Fishery and Other Un-utilized Resources

This project seeks to encourage exploitation of offshore pelagics, unutilized and under-utilized fisheries resources by:

- Assessing the potential for developing and/or expanding large pelagic fisheries;
- Evaluating the potential for developing fisheries for un-utilized or under-utilized resources such as squid;
- Demonstrating the technical and economic feasibility of catching and marketing the resources concerned, as one means of promoting investment in these fisheries;
- Enhancing the capability of the fisheries authorities to facilitate cooperation in technological interventions;
- Promoting the development of statistical monitoring systems for the new fisheries; and
- Assisting CRFM countries to obtain technical assistance for development of these fisheries.

Project deliverables include technical assistance for improved fisheries monitoring; evaluation of fisheries development potential for selected under-utilized and un-utilized resources; demonstration projects on affordable new fishing technologies for harvesting offshore pelagic resources; investor sensitization forums; and mobilization of technical assistance.

The funding requirement is estimated at US\$1,302,000 including US\$234,000 in kind from the Region. The CRFM will oversee implementation of this project, which is expected to last approximately 3 to 4 years.

Project 6

Support for Standards and Related Requirements for Global Trade

This project seeks to assess the current situation regarding CRFM countries' capabilities to meet global fish processing and trading standards and develop and implement programmes to enable them to attain such standards. The technical assistance programme will include legislation, training, establishment of procedures in production systems; upgrading of trade administrative systems to enforce compliance with catch quota allocations and minimum size regulations; upgrading of inspectorates and laboratories; and the development of harmonized incentive schemes to encourage private investment in production systems and laboratories to facilitate the development and sustainability of standards. This intervention will assist in improving the global technical competitiveness of the fisheries sector allowing for greater access to lucrative foreign markets and related increases in foreign exchange earnings; increase levels of income from fisheries and fish processing; and increase job creation on a sustainable basis. The project will also assist the CRFM countries in developing their capacity and capability for meeting their international obligations with respect to reporting on aspects of trade in fish and fish products. It will require a budget of US\$2,160,000, including regional counterpart support of US\$384,000.

The CRFM will coordinate implementation of the project, which will be undertaken by national authorities with the most likely candidates being the veterinary and fisheries authorities in partnership with appropriate private sector agencies will implement it. The proposed implementation timetable for this project is four (4) years.

Project 7

Development of Human Capital

This project seeks to expand the knowledge base of participants in the fishing industry so as to enhance sustainable fishing, effective participatory management and promote the use of the required technology. The project outputs comprise training for stakeholders such as fishers, vessel owners and operators, vendors and fish processors, fisheries officers, Community Based Organization (CBO) personnel, regional fisheries personnel and fisheries researchers. It will also provide institutional strengthening for designated training institutions and centres of excellence.

The required financing is US\$3.96 million, inclusive of US\$690,000 local counterpart inputs in kind. Approximately 70% of the budget is to be expended on the delivery of training, while the other 30% will be on preparatory work and institutional strengthening. This project will be implemented for the benefit of all CRFM countries. It will be regionally coordinated by the CRFM and at national and sub-regional levels by selected training institutions in conjunction with national fisheries authorities. It is envisaged that this project will be executed over a period of four (4) years.

Project 8

Developing and Implementing Regional Management Systems

This project seeks to improve the policy and institutional framework for fisheries management; formulate harmonized management systems and legislation; and formulate and implement alternatives to increase the value of sustainable living marine resources. The project will also complement existing initiatives that focus on enhancing the technical and institutional capabilities of the Region in order to facilitate sustainable management of shared marine resources by addressing issues of geopolitical and ecological trans-boundary connectivity among habitats and resources. This initiative will help to promote sustainable exploitation, and seek to restrict foreign fishers from illegally exploiting the region's EEZ. The budget for the project is estimated at US\$762,000 inclusive of US\$118,800 for regional counterpart funding in-kind. This regional project will be coordinated by the CRFM. It is designed to benefit all CRFM countries. The institutions that will implement the project execution work will be selected after an institutional assessment is undertaken. It is envisaged that this project will be implemented over a four (4) year period

Project 9

Promotion of Community Participation and Public Support.

This project is intended to promote community organizations as major effective change agents through institutional strengthening and public awareness programmes focusing on the appropriate management for fisheries resources, the economic and social importance of the fishing industry and the proper utilization of coastal resources generally. The design of the project will facilitate and promote the co-management of fisheries resources through public support and community advocacy, to ensure that the resources of coastal communities are sustainable sources of economic livelihood. The project will produce trained advocacy groups, a high impact social marketing programme focusing on the importance of the fishing industry, and the need for responsible fishing and utilization of other coastal resources.

The required funding for the project is estimated at US\$792,000, including US\$138,000 for counterpart support in kind. The project will be region wide and it will be coordinated by CRFM, in collaboration with selected national institutions. It is envisaged that this project will be implemented over a period of 3 years.

Project 10

Strengthening of Fishers' Organizations

This project is designed to further empower fishers' organizations through training, organizational restructuring and systems improvements thus allowing them to become effective co-management partners with government. The project will deliver four tangible outputs, as follows: restructured and formalized fishers' organizations, enabled fishers' organizations, signed memoranda of understanding between fishers' organizations and governments and sensitized and supportive fishers. The estimated budget for executing the project is US\$2.27 million, inclusive of US\$0.49 million co-financing in-kind from local sources. This project will be region wide, and will be coordinated by CRFM in collaboration with strategic national institutions. It is envisaged that this project will be implemented over a four (4) year period.

Project 11

Improvement of Data Collection and Management

The fishing industry has been making significant contributions to the region's economies through job creation, foreign exchange earnings and savings, economic growth and general socio-economic upliftment especially in rural communities. Fisheries management systems have been traditionally weak in the CRFM countries. Therefore, it is of vital importance to install and/or improve fisheries management decision-making and planning on the basis of sound data collection and management systems. This project is designed to strengthen the data collection and management capabilities of the CRFM community through training of fisheries personnel in data collection systems, expanding and improving the quality of the data collections systems, harmonizing the data collections systems to facilitate the establishment of a sound regional fisheries database, improving the institutional capabilities to coordinate data collection and management, and improving stakeholders' attitude towards supporting the development and sustainability of data collection systems.

The project can be executed over a period of three years and will require funding of about US\$732,000, of which US\$78,000 will be counterpart funding. The CRFM will coordinate the implementation of this project while the national fisheries authorities / divisions will execute the national programmes. It is envisaged that this project will be implemented over the next 3 - 4 years.

Project 12

Reduction of Vulnerability to Disasters

The main objective of this project is to build the CRFM Member States' capabilities to plan for, and implement measures geared towards minimizing fisher folk vulnerability to natural disasters, climate change and safety related risks at sea. The project will deliver six (6) tangible outputs: documentation and classification of risks; harmonized modular plans, procedures and practices to avoid or minimize risks; trained resource persons to implement plans and procedures dealing with risks; profiles of institutions that can implement plans and procedures for risk management; enabled institutions and institutionalized risk management models and practices and procedures; and sensitization programmes targeting fisher folk.

The project will require about US\$855,000 in investment funding, US\$156,000 of which is counterpart funding. It is envisaged that this project will be fully executed over a period of three 3 years. The CRFM's Technical Unit will coordinate implementation of the project in collaboration with suitable Member States as institutional partners.

Project 13

Establishment of a Regional Fisheries Information System and Policy Network

This project will develop an information portal on fisheries information which is both relevant and necessary for the decision-making concerns of the fisheries sector of the Region. Information sources for inputs to databases will include actual reports of regional and international research on fisheries and aquaculture from published digital and non-digital sources, and literature / reports produced by Fisheries Authorities and / or related agencies. Web based sources will be evaluated and organized thematically,

rendering easier and more timely, the process of information acquisition. Up-to-date electronic directories will enhance communication among fisheries personnel in the Region as well as with extra regional partners. Linkages will be established with other regional groupings and Fisheries Authorities will share and have access to information sources on a basis that is more economical than for individual countries.

The project will build on the initial investment of CFRAMP in supporting the Fisheries Management Information System (FISMIS) within the Fisheries Authority of Trinidad and Tobago. It will encompass the refining of this database and its expansion to include aquaculture and trade information; the digitizing of valuable information in a number of thematic areas not currently in digital format; filtering and organizing web-based information and making full text or abstracts of pertinent information available to fisheries authorities of participating countries; and the establishment of secure access to full text journals online, the content of which will be filtered to extract information of relevance for the fisheries sectors of the region. An electronic bulletin board and thematic chat rooms will be organized and managed to encourage information sharing and problem solving. The project will complement rather than duplicate the existing FISHBASE database, since its information focus is different, inter alia, including areas of 'grey' literature. It will also be linked with the rudimentary data systems existing in participating countries and complement these through the envisaged network.

The project will also develop a regional fisheries policy network to facilitate increased levels of collaboration between fisheries policy makers, in between Forum meetings. It will also promote dialogue and information sharing concerning national and regional fisheries policies, between national and regional stakeholders.

The estimated budget is US\$2,623,000, inclusive of US\$139,000 of regional in kind support. The CRFM will coordinate the implementation of this project. The Fisheries Authority of Trinidad and Tobago will be the focal point and the national programmes will be implemented through the respective national fisheries authorities. CRFM will liaise with IICA to build on the existing Regional Agricultural Policy Network. It is envisaged that this project will implemented within 3 years.

Project 14

Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts

Due to existing and emerging fisheries related conflicts which revolve the shared EEZ in the Caribbean, this project will aim to develop and implement effective mechanisms to avoid and resolve conflicts to the mutual benefit of the key stakeholders - fisher folk, tourism investors, governments and traders etc. The project will cost US\$456,000 and involve the following:

- Identification and characterization of existing, emerging and potential fisheries related conflicts;
-
- Development of harmonized conflict avoidance and resolution mechanisms; and
-
- Development and promotion of programmes to avoid and resolve conflicts.

It is estimated that implementation will be over a 3 year period.

Project 15

Harmonized Credit and Personal Insurance Schemes

This project is designed to develop and introduce a harmonized fiscal support plan to give fisher folk access to credit to invest in responsible fishing methods and safety practices and also to allow for insurance provisions against loss of income arising from the range of occupational and environmental risks. The project will deliver guidelines for credit and insurance plans, enabled national institution to follow-up and sponsor the initiative and forum to promote the opportunities to the financial services sector. The required investment in this project is about US\$180,000 and it can be implemented within two years.

APPENDIX II - BENEFICIARIES

The main beneficiaries of CRFM's Second Medium Term Plan include:

- Fisherfolk in CRFM Member States who will benefit from more sustainable economic livelihoods and increased income.
- National Fisheries Authorities and Researchers who will benefit from an enhanced decision making platform as well as enlightened and enhanced co-management partners.
- National Fisheries enforcement agencies that will benefit from increased knowledge of required standards and practices in responsible fishing.
- The rural workforce, which is experiencing major dislocations from trade liberalization, will benefit from increased employment opportunities and incomes.
- Women, whose unemployment rates are generally twice as high as the national average, will benefit from increased employment opportunities and incomes.
- Investors in fish processing business activities will benefit from new opportunities and access to new foreign markets.
- Tourism investors will benefit from a more viable coastal environment.
- Recreational fishers will benefit from protected access to Economic Exclusive Zone.
-
- Rural householders, most of who are among the poorest in CRFM countries, will access more employment opportunities and increased incomes.
- Fishers will benefit from access to credit and personal insurance schemes.
- Consumers across the Caribbean region will derive benefits from increased availability of fish and improved quality assurance practices which will be reflected in higher quality products.
- National and regional training institutions will benefit from enhanced capacities.
- Vessel owners and operators will benefit from new and sustainable opportunities.
- Non Government Organizations (NGOs) involved in community leadership, advocacy and environmental activities will benefit from enhanced institutional capabilities.

The Table below highlights the primary beneficiaries for each intervention.

CRFM SECOND MEDIUM TERM PLAN: INTERVENTION AND MAIN BENEFICIARIES

PRIMARY BENEFICIARIES

PROGRAMME AREA	PROJECT NUMBER AND NAME	FISHER FOLK	FISHERIES AUTHORITIES	RURAL WORKFORCE	WOMEN	INVESTORS IN THE FISHING INDUSTRY	TOURISM INVESTORS	RECREATIONAL FISHERS	RURAL HOUSEHOLDS	CONSUMERS	TRAINING INSTITUTIONS	VESSEL MANAGERS/ OPERATORS	NGOs	FISHERS ORGANIZATION
1. Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management	✓	✓			✓				✓	✓			✓
	13. Establishment of a Regional Fisheries Information System and Policy Network	✓	✓	✓	✓								✓	✓
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade.	✓		✓		✓				✓				
3. Resource Assessment and Management	1. Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and Surveillance (MCS).	✓	✓			✓		✓		✓	✓			✓
	3. Development and Implementation of Fisheries Management Policies and Plans.	✓	✓		✓	✓				✓		✓		✓

PROGRAMME AREA	PROJECT NUMBER AND NAME	FISHER FOLK	FISHERIES AUTHORITIES	RURAL WORKFORCE	WOMEN	INVESTORS IN THE FISHING INDUSTRY	TOURISM INVESTORS	RECREATIONAL FISHERS	RURAL HOUSEHOLDS	CONSUMERS	TRAINING INSTITUTIONS	VESSEL MANAGERS/ OPERATORS	NGOS	FISHERS ORGANIZATION
	4. Development and Implementation of Mechanisms for the Management of Shared Resources.					✓	✓	✓				✓		
	8. Developing and Implementing Regional Management Systems	✓		✓					✓					
4. Human Resource Development and Institutional Strengthening	7. Development of Human Capital	✓										✓		
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support.	✓				✓	✓	✓	✓				✓	
	10. Strengthening of Fishers' Organizations	✓										✓		✓
6. Promotion of Expansion and Utilization of Un-utilized Aquatic Resources	5. Promotion of the Expansion of Pelagic Fishery and Other Unutilized and Underutilized Resources.	✓			✓	✓						✓		✓
7. Development and Promotion of Aquaculture	2. Development and Promotion Of Aquaculture (including	✓			✓	✓	✓							

PROGRAMME AREA	PROJECT NUMBER AND NAME	FISHER FOLK	FISHERIES AUTHORITIES	RURAL WORKFORCE	WOMEN	INVESTORS IN THE FISHING INDUSTRY	TOURISM INVESTORS	RECREATIONAL FISHERS	RURAL HOUSEHOLDS	CONSUMERS	TRAINING INSTITUTIONS	VESSEL MANAGERS/ OPERATORS	NGOS	FISHERS ORGANIZATION
	Mariculture) in the Caribbean.													
8. Development and Promotion of Risk Reduction Programmes for Fishers	12. Reduction of Vulnerability to Disasters.	✓				✓						✓		
	15. Harmonised Credit and Personal Insurance Schemes	✓		✓					✓					
9. Development and Promotion of Programmes for Conflict Resolution at the National and Regional Levels	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts	✓	✓	✓	✓	✓			✓					

APPENDIX III - KEY PERFORMANCE INDICATORS

The key performance indicators for each intervention are outlined in the table below:

CRFM'S PROPOSED MEDIUM TERM PLAN: KEY PERFORMANCE INDICATORS

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
1. Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management	<ul style="list-style-type: none"> • An expanded and improved data collection system in CRFM Member States. • A harmonized data collection system to facilitate establishment of a sound regional fisheries database. • Improved institutional capacity of National Fisheries Authorities to coordinate data collection and management. • Trained personnel for data collection systems. • Improved stakeholders' attitude to supporting the system. 	<ul style="list-style-type: none"> • Member States expanding and improving data collection systems. • Harmonized data collections system in Member States. • Improved and expanded data collection and availability of statistics from Member States. • Personnel trained in data collection and management. • Increase in the number of stakeholders participating in data collection.
	13. Establishment of a Regional Fisheries Information System and Fisheries Policy Network	<ul style="list-style-type: none"> • Information and data needs assessment profiles for each CRFM member country. • Enhanced human capacity through personnel trained in information management and networking of information needs. • FISMIS assessment and review report. • Regional/Extra-Regional Information services profiles. • Regional Information Policy for 'grey' literature and related reports. • Bulletin Board and other electronic services. • Establishment of a regional network among Fisheries Authorities and related agencies. 	<ul style="list-style-type: none"> • Information and data needs assessment profiles completed for Member States. • Personnel trained in information management and networking from CRFM Member States. • FISMIS assessment and review report completed. • Regional/Extra-Regional Information services profiles developed. • Regional Information Policy for 'grey' literature developed and disseminated. • Bulletin board created and operational. • Regional network among Fisheries Authorities and related agencies developed and operational.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<ul style="list-style-type: none"> Regional Fisheries Policy Network established. 	<ul style="list-style-type: none"> Strengthened regional network participation. Regional Fisheries Policy Network established and operational. Significant number of persons subscribing to Regional Fisheries Network. Significant number of hits per day to the website.
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade.	<ul style="list-style-type: none"> Comprehensive Report on the status in each CRFM country, with respect to satisfying the relevant requirements for global fish trade, with reference to the major markets. Stakeholders' support obtained on priority interventions. A technical assistance programme developed for legislation, training of relevant personnel, (e.g., inspectorate, customs and other enforcement officers, fisheries officers, laboratory staff, fish processors, managers and fishers), establishing HACCP and Good Management Practices (GMP) procedures in fish processing plants, fishing vessels and fish landing sites; upgrading the inspectorate system and laboratories; and harmonization and upgrading of administrative systems to enforce compliance with relevant regulations. Incentive schemes developed to encourage private investment in processing plants, fishing vessels and landing site related systems and laboratories for facilitating the development and sustainability of product standards. 	<ul style="list-style-type: none"> Comprehensive status reports completed. Fisheries sector stakeholders agreeing to priority interventions. Technical assistance programme: <ul style="list-style-type: none"> Persons trained in Member States. Member States updating relevant legislation. HACCP and GMP procedures developed and implemented at the national level in CRFM Member States. Inspectorates upgraded in CRFM Member States. Administrative systems improved in CRFM Member States. Incentives framework completed. Increased levels of private sector expenditure in upgrade of processing plants, fishing vessels and landing sites.
3. Resource Assessment and Management	1. Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and	<ul style="list-style-type: none"> National Plans of Action to deter prevent and eliminate illegal, unregulated and unreported (IUU) fishing and related activities developed. 	<ul style="list-style-type: none"> National Plans prepared.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
	Surveillance (MCS).	<ul style="list-style-type: none"> • Legislation amended or created to prevent and reduce IUU. • Fisheries and vessel monitoring information databases created. • Public awareness programmes on IUU fishing issues executed. • Training programmes on MCS and related issues delivered to policy makers, the judiciary, law enforcement and other agencies. • Regional Fisheries Information system and data exchange mechanism between Member States developed. 	<ul style="list-style-type: none"> • National legislations amended or created to prevent and reduce IUU. • Regional fisheries and vessel monitoring information databases created. • Public awareness programmes on IUU fishing issues executed. • Training programmes on MCS delivered. • Regional Fisheries Information system and data exchange mechanism created.
	3. Development and Implementation of Fisheries Management Policies and Plans	<ul style="list-style-type: none"> • Analysis of the socio-economic importance of fisheries in each CRFM Member State. • Sensitized stakeholders on the socio-economic importance of the fisheries sub-sector. • Generic model of an institutional framework for policy formulation, planning and management of the fisheries sub-sector. • Trained personnel in national fisheries agencies and fishers' organizations to participate effectively in policy formulation and development of plans and managing them. • Establishment of national consultative mechanisms for upgrading Fisheries Management and Development Plans, with the Fisheries Advisory Committees being part of such mechanisms. • Established fisheries policy documents at the national and regional levels. • Established fisheries sub-sector plans. • Enhanced initiatives for the co-management 	<ul style="list-style-type: none"> • Socio-economic analyses of fisheries sector in CRFM Member states completed. • Stakeholders sensitized about the socio-economic importance of the fisheries sector. • Generic Model of institutional framework for policy formulation, planning and management of fisheries sub-sector completed. • CRFM Member States adopt the proposed Generic model institutional framework. • Persons trained in policy formulation and planning. • National consultative mechanisms developed. • Fisheries policies developed. • Fisheries sub-sector plans developed. • Co-management initiatives implemented.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		approach to fisheries management.	
	4. Development and Implementation of Mechanisms for the Management of Shared Resources.	<ul style="list-style-type: none"> • CRFM's Member States sensitized to the consequences of inaction and determine willingness to take part in co-operative management. • Enhanced participation of respective Member States in ICCAT. • Regional/sub-regional and bilateral management agreements among participating States formulated. • Status and management needs of the fisheries (focusing on shared resources) evaluated. • Regional/sub-regional management plans developed (including monitoring measures and trade restrictive measures). • Work plans for research, statistics, and advisory services prepared. • Improved mechanisms for regional planning assessments, resource management, decision making and monitoring, control and surveillance. 	<ul style="list-style-type: none"> • Member States sensitized about cooperative management of fisheries resources. • Increased and strengthened participation of Member States in ICCAT. • Bilateral agreements on the management of shared resources signed. • Evaluation reports on the status and management of fisheries resources completed, practically shared resources. • Regional/sub-regional management plans developed and implemented. • Work plans for research, statistics and advisory services prepared and implemented. • Mechanisms for regional planning assessments, resource management, decision making and monitoring, control and surveillance enhanced.
	8. Development and Implementation of Regional Management Systems.	<ul style="list-style-type: none"> • Reformed policies and institutions to achieve sustainable marine resources management, distinguishing between national and regional efforts. • Formation of working groups for fisheries species that are not covered by the current ones. • Increased support for regional groups that are 	<ul style="list-style-type: none"> • Policies and institutions reformed to support sustainable marine resource management. • Working groups formed for fisheries species that are not currently addressed by existing groups. • Meetings of working groups. • Reports and recommendations from work groups. • Increase in funding for regional groups collating

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<p>currently collating scientific information. (e.g. FAO-WECAFC ad hoc Working Groups, and Scientific Advisory Working Group and CRFM Technical Unit).</p> <ul style="list-style-type: none"> • Strengthened mechanisms for regional planning, assessments, resource management, and decision-making. • Functional regional research institutions with responsibilities for promoting and supporting the relevant management systems. • Regional protocol for sustainable fisheries and aquaculture development and management in CRFM Member States developed and implemented. • Research institutions upgraded. • Full and effective participation at conferences. • Memoranda of Understanding between CRFM, National Fisheries Authorities and fisheries organizations formulated and signed. 	<p>scientific information.</p> <ul style="list-style-type: none"> • Increase in regional institutions involved in the promoting and supporting relevant fisheries management systems. • Mechanisms strengthened. • Regional institutions promote and support relevant management systems. • All countries are signatory to the Regional Protocol. • CRFM Member States implement the Regional protocol. • Research institutions upgraded. • Increased number of persons participating in conferences. • MOUs formulated and signed.
4. Human Resource Development and Institutional Strengthening	7. Development of Human Capital	<ul style="list-style-type: none"> • Assessment of Stakeholders' specific training needs conducted. • Training programmes for stakeholders (tailored to specific needs) developed and conducted. • Selected institutions to deliver training programmes and function as Centres of Excellence identified. • Institutional strengthening programmes for designated regional institutions and Centres of Excellence designed and implemented. • Regional training institutions equipped to effectively deliver training programmes. 	<ul style="list-style-type: none"> • Report on assessment of stakeholders' training needs completed. • Training programmes developed. • Stakeholders trained. • Centres of Excellence identified. • Training programmes delivered at the Centres of Excellence. • Institutional strengthening programmes designed and implemented in selected regional institutions and Centres of Excellence. • Regional training institutions strengthened.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<ul style="list-style-type: none"> • Industry stakeholders trained. 	<ul style="list-style-type: none"> • Industry stakeholders trained.
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support.	<ul style="list-style-type: none"> • Empowered community based advocacy groups. • A high impact social marketing programme on importance of the fishing industry and need for responsible fishing and utilization of other coastal resources by other users. 	<ul style="list-style-type: none"> • Advocacy groups formed. • Public awareness programmes developed. • Persons impacted by the public awareness programmes in CRFM Member States.
	10. Strengthening of Fishers' Organizations	<ul style="list-style-type: none"> • Restructured and formalized fishers' organizations. • Empowered, better organized fishers' organizations that are effective co-management partners. • Formalized partnerships between fishers' organizations and Governments, through Memoranda of Agreements. • Strengthened collaboration between Government agencies and fishers' organizations. • Sensitized and supportive fishers. <p><u>Small Business Development</u></p> <ul style="list-style-type: none"> • Studies to assess the current business and regulatory frameworks conducted. • Business support provided to small-scale artisanal fishers. • Export marketing capabilities for fish and fisheries products improved. • New business opportunities in the fisheries sector identified. • Increased investment by private sector in the fisheries sector. • Business development workshops in CRFM Member States for all categories of fishers convened. 	<ul style="list-style-type: none"> • Restructured and formalized fishers' organizations. • Empowered and organized fishers' organizations. • Formalized partnerships between fishers' organizations and governments. • Increased collaboration between Government Agencies and fishers' organizations. • Fishers sensitized in CRFM Member States. • Studies to assess the current business and regulatory frameworks. • Small-scale fishers receive business support. • Increased exports of fish and fishery products. • Increased diversification of the sector. • Increased investment in the fisheries sector. • Business development workshops convened.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<ul style="list-style-type: none"> • Literature on business support and investment for fishers published and distributed. • Increased numbers of fishers accessing credit. 	<ul style="list-style-type: none"> • Business support services and investment literature. • Increased credit to the fisheries sector.
6.Promotion of Expansion and Utilization of Un-utilized Aquatic Resources	5. Promotion of the Expansion of Pelagic Fishery and Other Unutilized and Underutilized Resources	<ul style="list-style-type: none"> • Report on potential for development / expansion of large pelagic fisheries for un-utilized and under-utilized fisheries resources. • Cost / benefit analysis of affordable new fishing methods and fisheries for un-utilized and under-utilized resources undertaken. • Pilot project to rationalize the use of affordable new and optimum fishing technology implemented. • Technical interventions in the fisheries sector to improve the “know how” for developing these fisheries. • A harmonized incentive scheme to promote investment in the fisheries sector developed/ expanded. • Investors sensitized about opportunities in the fisheries sector. • Regional Management Plan for fisheries targeting shared resources developed. 	<ul style="list-style-type: none"> • Report on potential for development/expansion of large pelagic fisheries and fisheries for un-utilized and under-utilized resources completed. • Cost / benefit analysis completed. • Pilot projects implemented. • Persons trained in monitoring and management of new fisheries. • Harmonized incentive scheme formulated. • CRFM Member States implement harmonized incentive scheme for large pelagics, un-utilized and under -utilized fisheries. • Persons sensitized about opportunities in new fisheries. • Increased dollar value of investments in new fisheries in CRFM Member States. • Regional Management Plan completed.
7. Development and Promotion of Aquaculture	2. Development and Promotion of Aquaculture (including Mariculture) in the Caribbean.	<ul style="list-style-type: none"> • Report on the status of aquaculture development and the technical, economic, environmental, legislative and policy related issues and requirements for developing and promoting investment in the industry. • Report on the scope for public sector inputs into catalyzing aquaculture development and/or utilizing mariculture to sustain capture 	<ul style="list-style-type: none"> • Status report on aquaculture potential and related issues completed. • Report on the scope for public sector inputs for aquaculture and mariculture development completed.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<p>fisheries.</p> <ul style="list-style-type: none"> • Development and implementation of pilot projects in selected locations to demonstrate technical and economic viability of aquaculture. • An analysis of the capacities of those CRFM Member Countries which are planning to develop aquaculture as well as an evaluation of current aquaculture production already operational in CRFM Member States. • An assessment of the human resource requirements for the aquaculture industry and the strategies to satisfy them. • An assessment of opportunities for regionalizing research, training and development and relevant strategies inclusive of action plans for applied research and development of appropriate technology for respective aquaculture opportunities. • An action plan to promote awareness among policy makers and private investors together with strategies to mobilize technical assistance funding to assist national governments to develop and implement national plans. • Development of protocols for monitoring the environmental impacts of aquaculture. 	<ul style="list-style-type: none"> • Pilot projects implemented. • Studies conducted on the capacities of CRFM Member States for aquaculture development. • Report on assessment of human resource requirements for the aquaculture and mariculture sub-sector. • Report on potential for regionalizing research, training and development. • Action Plan to promote awareness among policy makers and private investors completed. • Increase of technical assistance funding for aquaculture and mariculture. • Increase in investment by private sector in aquaculture and mariculture. • Protocols for monitoring environmental impacts of aquaculture developed.
8. Development and Promotion of Risk Reduction Programmes for Fishers	12. Reduction of Vulnerability to Disasters	<ul style="list-style-type: none"> • Risk assessment on vulnerability of fisher folk to natural disasters and climate change. • Harmonized consensual modular plans, procedures and practice standards for minimizing vulnerability to natural disasters and personal safety at sea. • Trained resource persons to apply the modular plans, procedures and practice 	<ul style="list-style-type: none"> • Report on risk assessment of vulnerability of fisher folk to natural disasters and climate change. • Modular plans, procedures, and practice standards. • Persons in CRFM Member States trained to apply modular plans, procedures and practice

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		standards. <ul style="list-style-type: none"> • Profiles of strategic institutions selected to institutionalize the modular plans, procedures and practice standards. • Enabled institutions to institutionalize the modular plans, procedures and practice standards. • A promotional programme to sensitize the fisherfolk about the Modular Plans, procedures and practice standards. • Report on the impact of climate change on the fisheries species of economic importance and the fisheries sector in CRFM Member States. • Strategies for adaptation to climate change developed and implemented in Member States. 	standards. <ul style="list-style-type: none"> • Institutions selected to institutionalize modular plans, procedures and practice standards. • Institutionalization of Modular Plans, procedures and practice standards. • Fisherfolk sensitized about the Modular Plans, procedures and practice standards. • Report on the impact of climate change completed. • CRFM Member States adopt and implement recommended strategies for climate change.
	15. Harmonized Credit and Personal Insurance Scheme	<ul style="list-style-type: none"> • Study which identifies appropriate mechanisms for delivery of credit to the fisheries sector conducted. • Alternative models of credit delivery to fishers promoted among Development Banks and other financial intermediaries in CRFM Member States. • Specialized lines of credit or pool of funds provided to the fisheries sector. • Fishers sensitized on the importance of utilising credit in expanding, upgrading and modernizing their operations. • Study on the access of fishers to insurance schemes operated by Governments and private financial institutions in CRFM Member States conducted. • Demand study for personal insurance by fishers conducted. 	<ul style="list-style-type: none"> • Study on fishers' demand for credit. • Study on Appropriate Mechanisms for Credit Delivery to fisheries sector. • Acceptance of alternative models of credit by Development Banks and other financial intermediaries. • Increase in the pool of loan financing dedicated to the fisheries sector. • Fishers in CRFM Member States sensitized on the importance of utilising credit in their operations. • Study on Fishers' access to insurance schemes in CRFM Member States. • Study on demand for personal insurance.

PROGRAMME	PROJECT NUMBER AND NAME	OUTPUTS	KEY PERFORMANCE INDICATORS
		<ul style="list-style-type: none"> • Personal insurance schemes for fishers developed. • Provision of personal insurance scheme by Governments and insurance service providers in CRFM Member States. • Fishers sensitized on the importance of subscribing to a personal insurance scheme. 	<ul style="list-style-type: none"> • Personal insurance schemes developed. • Personal insurance schemes for fishers offered by Government and financial institutions. • Fishers sensitized on the importance of subscribing to a personal insurance scheme.
9. Development and Promotion of Programmes for Conflict Resolution at the National and Regional Levels	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts	<ul style="list-style-type: none"> • Emerging and potential conflicts identified and categorized. • Harmonized mechanisms for managing conflicts developed. • Procedural manuals for managing conflicts developed. • A cadre of persons to manage conflicts trained. • Strategic institutions to spearhead conflict management identified. • Conflict management procedures institutionalized. 	<ul style="list-style-type: none"> • Conflicts (existing, emerging and potential) documented and categorized. • Mechanisms developed for handling conflicts. • Procedural manuals developed. • Persons trained. • Institutions identified. • Institutions successfully institutionalize conflict management.

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CARIBBEAN REGIONAL FISHERIES MECHANISM

REVIEW OF THE

FIRST MEDIUM TERM PLAN

September 28, 2008

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LIST OF ACRONYMS

ACP	African, Caribbean and Pacific States
CARDI	Caribbean Agricultural Research and Development Institute
CARICAD	Caribbean Centre for Development Administration
CARICOM	Caribbean Community
CARIFIS	Caribbean Fisheries Information System
CARIFORUM	Caribbean Forum of ACP States
CARISEC	CARICOM Secretariat
CBCRM	Community-Based Coastal Resources Management
CCRF	Code of Conduct for Responsible Fisheries
CERMES	Centre for Resource Management and Environmental Studies
CFF	Caribbean Fisheries Forum
CFU	CARICOM Fisheries Unit
CFRAMP	CARICOM Fisheries Resource Assessment and Management Programme
CFP&R	Common Fisheries Policy and Regime
CFTC	Commonwealth Fund for Technical Cooperation
CFTU	Caribbean Fisheries Technical Unit
CIDA	Caribbean International Development Agency
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CLWG	Conch and Lobster Fisheries Working Group
COTED	Council on Trade and Economic Development
CRFM	Caribbean Regional Fisheries Mechanism
CRP	Caribbean Regional Queen Conch Research Programme

CSME	Caribbean Single Market and Economy
CTA	Technical Centre for Agricultural and Rural Cooperation ACP-EU
DFID	Department for International Development (UK)
DFMR	Department of Fisheries and Marine Resources
DR	Dominican Republic
EC	Eastern Caribbean Currency
EC	European Commission
EEZ	Exclusive Economic Zone
EPA	Economic Partnership Agreement
ESDU	Environmental and Sustainable Development Unit
EU	European Union
FAC	Fisheries Advisory Committee
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organization of the United Nations
FMP	Fisheries Management Plan
GECAFS	Global Environmental Change and Food Systems
GEF	Global Environmental Fund
IAC	International Agricultural Centre
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICRAFD	Integrated Caribbean Regional Agriculture and Fisheries Development Programme
IDRC	International Development Research Centre
IOCARIBE	Intergovernmental Oceanographic Commission (IOC) Sub-Commission for the Caribbean and Adjacent Regions
IMMARBE	International Merchant Marine Registry of Belize
IOI	International Oceans Institute
IUU	Illegal, Unreported and Unregulated

IMA	Institute of Marine Affairs
JICA	Japan International Cooperation Agency
LAPE	Lesser Antilles Pelagic Ecosystems (Project)
LME	Large Marine Ecosystem
LPWG	Large Pelagic Fisheries Working Group
LRS	Licensing and Registration Software
MALMR	Ministry of Agriculture, Lands and Marine Resources
MAREMP	Marine Resource Environmental Assessment and Management Programme
MCS	Monitoring, Control and Surveillance
MOU	Memorandum of Understanding
NOAA	National Oceanic and Atmospheric Administration
NFO	National Fisherfolk Organisation
NGOs	Non-Government Organizations
OCT	Overseas Countries and Territories
OECS	Organization of Eastern Caribbean States
RPTF	Regional Preparatory Task Force
RSWG	Reef and Slope Fisheries Working Group
SANREM CRSP	Sustainable Agriculture and National Resource Management Collaboration Support Programme
SCPWG	Small Coastal Pelagic Fisheries Working Group
SVG	St. Vincent and the Grenadines
SCRS ICCAT	Standing Committee on Research and Statistics
SPS	Sanitary and Phyto-sanitary
TCDC	Technical Cooperation among Developing Countries
TIP	Trip Interview Programme (Data collection software package)
TOR	Terms of Reference

UWI

University of the West Indies

WECAFC

Western Central Atlantic Fisheries Commission of the FAO, United Nations

CHAPTER 1: CRFM'S FIRST MEDIUM TERM PLAN - AN OVERVIEW

1.2 Strategic Framework

CRFM began implementation of its Strategic Plan in 2003 through its work programme consisting of its regular activities and implementation of the projects outlined in the First Medium Term Plan 2004-2007. The Strategic Plan outlined nine (9) Programme Areas which were formulated to address the challenges being experienced in the Caribbean fisheries sector. The Programme Areas that formed the CRFM Strategic Plan are described in Table 1.1 below.

Table 1.1: Programme Areas of CRFM Strategic Plan, 2002

Programme Area	Description
1. Research And Data Analysis For Policy Formulation And Decision Making	This programme seeks to enhance the data collection and management capabilities, and rationalize and strengthen institutions and facilities. It will also facilitate integrated planning as well as enhance decision making, policy formulation and collaborative management of shared fisheries resources involving straddling and migratory species.
10. Preparation For Global Competitiveness	This programme focuses on building institutional, infrastructural and technical capability and capacity to meet international standards of food safety and agricultural health. It will encompass the development and enactment of legislation, as well as processing standards and post harvest technologies to ensure that the community can overcome the technical barriers to entering foreign markets.
11. Resource Assessment And Management	This programme will impact within national boundaries as well as across borders and will be directed towards the creation of a conducive environment for the management of marine resources. Within national boundaries, the focus will be on enhancing the co-management strategy of fisheries management. Across national borders, efforts will be directed towards increased collaboration among countries and with relevant international agencies.
12. Human Resource Development And Institutional Strengthening	This programme is intended to enrich the stakeholders' knowledge capital in the Region.

Programme Area	Description
13. Strengthening Of Fisherfolk Organizations And Improved Community Participation	This programme is intended to encourage vibrant fishers' organizations and promote community organizations as the major change agents in the sector.
14. Promotion of the Expansion and Utilization of Unutilized and Underutilized Aquatic Resources	This programme is intended to promote expansion and optimize the use of aquatic resources achieving sustainability of the aquatic resource endowment.
15. Development And Promotion Of Aquaculture	The development of this sub-sector will follow a two tiered strategy. The first involves the establishment of a policy framework and regulatory environment to promote commercial aquaculture ventures while the second relates to the research on aquaculture initiatives in support of strengthening the marine fisheries sector.
16. Development And Promotion Of Risk Reduction Programme For Fishers	This programme aims to facilitate increases in fisherfolk's access to credit to invest in responsible fishing methods and safety practices and also to give insurance provisions against loss of income arising from a range of occupational and environmental risks. The programme aims to facilitate development and promotion of the implementation of harmonized mechanisms for avoiding and resolving conflicts relating to exploitation of fishing resources, preservation of the marine environment, and trading of fish.
17. Development And Promotion Of Programs For Conflict Resolution Among Multi-Users In Coastal Zones	This program is intended to focus on the development and promotion of mechanisms which will minimize or prevent conflicts and or allow for the resolution of conflicts between fisherfolk and other coastal zone users or between States.

The First Medium Term Plan 2004-2007 detailed fifteen projects drawn from these nine programmes. The Plan was designed as a compendium of project profiles with the primary objective of using the profiles as a framework to explore donor interest and mobilize financial and related support. This was the first such Plan prepared by CRFM. In addition, an important related objective was to expand the areas of interest into project proposals that were expected to complement the critical core work of the CRFM Secretariat, which is financed through Member States' contributions. The fifteen projects which form the basis of the First Medium Term Plan 2004-2007 are listed below in Table 1.2 and are linked to the programmes/priority areas.

Table 1.2: Linkages between Programme Areas and Proposed Projects

Programme Area	Projects Addressing Programme Area
1. Research and Data Analysis for Policy Formulation and Decision Making	11. Improvement of Data Collection and Management 15. Establishment of a Regional Fisheries Information System
2. Preparation for Global Competitiveness	6. Support for Standards and Related Requirements for Global Trade
3. Resource Assessment and Management	1. Development and Implementation of a Programme for enabling and promoting monitoring, control and surveillance. 3. Development and implementation of fisheries management policies and plans. 4. Development and Implementation of Mechanisms for the Management of Shared Resources. 8. Development and Implementation of Regional Management Systems.
4. Human Resource Development and Institutional Strengthening	7. Human Resource Development and Institutional Strengthening
5. Strengthening of Fishers' Organizations and Improved Community Participation	9. Promotion of Community Participation and Public Support. 10. Strengthening of Fishers' Organizations
6. Promotion of the Expansion and Utilization of Unutilized and Underutilized Aquatic Resources.	5. Promotion of the expansion of Pelagic Fishery and Other Un-utilized resources
7. Development and Promotion of Aquaculture	2. Development and Promotion of Aquaculture and Mariculture in the Caribbean
8. Development and Promotion	12. Reduction of the Vulnerability of Natural Disasters

Programme Area	Projects Addressing Programme Area
of Risk Reduction Programmes for Fishers	Harmonized Credit and Personal Insurance Schemes
9. Development and Promotion of Programmes for Conflict Resolution among Multi-users in Coastal Zones	14. Development and Promotion of Mechanisms for the Prevention and Resolution of Conflicts

CHAPTER 2: REVIEW OF THE FIRST MEDIUM TERM PLAN (MTP)

2.1 Methodology for Review of the First Medium Term Plan

The review of the First MTP was carried out by using the following methodology:

- (xi) Surveys / interviews with Chief Fisheries Officers in the majority of CRFM member States: St. Lucia, Dominica, Guyana, St. Kitts and Nevis, Anguilla, The Bahamas, Turks and Caicos Islands, Belize, Montserrat and Suriname.
- (xii) analysis and synthesis of survey data on CRFM performance and the First Medium Term Plan projects.
- (xiii) review and analysis of CRFM's Progress and Annual Reports for the 2005/2006-2007/2008 period.
- (xiv) consultations with CRFM executive staff.

2.2 Highlights of CRFM's Main Accomplishments

CRFM executes its activities through projects and programmes which are based on its Annual Work Plan. The progress of ongoing initiatives is reviewed annually through CRFM's Progress and Financial Reports.

The First MTP was a compendium of project profiles that was used as a tool to attract funding from regional and international sources. The length of time for resource mobilization and the lengthy project cycles of donors proved to be major challenges during the period of the First MTP which resulted in CRFM initiating project activities from their own resources. Despite the length of time for donor approval, CRFM was successful in obtaining donor financing for some project activities. Therefore, projects are at varying stages of implementation (see Table 2.1). When the aforementioned factors are taken into consideration, CRFM's efforts are commendable in terms of resources mobilized to date.

Due to slow resource mobilization for projects, the CRFM Secretariat initiated many of the activities using its own resources. Therefore any review of the accomplishments of the First Medium Term Plan should be undertaken using both a programmatic and a projectised approach. Major initiatives implemented using CRFM's own resources are reported under programme areas, while those primarily utilizing donor funds are addressed under each project area.

CRFM has implemented activities from its own resources under the following four (4) programme areas:

- (i) Research and Data Analysis for Policy Formulation and Decision Making
- (ii) Resource Assessment and Management
- (iii) Human Resource Development and Institutional Strengthening
- (iv) Strengthening of Fisher's Organizations and Improved Community Participation

These are discussed, in some depth, in the pages that follow.

(i) Research and Data Analysis for Policy Formulation and Decision Making

- ***Formulation of the “Draft Agreement Establishing the Common Fisheries Policy and Regime (CFP&R)”***

CRFM Secretariat has provided technical leadership in the formulation of the CFP&R, including identification and analysis of relevant legal, socio-economic and linkages issues. A consultative and participatory approach with Member States and key stakeholders was used in formulating the CFP&R.

Presently, the Draft agreement is still being negotiated among Member States.

- ***Caribbean Fisheries Information System (CARIFIS)***

CRFM Secretariat supported the development and implementation of the Caribbean Fisheries Information System (CARIFIS) in Member Countries. Technical assistance and training was provided to Antigua and Barbuda, Dominica, The Bahamas, Grenada, Guyana, Haiti, Dominican Republic, Belize, St. Kitts and Nevis, Jamaica Montserrat, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Suriname, Trinidad and Tobago, and the Turks and Caicos Islands in the use of CARIFIS. Computer systems were provided to the Fisheries Divisions of nearly all CARICOM Member States for the use of the CARIFIS software.

- ***CRFM / FAO Integrated Fisheries Management Project***

During 2004-2005 the CRFM, with assistance from FAO, implemented a project aimed at improving understanding of socio-economic and demographic concerns in fisheries and integrated coastal area management. The project consisted of three main components as follows: a study mission by fisheries officials from the Caribbean to the Philippines and Malaysia to conduct a comparative study on the role of socio-economic and demographic information in policy and planning in these Asian countries and the Caribbean; the preparation of case studies in Belize, Dominica, Jamaica, St. Lucia, Trinidad and Tobago and the Turks and Caicos Islands on the use of socio-economic and demographic information in fisheries and integrated coastal management; and a regional workshop at which the findings of the abovementioned studies were presented and discussed.

The CRFM in collaboration with FAO and the Ministry of Agriculture, Land and Marine Resources in Trinidad and Tobago hosted an Integrated Fisheries Management Workshop on the Collection and Use of Demographic and Socio-economic Information in Integrated Coastal and Fisheries Management between June 13 and 17, 2005 in Trinidad & Tobago. Technical experts from the Region and externally reviewed the results of the seven country case studies and the report of the Comparative Study Mission to Malaysia and the Philippines, which both examined the collection and use of demographic and socio-economic indicators in integrated coastal zone

and communities' development plans. As a result, a Workshop Report and Case Studies edited by FAO, CRFM Secretariat and Case Study authors has been published.

- ***Community-Based Coastal Resource Management (CBCRM) Project***

The CRFM, in collaboration with IDRC, IOI (Costa Rica) and Laval University of Canada implemented the CBCRM project in the Caribbean during 2002 – 2005. This initiative was composed of 15 projects in 11 countries, with research teams from university research centres, and various NGOs and governmental organisations. The research was designed to better understand the heterogeneity of Caribbean communities by critically examining existing approaches to the management of natural resources and the extent to which attention has been given to the diversity of social institutions and ecosystems at various scales in the management process. The project produced a book entitled, “Coastal Resource Management in the Wider Caribbean” with its findings and recommendation for improved use and management of coastal resources.

- ***Review of the Data Collection and Management Systems of the Marine Fisheries***

In an effort to provide information for management and decision-making on a continuous basis, the CRFM Secretariat assisted the Fisheries Divisions of the Turks and Caicos Islands, The Bahamas, Grenada, Guyana, Montserrat, St. Lucia and Antigua & Barbuda to review and refine their data collection systems so as to generate catch, effort, biological, economic, social and environmental data. This was implemented to permit qualitative and quantitative evaluation of the impact of their marine capture fisheries on the population structure.

Technical assistance was also provided to Antigua and Barbuda, The Bahamas, Grenada, Guyana, Montserrat, St. Lucia and Turks and Caicos Islands to review the data collection and management systems (including CARIFIS) for their respective marine fisheries.

- ***Monitoring and Provision of Technical Assistance***

The CRFM Secretariat carried out activities designed to strengthen the data collection and management capabilities in CRFM Member Countries. Activities implemented include the development of collaborative linkages with the FAO Lesser Antilles Pelagic Ecosystems Project and the acquisition and adoption of a software package for querying and reporting. CRFM also facilitated the development of training material for improving the collection of fisheries data in Member States.

- ***Rehabilitation and Management of the Queen Conch - ad hoc study***

Due to challenges with over-exploitation of the Queen Conch in the Wider Caribbean, the CRFM Secretariat conducted a study on the “*Rehabilitation and Management of the Queen Conch*” in the Dominican Republic (DR). Conch visual surveys were completed at two key sites in the country. Staff from the DR Fisheries Department was also trained in visual survey research techniques.

- **Fishery Assessment**

- **Fishery Assessment**

The CRFM Secretariat provided assistance to St. Vincent and Grenadines to:

- conduct an Ecological Risk Assessment on the Effects of Fishing (ERAEF) for the lobster fishery of St. Vincent and the Grenadines; and
- examine data on the country's queen conch and spiny lobster fisheries, with the aim of recommending data collection improvements and assessment activities.

The CRFM Secretariat established an ad hoc Working Group on Methods to evaluate the availability and suitability of fishery assessment methods for CRFM data situations. As agreed and planned, this Working Group met on three occasions since 2005, has completed its work, and has made a number of recommendations regarding fishery assessment methodologies. The establishment of a permanent Working Group on Data, Methods and Training is proposed for addressing future issues pertaining to data, analysis methods and capacity building.

- **MOU regarding Regional Fish Age and Growth Laboratory at IMA**

Recognising the common interest of the Caribbean Regional Fisheries Mechanism (CRFM) and the Institute of Marine Affairs (IMA) in providing information for sustainable development and management of the fisheries in the Caribbean region, CRFM and IMA are reviewing the options for resuming operations of the Fish Age and Growth Laboratory, located at the IMA. It is intended that this collaboration will result in the provision of scientific information for CRFM Member States, with special emphasis on priorities identified during the Annual CRFM scientific meetings.

(ii) Resource Assessment and Management

- ***Monitoring, Control and Surveillance***

The CRFM conducted a regional study on Illegal, Unreported and Unregulated Fishing (IUU) and the capability of Member States for monitoring, control, surveillance and enforcement of fisheries laws. The report of the study provided recommendations for combating IUU fishing in the region.

A draft agreement on Illegal, Unreported and Unregulated Fishing has been developed by CRFM and reviewed by the Legal Unit of the CARICOM Secretariat. This agreement has been circulated to Member States for their inputs.

- ***Fisheries Management Plans (FMPs)***

CRFM Secretariat has assisted Member States in preparing and implementing FMPs. FMPs have been prepared for seventeen (17) countries; these are Anguilla, Antigua & Barbuda, Barbados, Belize, Guyana, Haiti, Dominica, Dominican Republic, Haiti, Montserrat, St. Kitts & Nevis, Jamaica, St. Vincent & the Grenadines, Grenada,

Suriname, The Bahamas and Turks & Caicos Islands. CRFM has also assisted countries in carrying out national consultations for these Plans.

- ***CRFM Fishery Resource Working Groups***

The CRFM Resource Working Groups, under the guidance of selected chairpersons and species rapporteurs, are responsible for coordinating research and assessments in response to priority needs identified during CRFM's Annual Scientific Meetings and formally approved during the Annual meetings of the Caribbean Fisheries Forum. These Working Groups are also responsible for assisting in data and assessment preparations for CRFM's Annual Scientific Meetings.

The Working Groups currently in operation are: CRFM Shrimp and Groundfish Fisheries Resource Working Group (SGWG); CRFM Conch and Lobster Fisheries Resource Working Group (CLWG); CRFM Large Pelagic Fisheries Resource Working Group (LPWG); CRFM Reef and Slope Fisheries Resource Working Group (RSWG); CRFM Small Coastal Pelagic Fisheries Resource Working Group (SCPWG); and the Ad hoc Working Group on Methods.

The CRFM Fisheries Resource Working Groups cover data analysis, research, assessment, and provision of management advice on fisheries targeting the following range of fishery resources: large pelagic fish resources; small coastal pelagic fish resources; reef and slope fish resources; shrimp and groundfish, conch and lobster.

- ***Annual Scientific Meetings***

The CRFM Annual Scientific Meetings are joint meetings of the CRFM Fisheries Resource Working Groups that facilitate sharing of knowledge and expertise among the Working Groups. In addition, during these Meetings, assessments of various types of fisheries in the Member States are conducted, with the aim of developing fisheries management advice. Importantly, the Meetings facilitate wider regional reviews and consultations concerning the interpretation of assessment results. Using these methods, fisheries assessments and management recommendations are coordinated and updated at the regional level for presentation to the Fisheries Forum and the Ministerial Council on an annual basis. Three Annual Scientific Meetings have been held over the period, 2004-2007.

- ***Development and Implementation of Mechanisms for the Management of Shared Resources***

During 2004-2007, CRFM, through its Fisheries Resource Working Groups, has conducted analyses of the following fisheries within the CRFM region: spiny lobster fisheries of Belize, The Turks and Caicos Islands, Jamaica, and St. Lucia; queen conch fisheries of The Bahamas, Turks and Caicos Islands, Jamaica, and St. Lucia; the

southern pink shrimp and Atlantic seabob fisheries of Trinidad and Tobago, as well as two other shrimp fisheries of Trinidad and Tobago; Atlantic seabob fishery of Guyana; pink spotted shrimp and brown shrimp fisheries of Suriname; lane snapper fishery of Trinidad and Tobago; red snapper fishery of Guyana; bangamary fishery of Guyana; seatrout fishery of Guyana; king and Serra Spanish mackerel fisheries of Trinidad and Tobago, and; wahoo and dolphinfish fisheries of the Eastern Caribbean; the red hind fishery of St. Vincent and the Grenadines; the Nassau grouper fishery of Belize; bigeye scad, mackerel scad, and round scad fisheries of St. Vincent and the Grenadines and Grenada .

Based on the completed analyses of 27 fishery resources, management advice was formulated for each fishery. Recommendations were also made concerning areas of collaboration at the Regional level for those resources that are shared and those resources for which it was considered important to have harmonized management strategies; these included shrimp, queen conch, spiny lobster, king mackerel, and dolphinfish.

- **Provision of Technical Support at Regional and International Management Fora**

The CRFM Secretariat provided general technical support and advice to countries on: ICCAT matters pertaining to statistics, assessment, and management of Atlantic tunas, billfishes, and sharks; preparation of National reports and statements submitted to ICCAT; and formulation and presentation of National positions at ICCAT meetings.

An annual CRFM report was submitted to ICCAT, on behalf of those Member States that were not Contracting or Co-operating Parties to ICCAT, but which had locally-owned fishing fleets that harvested notable amounts of Atlantic tunas, billfishes and sharks.

The CRFM Secretariat has been participating in ICCAT Standing Committee on Research and Statistics and Commission (SCRS) and Commission meetings on an annual basis. CRFM has been providing assistance and advice to Member States on reporting of fisheries statistics to ICCAT for stocks managed by ICCAT, and handling of other ICCAT issues, such as contributing to ICCAT research initiatives, catch quota negotiations and management and compliance issues, as required by Member States on a case by case basis. Member States which have been assisted during the period concerned included Grenada, Dominica, St. Kitts and Nevis, Trinidad and Tobago, Barbados, Belize, St. Vincent & the Grenadines and Guyana. In the case of Belize and St. Vincent and the Grenadines, CRFM assistance has included, *inter alia*, development and implementation of remedial plans that resulted the removal of punitive sanctions against these two States, and strategy support for catch quota negotiations. In the case of Barbados, Trinidad and Tobago, and Grenada, CRFM assistance has included, *inter alia*, development and implementation of strategies for avoiding the unnecessary imposition of punitive sanctions against the States involved and loss of associated revenues.

In recent years, CARICOM, through CRFM, has provided a legal counsel during ICCAT Commission Meetings.

Member States have also been assisted in responding to CITES concerns in respect of queen conch. This has prevented some countries being sanctioned unnecessarily, with associated potential loss in revenues.

In cases of overfishing, CRFM has recommended management measures to protect fisheries from economic extinction, and to chart a course for recovery of the industry to elevate so as to ensure fish yields and economic benefits are maximized in the foreseeable future.

(iii) Human Resource Development and Institutional Strengthening

The International Ocean Institute (IOI), Canada and the CRFM Secretariat have signed a Memorandum of Understanding to facilitate the participation of individuals from the Caribbean region in the IOI's Training and Capacity Building activities, particularly the IOI Training Programme in Ocean Governance. A total of 10 fisheries officers from CRFM Member States have been trained under this initiative.

CRFM has brokered a partnership between itself and The United Nations University in Iceland to provide fellowships for persons from CRFM Member States in the Fisheries Training Programme (UNU- FTP). This is a postgraduate training programme that offers training in various areas of the fisheries sector for practising professionals in developing countries. CRFM has facilitated training of 3 officers under this programme.

Two (2) officers from the Fisheries Departments of Jamaica and Turks and Caicos Islands were provided with assistance and support to attend a course on *Fisheries Data Collection and Analysis* at the University of Wageningen , Holland.

Short-term training scholarships were also provided by CRFM Secretariat to four (4) officers from the Fisheries Department in Jamaica in the areas of Project Management and Microsoft SLQ (to support the CARIFIS Database).

CRFM has co-sponsored a Bachelor of Science degree programme and a Diploma programme for two fisheries officers from St. Vincent and the Grenadines in fisheries disciplines. This support was granted under the programme to facilitate compliance with ICCAT, IOTC (International Fisheries Organizations) and international standards.

CRFM provided ongoing financial support throughout the period of the First MTP to an officer from Trinidad and Tobago attending University of the West Indies (UWI), St. Augustine Campus, to complete a PhD. Thesis in a critical area relating to sustainable fisheries.

(iv) **Strengthening of Fisher's Organizations and Improved Community Participation**

- ***Institutional Strengthening for Fisherfolk Organizations***

A Report on the Organizational Needs Assessment of Fisherfolk Organizations was prepared; out of this, a Workshop was held in October 2004 with participants from CRFM Member States. A Pro Tem Working Group was formed to transform five (5) recommendations from the Report into a Strategy and Medium Term Action Plan for the Institutional Strengthening of Regional Fisherfolk Organisations 2005 –2010, out of which a project was prepared and submitted for funding.

2.3 Review of Projects Implemented Under First Medium Term Plan

In Table 2.1, a detailed review of the progress of the projects implemented under the First Medium Term Plan is presented. Expenditure levels, by project, are reported. To date, eight of the fifteen projects have been implemented. The progress of implementation is reflected in the "Review" column of the matrix. Many of these projects have been partially funded (mainly from CRFM's resources and the European Union). CRFM is currently seeking funds or additional resources to finance implementation of thirteen of its fifteen ongoing projects.

Table 2.2 details the amounts allocated by each Donor and Member States on the various projects. Member States contributed US\$234,479 towards implementation of the eight (8) projects. The European Union contributed US\$200,424 towards implementation of five (5) projects; CTA and CARICOM Secretariat each contributed US\$ 164,962 and US\$28,585, respectively, towards implementation of one (1) project. Member States, therefore, financed implementation of most projects in CRFM's First Medium Term Plan.

Table 2.3 shows the difference between budgeted and actual expenditure on projects that have been implemented over the past four (4) years.

Table 2.4 shows the total expenditure incurred for administrative, programme, project and other costs by CRFM over the period 2005/2006 to 2007/2008. This amounted to **US\$2.88 million**.

Table 2.1: Review of the Progress of Implementation of the First Medium Term Plan

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
1. Development and Implementation of a Programme for Enabling and Promoting Monitoring, Control and Surveillance (MCS)	1,866	77.4	CARICOM Secretariat; Member States	This project seeks to enhance the institutional capability, the legal and regulatory environments, and responsible fishing culture to reduce and prevent illegal, unregulated and unreported (IUU) fishing activities in CRFM Member States.	<p>A review of the current situation on IUU Fishing and Monitoring, Control and Surveillance (MCS) in the fisheries sector of the CARICOM/ CARIFORUM Region was undertaken. A strategy for enhancing the effectiveness of MCS and a proposal for a project to enhance the effectiveness of MCS has been drafted.</p> <p>This project is in the resource mobilization stage and ongoing discussions are being held with various International Donor Agencies.</p>
2. Development and Promotion of Aquaculture and Mariculture in the Caribbean.	830	-		The project will produce country specific plans for the aquaculture sub-sector comprising: strategies for sustaining the production levels of the capture fisheries sector through aquaculture techniques, production profiles for selected	This project is to be addressed under the proposed CRFM/JICA Project: Formulation of Master Plan on Sustainable use of Fisheries Resources for Coastal

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				environments, targeted to specific markets for food and aquarium fish, promotion of research and the use of appropriate technology, training activities and investor friendly policies for the mobilizing of private investment.	<p>Community Development in the Caribbean.</p> <p>A scope of work has been finalized between CRFM and JICA. This is now awaiting the signature of the CARICOM Secretary General.</p> <p>Work on this project is scheduled to begin soon.</p>
3. Development and Implementation of Fisheries Management Policies and Plans	549	36.3	Integrated Caribbean Regional Agriculture Caribbean Fisheries Development Programme (European Union); Member States	This project initiative seeks to strengthen the capabilities of the CRFM countries to formulate policies and plans for the fisheries sub-sector. It is intended to sensitize stakeholders concerning the socio-economic importance of the sub-sector and the range of threats that it faces. It is also designed to develop a model institutional framework for promulgating policies and plans for the sector, supporting the establishment and effectiveness of Fisheries Advisory Committees, and training stakeholder representatives to participate more effectively in the co-management	<p>Some elements of this project will be addressed under the EU-ACP Programme for Strengthening Fisheries Management in ACP Countries (ACP Fish II) which is geared towards improving fisheries policy development and implementation in ACP Countries.</p> <p>Project implementation is likely to commence during the CRFM Secretariat's programme year 2008/09, and will operate under decentralized</p>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				<p>process for the sustainable utilization of fisheries resources.</p>	<p>management through a Programme Management Unit (PMU) based in Brussels and a group of Regional Facilitation Units (RFUs) located in Belize (CRFM Secretariat), Gabon, Senegal, Uganda, Mozambique and Fiji.</p> <p>The project will also be addressed under the recently approved GEF - Caribbean Large Marine Ecosystem Project (CLME) which is likely to commence in 2008. The overall objective of the project is the sustainable management of the shared living marine resources of the Caribbean LME and adjacent areas through an integrated management approach that will meet the WSSD targets for sustainable fisheries.</p> <p>Inputs into this project will be obtained through EU Funding</p>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
					as part of a Euro 30 million Global ACP EU Project. This project will have five nodes located in ACP countries. CRFM is expected to be the Caribbean node. Funding for this node is projected to be between Euros 6 and 8 million.
4. Development and Implementation of Mechanisms for the Management of Shared Resources	465	19.5	Integrated Caribbean Regional Agriculture Caribbean Fisheries Development Programme (European Union); Member States	This project is intended to promote effective participation in ICCAT, catalyze collaboration in resource information management, formulate shared management agreements, and promote and facilitate shared management of resources.	Some elements of this project will be addressed under the EU-ACP Programme for Strengthening Fisheries Management in ACP Countries (ACP Fish II) which is aimed at strengthening fisheries sectoral policy development and implementation in ACP Countries. The project will be addressed under the recently approved GEF- Caribbean Large Marine Ecosystem Project (CLME)

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
					<p>which is likely to commence in 2008.</p> <p>Inputs into this project will be obtained through EU Funding as part of a Euro 30 million Global ACP EU Project. This project will have five nodes located in ACP countries. CRFM is expected to be the Caribbean node. Funding for this node is projected to be between Euros 6 and 8 million.</p>
5. Promotion of the Development of Offshore Pelagic Fisheries and Fisheries for other Under-utilized and Un-utilized Aquatic Resources	1,265	-		This project seeks to assess the potential for developing or expanding large pelagic fisheries, to assess the potential for developing fisheries for un-utilized or under-utilized resources such as squid, to demonstrate the technical and economic feasibility of catching and marketing the resources concerned, to promote investment in these fisheries, to enhance the capability of the fisheries authorities to facilitate cooperation in technological interventions, to promote	<p>This project is to be addressed under the proposed CRFM/JICA Project: Formulation of Master Plan on Sustainable use of Fisheries Resources for Coastal Community Development in the Caribbean.</p> <p>A scope of work has been finalized between CRFM and JICA. This is now awaiting the signature of the Secretary</p>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				the development of informative statistical monitoring systems for the new fisheries, and to assist CRFM countries to obtain technical assistance for development of these fisheries.	General of CARICOM. Work on this project is scheduled to begin soon.
6. Support for Standards and Related Requirements for Global Trade	1,800	34.5	Agrifor Consulting SA, Belgium (European Union) Member States	This project seeks to assess the current situation regarding CARICOM Regional Fisheries Mechanism (CRFM) countries' capabilities to meet global fish processing and trading standards and develop and implement a program to enable them to attain such standards.	In 2005, the Regional Preparatory Task Force (RPTF), which is charged with responsibilities for advising on support measures/programmes arising out of EPA negotiations, agreed that the CARIFORUM Pilot Project on SPS Measures would focus on the fisheries sector. To this effect, the Terms of Reference for a Study to Improve Compliance with EU Commission Sanitary Standards in the CARIFORUM Fisheries Sector was prepared by the CARIFORUM Secretariat, in consultation with the CRFM Secretariat, and submitted to the Secretary General of the ACP Group of States. The overall objective of

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
					<p>the Study was to advise on a programme of action which was to eventually increase the value added and revenue derived both from existing and potential fish exports to the EU from Caribbean operators through improved institutional collaboration and capacity in fisheries sanitary standards at the CARIFORUM level.</p> <p>The Consultant's <i>Final Report on the Study to Improve Compliance with EU Commission Sanitary Standards in the CARIFOUM Fisheries Sector</i> was provided to the CRFM Secretariat by the CARIFORUM Secretariat and circulated to Member States for review and comments. The Secretariat provided the comments received from some Member States to the CARIFORUM Secretariat and made recommendations on the Way Forward.</p>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
					<p>This project is currently being reviewed by the EU. The approach being contemplated is to revisit and adopt CRFM's proposals identified in the original project document. CARICOM Secretariat is currently reviewing reports related to this project.</p>
7. Development of Human Capital	3,300	83.5	Integrated Caribbean Regional Agriculture Caribbean Fisheries Development Programme (European Development Fund); Member States	This project seeks to broaden and widen the knowledge base of participants in the fishing industry to enhance sustainable fishing, effective participatory management and promote the use of the required technology.	The CRFM has provided scholarships for several students pursuing degree programmes at UWI, and continues to assist with supervision of students on projects of mutual interest. Additionally, the CRFM and UWI will continue to cooperate in the implementation of projects of mutual interest, e.g., CLME.

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
8. Developing and Implementing Regional Management Systems	875	-		This project seeks to improve the policy and institutional framework for fisheries management; formulate harmonized management systems and legislation; and formulate and implement alternatives to increase the value of sustainable living marine resources. This initiative will help to promote sustainable exploitation, and restrict foreign fishers from illegally exploiting the Region's EEZ.	Some elements of this project will be addressed under the EU-ACP Programme for Strengthening Fisheries Management in ACP Countries (ACP Fish II) which is aimed at strengthening fisheries sectoral policy development and implementation in ACP Countries. The project will also be addressed under the recently approved GEF- Caribbean Large Marine Ecosystem Project (CLME) which is likely to commence in 2008.
9. Promotion of Community Participation and Public Support	660	28	Member States	The project is intended to promote community organizations as major effective change agents through institutional strengthening, and public	This project is to be addressed under the proposed CRFM/JICA Project: Formulation of Master Plan on Sustainable use of Fisheries

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				awareness programs focusing on the appropriate management for fisheries resources, and the economic and social importance of the fishing industry and proper utilization of coastal resources in general.	Resources for Coastal Community Development in the Caribbean. Recently a CARISEC/CARDI/CRFM Secretariat Team had discussions with a Government of Spain/TRAGSATEC Team on the Project to provide technical assistance for agriculture and fisheries sector analysis and design specific projects in CARICOM, in November 2007, in Guyana. During these discussions it was determined that a diagnostic study to determine the levels of poverty in fishing communities and the development of alternative livelihood programmes would be developed.
10. Strengthening of Fishers' Organizations	1,900	165	The Technical Centre for Agricultural and Rural	This project is designed to empower fishers' organizations through training, organizational restructuring, and systems improvements to become effective co-	A CRFM/CTA Project: <i>Strengthening of National Fisherfolk Organisations in Selected ACP Caribbean Countries</i> is being

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
			Cooperation Funded by European Union	management partners with government.	implemented. The overall objective of the Project is to contribute to improved income earnings, higher standards of living of fisherfolk and sustainable use of fishery resources in the Caribbean, to develop the institutional capacities of fisherfolk organizations at the regional, national and community levels. The Project is being implemented over a three year period.
11. Improvement of Data Collection and Management	630	231.4	Integrated Caribbean Regional Agriculture Caribbean Fisheries Development Programme (European Development Fund); Member States	This project is designed to strengthen the data collection and management capabilities of the CRFM community through: training of fisheries personnel in data collections systems, expanding and improving the quality of the data collections systems, harmonizing the data collections systems to facilitate the establishment of a sound regional fisheries database, improving the institutional capabilities to coordinate data collection and management, and improving stakeholders' attitude to support the development and	Activities include the development and implementation of CARIFIS and review of the data collection and data management programmes in Member States. To date, these have been funded by CRFM resources. This project will also be addressed under the proposed CRFM/JICA Project: <i>Formulation of Master Plan on Sustainable use of Fisheries</i>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				sustainability of data collection systems.	<p><i>Resources for Coastal Community Development in the Caribbean.</i></p> <p>A scope of work has been finalized between CRFM and JICA. This is now awaiting signature of the Secretary General of CARICOM.</p> <p>Work on this project is scheduled to begin soon.</p>
12. Reduction of Vulnerability to Disasters	600	-		The aim of this project is to build the CRFM Member States' capabilities to plan for, and implement measures to minimize fisherfolk vulnerability to natural disasters and safety related risks at sea.	CRFM has initiated efforts to network with CDERA in the implementation of this project.
13. Harmonized Credit and Personal Insurance Scheme	180	-		This project is designed to develop and introduce a harmonized fiscal support plan to give fisherfolk access to credit to invest in responsible fishing methods and safety practices and also to allow for insurance provisions against loss of	Funding is currently being sought for this project.

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				income arising from the range of occupational and environmental risks.	
14. Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts	380	-		This project seeks to develop and promote the implementation of harmonized mechanisms for avoiding and resolving conflicts relating to exploitation of fishing resources, preservation of the marine environment, and trading of fish.	Funding is currently being sought for this project.
15. Establishment of a Regional Fisheries Information System	2,155	-		The project will build on the initial investment of CFRAMP in supporting the Fisheries Management Information System (FISMIS) within the Fisheries Authority of Trinidad and Tobago. It will encompass the refining of this database and its expansion to include aquaculture and trade information; the digitizing of valuable information in a number of thematic areas not currently in digital format; filtering and organizing web-based information and making full text or abstracts of pertinent information available to fisheries authorities of participating countries; and the establishment of secure access to full	<p>Funding is being sought from CARICOM/ JIICA and EU.</p> <p>A scope of work has been finalized between CRFM and JIICA. This is now awaiting signature of the Secretary General of CARICOM.</p> <p>Work on this project is scheduled to begin soon.</p>

Project	Estimated Budget (US \$000)	Expenditure as at March 2008 (US \$000)	Funded by:	Description	Review
				<p>text journals online, the content of which will be filtered to extract information of relevance for the fisheries of the Region. An electronic bulletin board and thematic chat rooms will be organized and managed to encourage information sharing and problem solving. The project will complement rather than duplicate the existing FISHBASE database, since its information focus is different, inter alia, including a focus on grey literature. It will also be linked with the rudimentary data systems existing in participating countries and complement these through the envisaged network.</p>	

Table 2.2: Expenditure on Projects in the First Medium Term Framework

PROJECT	FUNDED BY						TOTAL EXPENDITURE
	Member States	CARISEC	ICRAFD II	ICRAFD III	CTA	AGRIFOR	AT MARCH 31, 2008
	US\$						
(1) Development and Implementation of a Programme for enabling and Promoting Monitoring, Control and Surveillance (MCS)	1,614.00	28,585.07	0.00	0.00	0.00	0.00	30,199.07
(2) Development and Promotion of Aquaculture and Mariculture in the Caribbean	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(3) Development and Implementation of Fisheries Management Policies and Plans	36,109.32	0.00	0.00	233.80	0.00	0.00	36,343.12
(4) Development and Implementation of Mechanisms for the Management of Shared Resources	6,597.03		1,436.45	11,490.77	0.00	0.00	19,524.25
(5) Promotion of the Development of Offshore Pelagic Fisheries for other Under-utilized and Un-utilized Aquatic Resources	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(6) Support for Standards and Related Requirements for Global Trade	1,900.67	0.00	0.00	0.00	0.00	32,592.00	34,492.67
(7) Development of Human Capital	53,642.89	0.00	25,689.28	4,195.60	0.00	0.00	83,527.77
(8) Developing and Implementing Regional Management Systems	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(9) Promotion of Community Participation and Public Support	28,036.94	0.00	0.00	0.00	0.00	0.00	28,036.94
(10) Strengthening of Fishers' Organizations	0.00	0.00	0.00	0.00	164,962.47	0.00	164,962.47
(11) Improvement of Data Collection and Management	106,579.10	0.00	73,964.95	50,821.27	0.00	0.00	231,365.32
(12) Reduction of Vulnerability to Disasters	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(13) Harmonized Credit and Personal Insurance Scheme	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(14) Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(15) Establishment of a Regional Fisheries Information System	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	234,479.95	28,585.07	101,090.68	66,741.44	164,962.47	32,592.00	628,451.61

AGRIFOR- Agrifor Consulting SA, Belgium Funded by European Union

CARISEC - CARICOM Secretariat

CTA - The Technical Centre for Agricultural and Rural Cooperation Funded by European Union

ICRAFD - Integrated Caribbean Regional Agriculture Caribbean Fisheries Development Programme Funded by European Development Fund

Table 2.3: Comparison Between Budgeted Financial Requirements and Actual Expenditure

PROJECT	Budgeted Funding Requirements	Actual Expenditure	Variance
	US\$		
(1) Development and Implementation of a Programme for enabling and Promoting Monitoring, Control and Surveillance (MCS)	1,866,000	30,199.07	1,835,800.93
(2) Development and Promotion of Aquaculture and Mariculture in the Caribbean	830,000	-	830,000.00
(3) Development and Implementation of Fisheries Management Policies and Plans	549,000	36,343.12	512,656.88
(4) Development and Implementation of Mechanisms for the Management of Shared Resources	465,000	19,524.25	445,475.75
(5) Promotion of the Development of Offshore Pelagic Fisheries for other Under-utilized and Un-utilized Aquatic Resources	1,265,000	-	1,265,000.00
(6) Support for Standards and Related Requirements for Global Trade	1,800,000	34,492.67	1,765,507.33
(7) Development of Human Capital	3,300,000	83,527.77	3,216,472.23
(8) Developing and Implementing Regional Management Systems	875,000	-	875,000.00
(9) Promotion of Community Participation and Public Support	660,000	28,036.94	631,963.06
(10) Strengthening of Fishers' Organizations	1,895,000	164,962.47	1,730,037.53
(11) Improvement of Data Collection and Management	630,000	231,365.32	398,634.68
(12) Reduction of Vulnerability to Disasters	600,000	-	600,000.00
(13) Harmonized Credit and Personal Insurance Scheme	180,000	-	180,000.00
(14) Development and Promotion of Mechanisms for Prevention and Resolution of Conflicts	380,000	-	380,000.00
(15) Establishment of a Regional Fisheries Information System	2,155,000	-	2,155,000.00
TOTAL	17,450,000	628,452	16,821,548

Table 2.4 Total Expenditure on Activities Implemented by CRFM for Programme Years 2005/2006 to 2007/2008

Programme Area	Total Expenditure			
	2005/2006	2006/2007	2007/2008	Total
<i>Management and Support</i>	435,989	387,809	372,096	1,195,894
<i>Advocacy, Policy and Planning</i>	65,026	116,623	83,075	264,723
<i>Fisheries Statistics and Information</i>	52,638	86,998	80,016	219,651
<i>Fisheries Research and Resource Assessment</i>	210,188	160,971	204,494	575,653
<i>Fisheries Resource Management and Development</i>	169,916	200,605	210,846	581,367
Communication and Documentation	12,592	11,905	16,448	40,945
Total	946,349	964,910	966,975	2,878,234

2.4 Evaluation of CRFM's Operations

As part of the preparations for the CRFM Second Medium Term Plan, an evaluation of CRFM's operations related to the First Medium Term Plan was conducted. This was based on a survey of Chief Fisheries Officers (CFOs) in CRFM's Member States.

The survey instrument was divided into two sections. Section 1 focussed on an evaluation of CRFM's operations over the period of the First MTP. In section 2, data was collected on each of the fifteen projects identified in the First MTP. In addition, respondents were asked specifically to indicate whether or not the projects identified should be extended to the Second MTP in the current or modified form. Respondents were also asked to evaluate the fifteen (15) projects with respect to national priorities and needs of the sector; activities related to objectives; impact of the project on specific areas; and project impact on the country. In this section, an analysis of views on the operations of CRFM is presented.

This evaluation was carried out in the form of a survey of CFO's mainly by telephone interviews. A total of 11 CFO's in CRFM Member States participated in this exercise.

In evaluating the impact of CRFM's operations, eighty (80) percent of CFOs interviewed strongly agreed or agreed that that CRFM's operations have had a positive impact on the fisheries sectors in their respective countries (See Chart 1 below). This indicates a favourable assessment of the operations of CRFM by the CFO's in the Region.

Chart 1: CRFM's Impact on National Fisheries Sector.

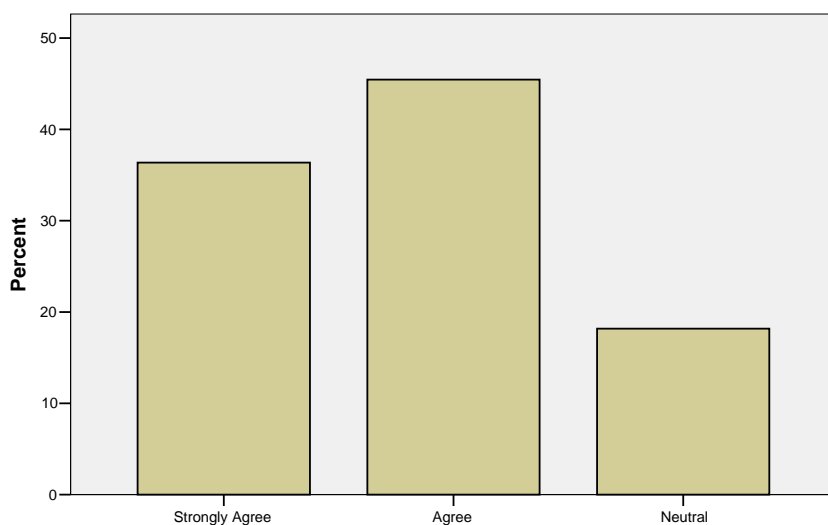


Chart 1: CRFM's Impact on National Fisheries Sector.

The activities of CRFM were then assessed as to their relevance with respect to the priorities of the fisheries sectors of CRFM Member States. All of the respondents strongly agreed or agreed that CRFM is

relevant in this context (See Chart 2). This reflects a positive assessment of CRFM's relevance to Member States.

Chart 2: Relevance to National Priorities.

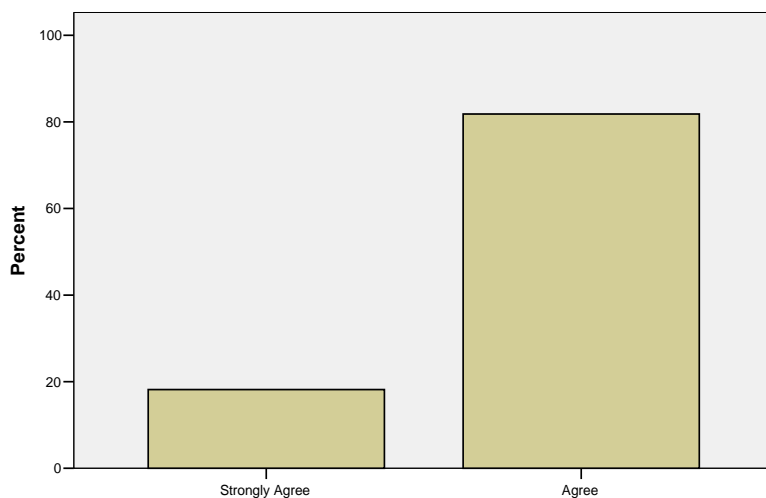


Chart 2: Relevance to National Priorities.

In terms of CRFM's First Medium Term Plan, the fifteen (15) projects were assessed as to their contribution to the development of Member States' fisheries sectors. No respondent strongly agreed that the projects in the First Medium Term Plan contributed to the development of their fisheries sector. However, 80% agreed that the projects contributed to fisheries sector development. It is to be noted that 20% of respondents were neutral on this issue (See Chart 3)

Chart 3: Contribution to Development of National Fisheries Sector.

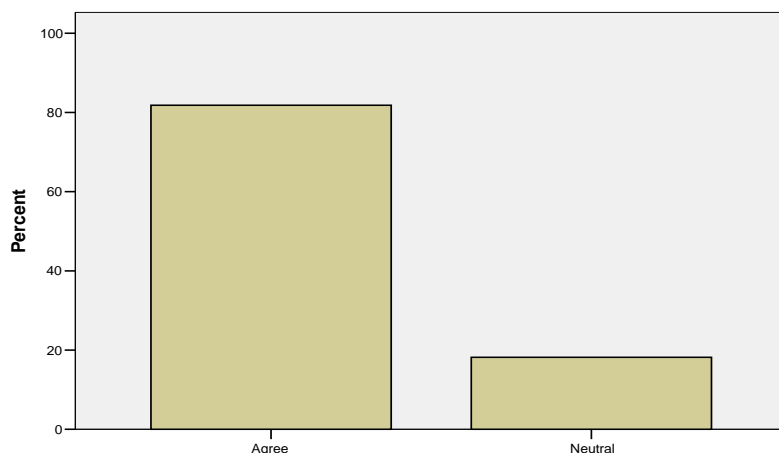


Chart 3: Contribution to Development of National Fisheries Sector.

Assessing whether CRFM's existing resources needed to be significantly increased, almost all (90%) of the CFO's who responded either strongly agreed or agreed that these resources should be increased (See Chart 4). These results point to the need for Governments and related institutions involved in funding to increase their budgetary allocations to CRFM.

Chart 4: Increase in Resources.

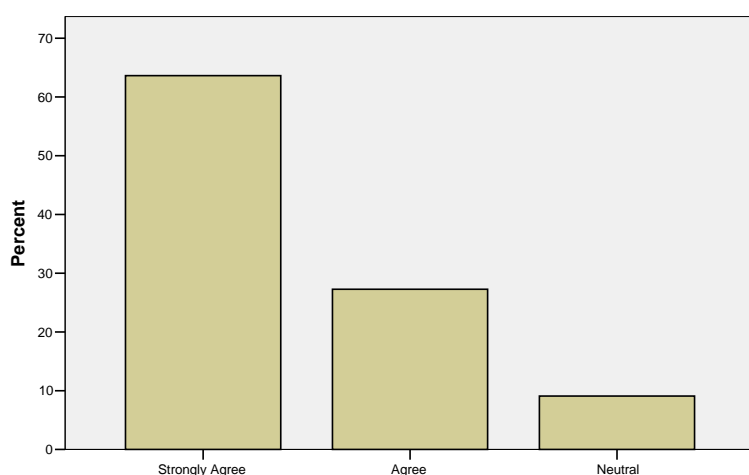


Chart 4: Increase in Resources.

Opinions were canvassed as to whether CRFM should increase its public advocacy and public awareness programmes. When asked to comment on this issue, 80% of respondents strongly agreed or agreed that these activities should be increased. This may indicate that CRFM has not been as aggressive in publicizing its activities, as well as educating the public about the critical nature of the fisheries sector. (See Chart 5).

Chart 5: Increase in Public Advocacy.

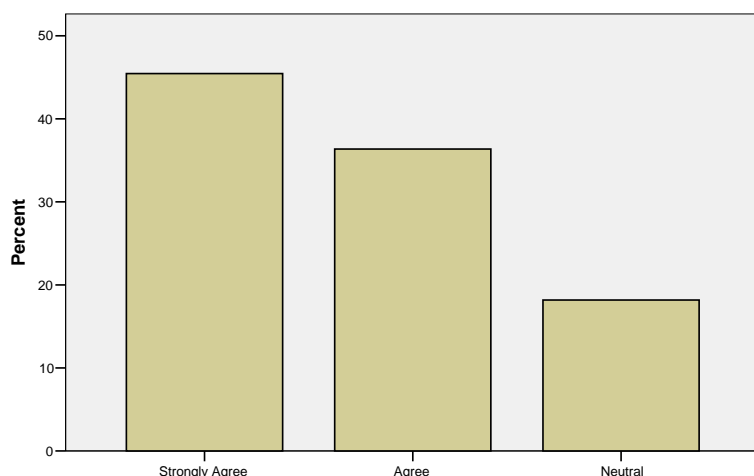
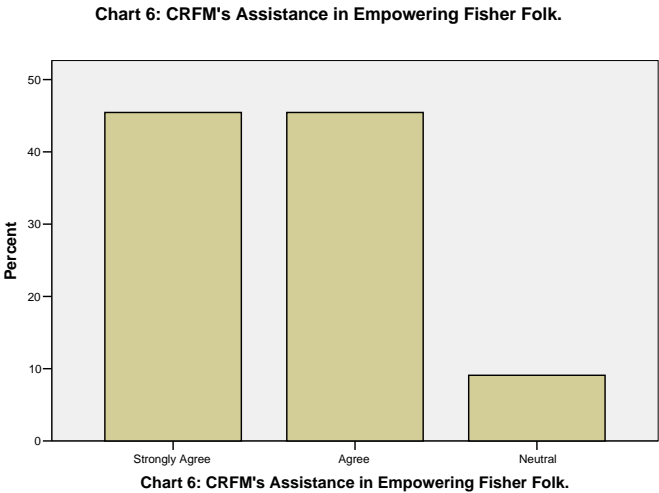
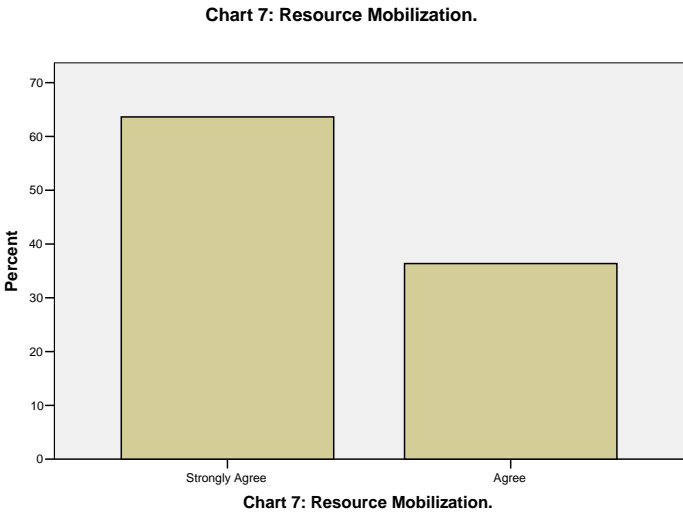


Chart 5: Increase in Public Advocacy.

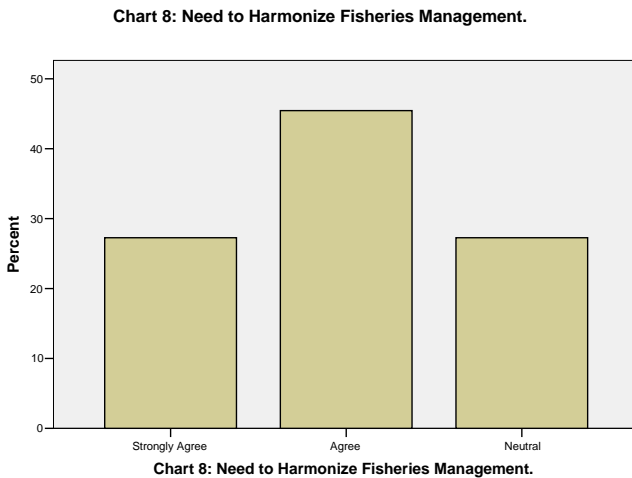
In terms of empowerment of fisherfolk and their organizations, the overwhelming majority (90%) of CFOs agreed or strongly agreed that CRFM should assist in this area. CRFM will therefore need to increase its focus on this important group of fisheries stakeholders throughout its Member States (Chart 6).



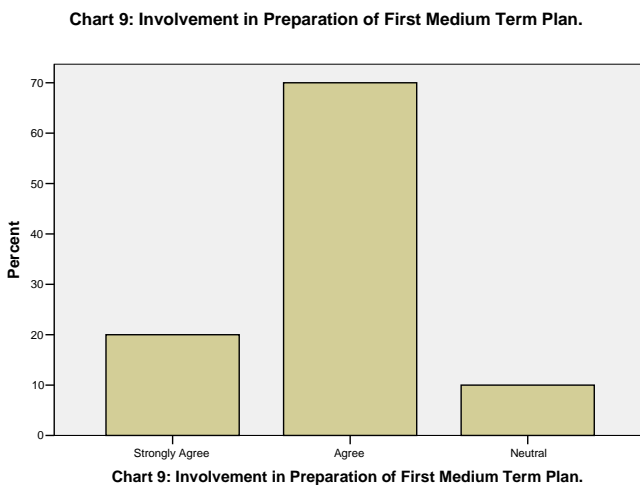
Resource mobilization represents a critical element in CRFM’s operations. In terms of examining whether CRFM should maximise its efforts to mobilize resources, none of the respondents disagreed with this proposal. This should be seen as a critical task for CRFM as it prepares to implement its Second MTP, with special emphasis being placed on this aspect of its work (Chart 7).



Harmonization of fisheries management approaches across the CRFM Member States was identified as a priority area for CRFM by seventy (70%) percent of CFOs who strongly agreed or agreed with this recommendation (Chart 8).



CFOs were asked to indicate whether their fisheries departments were involved in the preparation of the First Medium Term Plan. Almost all (90%) reported that their respective institutions were involved (Chart 9).



2.5 Conclusion

Implementation of the First Medium Term Plan has been slow due to lack of funding for the proposed projects activities. Member States and the European Union have been the main contributors to projects were initiated during the period of the First MTP and are currently being implemented. This situation points to the constraints faced by CRFM in mobilizing required financing for its activities from donor agencies. The length of time for resource mobilization and the lengthy project cycles of donors proved to be the major challenges in this respect. Despite the length of time for donor approval, CRFM was successful in obtaining donor financing for some project activities which are currently at various stages of implementation.

During the period of the First MTP, CRFM also initiated project activities using their own resources. As mentioned earlier, CFO's expressed the need for an increase in the resources allocated to CRFM to effectively undertake its activities. Member States could assist in this regard by considering increasing their allocations to CRFM to facilitate the implementation of a wider range of projects at the Regional level.

Chief Fisheries Officers have responded positively to CRFM's activities and interventions at the regional level and the related impacts on the development of the national fisheries sectors in Member States. CRFM's relevance to Member States has been endorsed by CFO's and is reflected in the level of support given to projects by participating Countries. This is important, as it indicates that Member States are confident of the activities undertaken at the regional level, and which are not disjointed from national priorities.