

May 2016



WESTERN CENTRAL ATLANTIC FISHERY COMMISSION (WECAFC)

SIXTEENTH SESSION

Guadeloupe, 20-24 June 2016

**ASSESSMENT OF THE RECENT ACHIEVEMENTS AND COLLABORATION OF
CRFM, OSPESCA AND WECAFC, INCLUDING OPTIONS FOR A REGIONAL
INSTITUTIONAL COLLABORATIVE STRUCTURE WITHIN AN RFMO FRAMEWORK**

Contents

Abbreviations and Acronyms.....	5
Executive Summary	7
1. Introduction.....	10
1.1. Background of this report	10
1.2. Logical Flow of this report.....	11
2. Present structure and achievements of organizations and projects.....	11
2.1. Establishment.....	11
2.1.1. CRFM.....	11
2.1.2. OSPESCA	12
2.1.3. WECAFC	13
2.2. Institutional arrangements.....	15
2.2.1. CRFM.....	15
2.2.2. OSPESCA	17
2.2.3. WECAFC	18
2.3. Strategic Planning Process	19
2.3.1. CRFM.....	19
2.3.2. OSPESCA	19
2.3.3. WECAFC	20
2.4. Activities, developments and achievements by CRFM, OSPESCA, WECAFC and the CLME project in recent years	20
2.4.1. CRFM.....	20
2.4.2. OSPESCA	22
2.4.3. WECAFC	22
2.4.4. CLME+.....	24
2.5. Joint collaborative work, gaps and thematic work areas that could be addressed by the new RFMO	25
2.5.1. Memorandum of Understanding	25
2.5.2. Joint Working Groups	26
2.5.3. Gaps in joint activities.....	30
2.6. Summary and conclusions	31
3. Present status and management of shared stocks of economic relevance	31
3.1. General observations.....	31
3.2. Queen Conch.....	32
3.2.1. Main players and production.....	32
3.2.2. Management systems	33
3.2.3. Gaps and shortcoming with regard to management	34
3.2.4. Conclusions	35
3.3. Caribbean spiny lobster.....	36
3.3.1. Main players and production.....	36
3.3.2. Present resource situation.....	37
3.3.3. Present management system.....	38
3.3.4. Gaps and shortcoming with regard to management	39
3.3.5. Conclusions	40
3.4. Dolphinfish.....	41
3.4.1. Main players and productions	41
3.4.2. Present resource situation.....	42
3.4.3. Present management system.....	42

3.4.4.	Gaps and shortcoming with regard to management	43
3.4.5.	Conclusions	43
3.5.	Shrimp and sea bob	43
3.5.1.	Main players and productions	43
3.5.2.	Present resource situation	45
3.5.3.	Present management system	46
3.5.4.	Gaps and shortcoming with regard to management	46
3.5.5.	Conclusions	47
3.6.	Sharks	47
3.6.1.	Main players and productions	47
3.6.2.	Present resource situation	48
3.6.3.	Present management system	48
3.6.4.	Gaps and shortcoming with regard to management	50
3.6.5.	Conclusions	50
4.	Analysis of WECAFC as RFMO and as connector of organizations and management of shared stocks	51
4.1.	Summary of Findings of the Performance Review of WECAFC	51
4.2.	Complexity of the situation	52
4.3.	Lost catches for shared stocks	54
4.4.	Share of resource (based on catch data) outside CRFM or OSPESCA	55
4.5.	Common vision and common objectives for the management of fisheries	55
4.6.	Area coverage	57
4.7.	Assess whether the common objectives could be met through a different type of working arrangements	57
4.8.	Scientific Advice	58
4.9.	Capacity building	58
4.10.	Clear institutional collaborative structures and partners	59
4.11.	Enabling environment in international discussions	60
4.11.1.	Small island developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway	60
4.11.2.	UN Sustainable Development Goals	61
4.12.	Four options for the future set-up of WECAFC	62
4.12.1	Option 1 WECAFC remains an advisory body	62
4.12.2	Option 2 WECAFC transforms into a small FAO RFMO	63
4.12.1	Option 3a WECAFC transforms into a large FAO RFMO traditional style	64
4.12.2	Option 3b WECAFC transforms into a large FAO or IGO RFMO new style (2 sub options)	67
4.13.	Benefits of the two types of RFMOs	67
4.13.1	Institutional benefits of both options	67
4.13.2	Administrative benefits of both options	70
5.	Conclusions and recommendations	71
5.1.	Conclusions	71
5.1.1.	Coordination and cooperation	71
5.1.2.	Stocks	71
5.1.3.	Area	72
5.1.4.	Science and capacity building	73
5.1.5.	Trade	73
5.1.6.	SDGs and SAMOA pathway	73
5.1.7.	Fisheries management tasks	74
5.1.8.	Institutional structures	74
5.1.9.	RFMO benefits within and outside FAO	74

5.2. Recommendations	74
----------------------------	----

List of Figures

Figure 1 Governance structure of CRFM	15
Figure 2: Governance structure of OSPESCA	17
Figure 3: Governance structure of WECAFC	18
Figure 4: WECAFC total production	32
Figure 5: Spiny Lobster catches in WECAFC area	37
Figure 6: Source and sink of Spiny Lobster in WECAFC area	40
Figure 7: shrimp and seabob catches in WECAFC area, with trend line.....	45
Figure 8: Shark catches	49
Figure 9: WECAFC, CRFM, OSPESCA and OLDEPESCA overlap in membership	52
Figure 10: Membership and overlap in membership ICCAT and WECAFC.....	53
Figure 11: Organizational structure and governance for WECAFC as Art. VI body.....	62
Figure 12: Organizational structure and governance for WECAFC as a small Art. XIV RFMO	63
Figure 13: Organizational structure and governance for WECAFC as a large Art. XIV RFMO traditional style.....	65
Figure 14: Organizational structure and governance for WECAFC as a large Art. XIV RFMO new style 1	66
Figure 15: Organizational structure and governance for WECAFC as a large Art. XIV RFMO new style 2 (including CSO and Private sector).....	67

List of Tables

Table 1 Queen Conch catches by main producing countries	33
Table 2. Caribbean spiny lobster catches (in tonnes).....	36
Table 3: Estimated status of Caribbean spiny lobster by country – based on the best available information.....	38
Table 4: Dolphinfish production	42
Table 5: Shrimp and seabob catches in WECAFC area, by species	44
Table 6: Shrimp and seabob catches in WECAFC area, by main fishing countries.....	44
Table 7: Shark catches in WECAFC area by country (in tonnes)	48
Table 8: Annual loss in quantities due to reduced landings (in tonnes)	54
Table 9: Annual loss in 2013 and expected loss for 2014-2020 in income due to reduced landings	54
Table 10: Share of shared resource (based on catch data) outside CRFM or OSPESCA.....	55
Table 11: Queen Conch catches (1980-2013) (in tonnes).....	81
Table 12: Lobster catches (1980-2013) (in tonnes)	82
Table 13: Shrimp and seabob catches, by country and by species, (1980-2013) (in tonnes)	83
Table 14: Shark catches by species (in tonnes).....	84

ABBREVIATIONS AND ACRONYMS

<i>ABNJ</i>	Areas Beyond National Jurisdictions
<i>CARICOM</i>	Caribbean Community
<i>CERMES</i>	Centre for Resource Management and Environmental Studies
<i>CFMC</i>	Caribbean Fisheries Management Council
<i>CITES</i>	Convention on International Trade in Endangered Species of Wild Fauna and Flora
<i>CLME</i>	Caribbean Large Marine Ecosystem
<i>CLME+</i>	Caribbean Large Marine Ecosystem project
<i>COFI</i>	FAO Committee on Fisheries
<i>COTED</i>	CARICOM Council for Trade and Economic Development
<i>CRFM</i>	Caribbean Regional Fisheries Mechanism
<i>CSO</i>	Civil Society Organization
<i>EU</i>	European Union
<i>ESA</i>	Endangered Species Act (USA)
<i>FAD</i>	Fish Aggregating Device
<i>FAO</i>	Food and Agricultural Organization of the United Nations
<i>GEF</i>	Global Environment Facility
<i>GFCM</i>	General Fisheries Commission for the Mediterranean
<i>ICCAT</i>	International Commission for the Conservation of Atlantic Tunas
<i>ICT</i>	Information and Communications Technology
<i>IFREMER</i>	French Research Institute for the Exploitation of the Sea
<i>IGO</i>	Inter-Governmental Organization
<i>IPOA</i>	International Plan of Action
<i>ITLOS</i>	International Tribunal on the Law of the Seas
<i>IUU</i>	Illegal, Unreported, and Unregulated (fishing)
<i>MAGDELESA</i>	Moored fish Aggregating Device in the Lesser Antilles
<i>MoU</i>	Memorandum of Understanding
<i>NDF</i>	non-detriment findings
<i>NGO</i>	Non-Governmental Organizations
<i>NPOA</i>	National Plan of Action
<i>OLDEPESCA</i>	Latin American Fisheries Development Organization
<i>OSPESCA</i>	Organization of the Fisheries and Aquaculture Sector of the Central American Isthmus
<i>RFB</i>	Regional Fisheries Body
<i>RFMO</i>	Regional Fisheries Management Organization
<i>RSN</i>	Regional Fishery Body Secretariats Network
<i>SAG</i>	Scientific Advisory Group
<i>SAP</i>	Strategic Action Programme
<i>SG</i>	Secretary-General
<i>SICA</i>	Central American Integration System
<i>TCP</i>	FAO Technical Cooperation Programme
<i>TURF</i>	Territorial Use Rights in Fisheries

<i>UNDP</i>	United Nations Development Programme
<i>USD</i>	United States dollar
<i>WECAFC</i>	Western Central Atlantic Fishery Commission
<i>WG</i>	Working Group

Executive Summary

This study assesses the existing collaboration between the main Regional Fisheries Bodies in the Western Central Atlantic Region, and discusses how the creation of a Regional Fisheries Management Organization (RFMO) would help this collaboration and improve the status and management of shared stocks among WECAFC member countries. This study, supported by the CLME+ project, collected and analyzed information on the recent achievements of CRFM, OSPESCA and WECAFC, recent experiences in subregional collaboration, identified shared and transboundary stock status and options for management, costs and benefits of the management of these specific fisheries, the role of other stakeholders (i.e. Civil Society Organizations) and any additional information that can be useful for make a decision on establishment of an RFMO. The study has to be seen as an addition to the independent cost benefit study conducted by Dr Kjartan Hoydal.

There is a multitude of organizations working in the WECAFC area on fisheries related issues at national, sub-regional and regional level. The collaboration between the organizations operating at sub- and regional level in the fisheries sector of the WECAFC mandate area has been overall good and fruitful. The collaboration has significantly strengthened in recent years and was formalized recently (2016), which is appreciated by the members of the three main RFBs (CRFM, OSPESCA and WECAFC).

The study considered five fisheries target species/stocks (Queen conch, spiny lobster, shrimp, dolphin fish and sharks) and concluded that for the sustainable fishing of all these stocks the establishment of an RFMO would be essential. The study showed that the overall economic loss for these five species due to inadequate and incoherent management measures is around USD 240 million per year or even more, which adds up to economic losses of USD 2.4 to 3 billion in the coming decade.

In specific, the study underlined that the establishment of an RFMO would significantly contribute to the following:

Queen conch: to implement and monitor the Regional Queen Conch Management and Conservation Plan, carry out timely regional stock assessments, collaborate with CITES and importing countries, and to combat IUU fishing.

Spiny lobster: to stop further reduction in catches and associated economic losses of USD 84 million annually, end overfishing and rebuild stocks, carry out stock assessments, secure mid-term employment and harmonize management measures throughout the region.

Shrimp: to stop overexploitation, carry out stock assessments and rebuild stocks, reduce current losses (which add up to 115 million USD annually) harmonize management measures – increasing the economic and ecological feasibility of the shrimp fisheries sector.

Sharks: stop the decline in shark stocks, assist members in coordination of stock assessments, put management and conservation measures in place that support CITES, ICCAT and EU decisions, support and monitor implementation of measures towards rehabilitation of stocks, establish a sustainable shark fisheries with higher economic gains.

Dolphin fish: increase dolphinfish value for food security in the region, reduce IUU fishing of the species, analyze stock status and any relations with Sargassum and FADs, increase data and information available on the resource and develop and monitor harmonized management measures.

Apart from the above shared regional stocks, **the straddling fish stocks** and **deep sea fish stocks** in the Area Beyond National Jurisdiction (**ABNJ**) of areas 31 and the northern part of 41 require coverage by an RFMO. The fact that currently insufficient known about these stocks and their value

for fisheries does not release the countries in the region from their responsibility to conserve these stocks and manage their fisheries.

The role of an RFMO with regards to the above regional stocks can be summarized as:

- 1) Coordinate collaboration on research and scientific advice generation on the stocks and their fisheries.
- 2) Conduct regional stock assessments.
- 3) Build capacity for stock assessments and fisheries management among the members.
- 4) Support sustainable fisheries development and responsible fisheries investments among the member.
- 5) Develop management and conservation plans supported by (binding) management recommendations.
- 6) Monitor and evaluate the implementation and impact of the management recommendations.
- 7) Facilitate regional coordination in fisheries activities monitoring and enforcement.

An important shortcoming in the region is that none of the three RFBs operating in fishing Area 31 or the northern part of Area 41 has a binding management function, or better said the binding management functions foreseen are not all effective at the moment. OSPESCA has under the Article 22 of the Protocol of Tegucigalpa the role of a binding authority, but still the SICA countries have to ratify any management measures decided by the Council. A similar situation exists with CRFM and the CARICOM. However, it has to be considered, that even if these two RFBs would make greater use of their binding management measures and if these would be fully implemented, the majority of the fisheries of these shared stocks would stay outside these arrangements. CRFM and OSPESCA represent together a majority of the WECAFC members in terms of numbers, but in terms of production only cover some 20% of total catches in the region. Moreover, the existing arrangements would not allow conservation and management of the ABNJ.

An RFMO in the WECAFC region would need to cover the ABNJ in the Western Central Atlantic and the Northern part of the Southwest Atlantic. The RFMO would be able to make recommendations concerning fisheries of shared stocks, straddling stocks and highly migratory species conducted within the EEZs of members, provided that the members in question request such recommendations. No other arrangement than an RFMO will be able to coordinate effectively the sustainable management and conservation of the shared, straddling and highly migratory stocks and those in the ABNJ.

The current annual economic losses for the region due to inadequate regional level coordination in fishery management are more than 100 times larger than the costs of operating an RFMO. Considering the lifecycle of the main commercially targeted regionally shared stocks it is possible, with regional fisheries management collaboration through an RFMO to rebuild stocks and increase catches to levels reached in the 1980s and 1990s within 10 to 15 years.

This assessment of the recent achievements and collaboration of CRFM, OSPESCA and WECAFC, including options for a regional institutional collaborative structure within an RFMO framework, particularly recommends the following steps:

- Members of WECAFC utilize the additional information presented in this report in their internal decision making processes on:
 - The area and stocks to be covered by the RFMO (proposed are the ABNJ and EEZs in Areas 31 and the northern part of area 41 for regionally shared stocks [Queen

conch, spiny lobster, dolphin fish, wahoo, shrimps and sharks], straddling stocks, deep sea fish stocks and highly migratory species that are not covered by ICCAT).

- The type of RFMO to be established: under FAO's constitution or an independent IGO.
- The structure/set-up of the RFMO (proposed is an RFMO with formal ties with CRFM, OSPESCA and perhaps OLDEPESCA, which will have sub-committees within the RFMO. The private sector will also have a subcommittee within the set-up a joint working group with ICCAT will enable effective collaboration with that organization. The RFMO should preferably also include a coordinating working group of sub-committees, scientific advisory committee, administrative and finance committee and a compliance committee).
- Members of WECAFC come well-prepared to the WECAFC 16 session (Guadeloupe, 20-24 June 2016) and decide on a way forward with the establishment process of the RFMO.
- CRFM and OSPESCA (and OLDEPESCA) secretariats duly consult with their members on the preferred institutional set-up and the role of their organizations within the RFMO.
- WECAFC/FAO Secretariat seeks the opinion of FAO senior management on the willingness to assist in a transformation process and to host and support a new RFMO under Article XIV of the FAO constitution, if the WECAFC members decide to follow such course.

1. Introduction

1.1. Background of this report

The Strategic Action Programme (SAP) produced under the Caribbean Large Marine Ecosystem project (CLME) recommends the establishment of an interim arrangement for sustainable fisheries under its Strategy 2, as well as to assess the options for a Regional Fisheries Management Organization (RFMO) or alternative arrangement. The interim arrangement between the Caribbean Regional Fisheries Mechanism (CRFM), the Organization of the Fisheries and Aquaculture Sector of the Central American Isthmus (OSPESCA) and Western Central Atlantic Fishery Commission (WECAFC) is currently being tested and a transformation of WECAFC into an RFMO would build on this on-going collaboration that has been established. The establishment of an RFMO with strong ties with CRFM and OSPESCA would be in-line with the CLME SAP and the transboundary diagnostic analysis carried out in recent years.

The 15th session of WECAFC, held in Trinidad and Tobago in March 2014, endorsed Resolution WECAFC/15/2014/10 on the strategic action programme for the sustainable management of the shared living marine resources of the Caribbean and north Brazil shelf large marine ecosystems (CLME+ SAP), calling upon members to promote SAP implementation and on WECAFC itself to take responsibility as well. The report of the session noted (para. 29) that “within Strategy 2 of the CLME Strategic Action Programme, the role of WECAFC and the relationship with its partners OSPESCA and CRFM should be further assessed”.

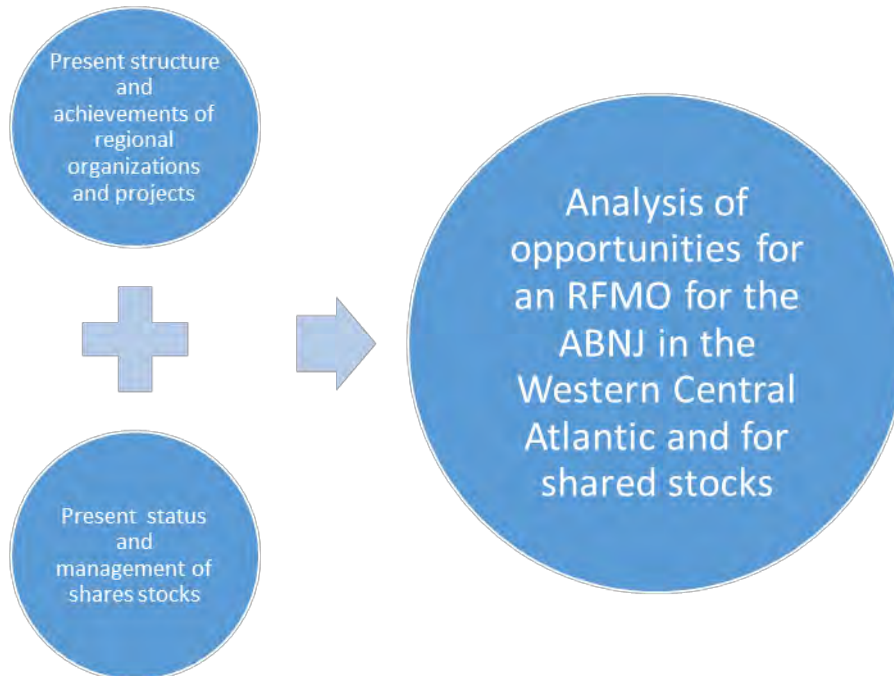
The discussion paper on the Findings of the independent cost-benefit assessment of the options for strategic re-orientation of WECAFC, by Dr Kjartan Hoydal, added that the above assessment should be done “before the 16th session of WECAFC (Guadeloupe, 20-24 June 2016), defining a clear institutional collaborative structure with operational linkages that are cost-effective, avoid and overlap and duplication, for presentation to the session”.

At the 2nd WECAFC Strategic reorientation workshop, held in Port of Spain, Trinidad and Tobago on 1-2 December 2015, 24 member countries and the EU attending the workshop recognized the value of an RFMO for the Western Central Atlantic, but recommended, amongst others, that “An additional study be undertaken within the framework of the CLME+ for submission to WECAFC 16.”

The workshop also suggested that “Such study, supported by the CLME+ project, will add information to the process on items such as: recent achievements of CRFM, OSPESCA and WECAFC¹, recent experiences in subregional collaboration, identified shared and transboundary stock status and options, costs and benefits for the management of these specific fisheries, role of other stakeholders (i.e. Civil Society Organization (CSOs)) and any additional information that can be used to make a decision on the merit for establishing an RFMO”. The following study is based on these suggestions.

¹ There are more than three RFBs existing in the CLME+ region, but the consultant was given the mandate only to analyse three of them, namely WECAFC, CRFM, and OSPESCA, given the non-response and non-participation by OLDEPESCA in the CLME and WECAFC activities.

1.2. Logical Flow of this report



This report analyses in its section 2 the present structure and achievement of organizations and projects, and possible shortcoming. In section 3 the report looks at the present status and management of five of the main shared fisheries stocks. Section 4 gives an analysis of WECAFC as potential “connector” of countries in the region and as RFMO in the management of shared resources in the ABNJ and EEZs. The final section gives a summary of the main findings.

This report has been prepared for presentation to WECAFC 16 to facilitate discussions on the way forward. This draft has been pre-reviewed by the secretariats of CRFM, OSPESCA and WECAFC, as well as the CLME+ PCU and was circulated in May 2016 to all WECAFC members. It will be finalized for publication after discussion and review at WECAFC 16.

2. Present structure and achievements of organizations and projects

2.1. Establishment

2.1.1. CRFM

The CRFM is a specialized institutions of the Caribbean Community (CARICOM). The CRFM was established by means of an international agreement signed on 4 February 2002.² This agreement entered into force upon signature of any seven Member States or Associate Members of

² Agreement establishing the Caribbean Regional Fisheries Mechanism. Multilateral, signed on 4 February 2002, 2242 *United Nations Treaty Series* pp. 271, 273-290. This agreement entered into force on 4 February 2002 (as available at <<http://www.caricom-fisheries.com/LinkClick.aspx?fileticket=k2y%2b0jOz%2ffY%3d&tabid=124>>. Hereinafter CRFM Agreement.

CARICOM,³ which happened on the same day.⁴ The organization adopted its own rules of procedure on 5 August 2002⁵ and was officially inaugurated in Belize City, Belize, on 27 March 2003. The CRFM, in other words, is a relatively recently established Regional Fisheries Body (RFB), compared with many other fisheries bodies.

According to its founding document⁶, the objectives of the CRFM are three:

- “(a) the efficient management and sustainable development of marine and other aquatic resources within the jurisdictions of Member States;
- (b) the promotion and establishment of co-operative arrangements among interested States for the efficient management of shared, straddling or highly migratory marine and other aquatic resources;
- (c) the provision of technical advisory and consultative services to fisheries divisions of Member States in the development, management and conservation of their marine and other aquatic resources.”⁷

Current membership includes: Anguilla, Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, Saint Kitts and Nevis, Saint Vincent/Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos Is. The CRFM Member States cooperate with the Dominican Republic through a Memorandum of Understanding.

2.1.2. OSPESCA

On 18 December 1995 the authorities of fisheries and aquaculture in Central America, aware that fishery resources that exist within their jurisdiction are common goods; that the vast majority of them are migratory or highly migratory and that both opportunities and challenges of development are similar, constituted in the "Act of San Salvador" the Organization of the Fisheries and Aquaculture Sector of Central America Isthmus (OSPESCA).

OSPESCA aims at promoting coordinated and sustainable development of fishing and aquaculture, in the framework of the Central American integration process (SICA), defining, approving and implementing policies, strategies, programmes and regional projects on fisheries and aquaculture.

The mission of OSPESCA is to be an organization that drives the development and coordinated management of the regional activities of fishing and aquaculture, contributing to strengthen the process of Central American integration.

The vision of OSPESCA is to arrange and promote a model of harmonious and sustainable regional development of fisheries and aquaculture, which guarantees obtaining maximum social and

³ CRFM Agreement, Art. 35 *juncto* Art. 3 (1).

⁴ Indeed, the following eight CARICOM Member States signed on 4 February 2002: Barbados, Belize, Grenada, Guyana, Jamaica, St Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

⁵ As available at <<http://www.caricom-fisheries.com/LinkClick.aspx?fileticket=D%2bL1OJk32pk%3d&tabid=125>>. According to the founding document of the CRFM the Ministerial Council and the Caribbean Fisheries Forum should normally each establish their own rules of procedure (CRFM Agreement, Arts 7 (4) and 8 (2), respectively). Instead a single document was adopted converging both organs.

⁶ Agreement establishing the Caribbean Regional Fisheries Mechanism is reproduced under the following link <http://www.caricom-fisheries.com/LinkClick.aspx?fileticket=k2y%2b0jOz%2ffY%3d&tabid=124>

⁷ CRFM Agreement, Art. 4.

economic benefits for the American people.

OSPESCA's activities are

- a) To promote strategies of integration policy for fisheries and aquaculture;
- b) To promote and monitor the Regional Framework Treaty on fisheries and aquaculture;
- c) To coordinate inter-institutional and intersectoral efforts of regional fisheries development in Central American, with an ecosystem and interdisciplinary approach;
- d) To work together to harmonize and implement the laws on fisheries and aquaculture;
- e) To formulate and promote strategies, programs, projects, agreements or regional agreements on fisheries and aquaculture;
- f) To encourage regional fisheries and aquaculture producers organization;
- g) To coordinate an appropriate and coordinated regional participation in international fora related to the fisheries and aquaculture.

On 26 December 1999, the authorities of fisheries and aquaculture and the Secretary-General of the Central American Integration System (SICA), agreed to strengthen joint work process by incorporating OSPESCA into SICA. OSPESCA is based in El Salvador.

Current members of OSPESCA are Belize, Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

2.1.3. WECAFC

The WECAFC was established in 1973 by Resolution 4/61 of the Food and Agricultural Organization of the United Nations (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. Membership is open to coastal States whose territories are situated wholly or partly within the area of the Commission or States whose vessels engage in fishing in the area of competence of the Commission that notify in writing to the Director-General of the Organization of their desire to be considered as members of the Commission.

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 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.

WECAFC has the following main functions and responsibilities:

- to contribute to improved governance through institutional arrangements that encourage cooperation amongst members;
- to assist its members in implementing relevant international fisheries instruments, in particular the FAO Code of Conduct for Responsible Fisheries and its related International

Plans of Action;

- to promote, coordinate and, as appropriate, undertake the collection, exchange and dissemination of statistical, biological, environmental and socio-economic data and other marine fishery information as well as its analysis or study;
- to promote, coordinate and, as appropriate, strengthen the development of institutional capacity and human resources, particularly through education, training and extension activities in the areas of competence of the Commission;
- to promote and facilitate harmonizing of relevant national laws and regulations, and compatibility of conservation and management measures;
- to assist its members in and facilitate, as appropriate and upon their request, the conservation, management and development of transboundary and straddling stocks under their respective national jurisdictions;
- to seek funds and other resources to ensure the long-term operations of the Commission and establish, as appropriate, a trust fund for voluntary contributions to this end;
- to serve as a conduit of independent funding to its members for initiatives related to conservation, management and development of the living resources in the area of competence of the Commission.

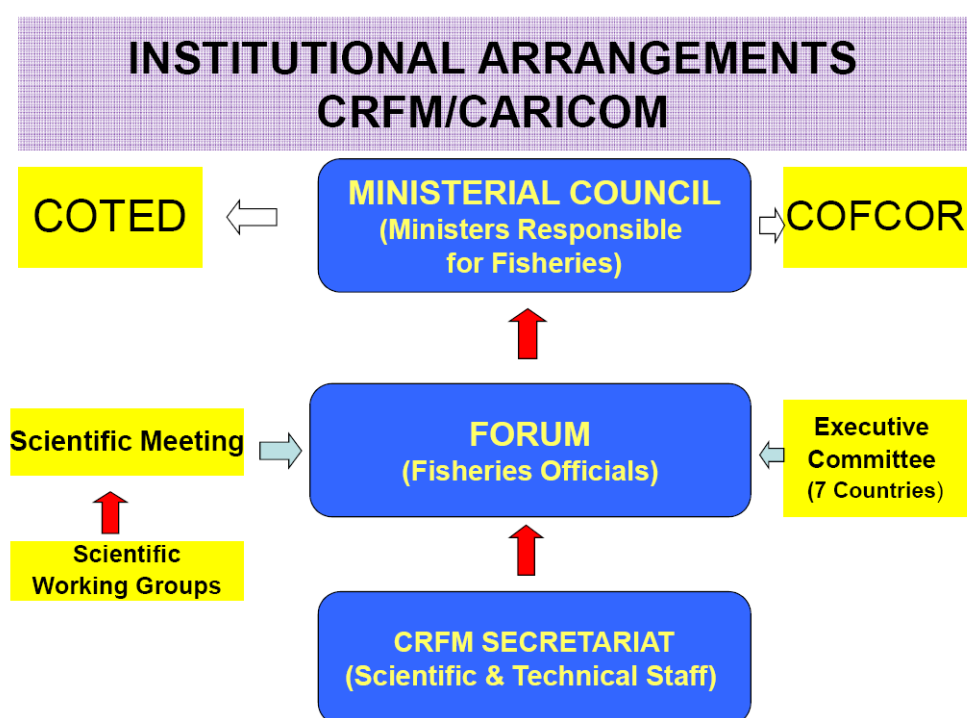
Current membership includes: Antigua and Barbuda, Bahamas, Barbados, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, European Union, France, Grenada, Guatemala, Guinea, Guyana, Haiti, Honduras, Jamaica, Japan, Mexico, Netherlands, Nicaragua, Panama, Republic of Korea, Saint Kitts and Nevis, Saint Lucia, Saint Vincent/Grenadines, Spain, Suriname, Trinidad and Tobago, United Kingdom, United States of America, Boliv Rep of Venezuela.

2.2. Institutional arrangements

2.2.1. CRFM

The institutional structure of the CRFM consists of three main organs, namely the Ministerial Council, the Caribbean Fisheries Forum and the Technical Unit/Secretariat.⁸ The structure is presented in the figure below

Figure 1 Governance structure of CRFM



The Ministerial Council is the organ that sets out the general policy of the CRFM.⁹ It is composed of the 17 Ministers that have fisheries under their competence and meets at least once a year.¹⁰ Every Member State has one vote. Substantial issues are normally decided by consensus. If no consensus can be reached voting shall decide the issue by a three-quarters majority of the Member States comprising the CRFM, with at least two-thirds of the CRFM membership being present.¹¹ When a Member State is absent when a decision is taken that is prejudicial to its interest, it can require a review of that decision.¹² Non-legally binding recommendations addressed to a Member State are taken by a two-thirds majority.¹³ Decisions on procedural matters are taken by a simple

⁸ *Ibid.*, Art. 6.

⁹ *Ibid.*, Art. 7 (3).

¹⁰ *Ibid.*, Art. 7.

¹¹ CRFM Agreement Art. 14 (1-3) and CRFM Rules of Procedure, Rule 24 (2).

¹² CRFM Agreement Art. 14 (6) and CRFM Rules of Procedure, Rule 24 (6).

¹³ CRFM Rules of Procedure, Rule 24 (7).

majority. Whether an issue is procedural or substantive is determined by a two-thirds majority.¹⁴ It is important to note that the Ministerial Council is required to submit annual reports to the Council of Trade and Economic Development (COTED) and the Council for Foreign and Community Relations (COFCOR)(Art. 7(3)(p) CRFM Agreement) This establishes a formal link between the CRFM and the Governing bodies of CARICOM.

The Caribbean Fisheries Forum is a much more heterogeneous body. It is composed of one representative of each Member State, observers as approved by the Ministerial Council, Fisher Folk Organizations and private fishing companies within the Caribbean region, regional organizations and institutions whose work in the area of fisheries contribute to the work of the CRFM, and, finally, non-governmental organizations involved in the same area of work.¹⁵ Despite this wide variety of possible participants, however, in practice the Caribbean Fisheries Forum remains a rather manageable group.¹⁶ The main function of the Caribbean Fisheries Forum is to determine the technical and scientific work of the CRFM. The meeting frequency and voting procedure are quite similar to the ones just described with respect to the Ministerial Council, although the two-thirds majority quorum must include at least two-thirds of the Member States of the CRFM and that observers have no right to vote.¹⁷ This body is a kind of interface between the Ministerial Council, to which it receives and reviews submissions and the Ministerial Council, to which it makes recommendations.¹⁸ In order to safeguard continuity between the yearly meetings, an Executive Committee is established, consisting of seven members.¹⁹

The Caribbean Fisheries Forum may establish Sub-Committees of the Forum (Article 11 of the Agreement and Rule 11 of the Rules of Procedure), several species working groups have been established under this article²⁰. For conservation and management of the flying fish fisheries, the CRFM Ministerial Council decided in 2011 to establish a Ministerial Council Sub-Committee on Flying Fish.

The Technical Unit constitutes the permanent Secretariat of the CRFM and is headed by an Executive Director, who bears full responsibility for the work of the CRFM, he is assisted by a Deputy Executive Director and a number of managerial, technical, scientific and support staff in order to enable the Technical Unit to discharge the mandate of the Mechanism.²¹ This is the body that has been described as being “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”.²²

¹⁴ *Ibid.*, Rule 24 (8).

¹⁵ CRFM Agreement, Art. 8.

¹⁶ The last meeting of the Caribbean Fisheries Forum, for instance, held during the month of March 2012 in Nassau, The Bahamas, consisted of representatives of the 17 Member States with in addition a representative of Bonaire. As far as institutions were concerned, the following were represented at that time: ACP Fish II, Caribbean Large Marine Ecosystem, Caribbean Network of Fisherfolk Organization, CRFM, Food and Agriculture Organization, NOAA Fisheries Service, University of the West Indies, and University of South Mississippi.

¹⁷ CRFM Agreement, Art. 14 (3 and 5) and CRFM Rules of Procedure, Rule 24 (3 and 5).

¹⁸ CRFM Agreement, Art. 9.

¹⁹ *Ibid.*, Art. 10.

²⁰ Even though these grouping were called working groups, their function is identical to those of sub-committees, working groups is a rather historical way of calling Sub-Committees.

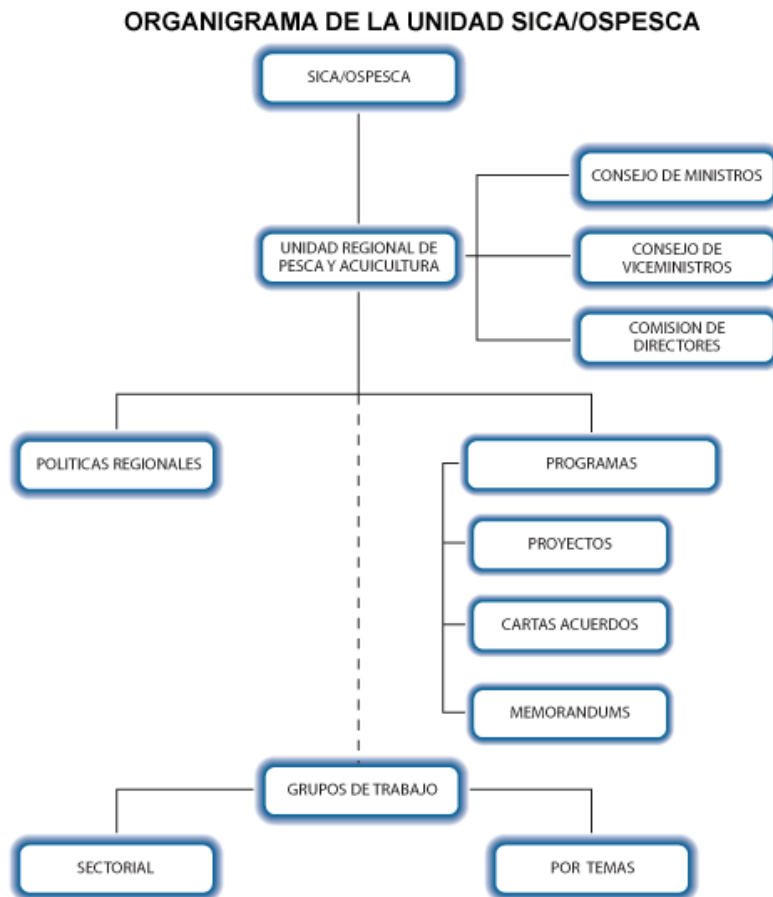
²¹ *Ibid.*, Art. 12.

²² CRFM Second Medium Term Plan, *supra* note Error: Reference source not found, p. 3.

2.2.2. OSPESCA

OSPESCA is established under the Council of Ministers of SICA. OSPESCA's headquarters are based in San Salvador. The executive committee meets every second year. Technical review is provided by the scientific working groups. The secretariat is one director assisted by project staff if projects are executed.

Figure 2: Governance structure of OSPESCA

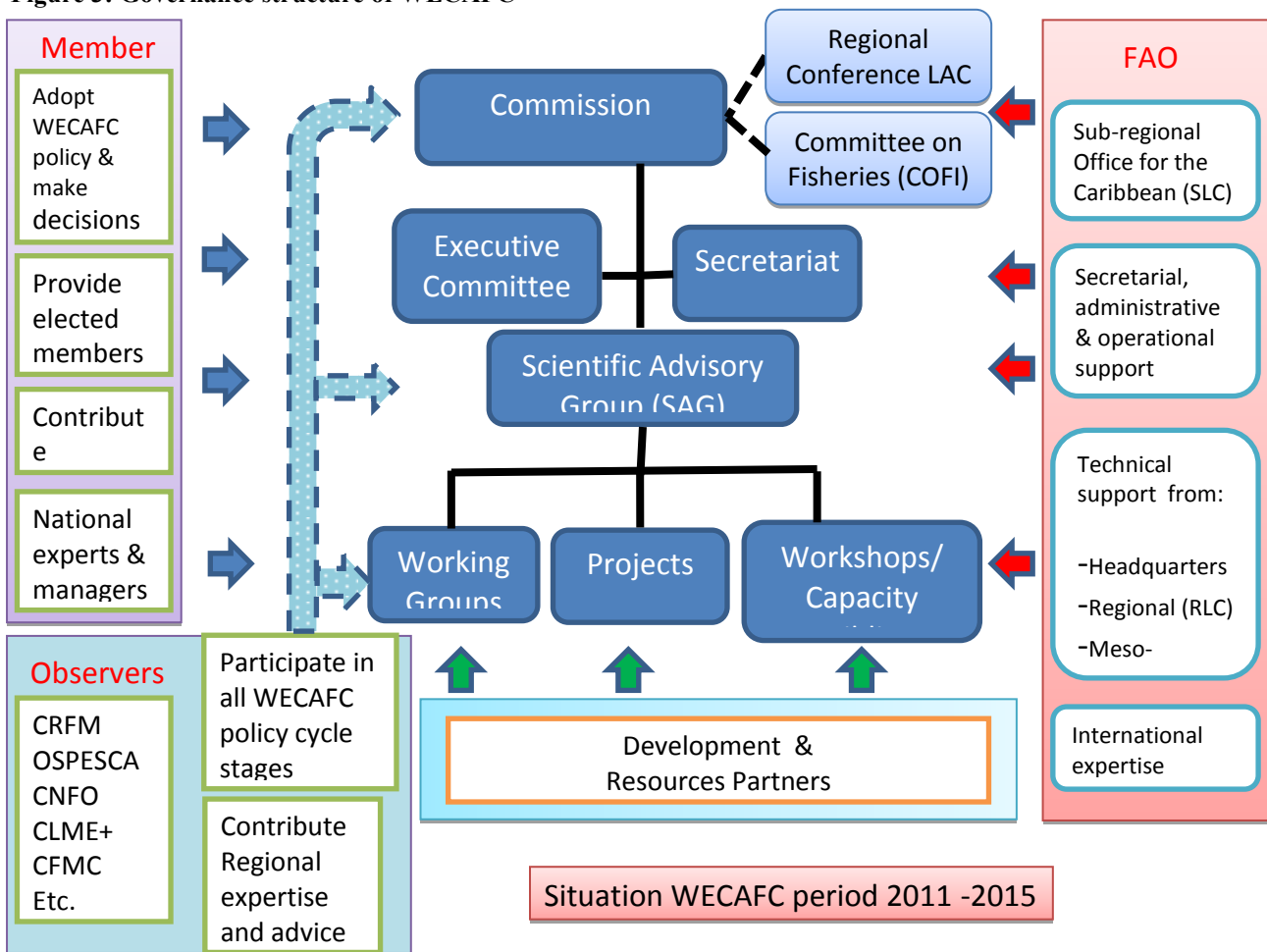


Members of OSPESCA are

- a) Council of Ministers, which is the highest authority of OSPESCA representing at the political level, responsible for regional policy decisions,
- b) The Committee of Deputy Ministers, which is the Executive level of the Organization and directs, orients, monitors and evaluates the implementation of policies, programmes and regional projects,
- c) The Commission of Directors of fisheries and aquaculture, which is the scientific and technical level of OSPESCA, responsible for ensuring scientific and technical regional brackets.
- d) two organizations of civil society that represent small-scale and large-scale fishing and aquaculture producers. They assume an advisory role and their participation is highly important under the OSPESCA's governance model. They are: CONFEPESCA and OECAP.

2.2.3. WECAFC

Figure 3: Governance structure of WECAFC



The main governing body of WECAFC is the Commission, which is composed of all members. Meetings of the Commission are normally held every two years. All member countries have a vote in the Commission. The overarching bodies to which the WECAFC reports are the Regional Conference of FAO for Latin America and the Caribbean and the FAO Committee of Fisheries (COFI), both bodies meet once every two years.

The WECAFC receives technical advice from its Scientific Advisory Group (SAG). The SAG is constituted of five scientists with suitable scientific qualifications and experience in fisheries who serve in their personal capacity. The SAG provides scientific advice to the WECAFC Commission and its ad hoc working groups, assesses and reports to the Commission on the status of stocks in the area covered by the Commission and assesses the situation, trends and prospects of fisheries in the region. The SAG meets every two years in the year when the Commission meets.

Fishery management advice and recommendations, based on the best available scientific information, are provided to member countries for their implementation by dedicated Working Groups, established by the Commission.

Most working groups are joint working groups with other regional partner institutions, such as the CRFM, OSPESCA, the Caribbean Fisheries Management Council (CFMC) and with the French

Research Institute for Exploration of the Sea (IFREMER).

Fishery scientists, experts, managers and decision-makers of member countries, regional partner organizations and NGOs participate in the working groups, which have specific terms of reference (TORs) and are time bound. The TORs are reviewed and amended (as needed) by the Commission based on the requirements by the members. The data used by the working groups to generate fishery management advice and recommendations are collected by the participating countries and NGOs.

The working groups meet on a regular basis, the timing of which is decided by the members.

The Secretariat of WECAFC is provided by FAO. It is based in the Subregional Office for the Caribbean (SLC) in Barbados. Technical inputs are provided by the Scientific Advisory Group (SAG) and by the working groups. Technical assistance is also given by FAO HQ and the Regional Office for Latin America. The WECAFC is also a member of the Regional Fishery Body Secretariats Network (RSN), which meets biennially.

2.3. Strategic Planning Process

2.3.1. CRFM

A Performance Review of CRFM was carried out in 2013, based on its findings the second Strategic Plan was developed and adopted. CRFM entered into the Second CRFM Strategic Plan (2013 - 2021) in 2014, which started during the same year the Biennial Work Plan for 2014 to 2016.

The Second Strategic Plan of CRFM establishes seven strategic objectives, representing the priority areas of work of the CRFM during the year. These are: Objective A: Information on status and trends in the fisheries and aquaculture sector Objective B: Research & development Objective C: Sustainable management of fisheries Objective D: Sustainable use of fisheries resources Objective E: Sustainable development of aquaculture Objective F: Adaptation to climate change and disaster risk management in fisheries Objective G: Capacity-building and institutional strengthening.

The Caribbean Community Common Fisheries Policy (CCCFP), approved in October 2014 by COTED, provides also guidance to the work of CRFM.

2.3.2. OSPESCA

SICA countries have a new integration policy of fisheries and aquaculture 2015-2025. The policy, which came into effect from July 1, 2015, aims to ensure the sustainable use of aquatic resources and aquaculture, strengthening the framework of coordination and harmonization within the SICA and contributing to food security and the improvement of the quality of life of the population. Some of the challenges that the new policy aims to tackle are: the improvement of the capacities of the institutions and the sectoral organization, including the need for more information for management, management and sustainable use of the biodiversity of fisheries and aquaculture; the convenience of consolidating the regional governance model; more programs of training, extension and technical assistance requirements; improvements of organizations to tackle the illegal, unreported and unregulated fishing, and measures for mitigation and adaptation to climate change. This policy is based on the Tegucigalpa Protocol as a legal framework of SICA, establishing common rules and models of land use and development for the sustainable use of natural resources.

Art. 22 "Decisions of the Council of Ministers will be binding in all Member States. Under the new fisheries policy, the following steps for a new agreement are:

- The original proposal of an agreement or regulation can arise by initiative of governments or civil society.
- The Legal Advisers Group reviews the proposal from their perspective.
- Intersectorial (civil society) and interinstitutional consultations of the proposal of agreement or regulations are made.
- The Executive Committee of OSPESCA makes a full review of the proposals.
- The Council of Ministers of OSPESCA approves the agreement or regulation.
- The Minister President Pro tempore proposes the agreement or regulation to the General Secretariat of SICA.
- The General Secretariat of SICA certifies the agreement or regulation.
- The agreement is published and distributed.

2.3.3. WECAFC

WECAFC is a FAO Art. VI body, which means that WECAFC is only an advisory body. As WECAFC does not have a management mandate, the work of the Commission is focused on producing and transferring knowledge in order to improve policy and management through research, collection of information, capacity building and provision of technical and scientific fisheries advice.

Within WECAFC, the channels of policy advice and capacity-building have been: the Sessions of the Commission, which are typically used to present and discuss issues, approaches and instruments; the activities of the WGs; the workshops and expert consultations; and the projects implemented, directly or indirectly, under the auspices of WECAFC.

The 1st performance review of WECAFC and Strategic Plan (2014-2020) were prepared in 2013/2014 and were reviewed and approved by WECAFC 15 in March 2014.

The strategic rethinking of the WECAFC started at WECAFC 14 in 2012, and will continue during the next session of the Commission in June 2016. The main issue of the strategic re-orientation is whether the organization should continue as an Art. VI body, become an Art. XIV body that means a body with management authority under FAO, or become an independent Intergovernmental Organization (IGO) RFMO. This report is intended to facilitate the strategic re-orientation process.

2.4. Activities, developments and achievements by CRFM, OSPESCA, WECAFC and the CLME project in recent years

2.4.1. CRFM

The following are some of the major achievements of CRFM during the period 2014-2016:

- Implementation of the Castries Declaration on IUU Fishing through the adoption of a Regional Strategy on MCS and manuals for Prosecution and Standard Operating Procedures for enforcement personnel.
- Adoption of the first Sub-regional Fishery Management Plan for the Flying fish Fishery.
- Adoption of the Regional Plan of Action 2014-2019 on Improving the Outlook for Caribbean Coral Reefs.

- Development of the Regional Declaration on the Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster.
- CRFM-OSPESCA joint Action Plan
- Lionfish strategy
- Aquaculture Programme of Action
- Research agenda
- Review of aquaculture and preparation of a Five-Year Plan of Action for the Development of Aquaculture in the CARIFORUM States.
- St. George's Declaration on Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster
- Institutional capacity development and training of fisheries personnel.
- Conducting research, and sharing data and information and management recommendations on key commercial species through the Annual Scientific Meeting and joint working groups with WECAFC
- International case on Illegal, Unreported, and Unregulated (IUU) fishing before the International Tribunal on the Law of the Seas (ITLOS)
- Information and Communications Technology (ICT) into the mainstream work of the organization
- Regional Strategy and Action Plan – Climate Change and DRM in Fisheries and Aquaculture in the CARICOM region
- FAD Fishery Manuals
- Knowledge platform
- SPS legislation & coordination mechanism
- Queen conch countries assessments
- various studies and reports
- Confirmation by CARICOM Council for Trade and Economic Development (COTED) in October 2014 that the Caribbean Community Common Fisheries Policy is the official policy of the region and should be implemented by Member States.

A major milestone for the implementation of sustainable fisheries through the CRFM was the signing of the St. George's Declaration on Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster (*Panulirus argus*) in May 2015. The Spiny Lobster Declaration recognizes the trans-boundary nature of the species and the interconnectedness of the marine ecosystems in which they live, and it highlights the need for Member States to cooperate and coordinate actions.

In the period 2013-2014 the CRFM contributed to a landmark international case on Illegal, Unreported, and Unregulated (IUU) fishing before the International Tribunal on the Law of the Seas (ITLOS): Case No. 21. During the same period, CRFM made bid to US-CARICOM Council on Trade and Investment against the petition to list the Queen Conch as a threatened or endangered species under the US Endangered Species Act, engaged fishers in decision-making through new electronic policy dialogue, commenced field implementation of the 5-year CARIFICO Project promoting co-management of fisheries and expanding use of Fish Aggregating Devices in the region.

During the 2012-13 CRFM underwent a performance review carried out by the FAO. In addition, the CRFM had to take into account the need to integrate Information and Communications Technology (ICT) into the mainstream work of the organization, as well as in the manner in which it interacts with stakeholders across Member States. This modern way of information sharing and dialoguing has proven to bring speedier delivery of programme outputs as well as cost savings. In line with this effort, the CRFM has been able to implement a major overhaul of its web portal and it

now boasts a website, which includes social networking features, allowing users to interface with the CRFM on Facebook, Twitter and You Tube. These portals have allowed the CRFM to showcase the work it has been doing, in collaboration with its invaluable partners, to integrate the ecosystem approach to management; as well as to introduce strategies for disaster risk management and the mitigation of climate change impacts on the fisheries sectors in the Caribbean.

2.4.2. OSPESCA

The main achievements of OSPESCA are the regional regulations which are binding for all member states. These include the following:

- Regional Regulation OSP-01-09 Integrated Register System of Fisheries and Aquaculture which specifies the minimum data for the fisheries and aquaculture registration; and sets the obligations of States to the collection, validation and transmission of data;
- Regional Regulation OSP-02-09 for the Regional Management of the Caribbean Spiny Lobster Fishery, which establishes harmonic and simultaneous measures for the regional management of the fishery of Caribbean Spiny lobster (*Panulirus argus*).
- Regional Regulation OSP 03-10 Regional System of Satellite Monitoring and Control of Fishing Vessels, which creates and implements a regional monitoring and satellite control system of fishing vessels of the Central American Isthmus countries, contributing to ensure the sustainable use of fisheries resources and prevent illegal, unreported and unregulated fishing.
- Regional Regulation OSP 04-11 Code of Ethics which adopts the FAO Code of Conduct of Responsible Fisheries to the region.
- Regional Regulation OSP-05-11 which prohibits the practice of shark finning and establishes regional management measures for the sustainable use of sharks, which contributes to finning eradication.
- Regional Regulation OSP-06-13 on the Proper Use of Turtle Excluder Devices (TEDS) which establishes a regional action framework for the protection of sea turtles through the proper use of Turtle Excluder Devices.
- Regional Regulation OIRSA-OSPESCA No. 001-2013 which aims at strengthening the health status in the SICA and OIRSA countries through the adoption and implementation of measures for the prevention, control and eradication of farmed shrimp diseases.
- Regional Regulation OSP-07-2014 which strengthens the sustainability of the Whale Shark species (*Rhincodon typus*) by adopting management measures by the SICA Member States.
- Regional Regulation OSP-08-2014 which promotes the adoption of harmonic measures to prevent, deter and eliminate IUU fishing.

2.4.3. WECAFC

Main achievements of WECAFC during 2013-2016 included the following:

- Capacity built among Members for effective uptake and implementation of the 1995 Code of Conduct for Responsible Fisheries and related international fisheries instruments (PSMA, UNFSA, EAF, Bycatch and Deep sea fisheries guidelines, IPOA -sharks, IPOA-IUU);

- Provided the main platform for all countries and overseas territories in the Caribbean and North-Brazil-Guianas shelf to collaborate on fisheries science and sustainable development and management of fisheries, facilitating countries that are not part of CARICOM or SICA to collaborate with these groupings;
- Enabled the Members to produce true regional fisheries management advice for the main commercially exploited marine aquatic resources in the Western Central Atlantic; advice that has been incorporated in national level fisheries management plans and regulations;
- Empowered Members and CITES to take the necessary binding trade measures to support the conservation and better management of Queen Conch resources in recent years;
- Introduced the 1st regionally harmonized closed season for Nassau Grouper fisheries in 2014; the first true regionally harmonized management measure, which has been made binding by most Members that have Nassau grouper fisheries;
- Increased the capacity of Members for fisheries data and information collection, analysis and dissemination and the establishment of functional statistical systems;
- Mobilized effectively resources from Members and donors for capacity building, information exchange and the functioning of WECAFC's expert working groups.

Most of the activities carried out by WECAFC in recent years were done in partnership with other RFBs (e.g. CRFM, OSPESCA), CFMC and/or donors, such as the National Oceanic and Atmospheric Administration (NOAA), Inter-American Development Bank (IDB), IFREMER, CITES, GEF, Government of Japan, FAO's Technical Cooperation Programme (TCP), European Union (EU) and World Bank.

Under current funding constraints, the Commission has focused much of its efforts on the operations of its Working Groups (WGs), on a number of projects supported by trust fund and TCP projects, and on coordination and collaboration of activities with other actors involved in sustainable development and marine and coastal resource management in the WECAFC area. Most WGs are active and meet with the participation of most of the countries interested in these fisheries methods or stocks. They provide follow-up between sessions, which is valuable since regular meetings increase coherence and continuity, as well as awareness.

WGs are based on species or themes such as spiny lobster, recreational fisheries/billfish, Queen Conch, shrimp and groundfish, development of sustainable moored Fish Aggregating Device (FAD) Fishing in the Lesser Antilles (recently, a project – Moored fish Aggregating Device in the Lesser Antilles (MAGDELESA) - on the sustainable development of anchored FAD fishing was finalized), flying fish in the Eastern Caribbean (a recent follow-up from WECAFC and from the Caribbean Large Marine Ecosystem Project (CLME) case study on flying fish, which is being implemented under the technical leadership of the CRFM Secretariat), management of deep-sea fisheries, and spawning aggregations.

Other important achievements of the Commission and its partners in recent years have been in the fields of developing a methodology for economic impact assessments of recreational fisheries in the Caribbean; supporting the development of a strategy, action plan and programme proposal on

disaster risk management, climate change adaptation in fisheries and aquaculture in the Caribbean Community (CARICOM) region; preparation of management advice to Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on Queen Conch; and promoting the EAF and the international guidelines for securing sustainable small-scale fisheries. The portfolio of projects in which WECAFC places an important role added up to 19 million USD in recent years.

WECAFC has also been assigned an important regional level fisheries advisory and management role in the Strategic Action Programme for the sustainable management of the shared living resources of the Caribbean and North Brazil Shelf LME (SAP)

2.4.4. CLME+

The UNDP/GEF project “Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems” (CLME+) Project will be implemented between 2015- 2020.

The project is implemented following a Regional planning framework (SAP) to address transboundary issues as they relate to shared living marine resources. The SAP was developed through a participatory approach and reflects the orientations of the countries and of the regional stakeholders and organizations. The SAP includes 6 Strategies, 4 Sub-strategies and 76 actions falling under three categories: Governance/Institutional Frameworks; Capacity Building; Implementation in the field/Investments. The implementation of each group of strategic actions will be led by a grouping of partner organization (UNEP-CEP, IOC UNESCO, FAO WECAFC, CRFM, OSPESCA etc.). The SAP, amongst other things, focuses on enhancing ecosystem-based governance for reef, sea grass, mangroves and coastal lagoons management; implementing ecosystem approach for pelagic fisheries; applying EBM/EAF to shrimp and ground fish fisheries in the NBSLME; and combating the widespread IUU fishing.

Strategies and Sub-Strategies include:

Strategy 1: Enhance the regional governance arrangements for the protection of the marine environment

Strategy 2: Enhance the regional governance arrangements for sustainable fisheries

Strategy 3: Establish and operationalize a regional policy coordination mechanism for ocean governance with initial focus on shared living marine resources

Strategy 4: Enhance the governance arrangements for ecosystem-based management of reefs and associated ecosystems (e.g. seagrass beds, mangroves, reef slopes and coastal lagoons)

Sub-Strategy 4A: Enhance the governance arrangements for implementing an ecosystems approach for spiny lobster fisheries

Sub-Strategy 4B: Enhance the governance arrangements for implementing an ecosystem approach for the Queen Conch fisheries

Strategy 5: Enhance the governance arrangements for implementing an ecosystem approach for pelagic fisheries

Sub-strategy 5A: Enhance the governance arrangements for implementing an ecosystem approach for flying fish fisheries

Sub-strategy 5B: Enhance the governance arrangements for implementing an ecosystem approach for large pelagic fisheries

Strategy 6: Establish governance arrangements for implementing ecosystem-based management of the Guianas-Brazil continental shelf

2.5. Joint collaborative work, gaps and thematic work areas that could be addressed by the new RFMO

2.5.1. Memorandum of Understanding

In January 2016, WECAFC, OSPESCA and CRFM signed a Memorandum of Understanding (MoU), which formalizes the arrangement between the three organisations for improved cooperation and coordination. This MoU aims at enhancing the regional governance for sustainable fisheries. Specifically, this MoU aims to formalize an interim arrangement to facilitate, support and strengthen the coordination of actions among the organisations for sustainable fisheries in the Western Central Atlantic region.

The objectives of the collaboration are:

1. To promote coordination and mutual cooperation in:
 - a. Areas identified as priorities in the CRFM-OSPESCA Joint Action Plan;
 - b. Areas and subjects covered by the Parties' technical working groups (such as lobster, Queen Conch, shrimp and ground fish, recreational fisheries, flying fish, FADs fisheries, sharks, Spawning Aggregations, and Illegal, Unreported and Unregulated Fisheries);
 - c. Areas and actions identified in the CLME+ Project and CLME+ SAP that are of relevance to the mandate/scope of work of the Parties, subject to their respective internal rules and procedures; and
 - d. Other areas of collaboration that contribute to the fulfilment of the objectives of the organisations in the field of promoting responsible fisheries in the Western Central Atlantic.
2. To collaborate to ensure a free flow of mutually useful information (including data) concerning fish stocks, fisheries activities and the Caribbean and North Brazil Shelf Large Marine Ecosystems.
3. To facilitate the work among the Members of the Parties towards harmonization of their respective policy and legal frameworks for fisheries, based on the best available science and information, as well as international standards and best practices.
4. To cooperate on relevant scientific and fisheries management projects of mutual interest.
5. To establish reciprocal observer arrangements according to their respective internal rules and procedures.
6. To share reports of their sessions and meetings of their subsidiary bodies and projects that are relevant for each other's work.

The WECAFC Secretariat will coordinate the implementation of the MoU in close cooperation with the other Parties and the CLME+ Project Coordination Unit. However, the Parties may agree amongst themselves on another lead coordinator of the interim fisheries mechanism. The Parties

will hold regular meetings to plan, coordinate and review the progress made in the execution and implementation of the MoU.

The first year work plan of this MoU foresees activities in the field of data collection improvements, joint work on Queen Conch, lobster, flying fish, reef fisheries, and pelagic fisheries. In addition, the three organizations will support the reduction of IUU fishing, support a finance mechanism for the various interventions needed, and facilitate an analysis for a RFMO mechanism covering the Central Western Atlantic. Already before the formal MoU was signed, the collaboration between the various organizations operating in the WECAFC showed improvement. In 2012 at WECAFC 14 the first joint working groups were established and in 2013, OSPESCA and CRFM signed a MoU on Cooperation. All working groups on species and fishing methods have carried out joint activities already, and advised on the evaluation of the existing fish resources and for their exploitation. The CLME+ Project has been instrumental in facilitating the collaboration process and the working arrangements for a number of these WGs.

Another important point of collaboration between OSPESCA and CRFM is the St. George's Declaration on Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster (*Panulirus argus*). In fact, this declaration and the philosophy behind it originates from the OSPESCA Regional Regulation OSP-02-09 for the Regional Management of the Caribbean Spiny Lobster Fishery, which establishes harmonic and simultaneous measures for the regional management of the fishery of Caribbean Spiny lobster (*Panulirus argus*) and supported through the CLME Project. At WECAFC 16 the main lobster management measures from CRFM's declaration and OSPESCA's Regulation will be discussed for extension throughout the region via a WECAFC recommendation.

2.5.2. Joint Working Groups

The Working Groups that were established or confirmed by the 14th session and the 15th session of the WECAFC Commission in 2012 and 2014 are the following:

- OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean Spiny Lobster
- WECAFC/OSPESCA/CRFM/CFMC Working Group on Recreational Fisheries
- CFMC/OSPESCA/WECAFC/CRFM/CITES Working Group on Queen Conch
- CRFM/WECAFC/JICA/IFREMER Working Group on fisheries using FADS
- CRFM/WECAFC Working Group on flying fish in the eastern Caribbean
- WECAFC Working Group on the management of deep-sea fisheries
- CFMC/WECAFC Spawning Aggregations Working Group
- WECAFC/ IFREMER/CRFM Working Group on Shrimp and Groundfish in the northern Brazil-Guianas shelf
- CRFM/WECAFC/JICA/IFREMER Working Group on Fisheries using FADS
- Regional Working Group on Illegal, Unreported and Unregulated fishing (RWG-IUU)

The joint working groups that have been established by WECAFC 14 (2012) and WECAFC 15 (2014) have contributed tremendously to exchange of information on fisheries resources and the fisheries activities in the region and to the generation of fisheries advice in support of management and decision making by WECAFC, CRFM and OSPESCA members. Below some main outcomes of WGs are described. It is apparent that there is an important ongoing collaboration among the three RFBs, and other organizations/projects such as CFMC, CERMES, CLME+, and IFREMER. The joint activities especially during the last two years, after the revival which was fostered by the

15th session of WECAFC, were very fruitful, resulting in various management plans, ready for adoption by WECAFC 16 and others being prepared for WECAFC 17.

OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean Spiny Lobster

The first meeting of this Working Group was held in Panama City in October 2014, and was sponsored by the USA. It has to be considered however that before this formal Working Group meeting various FAO, CRFM and OSPESCA/CLME meetings on the assessment of the spiny lobster resource in the region had been convened. The meeting compiled and reviewed national catch and effort data, stock assessment methodologies and management measures for Caribbean spiny lobster. The country presentations and the FAO/CRFM report presented provided important inputs to this discussion.

The meeting noted an overall improvement in data collection and management, with most countries now having the capabilities to carrying out stock assessments. The state of the stocks appears to have improved compared with 2006, but still many countries report “unknown” stock status. However, fisheries policy-and decision makers were urged to take concrete action to further improve management practices throughout the region. The meeting recommended that technical management measures be embedded in a broad regional management plan addressing ecological, social and institutional issues for adoption by WECAFC 16. The meeting was in favour of standardizing available data and information for joint assessment and comparison purposes.

The meeting recommended that joint regional stock assessments should be made through OSPESCA, CRFM and WECAFC in order to get a true picture of the situation.

WECAFC/OSPESCA/CRFM/CFMC Working Group on Recreational Fisheries

The 1st Workshop on the preparation of a billfish management and conservation plan for the Western Central Atlantic, was held in Ft. Lauderdale, Florida, on 19-20 March 2013 under the aegis of the WECAFC/OSPESCA/CRFM/CFMC Working Group on Recreational Fisheries. The 1st meeting prepared the Caribbean Billfish Project for World Bank funding and discussed regional management measures. The 2nd Meeting of the WG was held in Panama City in November 2015.

Preliminary findings of six field and desk studies were presented and discussed on the status of Caribbean billfish stocks and fisheries, the value of billfish recreational and commercial fisheries, on rights based approaches in recreational and commercial fisheries, the national legal frameworks for fisheries in the Caribbean and on the application of the WECAFC Manual on Assessment of the Economic Impact of Recreational Fisheries in The Bahamas and Martinique. Other presentations included in the report comprised the first outline of the table of contents, and of possible regional management measures, to be included in the Caribbean Regional Billfish Management and Conservation Plan. The report describes the selection procedure of the two pilot countries to test and validate co-management arrangements and right based approaches, and participants revised the Terms of Reference of the Working Group on Recreational Fisheries and elected its Convener. The accomplished work by the WG was done under the guidance and supervision of FAO's WECAFC with the support of the Caribbean Billfish Project, financed by the GEF/World Bank . The WG prepared in early 2016 a draft Billfish Management and Conservation Plan, which will be passed through the Interim Coordination Mechanism review and adoption process for eventual regional endorsement by WECAFC 17 and ICCAT. The Working Group also contributed to the Establishment of a Consortium for Billfish Management and Conservation (CBMC) in 2016 in which CRFM, OSPESCA, FAO/WECAFC, CNFO, CI and IGFA are partnering.

CFMC/OSPESCA/WECAFC/CRFM/CITES Working Group on Queen Conch

This working group held its second meeting in Panama, in November 2014. The meeting followed up on decisions by the sixteenth meeting of the Conference of Parties of CITES and a recommendation from WECAFC 15. The meeting reviewed a draft Regional Queen Conch Management and Conservation Plan with 26 potential fisheries management measures, and determined which measures will contribute most to the sustainability of the stocks and livelihoods of those involved in Queen Conch fisheries in the region. The meeting reached expert agreement on the use of regional harmonized conversion factors for the various degrees of processing of conch meat and on a format for non-detriment findings (NDFs) assessments.

The meeting also updated the Terms of Reference of the Working Group and prepared a new work plan. The conclusions and draft recommendation from the Working Group was reviewed by the Scientific Advisory Group and has been forwarded important meetings of partner agencies and to the sixteenth session of WECAFC for their endorsement. In 2015 the Regional Queen Conch Management and Conservation plan was finalized by the WG and reviewed by members of the three RFBs. In 2016 the regional plan was endorsed by OSPESCA and CRFM and will be finally reviewed and endorsed by WECAFC 16. The WG meeting was facilitated by the Caribbean Fisheries Management Council, CITES and FAO.

CRFM/WECAFC/ JICA/IFREMER/ Working Group on Fisheries using Fish Aggregating Devices (FADs)

The Working Group was established in 2001 and changed title leadership and membership various times. It endeavors to have a multidisciplinary approach to sustainable fisheries development by testing an approach by the fishery (fishing gear, location and targeted species) rather than the resource.

The WG developed from 2014 onwards various manuals on best practices on FADs design and deployment, fish quality and marketing, resources and business management strategies. Some of the manuals are completed and others are under development (by CRFM) as well as an Internet site (<http://wwz.ifremer.fr/carafad>) dedicated to the sustainable development of moored FADs. The draft FAD management plan requires finalization, review and endorsement at the CRFM level. Currently the WG priority is to provide technical support to fishers to build and to set up their FADs safely to better control / record FAD location and improve their data on fishing effort and catches.

CRFM/WECAFC Working Group on Flying fish in the Eastern Caribbean

The effort of this WG resulted in the drafting of the management plan for the flying fish which was adopted by CRFM Ministerial Council in 2014. The management plan was prepared with the assistance of FAO/WECAFC, the CLME Project and CERMES-UWI. The management plan is being implemented by some of the CRFM members for which flying fish is relevant. It was translated in French with support from CLME+ and passed for WECAFC 16 endorsement.

The WG supports the regional and national level implementation of activities outlined under the CLME+ project on EAF for Eastern Caribbean Flying fish. The WG also monitors the implementation of the Flying fish FMP.

CFMC/WECAFC/OSPESCA/CRFM Working Group on Spawning Aggregations

This WG met in Miami, USA (29-31 October 2013), recorded reduced numbers of fish in many aggregations and the relatively smaller size of most remaining aggregations. Smaller aggregations of adults are producing fewer and fewer fish to replenish the region's fisheries. Using scientific methods and the best scientific information available, the status of Nassau Grouper (along with Goliath Grouper and several other species) stocks in the Wider Caribbean Region can be considered "overexploited" and some stocks can even be regarded as "depleted". The two groupers are already observed to be threatened with extinction if such trends continue, according to the IUCN Red List of Threatened Flora and Fauna. The WG asserted that it is vital to maintain healthy groupers and snapper fisheries in support of food security and to recognize the social and economic value of these fisheries for coastal communities in the region. The WG called for a regional closed season and concerted action by the range states of these fish species and recommended to WECAFC, CFMC and the SPAW (Specially Protected Areas and Wildlife) Protocol action to stop further declines. WECAFC 15 agreed on a regional closed season for Nassau Grouper, which started in December 2014. The Working Group also produced in 2015 advice to the USA in support of ESA listing of the Nassau Grouper.

WECAFC/IFREMER/CRFM Working Group on Shrimp and Groundfish in the northern Brazil-Guianas shelf

This WG has been functioning since the 1980s in different forms and compositions. The WG provided over the years highly valuable advice for management. In recent years its work was supported by the CLME project, which led to uptake of EAF and a trans boundary diagnostic analyses (TDA). In 2015 WECAFC organized a Workshop on Investing in Ecosystem-based shrimp and groundfish fisheries management of the Guianas –Brazil shelf, which was held in Barbados, on 7-8 September 2015. The Workshop was the 1st meeting of the new joint Working Group of the WECAFC, CRFM and the IFREMER. The Inter-American Development Bank (IADB) supported the workshop. The 35 experts attending discussed the status of the shrimp and groundfish stocks, investment options for these fisheries in the sub-region and opportunities to harmonize fisheries management measures that would increase financial and environmental sustainability of the sector.

Recommendations were made to increase collaboration in stock assessments of the fish and shrimp resources between the countries, to build capacity to carry out the necessary analyses in support of fisheries management decision making, to develop a regional plan of action to combat illegal, unreported and unregulated (IUU) fishing as well as a sub-regional shrimp and groundfish fishery management plan for the Northern Brazil-Guianas Shelf countries, to finalize a general investment plan and to assist the countries in conducting the necessary feasibility studies for the preparation of full-fledged, location specific fisheries investment proposals.

In recent years the members of the WG also assisted in the preparation of the GEF funded FAO project on "Sustainable management of bycatch in Latin America and Caribbean trawl fisheries" (REBYC-II LAC) which was approved in April 2015 and held its inception workshop in Barbados on 9-12 September 2015. The findings and recommendations of this project will be discussed by the WG and disseminated regionally by the WECAFC to allow all members to benefit from the project. The WG will, with the support of the REBYC II LAC and CLME+ projects continue its work on capacity building for stock assessments, fisheries management and MCS in the participating countries in the coming years.

2.5.3. Gaps in joint activities

The above list shows the important joint scientific and technical activities carried out by the three RFBs, and the important policy decisions, which have been made based on the scientific recommendations. However, the main gap is again the fact that the main fish producing countries in the WECAFC area, the decisions by OSPESCA or CRFM are not binding as the large fish producers in the region do not belong to these RFBs. The overexploitation of Nassau grouper, to mention just one species, will not be addressed adequately, simply because a binding instrument for the Wider Caribbean region is missing.

Another important point of consideration is that despite the MoU between the organizations, and good will of collaboration in these times of reduced international assistance to the Caribbean, it is likely that there will be fewer project resources for the three RFBs. Ideally if the three organizations would be further linked and their functions should be rationalized (WECAFC with RFMOs functions) the resources could be better coordinated and more wisely distributed among the stakeholders and RFBs in the region. Scientific advisory functions and some capacity building funds could be largely channeled through CRFM and OSPESCA and MCS/compliance related contributions could be largely dealt with by WECAFC, for example.

The other important gap of joint activities is for those species of less economic importance in the region, such as small pelagic fish, reef fish, bivalves, sea cucumbers and other crustaceans²³. These species are important for local food security, but are generally not well covered in national statistics and not considered by the established WGs, which concentrate mainly on commercially most important species with a focus on species that are important for export earnings.

The other gap of collaboration is with regard to the implementation of the Small Scale fisheries guidelines (SSF). At OSPESCA and CRFM level, some data and knowledge on SSF fisheries is collected, but the regional overview is missing, which would be beneficial to the discussion on user rights in terms of allocating of the resource between SSF and large scale, and recreational fisheries.

An additional area of collaboration, which is presently not covered includes hygiene control and SPS measures for export of fisheries products. CRFM is in the forefront of these activities implementing an EU funded project since 2015. Here it has to be considered that stringent rules exist for the USA and for the EU, but also intra-regional trade is increasing, and each country applies its own hygiene control laws, not harmonized in anyway. One additional problem of the national laws for food control is that they are generally under the Health Ministry, and thus dialogue is difficult for fisheries organizations.

Only a regional organization could assist the smaller SIDS members of WECAFC to have an efficient system of quality and safety control in order to produce fishery products that meet international and export market requirements. The IUU regulation as being implemented by the EU is yet another area where further regional collaboration could strengthen the standing of small countries.

Other areas that are presently insufficiently covered in terms of regional fisheries collaboration in the Western Central Atlantic relate to the collection and analysis of fisheries data and statistical information, where countries should start to report directly to the RFMO, monitoring the implementation of recommendations and measures, and Monitoring, Control and Surveillance

²³ Not lobster nor shrimp.

(MCS), regional fishing vessel register and IUU vessel list, etc. Also the private sector, CSOs and NGOs that are involved in fisheries and represent key stakeholders have currently only the possibility to participate as observers and as experts in WGs. Allowing these stakeholders more active involvement in planning, decision making and management processes, in line with the EAF, could facilitate uptake and implementation of RFB measures.

2.6. Summary and conclusions

The collaboration between the organizations operating at sub- and regional level in the fisheries of the Caribbean has been overall good and fruitful. The collaboration has strengthened in recent years, which is appreciated by the members of the three RFBs. Information exchange, joint capacity building, management planning and advice provided by the WGs has benefited decision making processes at sub-regional and regional level. The collaboration between the secretariats of the three RFBs is good, and there is an institutional level commitment that contributes to the positive relationship.

The main issue is that fisheries management decisions, as they can be taken by OSPESCA and the CRFM, have limited impact if they are applied only by members of these organizations. As will be shown in detail under the chapter 3, there are several shared stocks where the majority of the catch takes place outside the mandate areas of OSPESCA and CRFM, and where any true management action can only be taken at a RFMO level.

The management of the tuna resources is an exception, as there is an RFMO already established and operational: ICCAT. However, there is no evidence to include that the management and conservation status of these species is in significantly better state than those species not under an RFMO. For several member countries of WECAFC the membership fee of ICCAT is considered too high, in view of their limited catches of tuna. Some cooperative action by a strong RFMO could pave the way to get these members involved in ICCAT and to support implementation of the decisions of this tuna-RFMO. A joint working group with ICCAT on large pelagic in the Caribbean may be beneficial to the countries as well, following the practice of the General Fisheries Commission for the Mediterranean (GCFM) and ICCAT collaboration.

An additional area of collaboration, which is presently not covered includes hygiene control and SPS measures for export of fisheries products. Other areas that are presently insufficiently covered in terms of regional fisheries collaboration in the Western Central Atlantic relate to the collection and analysis of fisheries data and statistical information, monitoring the implementation of recommendations and measures, and Monitoring, Control and Surveillance (MCS), regional fishing vessel register and IUU vessel list, etc.

3. Present status and management of shared stocks of economic relevance

3.1. General observations

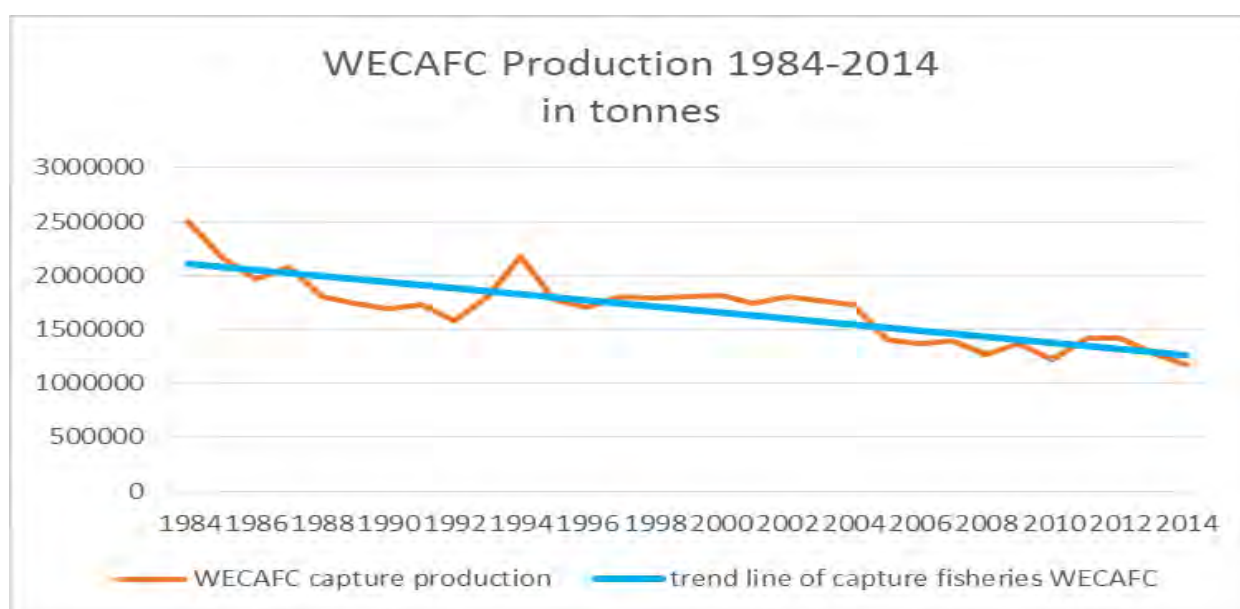
The WECAFC area supplies fish and fisheries products for an estimated 94 million people. The WECAFC area represents 1.6% of total world capture fisheries production; in the year 1984 this share was more than 3%. Many commercially targeted fish stocks are overfished or fully exploited

at present. Main producing countries are USA, Mexico, Brazil and Venezuela. The production trend line shows a continuous downward trend for the production, with no end in sight.

The WECAFC area is a net importer of fishery products. IUU fisheries is estimated to be 20-30% of the recorded catch. Fisheries is an important creator of employment, with an estimated 1.3 million fishers and an estimated 4.5 million people depending directly or indirectly on the sector for their livelihoods.

In the following paragraphs five shared stocks (Queen Conch, spiny lobster, dolphinfish, sharks and shrimp/sea bob) are described in detail, which are the stocks with the highest economic value and truly shared among the WECAFC countries.

Figure 4: WECAFC total production



Source: FISHSTAT J

3.2. Queen Conch

3.2.1. Main players and production

The Caribbean Queen Conch (*Strombus gigas*) is a gastropod belonging to the Strombidae family. It inhabits the Neotropical Atlantic waters of Bermuda, southern Florida, southern Mexico, the whole Caribbean region, Venezuela and Brazil. The Queen Conch is easily recognizable by its large pinkish shell, reaching a length of 30 cm and weighing some 2 kg. The meat is sold either fresh or dried, and used to prepare salads or chowder. The shells are utilized in pottery and jewellery. The Queen Conch fishery has a long tradition in the Caribbean region, however the commercial fishery has only been expanding since the mid-late seventies. This has been due to the relatively recent increase in demand for conch meat both within the Caribbean and in foreign markets, particularly in the USA. The growing tourism industry has also increased the demand for shells and jewellery.

The Queen Conch range states include 36 countries and overseas territories. In terms of volume, value and socioeconomic significance, *S. gigas* is the principal species regulated under CITES in the Caribbean.

In 1992, continuing concerns over the species' overexploitation led the CITES Members to list the Queen Conch under CITES Appendix II. Upon request of the Caribbean Queen Conch range States, concerned about persistent illegal activities and enforcement problems, the CITES Animals Committee, at its 17th meeting (held in Hanoi, Vietnam, 2001) recommended the inclusion of the species in the Review of Significant Trade once again.

Table 1 Queen Conch catches by main producing countries²⁴

Country	1980	1985	1990	1995	2000	2005	2010	2013
Nicaragua					298	1149	5970	9857
Bahamas	2415	4058	2513	3705	5003	5115	5273	5642
Jamaica			6000	15998	10000	4800	3300	4125
Antigua and Barbuda			94	311	284	477	690	4000
Turks and Caicos Is.	4200	5685	3195	7148	5525	5103	5286	3630
Belize	1234	1406	1254	1026	1745	2136	2395	3060
Total (incl. others)	11458	19728	26762	43514	38263	27043	29176	39169

Source: FISHSTAT J

Total Queen Conch production reached a peak of production in 1994 with 46 500 tonnes, to decline to a low of 22 000 tonnes in 2007. As Queen Conch is subject to some management measures at national level, production has recovered in recent years to almost 40 000 tonnes in 2013. At present the main producer of Queen Conch is Nicaragua with almost 10 000 tonnes, followed by Bahamas and Jamaica.

3.2.2. Management systems

A number of Caribbean countries have been implementing their own national Queen Conch fishery management programs, in part in response to advances in coordinated regional efforts in recent years. CRFM has been in the forefront in regional management actions, conducted detailed country assessments.

Countries like Bermuda, Caribbean Netherlands, USA, Mexico and Venezuela have kept their Queen Conch fisheries largely closed. Colombia has dramatically reduced its fishing effort, eliminated industrial fishing and has conducted stock enhancement pilot projects on banks with low Queen Conch densities. Belize has established a series of no-take marine reserves and only allows free diving. Cuba delimited only six fishing areas where the Queen Conch fishery can legally operate and not all are open every year or at the same time. Jamaica substantially reduced its

²⁴ Honduras has not reported its catches of Queen Conch in recent years to FAO and therefore the country does not appear in the list in this table. It is however known that Honduras has been one of the main exporters of Conch.

landings from Pedro Bank, instituted water quality surveys and now uses control rules to link production to abundance levels determined by periodic survey. As a result of the CITES Review of Significant Trade Process, Honduras has implemented a monitoring program based on a 210 tonnes per year scientific quota, which, although measured as clean meat seems effective in limiting their exports to this amount. It is however clear that there is substantial IUU fishing taking place for Queen Conch on the Pedro Bank and in the waters of The Bahamas, which is destroying efforts by Jamaica and Bahamas towards sustainable queen conch stocks.

To control Queen Conch fishing in the Caribbean region, countries variably regulate the minimum shell length; the minimum unclean or clean meat weight, impose restrictions on fishing techniques, establish permanent or temporal closed areas or seasons, and/or determine annual catch and export quotas. The Organization of Eastern Caribbean States (OECS) succeeded in harmonizing rules (i.e., minimum shell length of 178 mm and 225 g unclean meat weight) as part of the 1991 OECS Common Fisheries Surveillances Zones Agreement, which is designed to improve regional cooperation between member states.

The CITES listing requires that a Management Authority of an exporting State issue an export permit. This certifies that the specimens to be traded were legally acquired (determined by the Management Authority of the Exporting Party), and that exports are not detrimental to the survival of the species). These conditions are laid down in Article IV of the Convention. The Significant Trade Review, conducted by the CITES Animals Committee, is an external auditing process to ensure compliance with CITES requirements. It involves revision of scientific and management information, consultations with range States, and the implementation of targeted, country-specific recommendations. *S. gigas* has been included in the Review twice (1995– 1999 and 2001–2005). The major exporting countries undertook considerable efforts to meet the Review recommendations, contributing to considerable and lasting changes in Queen Conch trade policies in Belize, Colombia, the Dominican Republic and Jamaica, for example; and resulting in trade suspensions for Grenada and Haiti. The Review served as a catalyst for funding and technical support, research efforts, and improved understanding of the ecology and management of the species.

As can be understood from section 2.5.2 it is clear that CFMC, OSPESCA, WECAFC and CFRM, have actively supported regional cooperation and coordination of Queen Conch management and utilization. There remains a need to support and build capacity, improve enforcement of fisheries management and trade provisions, and enhance regional approaches towards sustainable use of and trade in the species.

3.2.3. Gaps and shortcoming with regard to management

The Queen Conch working groups prepared in 2014 and 2015 a regional Queen Conch Fisheries Management and Conservation Plan, which incorporates the following management measures:

1. Harmonized and simplified categories of Queen Conch meat conversion factors.
2. Improvement of catch and effort monitoring programs.
3. A synchronized regional closed season.
4. Non-Detriment Finding (NDF) for export of Queen Conch meat and its by-products.
5. Licensing of all Queen Conch fishers, processors and exporters.
6. Adoption of stricter regulations on autonomous diving techniques.
7. Coordination in patrolling.

8. Extended use of satellite based VMS systems for boats with a length exceeding 10 meters.
9. Continuous education and outreach programs for stakeholders.
10. National level Queen Conch conservation and management plans.
11. Traceability of Queen Conch throughout the value chain.
12. Develop collaborative arrangements needed to generate habitat maps at the scale needed for better fisheries management.
13. Adoption of sub-regional mechanisms to evaluate the fishery potential of Queen Conch using fishery dependent and independent factors.
14. Progressive inclusion of co-management strategies.

The above measures address the main regional issues related to the Queen Conch conservation and sustainable harvests. Remaining gaps in management and conservation will be national level matters or will have to be dealt with at technical level by the Working Group in a next meeting. After endorsement of the Regional Plan by OSPESCA and CRFM at sub-regional level, WECAFC at regional level, and CITES at global level, the implementation of this plan will require capacity building, monitoring and a revision after some years.

The CLME SAP has identified Queen Conch management and conservation among its strategic priorities, but no funding under the CLME+ project was allocated in support of management of the Conch stocks.

3.2.4. Conclusions

The Queen Conch management has benefited from substantial attention from the Caribbean countries, assisted by trade measures (CITES listing) and regional scientific and technical collaboration under the joint WG. This seem to have led to improvement of the stock situation. The activities of all partners of the WG on Queen Conch CFMC, WECAFC, OSPESCA, and CRFM have resulted in a positive development of the resource situation. In fact, also the US-government took this standpoint and rejected in 2014 the petition by an NGO the WildEarth Guardians to list the commercially important Queen Conch as threatened or endangered under the USA Endangered Species Act (ESA). After a comprehensive status report for the Queen Conch conducted over two years using the best scientific and commercial information available, the US government authorities concluded that the species does not warrant listing at this time. The current situation however warrants that the Regional Plan requires implementation by all range states and that additional recommendations proposed to WECAFC 16 are implemented by the members.

The current scientific evidence available shows that the queen conch is a true regional resource, with sources and sinks that are shared by many of the WECAFC member countries. Interdependence of the members on each other's conservation and management measures seems large.

The IUU fishing of Queen Conch as described above, in which fishers of various WECAFC member countries are involved, will require "neutral" technical and scientific advice. The availability of markets for iuu catch, the underlying weakness in MCS capacity, limited resources and assets, weak legislation and low sanctions/penalties, along with the lack of political will at the national level are the real challenges for tackling IUU fishing. If a sustainable stock impact is desired, then such advice can only be provided through clear and transparent systems established

under an RFMO, accompanied by binding measures that are to be monitored and enforced at regional level. CITES -trade related- decisions will not be able to do the trick alone.

3.3. Caribbean spiny lobster

3.3.1. Main players and production

The Caribbean spiny lobster (*Panulirus argus*) catches exceeded 40 000 tonnes in the year 2000 to decline to 31 600 tonnes in 2013. Caribbean spiny lobster landings are declared by 26 countries, but Brazil, Bahamas, Cuba, Nicaragua, Dominican Republic, USA and Honduras together accounted for more than 90% of production in 2013 (table 2).

Table 2. Caribbean spiny lobster catches (in tonnes)

Country	1980	1985	1990	1995	2000	2005	2010	2013
Brazil	6218	6929	9223	10817	6469	6927	6866	6726
Bahamas	2894	5513	5808	7750	9023	9278	9692	6088
Cuba	10567	13578	7957	9405	7478	5834	4458	4621
Nicaragua	1848	1159	717	2260	6180	3787	3690	4278
Dominican Republic	166	784	750 F	619	1286	958	1001	2542
United States of America	2959	1667	2606	2934	2571	1534	2570	2452
Honduras	2198	4065	4002	3771	2469	3321	3150	1657
Totals (incl. Others)	29117	36765	35239	41952	39969	36191	34234	31536

Source: FISHSTAT J

The Caribbean lobster fisheries is generally artisanal or small scale, with the exception of Honduras, Nicaragua and Cuba, where the fisheries are largely industrial. Traps and casitas cubanas are the main form of fishing devices, while diving (scuba, free and hookah²⁵) are the main forms of fishing. Gillnets and trammelnets are used in some countries but are illegal in others.

The total number of fishers involved in Caribbean spiny lobster fisheries can be estimated at 60 000 professional fishers plus more than 100 000 recreational fishers. In some areas the lobster fisheries are key to the economic livelihood of coastal communities, which do not have any other way of subsistence. The average production of lobster per small-scale commercial fisher is as little as 500 kg per year.

²⁵ compressor on board providing air through a hose to the diver

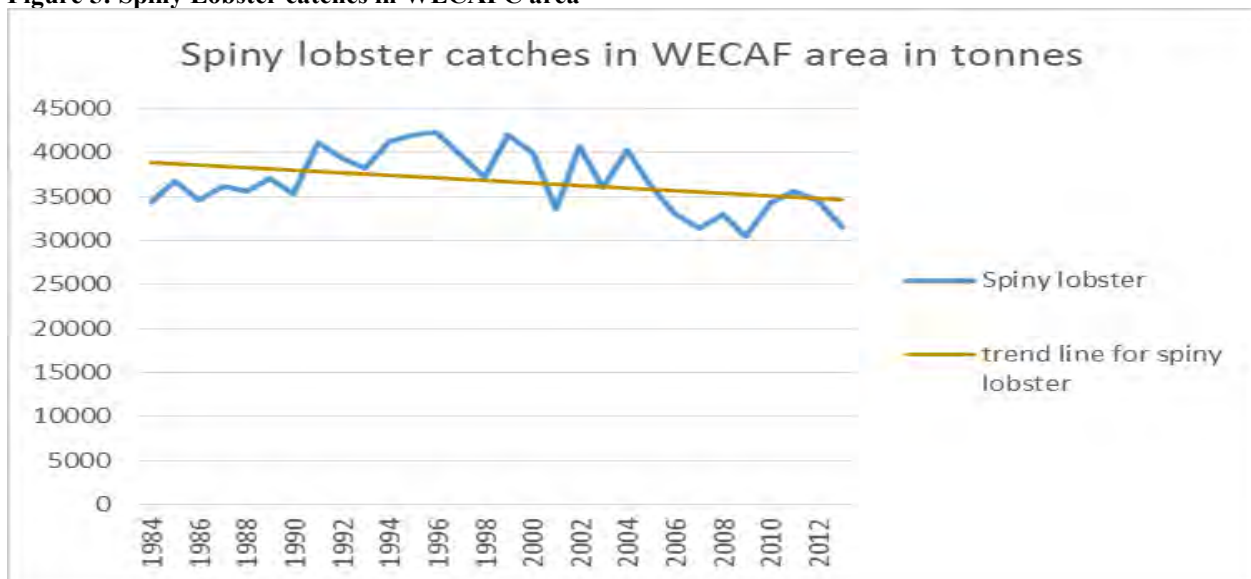
3.3.2. Present resource situation

The spiny lobster stocks are known to be under heavy exploitation in the region and to have been depleted in some areas. The fact that landings have been maintained at reasonably constant levels until recently probably reflects the fact that fisheries in some countries have progressively extended to deeper waters, for example in Jamaica, Dominican Republic, Honduras and Nicaragua.

The trend of spiny lobster catches is downward, as shown in figure 5. Given the limited progress in implementing sub-regional management and conservation measures, it is anticipated that the decline will continue in the coming years. Spiny lobster in the Yucatan and Quintana Roo region, Mexico, was estimated to be exploited at around MSY. Other experts declare that lobster populations in southern Mexico are overexploited. In the southeast of the United States of America, the latest assessment could not establish the status of lobster stocks, as the results of the assessment models were rejected by an external review panel.

An important issue that is often overlooked is the fact that there are several CRFM Member States with strong conservation and management programmes in place e.g. with minimum harvest sizes of 95 mm CL. The result is that significant quantities of lobster in size ranges that are taken by other states are not taken by these CRFM States. These CRFM States do not usually participate in the regional assessments because their catches may not be above the threshold established for inclusion. However, if the CRFM States in question applied lower minimum legal size (similar to the larger producers), then it is possible that their catches would be significantly larger.

Figure 5: Spiny Lobster catches in WECAFC area



Source: FISHSTAT J

In Jamaica, an assessment of the spiny lobster stock of Pedro Bank suggests the stock was not overfished and that current catches levels would not result in overfishing. These results were not conclusive, because of data limitations and poor reliability of the modelling results.

In Belize, the lobster stock was assessed to be halfway between fully exploited and overexploited. The total biomass, spawning biomass and recruitment declined as a result of high fishing mortality. Very similar results were found for the lobster stock in Nicaragua, where fishing mortality was found to be too high and exploitation rates were not sustainable. An assessment for Turks and Caicos Islands concluded that overfishing was occurring in 2005 and 2006. The assessment

provided baseline information for determining a TAC in 2007. An assessment of the spiny lobster fishery in Venezuela indicated that the stock was overexploited, and current biomass was estimated at 14 percent of virgin biomass. It should be noted that very few countries conduct their stock assessments with adequate frequency to determine sustainable harvest levels.

Table 3: Estimated status of Caribbean spiny lobster by country – based on the best available information.

Stock status	Countries
Under fished	None
Fully fished or stable	Anguilla, Antigua and Barbuda, Belize, Bahamas, Cuba, Mexico, Nicaragua
Overfished	None
Unknown	Brazil, Caribbean Netherlands, Dominican Republic, France, Honduras, Panama, United States of America

Source: Report of the First Meeting of The OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean Spiny Lobster , Panama City, Panama, 21–23 October 2014

3.3.3. Present management system²⁶

Most countries in the region have some type of management measures in place for Caribbean spiny lobster fisheries. OSPESCA member countries apply the common management system (OSP 02-09)²⁷ The exceptions are Nicaragua and Honduras, where the restrictions on free diving still have to be applied, as the social impact of these restrictions would be substantial and alternative forms of livelihood for the divers are difficult to find. Nicaragua and Honduras have formulated plans of actions both by themselves and with technical assistance. They have laws to regulate the activity, intergovernmental advisory groups and involve with fishers. In fact, there are alternatives forms of livelihood identified (even some of them proposed by Miskito's) but in the end, it has been a challenge to obtain the consent of the Miskito community to put in place the laws and plans.

In 2015, CRFM member countries signed the Grenada declaration on spiny lobster, which is a non-binding roadmap for closer sub-regional collaboration. The St George's Declaration on Spiny Lobster effectively harmonize the OSPESCA Measures and those of CRFM Member States. CRFM-OSPESCA Joint Action plan has relevance to lobster management cooperation

With regard to input management measures, closed seasons are a commonly used measure, ranging from 2 to 6 months. Only a handful of countries do not apply a closed season. In several countries, Caribbean spiny lobster can be caught only with traps. Harpoons and/or scuba diving are prohibited in many countries. The majority of countries also have some type of licensing for fishers or fishing vessels in place.

²⁶ Detailed information on present management systems for Caribbean lobster can be found in Report of the First Meeting Of The OSPESCA/WECAFC/CRFM/CFMC Working Group On Caribbean Spiny Lobster , Panama City, Panama, 21–23 October 2014, <http://www.fao.org/3/a-i4860b.pdf>, under Table A3.1 and Table A3.3

²⁷ 4 months off season (1 March - 30 June), 140 mm; and 5 ounce (4.5 - 5.5 ounces) weight, prohibited to take lobster that is berried, has eggs, spawn or had the berries, eggs, spawn removed; is moulting or has a soft shell; Filet or diced lobster tail meat; Inventory of existing stocks on 3 day after start of closed season, no scuba diving, limit of 2500 traps per vessel; escape door for traps; no traps in water during closed season

Quotas and territorial rights for Caribbean spiny lobster fisheries are not common, only Cuba, the United States of America and Nicaragua have total allowable catches (TACs) and the former two have Territorial Use Rights in Fisheries (TURFs) for Caribbean spiny lobster.

The countries apply a wide variety of output management measures for Caribbean spiny lobster. Generally, minimum sizes are required, but some countries also have maximum sizes. Several countries require that the species be landed alive, which helps the release if the size limits are not respected.

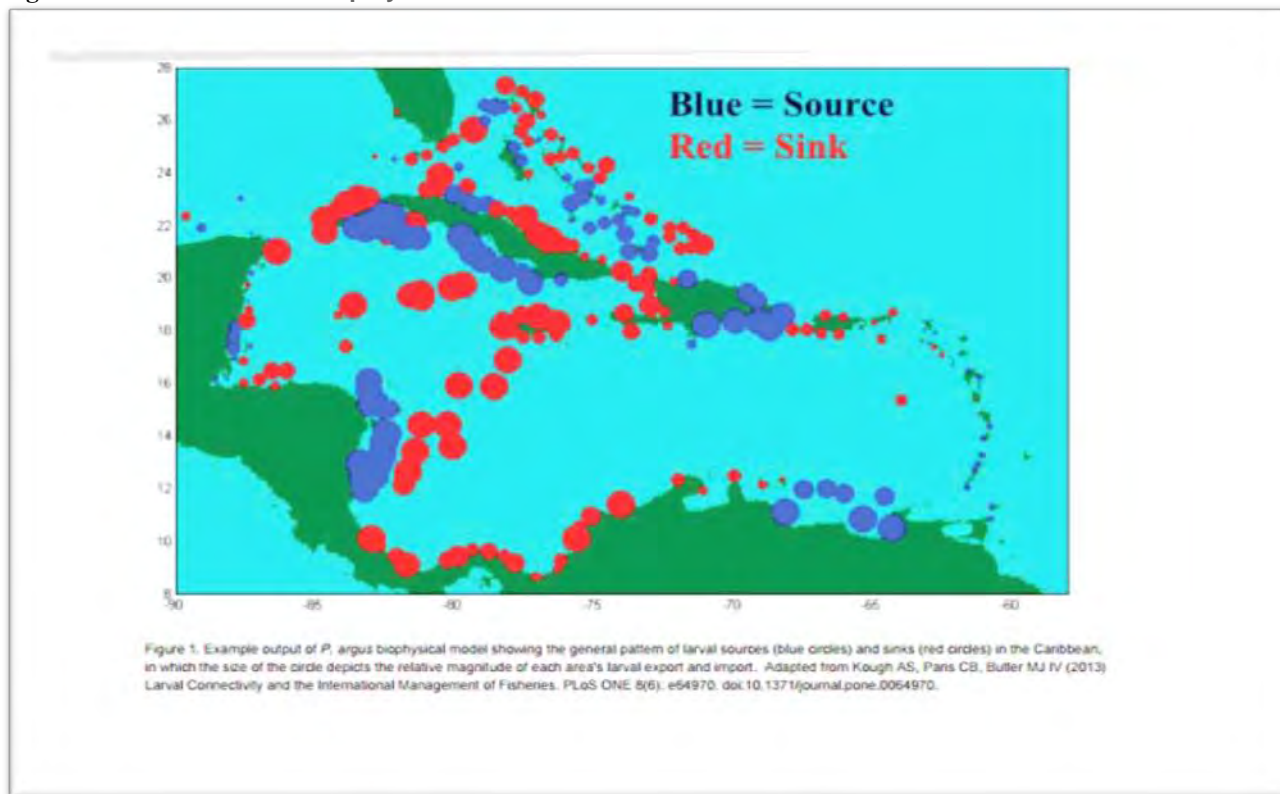
The CLME SAP has identified spiny lobster among its areas of work and OSPESCA has been assigned, within the Interim mechanism for sustainable fisheries, a coordinating role in the CLME+ project activities on lobster management and WG operations.

3.3.4. Gaps and shortcoming with regard to management

The findings of the First Meeting of the OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean spiny lobster, Panama City, Panama, 21–23 October 2014, admit that in the majority of countries (including Brazil, Caribbean Netherlands, Dominican Republic, France, Honduras, Panama, United States of America) the stock situation is unknown. The table on the various management measures applied for Caribbean lobster in WECAFC countries show that there is a confusing variety of management measures in place. Only OSPESCA countries have a common system which should be an example for all other WECAFC countries. Other countries outside OSPESCA and CRFM, such as France, Mexico, Brazil, Venezuela, and the USA, could highly benefit from a common management regime. The WG also mentioned that there are very few stock assessments been carried out in the region; and those done are not harmonized.

During the First Meeting of The OSPESCA/WECAFC/CRFM/CFMC Working Group it became apparent that countries did not want to be identified as countries where the lobster stock is overexploited, as this could lead to market closures for the product. Scientists in the meeting also underlined that Caribbean spiny lobster is a true shared stock, with common breeding grounds and movements in the Caribbean. Figure 6 derived from the Report of the First Meeting of The OSPESCA/WECAFC/CRFM/CFMC Working Group On Caribbean Spiny Lobster, Panama City, Panama, 21–23 October 2014 clearly shows the interconnectivity of the lobster resource in the Caribbean.

Figure 6: Source and sink of Spiny Lobster in WECAFC area



Source: Report of the First Meeting of The OSPESCA/WECAFC/CRFM/CFMC Working Group On Caribbean Spiny Lobster, Panama City, Panama, 21–23 October 2014

What is evident is that the catch has gone down by about 25% since the turn of the century. Expressed in money terms, this represents about an economic loss of almost USD 100 million in 2013, when compared to the production in 2000. During the 13 years since the turn of the century, about 70 000 tonnes less of lobster were produced, representing an estimated economic loss of USD 700 million to the region.

The difficulty in applying the prohibition of scuba diving for lobster production in Nicaragua and Honduras is another important gap for the lobster management. International attention on scuba diving and its impact on divers' health is growing in the top lobster market, the USA. In 2013, a pledge was made by the US lobster dealers and importers to ban scuba diving and promoting alternative ways of harvesting lobster. 10 companies signed onto this initiative, which targets especially the Honduran lobster production. Most importantly, Red Lobster, a well-known restaurant chain in the USA, which buys around 40% of the lobsters exported from Honduras joined very actively this initiative and has observers on the ground ensuring that only scuba diving free lobster is reaching the Red Lobster restaurants in the USA. Various countries in Latin America have since several years started to promote scuba free lobster production. The experience from these activities are mixed, and lessons learned from these experiences need to be documented and disseminated among stakeholders, involved in lobster from Honduras and Nicaragua. In some areas, the scuba diving ban is disregarded and lobster is still taken with scuba, despite the prohibition.

3.3.5. Conclusions

The ongoing decline in lobster catches and the limited stock assessments, combined with evidence that the resource is truly regional, require that management measures for lobster fisheries and conservation are taken at the regional level. It is further clear that such measures require close

monitoring and adaption as necessary. The continuing economic loss to the Caribbean society caused by the current fragile management regimes can only be turned into profits for the region again if binding measures will be agreed and applied. Haphazard approaches have proven to be inadequate in improving the stock status and offering a future for lobster fisheries. With the assistance of an RFMO the countries in the region would be in a better position to ensure the long-term sustainability of the lobster stocks and fisheries in their EEZs, build capacity for stock assessments and management and enable the sustainable development of the lobster value chain.

Without regional collaboration through an RFMO it will be impossible to rebuild this important regional stock and current levels of economic losses will continue. The lack of an RFMO would cost the region hundreds of millions of dollars over the next decade.

3.4. Dolphinfish

3.4.1. Main players and productions

Total production of dolphinfish (mahi mahi) was between 3 500 and 4 600 tonnes in recent years. Venezuela is the main producing country with about one third of the total production in the WECAFC area (table 4). The catch is really not very well known, as about half of the production recorded for 2013 was estimated, based on previous years' production or on other knowledge. Dolphinfish is an important target species for sports fisheries, and is not subject to catch-and-release regulations from the large game fishing associations (TBF and IGFA). Therefore, a substantial share of the catch is not appearing in the current production statistics. The current trend in the Eastern Caribbean towards increasing the number of FADs in small-scale fisheries is showing to lead to substantial increases in catches of dolphinfish by some countries and territories.

Table 4: Dolphinfish production

Country	1980	1985	1990	1995	2000	2005	2010	2013
Antigua and Barbuda	...	...	...	...	...	13	2	25
Barbados	619	1278	906	758	728	357	465	514
British Virgin Islands	...	...	...	2	1	1	1	1
Cuba	-	-	-	-	386	339	32	...
Dominica	...	...	...	...	...	53	180	107
Dominican Republic	205	60	230	89	255	163	259	142
Grenada	31	37	137	182	167	86	132	148
Guadeloupe	650	680	700	700	700	700	700	700
Martinique	355	327	185	350	250	200	130	100
Mexico	5	18	12	88	308	205	2	2
Puerto Rico	...	...	...	...	111	39	44	36
Saint Kitts and Nevis	...	...	...	3	26	9	11	74
Saint Lucia	...	...	...	200	552	198	352	387
Saint Vincent/Grenadines	-	-	-	-	-	45	71	90
Suriname	...	...	...	...	...	...	...	515
US Virgin Islands	...	...	...	...	...	23	32	18
United States of America	78	139	718	980	416	257	266	256
Venezuela, Boliv Rep of	...	...	50	447	141	1843	900	1500
Totals - Quantity (tonnes)	1943	2539	2938	3799	4041	4531	3579	4615

Source: FISHSTAT J

Dolphinfish is an excellent food fish, and very important for food security in the Caribbean islands and Venezuela. Only a small part of the landings is exported. Dolphinfish is not identified through any trade codes, therefore trade of this species goes unrecorded.

3.4.2. Present resource situation

The present resource situation is virtually unknown from the catch statistics, the resource does not seem to be overexploited. CRFM did some resource assessment work. The life cycle of dolphinfish is short and its catchability in the Eastern Caribbean is highly affected by the occurrence of Sargassum seaweeds. In years with lots of Sargassum it appears that various fisheries catch relatively more juvenile Dolphinfish, which may affect the resource status in the mid-term. The limited scientific information available on the size of the stock(s), spawning areas, migration patterns and life cycle and fisheries mortality rates makes it impossible to assign a stock status for the region.

3.4.3. Present management system

The dolphinfish fishery is currently not covered under any management regime in the WECAFC area. However, the CRFM Forum recently endorsed precautionary management measures for the dolphinfish to counter the landing of large numbers of juveniles associated with the sargassum seaweed. These will be presented to the Ministerial Council for approval in June 2016.

The CLME project carried out a governance assessment for large pelagic fisheries in the area in 2012, which included also dolphinfish, and some efforts were made by CRFM towards drafting a

sub-regional fisheries management plan. However, the catches in recent years did not trigger regional fisheries management interest among the WECAFC members so far. It seems that the management of dolphin fish fisheries is low on the priority list. The CLME Strategic Action Plan calls however under strategy 5B for increased attention to large pelagic conservation and fisheries management.

3.4.4. Gaps and shortcoming with regard to management

The main gaps and shortcomings are the lack scientific information on the resource and of good fisheries production and trade statistics, which makes any assessment difficult. As the resource seem to be a real regional resource, the countries of the region that are involved in dolphinfish catches would need to increase their data collection efforts and stock assessment should be done at a regional level. The increase in FADs deployment, particularly in the Eastern Caribbean, could have an impact on the migration patterns of the species, according to some concerned scientists, but conclusive evidence on this matter is pending. The region wide adoption and implementation of the CRFM/WECAFC/CARIFICO/IFREMER Working Group' developed FADs fisheries management plan, could probably assist with making available the necessary information for analysis of this linkage between moored FADs and migration routes.

3.4.5. Conclusions

The dolphinfish resource is important for food security purposes in most Caribbean islands and is a target species for a range of small-scale and sports fisheries. It seems (from the limited scientific evidence available) to be a true regional resource, but management efforts at the various levels have been minimal so far. The fluctuations and increase in annual landings of the species seem to be based on the influx of sargassum (or not) and an increase in FADs deployment in the eastern Caribbean.

The limited attention given to research, development and management of the dolphin resource is not justified. On the other hand, without a stock assessment any investment in sustainable development of dolphin fish fisheries will be uncertain. In too many cases the laissez-faire approach has led to the sudden collapse of a fisheries. For a fisheries that is so important for food security in the region, a stock collapse would be a disaster.

The resource is of limited interest to ICCAT and most CRFM members, as evidenced by recent sessions of both. The current off-vessel value is approximately some 20 million USD/year in the WECAFC area, which is a significant underestimation. The value of dolphinfish for the sport/game fisheries sector is very high, but not (yet) assessed. The above described situation calls for regional attention by an RFMO into stock assessment and management of the dolphin fisheries resource.

3.5. Shrimp and sea bob

3.5.1. Main players and productions

Shrimp catches in the WECAFC area reached a peak of 217 000 tonnes in 2003 and have declined since though in recent years a certain levelling off of the downward trend can be observed. The main shrimp species produced in the Western Central Atlantic is the Northern brown shrimp (*Penaeus aztecus*) with a reported production in 2013 of 53 000 tonnes. This species has

experienced the most severe decline from almost 80 000 tonnes in 1990 to a low of 36 800 tonnes in 2010. The catches seem to have recovered slightly in recent years. The second major shrimp species, the Northern white shrimp (*Penaeus setiferus*) showed significant oscillations between 22 000 tonnes and 64 000 tonnes during the years under review.

Table 5: Shrimp and seabob catches in WECAFC area, by species

English	Latin	1980	1985	1990	1995	2000	2005	2010	2013
					(tonnes)				
Northern brown shrimp	<i>Penaeus aztecus</i>	60928	70852	78667	57107	62713	45315	36801	53044
Northern white shrimp	<i>Penaeus setiferus</i>	33784	44573	34104	39959	52280	52406	46754	41955
Atlantic seabob	<i>Xiphopenaeus kroyeri</i>	3612	6040	5030	11524	28608	26877	26414	34554
Penaeus shrimps nei	<i>Penaeus spp</i>	54744	44931	41610	46549	44817	32451	16818	11519
Northern pink shrimp	<i>Penaeus duorarum</i>	20136	15512	8432	11121	7161	8366	5732	4482
Natantian decapods nei	<i>Natantia</i>	...	100 F	1253	4648	3448	1878	1413	1138
Whitebelly prawn	<i>Nematopalae-mon schmitti</i>	...	...	...	...	1464	2553	526	685
Royal red shrimp	<i>Pleoticus robustus</i>	233	-	135	252	369	196	323	589
Rock shrimp	<i>Sicyonia brevirostris</i>	1747	924	3681	3848	3254	724	805	519
Totals – Quantità (tonnes)		175184	182932	172912	175008	204114	173570	135586	148485

Source: FISHSTAT J

The relatively lower valued seabob has experienced quite an important increase in recent years, to 35 000 tonnes reported for 2013. Seabob is really the only shrimp species in the WECAFC area that has experienced some increase in recent years, while other shrimp species have declined such as Northern pink shrimp (*Penaeus duorarum*) that declined from the peak level of 23 000 tonnes reached in 1977 to the 4 500 tonnes in 2013. Some of the decline can be found in the deliberate exit of vessels from shrimp fisheries due to (at the time of exit) high fuel prices and low world market price.

Table 6: Shrimp and seabob catches in WECAFC area, by main fishing countries

Country	1980	1985	1990	1995	2000	2005	2010	2013
				(tonnes)				
USA	116497	131919	125246	116658	129404	104127	89276	94230
Guyana	1974	3226	3864	10200 F	19329	18391	19066	24738
Mexico	27610	25476	23847	23435	21288	24479	12108	13452
Suriname	1921	1359	2070 F	2300 F	13518	12836	8808	9253
Totals (incl. Others)	175184	182932	172912	175008	204114	173570	135586	148485

Source: FISHSTAT J

The USA are by far the main shrimp and seabob producing nation in the WECAFC region, accounting for about two thirds of production. The share in production was even higher in the nineties of the last century, when it exceeded 72%. Guyana is now the second major producing country of shrimp and seabob in the region, with a production that has experienced continuous increase in recent years. Mexico on the other hand, lost half of its shrimp production, from a peak of

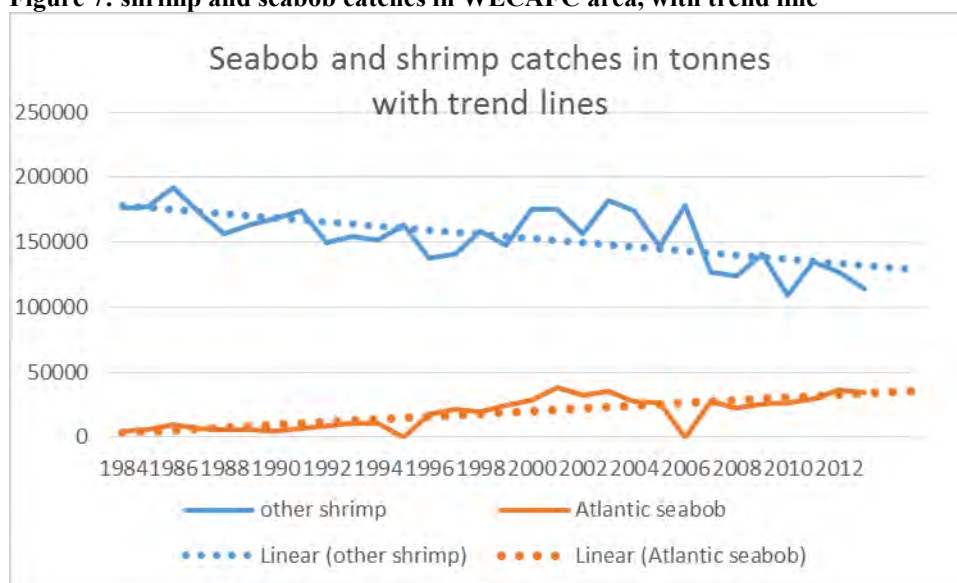
27 000 tonnes in the eighties to about 13 500 tonnes at present.

Suriname expanded its shrimp production in the nineties of the last century, with seabob catches peaking at 14 000 tonnes in 2003. At present the Suriname catch of this species has come down to 8 000 tonnes. Declines in shrimp catches were extremely severe for Venezuela, Colombia and Cuba, but also for distant water fishing nations, such as Japan and the Republic of Korea, which were involved in shrimp trawling in the region in the 1990s. The ban on trawling in some of the countries, notably Venezuela, led to significant reduction in production and income from fisheries in this WECAFC member state.

3.5.2. Present resource situation

Though the shrimp catches are important, the status of the resource is not well documented. In the Brazil- Guyana continental shelf area some shrimp resource assessments have been carried out in recent years. All other areas including the US Gulf of Mexico shrimp fisheries are not well monitored. CRFM carried out various scientific assessments of the resources, which were a reference point for the MSC certification of Suriname seabob.

Figure 7: shrimp and seabob catches in WECAFC area, with trend line



Source: FISHSTAT J

The latest publication by FAO on the resource situation²⁸ indicates that seabob and brown shrimp are fully exploited, while the pink shrimp and the red spotted shrimp are overexploited. No indications can be made for the white shrimp and the other *Penaeus* species caught in the region.

The trend line in figure 7 shows a steady decline in production of shrimp in the WECAFC area, for some species, such as pink shrimp this trend is even more downward. The prohibition of trawling in Venezuela obviously also impacted the performance of the shrimp catches in the area.

²⁸ FAO (2011) *Review of the state of world marine fishery resources*

3.5.3. Present management system

From the reports of the WECAFC/CRFM/IFREMER Working Group on Shrimp and Groundfish it becomes apparent that few national level fisheries management plans for shrimp are formally approved by the countries and that even less are actively implemented.

The USA has a shrimp management plan in place since 1981, which was amended several times. Mexico is looking now into establishing some management for its shrimp fisheries. At present the Mexican shrimp fisheries are an open access fisheries. The brown shrimp fisheries in Mexico seems to be fully exploited, while other shrimp resources in this country seem to be overfished. Suriname has a seabob plan for its trawl fishery, and its fisheries is MSC certified since several years.

Another important issue in shrimp trawling is the reduction of by-catch. In the USA all trawlers have some type of by-catch reduction device (BRD) on board. Also Turtle Excluder Devices (TEDs) are getting more common in the region. A great number of improvements have been made to reduce the impact of the shrimp fishery on the environment, including stock monitoring, bycatch reduction, area closures, and sea turtle nesting enhancement projects, but there are still areas for improvements in sustainability. In the case of Venezuela shrimp trawling was banned in 2007, which led to a decline from about 10 000 tonnes of shrimp caught by the country back in the nineties of the last century to only 2 000 tonnes at present.

FAO, from the WECAFC Secretariat, is implementing the REBYC II LAC project aimed at reducing by catch by the shrimp fisheries in selected Latin American countries, including Costa Rica, Mexico, Colombia, Suriname, and Trinidad and Tobago.

3.5.4. Gaps and shortcoming with regard to management

The most recent meeting of the WECAFC/CRFM/IFREMER Working Group and earlier shrimp Working Group meetings spent considerable time on discussing whether stocks of certain shrimp species were specific for the EEZ of one WECAFC member, two members or of sub-regional and/or regional interest. The discussions were showing that stock assessments were poorly done and inconclusive. National interests, related also to MSC certification, caused that not much progress could be made towards regional stock assessment, let alone management of the resources. Strategy 6 of the endorsed CLME SAP calls for sub-regional collaboration in the management of shrimp and groundfish resources of the Brazil-Guyanas continental shelf, but progress in collaboration has so far been limited.

The worrying note is that two shrimp species are overexploited and have already experienced a 75% reduction in catches. Even more worrying is that the status of exploitation of one third of the present shrimp catches is unknown. White shrimp reported a stiff decline from 52 000 tonnes in the year 2000 to 42 000 tonnes at present, while the unidentified *Penaeus* catches went down from 55 000 tonnes in the eighties to 11 000 tonnes at present, some of this dramatic reduction could be due to better classification of the shrimp caught, but still a substantial volume of shrimp is missing from the landings. When looking only at the valuable *Penaeus* catch, it declined sharply from 170 000 tonnes in 1980 to 110 000 tonnes in 2013. The disappearance of some 60 000 tonnes of this valuable species for the region is a serious concern. Using a conservative ex vessel price of USD 5.00/kg this loss (due to no management) causes a reduced income of USD 300 million per year to the region.

CRFM and OSPESCA member countries account for only 25% of total shrimp catch in the WECAFC region, therefore about 75% of the catch is taken outside the mandate area of these two RFBs.

3.5.5. Conclusions

Very few countries in the region have a shrimp management system in place. It should be noted on the positive side that Guyana and Suriname are respectively trying to receive and have received already MSC certification for seabob. In most countries administrations are looking at the reduction of turtle and fish by catch rather than at the management of the valuable shrimp resource. For shrimp management, better shrimp stock assessment would be needed. This assessment should be centred on the main producing and recruitment areas for shrimp, that is the Gulf of Mexico and the Brazil Guyana area.

Current commercial national-level interests make that short-term thinking prevails in shrimp and seabob fisheries. Considering that a shrimp stock is a national stock is most easy, without conclusive evidence. Private sector interests seem to push governments in this direction, emphasizing the importance of shrimp fisheries for employment. The lack of resources and capacity to carry out real stock assessments cause that some fisheries administrations seem to follow the private sector blindly. Collaboration in stock assessments between the countries in the sub-regions would likely show another resource picture than is currently presented, according to concerned scientists.

Shrimp and seabob resources are of great interest to the region and are currently insufficiently monitored and managed. The overexploitation of a number of shrimp stocks speaks for itself. Harmonization of shrimp management measures and collaboration between the shrimp producing countries is limited. Without an RFMO it will be impossible to improve the coordination of shrimp management measures and to recover the lost value for the region as whole.

3.6. Sharks

3.6.1. Main players and productions

All over the world, shark are caught for their fins. These are a high bracket product for the Chinese market, where dried sharkfins can reach as much as USD 100/kg.

Shark catches in the Western Central Atlantic have apparently increased during the past years, to reach 28 400 tonnes, compared with 16 800 tonnes reported for 2010. However, this is mainly due to the reporting of one species, blue shark (*Prionace glauca*) for which no landings were reported prior to 1997. When taking out this species from the total, it becomes apparent that the overall catch of shark declined from about 27 000 tonnes in 1990 to about 18 000 tonnes at present.

It has also to be noted, that shark catches are significantly underreported, as often sharks are taken as by catch to other fisheries or only the fins are landed, while the rest of the body is thrown back into the sea, thus never recorded in official statistics. These nominal catches underestimate the true (blue) shark fishery removals, as most sharks taken in this fishery are finned and the carcasses are discarded at sea. Blue shark fins are five times more common than any other pelagic species in the fin trade in China, Hong Kong SAR. FAO calculated that the shark biomass required to support the

documented global fin trade (all species) annually exceeded the total catch reported to FAO by four times at a world level and probably this is true also in the WECAFC area. The sudden emergence of blue shark in the landing statistics is probably due to the fact that the EU now requires its members (thus also Spain) to have the fins landed together with the body.

Table 7: Shark catches in WECAFC area by country (in tonnes)

Country	1980	1985	1990	1995	2000	2005	2010	2013
Spain	...	...	...	...	...	1425	5204	9230
Venezuela, Boliv Rep of	4181	5507	5466	7468	3343	4795	3507	7461
Mexico	5321	12947	12998	11601	7478	6211	3263	5259
United States of America	203	818	5589	3497	2500	2212	2305	2156
Belize	...	...	...	...	6	10	495	1315
Other	3096	4605	2981	2266	4833	5214	2032	2008
Totals -	12801	23877	27034	24832	18160	19867	16806	27429

Source: FISHSTAT J

Spain is the main fishing nation for the shark catch in the Western Atlantic, with about one third of the production. This country is also the main nation targeting the blue shark. Venezuela takes an estimated 7 500 tonnes of shark in 2013, which is its normal production over the years with some up and downs. Mexico reported 5 200 tonnes of shark catches in 2013, about half the catch of the nineties of the last century. The USA also report only half of the previous catches. Belize has only recently entered the group of shark producers with 1 300 tonnes in 2013. Currently reported shark landings by Suriname, Guyana, and Trinidad and Tobago are a significant underestimation, as anyone who has visited local fish markets in these countries can confirm. Trade information available at CITES underpins this conclusion.

3.6.2. Present resource situation

The situation of the shark resource in the WECAFC area is unknown. In fact, the FAO publication on resources gives it a round question mark. Even though sharks are on the agenda of environmental groups and some species are put on the CITES Appendix II, nothing has been done in the area to thoroughly study the resource. Assessments at local or national level have been carried out in some countries (e.g. Antigua and Barbuda, Bahamas, Barbados, and Cuba) but as most sharks are migratory or pelagic species, a true picture of the regional stock(s) status cannot be drawn from these assessments.

3.6.3. Present management system

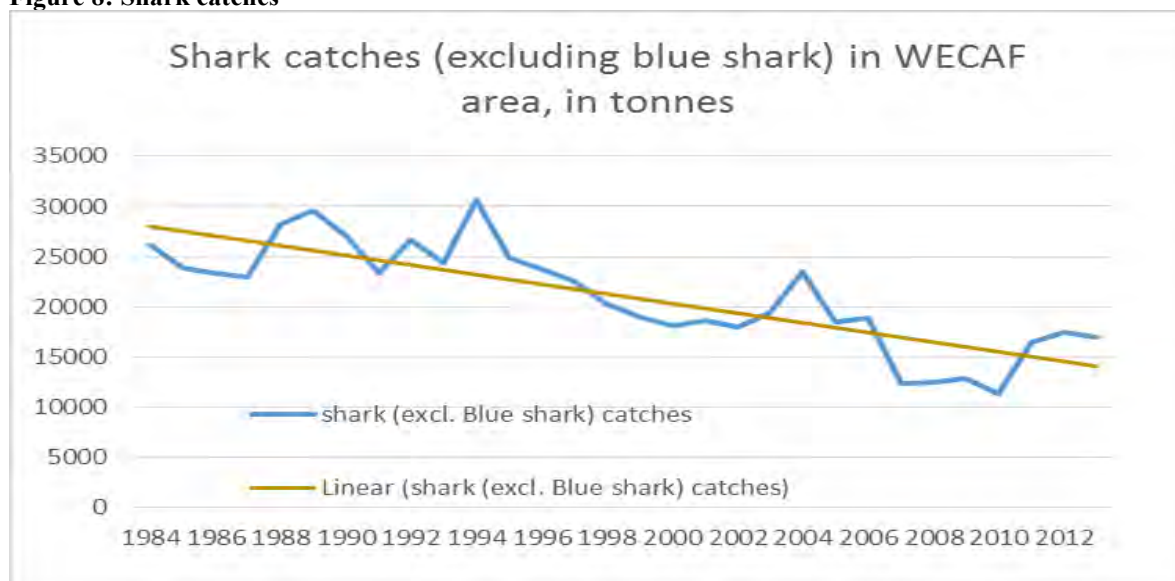
In 1999, FAO adopted the International Plan of Action (IPOA)-Sharks in response to growing international concerns about the inherent vulnerability of elasmobranch stocks to overfishing, the demonstrated historical collapse of some shark fisheries and the rapidly increasing shark landings (FAO, 2000). The IPOA-Sharks requested that all UN Member Countries that captured sharks and their relatives voluntarily prepare National Plan of Action (NPOAs). These NPOAs should include monitoring, assessments and management protocols to ensure that shark stocks are fished sustainably and that threatened species are conserved. Although the target date for these plans was

set at 2001, as of June 2010 only 12 of some 37 shark-fishing countries (which have landed 5 000 tonnes or more in any year in the last ten years) had submitted NPOAs, and these vary widely in content from substantial to ephemeral (FAO, 2010c). In the WECAFC area, only the USA and Cuba have a NPOA for sharks. OSPESCA countries have two regional regulations that address the shark resource and its conservation: Regional Regulation OSP-05-11 Prohibiting the Practice of Shark Finning, which establishes regional management measures for the sustainable use of sharks, which contributes to finning eradication; and Regional Regulation OSP-07-2014 which strengthens the sustainable use of the Whale Shark species (*Rhincodon typus*) by adopting management measures by the SICA Member States.

The WECAFC/OSPESCA working group on sharks was established by WECAFC 15 but has since not met, due to funding constraints. Nevertheless, it is foreseen that an RPOA-IUU is prepared in 2017 by the WG with support from the USA. Latest activities under WECAFC/FAO collaboration on sharks included drafting of NPOAs with Antigua and Barbuda, Barbados and Trinidad and Tobago. However, none of these NPOA's has been approved to date. A Caribbean sharks and rays identification guide for fisheries inspectors, fishers and customs officers was developed in 2016 as well.

The most important convention in terms of conservation impact is CITES, which can restrict or prohibit international trade in threatened species. Currently, three sharks and one sawfish are listed under Appendix II (restricted trade) and six sawfishes are listed under Appendix I (prohibited trade). Additional sharks have been nominated for listing but declined recently. Many of these species will probably be re-nominated along with others at the next conference of the parties. The impact of the CITES decisions, which include 5 species of relevance for the WECAFC area, is yet to be monitored. ICCAT, which has carried out stock assessments for some sharks concluded that a range of shark species was overfished and put some management measures in place. The assessments however did not include sufficient data and information on shark stocks in the Caribbean.

Figure 8: Shark catches



Source: FISHSTAT J, 2015

3.6.4. Gaps and shortcoming with regard to management

There is virtually no management in place for sharks, apart from the OSPESCA management regulation for whale shark. Assessments are not being carried out by the main shark fishing countries, as many fisheries consider shark as by-catch. IUU fishing of sharks and related shark finning are likely generating enormous profits for a few individuals in the region; particularly those who have found ways to (illegally) export the fins to China. There is no doubt that the reduction in shark landings is not the result from reduced fishing effort directed to the shark stocks. Many shark stocks are severely overfished. Something has to be done urgently, before depletion of many of the Caribbean shark species takes place.

3.6.5. Conclusions

The management of shark resources in the Western Central Atlantic, cannot be left to ICCAT alone. The ICCAT measures have been inadequate so far. Moreover, the CITES trade related decisions are likely to be insufficient to stop the ongoing decline. The WECAFC members had sufficient time to develop their NPOA sharks, but generally considered sharks not a priority. EU shark finning regulations have improved data availability slightly in recent years, but do not seem to have an impact as yet on the resource.

In terms of value generation for the region the shark landings are of limited importance, with an estimated off-vessel value of approximately 13-16 million USD (if current statistics are considered valid), but as mentioned above the IUU fishing of shark and shark finning practices generate substantial income for some individuals.

Only an RFMO which can coordinate the stock assessments in the region and which can coordinate the effort in the region to improve the control of shark catches and the fin problem can stop the downward trend, conserve the relevant species to the region and ensure long-term sustainable harvesting of sharks.

Coordination with ICCAT through a joint Working Group may further increase access to data and information on sharks to the region and increase impact of advice and measures.

4. Analysis of WECAFC as RFMO and as connector of organizations and management of shared stocks

4.1. Summary of Findings of the Performance Review of WECAFC

In 2014 FAO carried out a Performance Review of WECAFC²⁹ which found that there was a general appreciation of the current work of the WECAFC Secretariat. The responses show that the present secretary is considered a very dedicated, competent, highly motivated, very responsive and active person, who has managed to revive the activities of WECAFC after a period of stasis. Many replies to the online survey noted a mismatch between the budget available to the Secretariat and the potential need to carry out all the activities agreed in the programme of work. The need to increase the number of people working in the Secretariat was underlined in various comments.

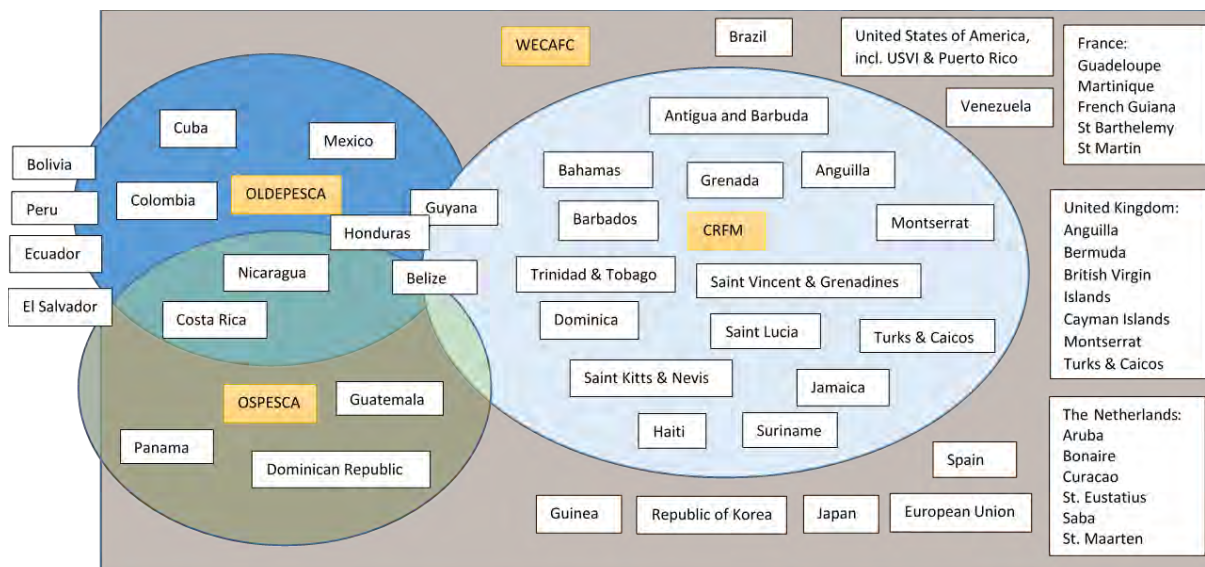
The role of WECAFC is appreciated with regard to the implementation of the Code of Conduct for Responsible Fisheries and the relevant instruments, especially the Port States Measures Agreement.

The recommendations from this performance review were to increase the availability of financial resources and the number of staff working in the WECAFC Secretariat. The review of the level of implementation of the work plan as adopted by the fourteenth session of WECAFC showed that more than 80 per cent of the envisaged activities had been implemented, and the reasons for shortcomings in the implementation have generally been caused by external factors. The collaboration in the region among the various actors is working quite well, and the regional-level coordination function of WECAFC has to be underlined. Further strengthening and increased institutionalization of this function is needed in the future.

²⁹ <http://www.fao.org/3/a-i5096t.pdf>

4.2. Complexity of the situation

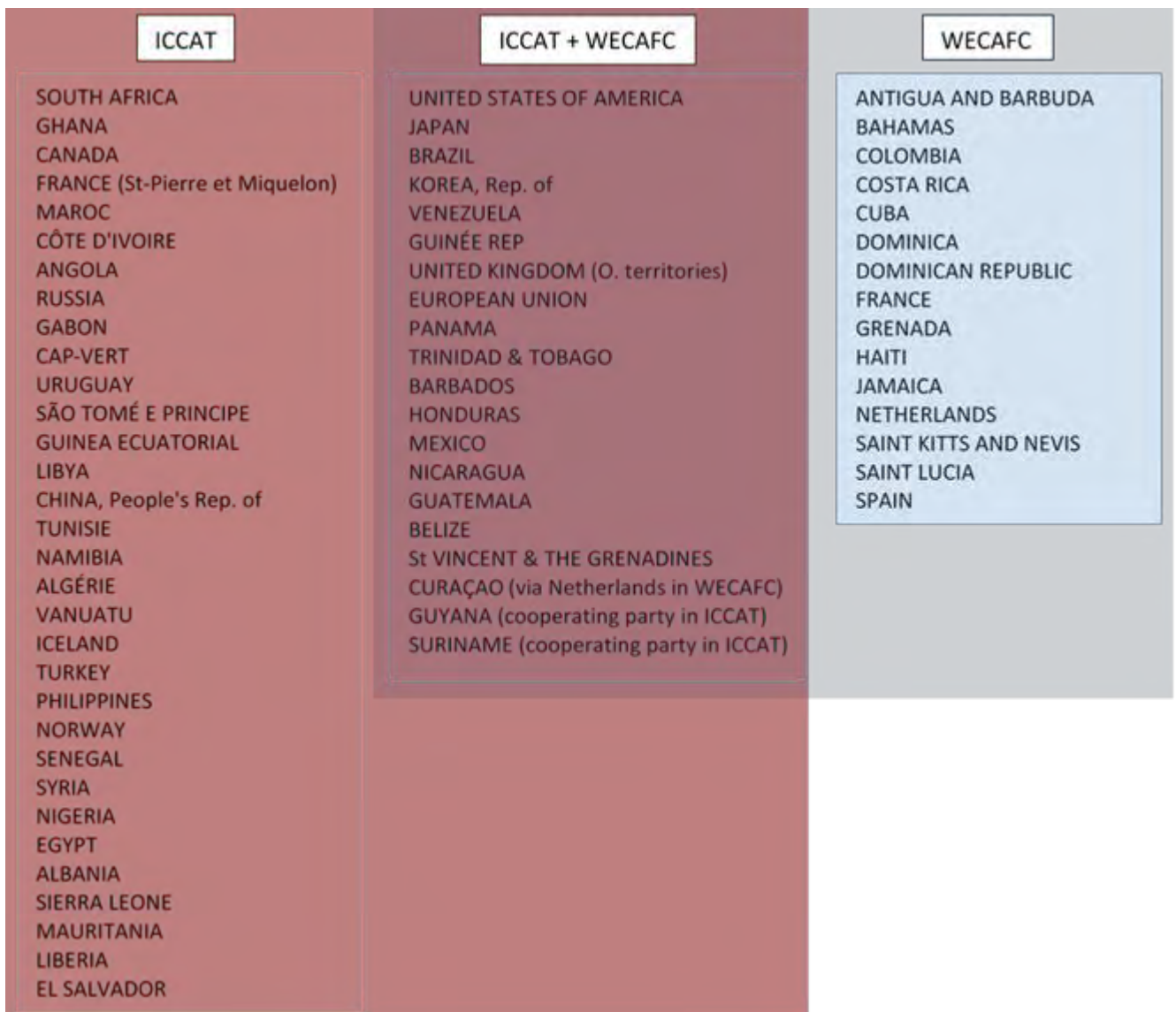
Figure 9: WECAFC, CRFM, OSPESCA and OLDEPESCA overlap in membership



The above figure provides an overview of the complexity of the environment in which WECAFC operates. Many WECAFC members are also members of CRFM and/or OSPESCA, but the main producers can be found outside the area covered by these two RFBs. WECAFC has therefore a role to play to link Caribbean and Central American Countries with those in South and North America, and enable overseas territories of European countries to participate in regional fisheries discussions, scientific advice, management and conservation efforts.

For tuna conservation and management, the below figure shows the overlap between the memberships of ICCAT and WECAFC. It is clear that in order to increase collaboration with ICCAT and the impact of its recommendations and measures on tuna stocks and fisheries a set-up similar as with the General Fisheries Commission for the Mediterranean (GFCM) would be beneficial. GFCM and ICCAT have a joint working group on large pelagic. In general, GFCM participates in ICCAT processes and adopts the recommendations from ICCAT in its sessions, making them valid also for non-ICCAT members.

Figure 10: Membership and overlap in membership ICCAT and WECAFC



4.3. Lost catches for shared stocks

Table 8: Annual loss in quantities due to reduced landings (in tonnes)

	Loss in 2013 compared to the record catch level	Loss in 2013 compared to ten years' average (1990-2000)
Queen Conch	-	-
Lobster	10 000	8 400
Shrimp	70 000	24 000
Sharks	14 000	7 000
Dolphinfish	-	-

The above table gives a summary of what was presented in chapter 3 above. The second column gives an indication (in quantity terms) on the loss in production in 2013 over the record production in the past, while the third column estimates the loss of 2013 when compared with the average of 1990-2000. This table shows that while Queen Conch and dolphinfish have not reported losses, for various reasons explained earlier. For the other three main shared stocks the decline is significant. It is 10 000 tonnes for lobster, 70 000 tonnes for shrimp and seabob, and 14 000 tonnes for sharks (excluding blue shark) when comparing the 2013 production with the maximum level of production in past history. These losses are high, but one can argue that comparison with the maximum level reported is not a fair comparison. The losses, however, are still important when comparing the 2013 production with the 1990-2000 average: 8 400 tonnes for lobster, 24 000 tonnes for shrimp and seabob, and 7 000 tonnes for sharks (excluding the blue shark).

Table 9: Annual loss in 2013 and expected loss for 2014-2020 in income due to reduced landings

	Loss in 2013 compared to the record catch level (USD million)	Loss in 2013 compared to ten years average (1990-2000)– USD million)	Estimated loss in 2014-2020 compared to the record catch level (USD million ³⁰)	Estimated loss in 2014-2020 compared to ten years' average (1990-2000)– USD million)
Queen Conch	0	0	0	0
Lobster	100	84	700	550
Shrimp	300	115	2570	1468
Sharks	60	40	420	280
Dolphinfish	0	0		

The above table estimates the economic loss by multiplying the loss in landed products as described above with the average ex vessel price³¹, as recorded in Annex 3.

The lost income due to missing management measures is difficult to quantify, however, for just the five species groups under review, this can be estimated at at USD 240 million annually when considering the decade 1990-2000 as reference point. Additional losses are coming from other species, not covered in this analysis for the most important shared stocks. When looking at the potential loss from now (2016) to the end of the decade, between USD 1.2-3 billion will be lost in value due to insufficient management of shared stocks, an impressive figure which outnumbers

³⁰ The 2014 to 2020 takes the quantities into account created by trends overseved over the years,

³¹ Ex vessel prices of 2013 are used

greatly the additional costs from creating a RFMO for the Western Central Atlantic region.

4.4. Share of resource (based on catch data) outside CRFM or OSPESCA

For many of the shared, transboundary stocks, the majority of the catch landed by countries that are not member of CRFM or OSPESCA. Over 75% of the seabob and shrimp catches and about 92% of the shark catch are from non OSPESCA/CRFM countries, followed by 48% of the lobster catch and 30% of the dolphinfish catch. When the best management decisions by OSPESCA and CRFM are taken and fully implemented, and even if both organizations harmonize their management decisions fully, the impact of the management measures on these shared stocks is relatively small if other countries do not join in or follow. The only exception is Queen Conch, where in fact 94% of the catch originates from the OSPESCA/CRFM mandate area.

Table 10: Share of shared resource (based on catch data) outside CRFM or OSPESCA

	Share outside CRFM or OSPESCA (in% of total catch)
Queen Conch	6
Lobster	48
Shrimp	75
Sharks	92
Dolphinfish	30

4.5. Common vision and common objectives for the management of fisheries

From chapter 3 it becomes clear, that the management arrangements for the most economically important fisheries stocks are very fragmented and sometimes inadequate. Stock assessment is done on an ad hoc basis and with insufficient frequency. When the WECAFC SAG describes the stocks status in the region, most of the information available are estimates with a high uncertainty factor, and for many transboundary and shared stocks the status is therefore unknown.

Queen Conch seems to get relatively much management attention, and the present system should be maintained as it shows positive impact, with a recovering resource. The combined efforts of WECAFC, CRFM, OSPESCA and CITES members appear to bear fruits. However, only if the recently developed regional management plan will be fully implemented and countries' management and conservation efforts are monitored and reported on frequently, then the resource is likely to be sustainably harvested. The value of the Queen Conch fisheries could further increase with eco-certification of the fisheries if this is obtained.

The situation is different for spiny lobster, the last working group meeting on this species showed that for the majority of the countries participating in the exploitation of the spiny lobster resource, there are no information on the status of the resource. It was noticed that experts in the WG were very cautious in stating that the resource is overfished, simply fearing that their country could be excluded from the trade through importers not willing to buy from an overexploited stock.

An estimated USD 84-100 million are lost every year due to a lack of knowledge on the real spiny lobster stock situation overfishing in certain locations and fragmented or limited management. The management measures, apart from the OSPESCA regime and from the envisaged regime in the

CRFM countries are fragmented and not based on scientific evidence. The resource is a truly shared resource as it moves from one area of the Caribbean to the next. This resource cries for a joint regional management and conservation regime.

Similar, shrimp and seabob are not assessed with respect to their overfishing. Most of the resource has an unknown status, with some species being identified as overfished. The stocks are more resident than the lobster stocks, but a common management regime would greatly benefit also these resources. The potential economic benefit from proper management is even greater than for lobster, estimated at around USD 115-300 million per year.

The resource situation of dolphinfish is unknown, as is its exploitation level, as a good part of the catch originates from sports fisheries and is not being reported. The official catch statistics are shaky, and a joint regional stock assessment could at least give some idea on the real status of this resource.

Shark stocks are under stress, but data do not show this, as underreporting, under-sampling or under-estimation is the norm. Only in recent years did the landings of blue shark appear in the statistics, but mainly due to changes in landing obligations (under EU regulations) rather than due to a discovery of a new resource. Normally when no research is done and statistical data are unreliable it is more than likely that the resource is being overfished.

Another unknown resource is the sea cucumber, for which the exploitation started only in recent years, driven by buying interest of Chinese traders. A concern in the region is that there are several species like sea cucumber for which there is very little information. These may be targeted by fishing or they may be associated with target species and therefore need to be understood and managed within the EAF approach. The resource status is virtually unknown, and there is a strong preoccupation that already after a few years of intensive exploitation the resource is overexploited. Urgent management measures are necessary to ensure that the resource does not collapse within a few years within the WECAFC area..

At present virtually nothing is known about the fish resources in the high sea part of the WECAFC mandate areas 31 and the northern part of area 41. The highly migratory tuna species are assessed and managed by ICCAT, but are nevertheless largely overexploited (e.g. bluefin tuna, yellowfin, marlin, sailfish) at Atlantic Ocean level including in Area 31. The stocks of pelagic oceanic sharks (apart from blue shark *Prionace glauca*) are largely overexploited as well and are not covered under any management regime in Area 31 or 41.

The straddling fish stocks status, such as of various species of squids (e.g. angel), Atlantic horse mackerel, hakes (e.g. silver), rays and eels, is not known in Area 31.

There is insufficient information available about the Alfonsino, black scabbard fish, black cardinal fish and wreckfish stocks in the deepsea of Area 31 and the fisheries on these stocks.

It has now become evident that the time to assess, study, manage and conserve these resources and their fisheries is now.

In conclusion, it would be adequate if an RFMO would cover true regional resources that currently cannot be covered through bi-lateral or sub-regional arrangements. An RFMO should be dealing with all the shared resources within the agreed RFMO Convention Area, although it would be expected that the major commercial stocks would receive priority attention. Partnerships are to be established with ICCAT. The WECAFC member countries need to plan for the future applying the

ecosystem approach and give more attention to the potential of ABNJ resources.

Stocks that could be covered under other arrangements include: reef fishes (parrotfishes, groupers, etc.), and small pelagic that have a sub-regional range (e.g. flying fish). Tunas, swordfishes and billfishes are covered by ICCAT and an RFMO would be able to team-up with ICCAT in order to ensure better implementation and impact of ICCAT recommendations throughout the region.

4.6. Area coverage

In terms of area coverage, it is obvious that the ABNJ (high seas) area, which is 51% of the current WECAFC mandate area should be covered by an RFMO. This will ensure that resources such as deep sea fish stocks and straddling stocks, which are currently not exploited or are exploited without the knowledge of WECAFC Member States will come under a management and conservation regime determined by the members. In view of the transboundary nature of various straddling stocks it makes sense that apart from the high seas area in Area 31 also ABNJ in the northern part of Area 41 would be covered by the RFMO.

In terms of coverage this would mean that the RFMO can make recommendations concerning fisheries conducted in areas beyond national jurisdiction (ABNJ) of the current WECAFC mandate area; the RFMO could probably adopt recommendations by a qualified majority.

In relation to the EEZs of members within Area 31 and the northern part of Area 41 it would be important that the RFMO seeks to ensure consistency between:

- (a) any recommendation that applies to a stock or group of stocks occurring both within EEZs and ABNJ, or any recommendation that would have an effect through species inter-relationships on a stock or group of stocks occurring in whole or in part within the EEZ of a member, and
- (b) any measures and decisions taken by a member for the management and conservation of that stock or group of stocks with respect to fisheries within its EEZ.

Recommendations concerning fisheries conducted within the EEZ of a member could be made by the RFMO, provided that the member in question so requests and the recommendation receives its affirmative vote.

Given the well-established nature of CRFM and OSPESCA it would be logical that these RFBs will be fully involved in any decision taking and recommendations made related to their membership within their respective coverage areas.

It has to be considered that if WECAFC becomes an RFMO, CRFM and OSPESCA roles and mandates would remain largely unaffected. Changes are expected of course in decision making processes as greater coordination with the RFMO would be required. Moreover, collaboration, scientific advice and stock assessments will need to be strengthened.

4.7. Assess whether the common objectives could be met through a different type of working arrangements.

The success of an RFMO will depend on the members' willingness and ability to collaborate and bring positive results to the fish stocks and catches. The results will depend on issues, such as the availability of accurate scientific information, an effective decision making structure and the

members' ability to adopt and implement appropriate measures. The RFMO should not try to duplicate functions that can be performed by others or cover areas that are better dealt with at national- or sub-regional level (e.g. aquaculture, reef fish stocks fisheries management, research and education in fisheries).

4.8. Scientific Advice

The collection of scientific data and information in support of decision making processes and monitoring, as well as the evaluation of implementation and impact of fisheries management measures, are among the most important tasks to be carried out for the management and conservation of the fish stocks.

Stock assessments on a regional level could be carried out by a research institution, however, even though the political situation has changed positively recently, joint research between the USA and Cuba can only be carried out under the aegis of an international organization, such as an RFMO. Within the WECAFC membership there are a number of national and sub-regional institutions that play an important role in regional fisheries management advice generation. These include amongst others: NOAA, IFREMER, UWI, University of Miami and CINESTAV.

The current structure of joint Working Groups, in which these institutions could get a more prominent/coordinating role, would probably be a highly cost-effective way to generate the necessary scientific advice.

The two existing sub-regional RFBs, CRFM and OSPESCA, can be instrumental in generating scientific advice for the areas and species covered by them. As such their intense collaboration with the membership and high interest in scientific information could be highly beneficial for an RFMO to build on.

The RFMO could facilitate resource mobilization for scientific work by these existing national and sub-regional institutions and RFBs, as well as play a role in coordination and exchange of findings from scientific research between all members.

A similar approach is taken by the GFCM in the Mediterranean where working groups and projects are used to support the generation of advice.

Alternative working arrangements would be either the establishment of an in-house research/scientific group within the RFMO structure, fully covered by the RFMO budget, or the NEAFC approach. The latter bases its decisions on scientific advice generated by ICES, an organization with a budget of over 100 million USD per year and more than 80 staff. In the Pacific Ocean, the Forum Fisheries Agency (FFA) has a similar set-up with the Secretariat of the Pacific Community (SPC) doing most of the scientific work.

4.9. Capacity building

Climate change and sea level rise, fishing pressure and other human activities are among the major challenges facing the region's fisheries sector today, as it grapples with decreasing fish catch and other threats to the livelihoods of the many people who depend on the small scale fisheries for economic survival. Fisheries professionals in the WECAFC area must, therefore, be properly

equipped to cope with the new reality, and key players, such as heads of the national fisheries authorities, must build their capacity to provide leadership in the process of transforming the fisheries sector. CRFM is already in the forefront of this capacity building through an arrangement with the United Nations University –Fisheries Training Programme (UNU-FTP) and the University of Akuyreri, Iceland (UA).

However, the fisheries administrators of the other WECAFC members are not included in this programme, and an RFMO could help to better include other member countries in capacity building.

An RFMO has a clear role to play in capacity building on MCS and VMS, stock assessments, fisheries statistics, fisheries inspections, training of observers and the development of the sector. In general, RFMOs establish dedicated funds that support staff of developing country member states to participate in capacity building programmes. An RFMO in the WECAFC area would be expected to do the same.

Recognizing that small-scale fisheries (SSF) are the most important sub-sector of the fisheries sector in the developing countries and SIDS in the WECAFC area, the capacity building needs of SSF will require special attention. The recently approved Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication have a capacity building component, which will enable SSF fishers to cope with the changing environment. States and other parties should enhance the capacity of small-scale fishing communities in order to enable them to participate in decision-making processes. To this effect, it should be ensured that the range and diversity of the small-scale fisheries subsector along the entire value chain is appropriately represented through the creation of legitimate, democratic and representative structures. Specific attention should be paid to the need to work towards the equitable participation of women and youth in such structures. Where appropriate and necessary, separate spaces and mechanisms should be provided to enable women to organize autonomously at various levels on issues of particular relevance to them. The capacity building aspect of these Guidelines will be implemented best through an overarching mechanism, deeply embedded in the FAO process.

An important field of capacity building where an RFMO could become active is organization of trade conferences, which would bring together all stakeholder groups, including the private industry and importers from the USA and other main markets. These initiatives would highlight the importance of sustainable trade, and could facilitate the uptake of issues such as decent labour and product safety.

4.10. Clear institutional collaborative structures and partners.

The 34th FAO Regional Conference for Latin America and the Caribbean, held in Mexico in March 2016, recognized the stronger role of WECAFC in the region, its partnerships, and that the establishment process of an RFMO would be an important step forward in the fight against IUU fishing in the region.

As becomes apparent from chapter 2, the collaboration between WECAFC and CRFM has increased in the last 5 years, through joint WGs (flying fish, FADs, lobster, Queen Conch, shrimp, recreational fisheries, IUU fishing), project collaboration (CLME+, CC4Fish, REBYC II LAC, Caribbean Billfish, Stewardfish, FIRMS) and joint activities (CCCFP promotion, combating IUU fishing, promotion of the EAF, etc.). Areas of collaboration demonstrate similar priorities in the CRFM and WECAFC strategic plans and in support of the CCCFP. In the period 2011-2015

WECAFC supported CRFM members' participation in regional working groups and meetings with funds in the order of 800 000 USD. Participation by CRFM members in WECAFC (joint) Working Group meetings and training sessions is over 60% of total participation and on average 4 of the 8 OSPESCA members participate in these Working Groups.

In order to formalize the ongoing collaboration, and in line with Strategy 2 of the CLME+ Strategic Action Programme (SAP), the three Regional Fishery Bodies (RFBs), CRFM, OSPESCA and WECAFC signed on Wednesday 27 January 2016 a Memorandum of Understanding (MOU) to facilitate, support and strengthen the coordination of actions among the three RFBs to increase the sustainability of fisheries. The MoU establishes an Interim Coordination Arrangement for Sustainable Fisheries.

At the 2nd WECAFC Strategic Reorientation Workshop in Trinidad and Tobago on 1-2 December 2015 the preliminary findings of an independent cost-benefit assessment of the options for strategic re-orientation of WECAFC were discussed. Members present understood the value of establishing an RFMO for the region, but desired additional information (hence this study).

The Workshop recognized (among others) that “an RFMO will have an umbrella function and should not replace effective existing institutions (CRFM and OSPESCA) at sub-regional level”.

This implies that an RFMO will need to ensure structural linkages with CRFM, OSPESCA and also with ICCAT for tuna stocks.

4.11. Enabling environment in international discussions

The earlier mentioned cost benefit assessment detailed the international legal framework that gives the mandate to countries to establish and operate together an RFMO. In the last two years various important international developments have taken place that give emphasis to the important roles of RFMOs.

4.11.1. Small island developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway

The General Assembly of the United Nations in its small island developing States (SIDS) Accelerated Modalities of Action (SAMOA) Pathway adopted in 2014, highlights that small island developing States remain a special case for sustainable development in view of their unique and particular vulnerabilities and that they remain constrained in meeting their goals in all three dimensions of sustainable development. The pathway recognizes that poverty eradication, changing unsustainable practices and promoting sustainable patterns of consumption and production and protecting and managing the natural resource base of economic and social development are the overarching objectives of and essential requirements for sustainable development. The pathway also underlines the need to implement expeditiously, through genuine and durable partnerships, the global effort in support of the sustainable development of SIDS through concrete, focused, forward-looking and action-oriented programmes. Such partnerships should be based on the principles of national ownership, mutual trust, transparency and accountability.

The SAMOA pathway highlights that SIDS have large maritime areas and have shown notable leadership in the conservation and sustainable use of those areas and their resources. The pathway supports SIDS efforts to develop and implement strategies for the conservation and sustainable use

of those areas and resources. Inter alia the SAMOA pathway strongly support action to promote and support national, subregional and regional efforts to assess, conserve, protect, manage and sustainably use the oceans, seas and their resources by supporting research and the implementation of strategies on coastal zone management and ecosystem-based management, including for fisheries management, and enhancing national legal and institutional frameworks for the exploration and sustainable use of living and non-living resources, to implement fully and effectively the regional seas programmes in which SIDS participate and to promote the conservation, sustainable use and management of straddling and highly migratory fish stocks, including through measures that benefit small island developing States that are adopted by relevant regional fisheries management organizations and arrangements.

The above SAMOA pathway is of relevance for WECAFC, as one third of WECAFC members are SIDS, and the call by the SAMOA pathway is to work through relevant regional fisheries management organizations and arrangements, and to ensure that the SIDS should not bear too high economic costs for the regional cooperation.

4.11.2. UN Sustainable Development Goals³²

Among the 17 SDGs adopted by the General Assembly on 25 September 2015 four are fundamental for fisheries, especially in the WECAFC area: Goal 1 End poverty in all its forms everywhere; Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture; Goal 3. Ensure healthy lives and promote well-being for all at all ages; and Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development.

Fish products play an important role in providing employment in the WECAFC area, especially in the Island states. This importance is not fully reflected in official employment statistics in the countries. The importance of fisheries to end poverty, or put differently the potential impact that disappearance of fisheries stocks would have on creation of poverty is generally underestimated.

Similarly, the importance of fisheries as a supplier of food, both directly and indirectly (through income and employment) is undervalued by many. The fact that many Caribbean countries import more than one-third of their fish consumed leads to the wrong impression that anyway too little fish is available for nutrition, and that a decline would not have any important impact on food security. The contrary is true, in many instances, fish is caught and consumed in the family or in the community, without entering official statistics, and a decline of availability caused by the lack of coordinated fisheries management would have significant impact on food security. The goal three is closely linked to the goal 2, with regard to fisheries, it is well known that fish consumption is beneficial for healthy lives, a decrease of availability of fish from local areas, would have a negative impact on the wellbeing of all, including the residents in urban areas.

Last not least, the SDG 14 talks about the sustainable use of the oceans, and the conservation and utilization of marine resources for sustainable development. This goal can only be reached in the WECAFC area through coordinated management of fisheries and this is only possible if WECAFC becomes a binding instrument. Many of the targets³³ under SDG 14 are relevant for the WECAFC

³² Resolution adopted by the General Assembly on 25 September 2015; 70/1. Transforming our world: the 2030 Agenda for Sustainable Development

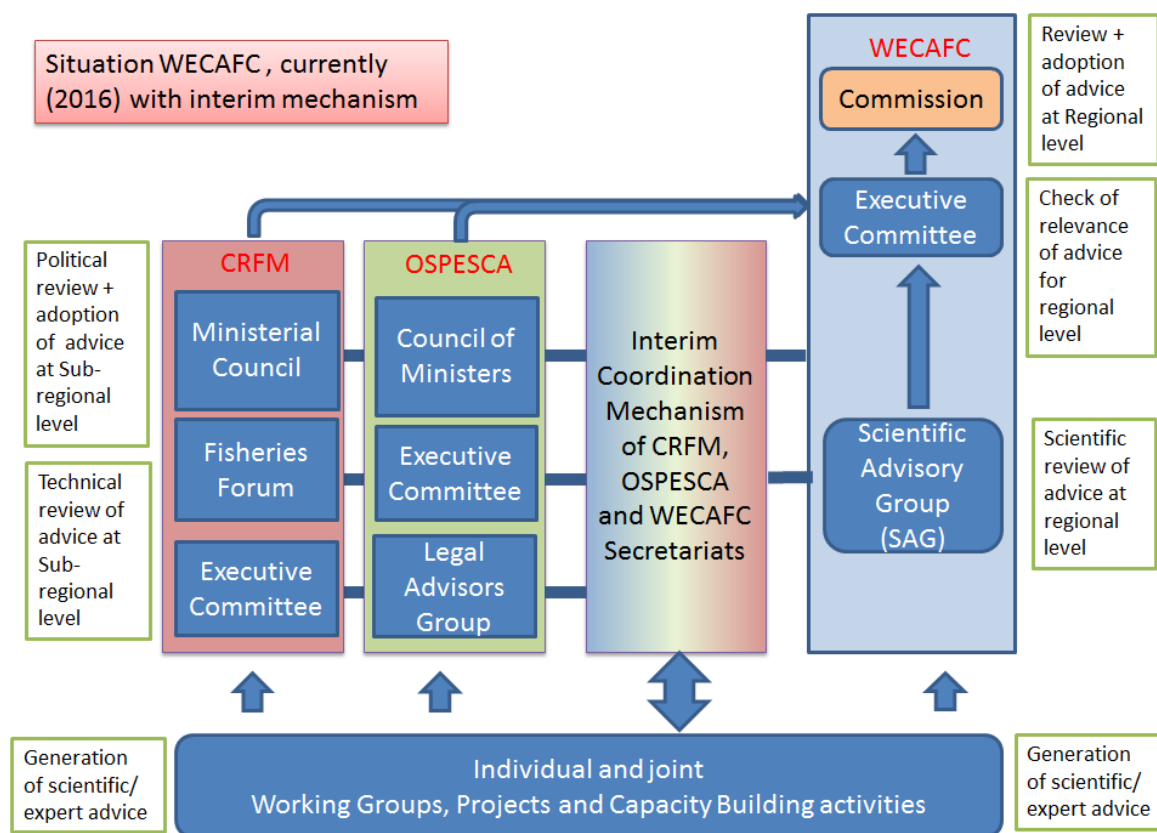
³³ The SDG 14 targets can be found at: <http://www.un.org/sustainabledevelopment/oceans/>

members. The global target “By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics” can only be reached in the WECAFC region if an RFMO would be established within the next two years.

4.12. Four options for the future set-up of WECAFC

4.12.1 Option 1 WECAFC remains an advisory body

Figure 11: Organizational structure and governance for WECAFC as Art. VI body



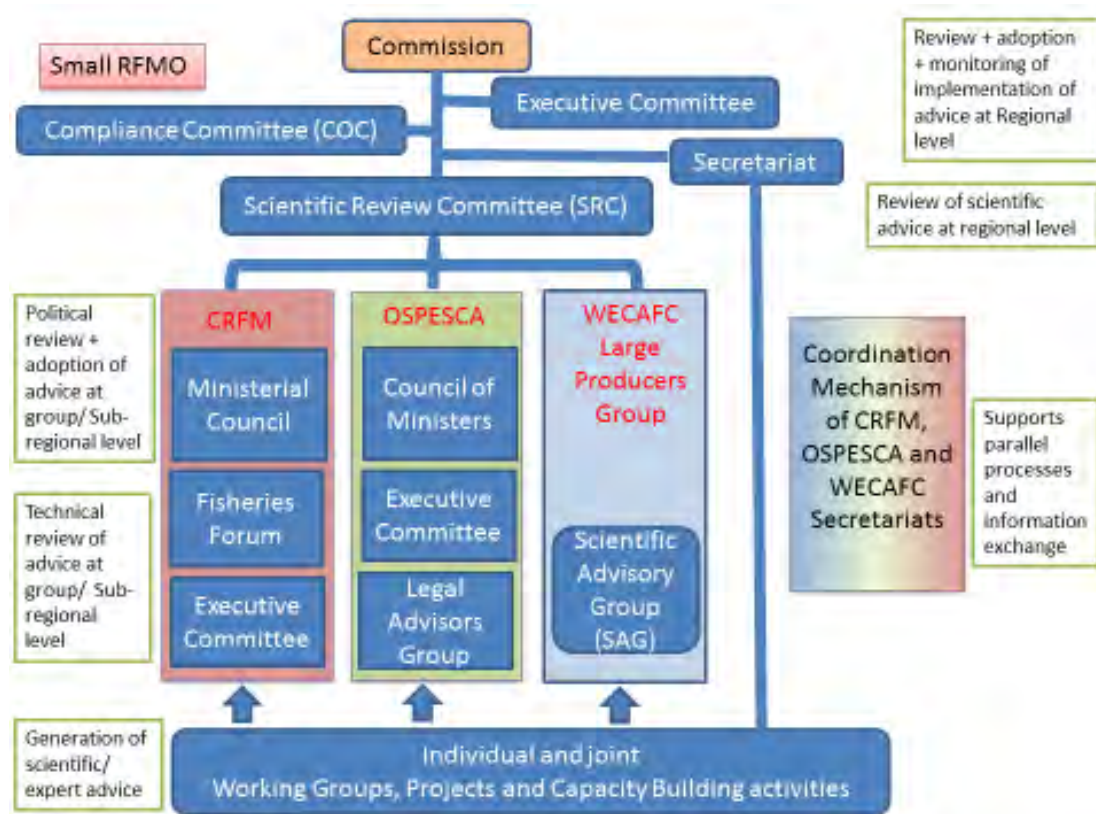
The above chart identifies the present situation of WECAFC. The main decision making body is the Commission, where every member country and the EU have each 1 vote (34 members). However, voting has not taken place as yet, due to the practice that the Commission strives for decisions by consensus. The Sub-regional RFBs (CRFM, OSPESCA) are observers. Projects, Non-Governmental Organizations (NGO's), Stakeholder Organizations and Civil Society Organizations are sometimes invited as observers and the private sector is not officially invited and can only participate in the decision making process if included in the official delegation of a member country.

The interim coordination mechanism is being tested and is likely to show improvements in harmonization of policy and legal frameworks for fisheries, cooperation on relevant scientific and fisheries management projects, participation in each other's activities and sharing of data, information and findings. The generation of scientific advice for management at sub-regional level and its transfer to regional level (if appropriate) is being tested presently.

As shown in the independent Cost Benefit assessment and in chapter 3 above, the overall negative trend of catches is likely to continue if no innovative action is taken. Further reduction in stock status, continued overfishing and continuing IUU fishing, is likely. The fisheries in the Areas beyond National Jurisdiction (ABNJ): (i.e. the High Seas) in the WECAFC area will remain unmanaged, open access to all and (with the exception of tuna) no information will be collected or shared in support of fisheries management and conservation in these areas. As shown before the estimated loss to the industry will be around USD 240+ million per year just for the three shared stocks, lobster, shrimp and sharks (at ex-vessel value), and further losses in the value chain have to be added to this. Overall opportunities for fisheries sector employment will continue to reduce, while food security problems and further dependence on fishery products imports will increase. For the three regionally shared stocks the importance of CRFM and OSPESCA members are limited in terms of catch figures, therefore no successful resource impact can solely be achieved by these two important organizations.

4.12.2 Option 2 WECAFC transforms into a small FAO RFMO

Figure 12: Organizational structure and governance for WECAFC as a small Art. XIV RFMO



If the WECAFC members opt for an FAO RFMO and would like to keep the operational costs as low as possible, they may choose to establish a small RFMO.

Under the framework of a small RFMO, the members of the WECAFC are the large producer countries (USA, Venezuela, Brazil, Mexico, Cuba, Colombia) in the region, CRFM, OSPESCA, and the EU. Under the small RFMO option the CRFM, OSPESCA and the EU would represent

their members and vote on behalf of them. Distant Water Fishing Nations (DWFNs) cannot be members, they can participate as observers, which would change the position of present WECAFC member countries such as Japan or the Republic of Korea. Projects, IGO's (e.g. ICCAT), NGO's, Stakeholder Organizations, Civil Society Organizations and the Private sector can participate as observers. The small-RFMO option can be seen in practice within NEAFC (although not an FAO-RFMO), where the EU represents its members and no DWFN can become member.

The budget would be agreed by the members of the WECAFC and is funded by contributions made by members. The overall budget for any given year can be enhanced by extra budgetary contributions. These would normally be made by members to fund specific projects of priority interest to member countries. These extra budgetary projects would be managed by the Commission staff.

Some advantages of this option are:

- A limited budget is required – due to reduced need to consult with all members – reduced travel and participation costs.
- Sub-regional organizations and the EU get substantial more influence –as they act on behalf of/represent their members in the region.
- The secretariat can remain small if also capacity building work will be outsourced fully to sub-regional organizations and national level organizations.
- Decisions can (probably) be made faster as it is easier to reach consensus among few members than among many.

Some disadvantages of this option:

- Small producers need to reach consensus within CRFM, OSPESCA and EU structures and be willing to hand over responsibility to a representative of these structures.
- A few countries/members could make decisions for the whole region; which is less participatory; consequently less ownership, buy-in and implementation at national levels could be the result.

4.12.1 Option 3a WECAFC transforms into a large FAO RFMO traditional style

In the case WECAFC members decide to transform it into a large RFMO as FAO Art. XIV body (GFCM type) where every member country and the EU have each 1 vote (34 members). then an institutional structure as is shown in Figure 13 below could be an option. Under this option, the members could decide that the sub-regional RFBs (CRFM, OSPESCA) and the EU represent their membership (grouping) and vote for them, but they can also participate independently. Projects, Inter-Governmental Organization (IGO's) (e.g. International Commission for the Conservation of Atlantic Tunas (ICCAT)), Non-Governmental Organizations (NGO's), Stakeholder Organizations, Civil Society Organizations and the Private sector can be observers.

As in the case of a small RFMO, the budget is agreed by the members, based on an agreed cost attribution formula, normally taking into account the importance of the fisheries in the economy of the member, and the overall economic position of the member.

Subcommittees of OSPESCA and CRFM members could be established within the structure, coordinated by the respective secretariats, to facilitate generation of scientific advice from the subregion and arrive at joint positions for the meetings of the Commission. Similarly, as within the GCFM structure a joint working group is foreseen with ICCAT on stocks of mutual interest.

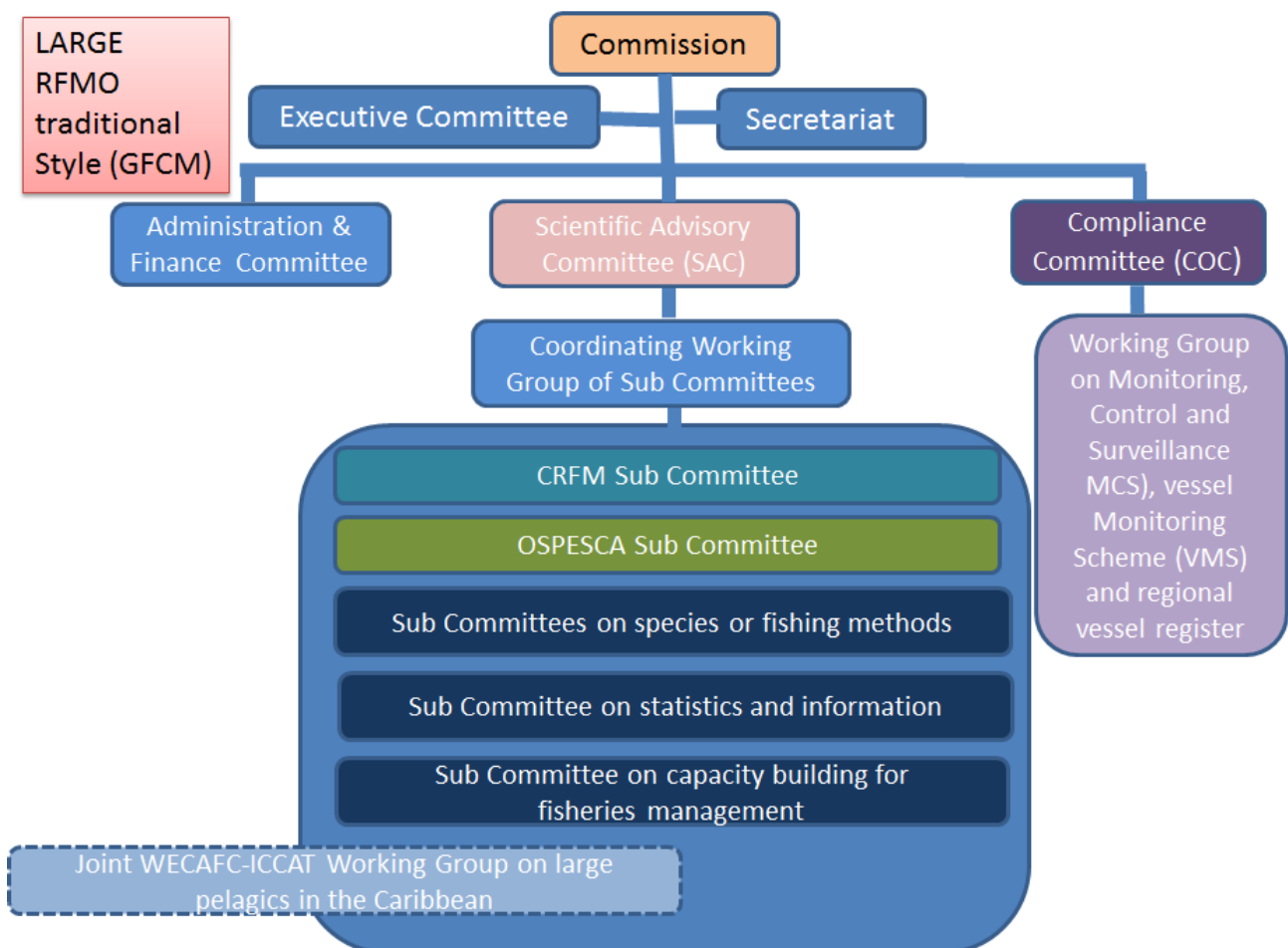
Some advantages of this option are:

- Known structure (e.g. GCFM, RECOFI, IOTC) which has proven to be effective in other regions.
- Countries can ask their sub-regional organizations and EU to represent them in meetings of the RFMO, which can be highly cost-effective.

Some disadvantages of this option:

- A large RFMO with many SIDS and some Low Income Food Deficit Countries (LIFDCs) implies that the wealthier members will have to support the poorer members to enable them to participate fully in the decision making process.
- A relatively large secretariat will be necessary to communicate and assist all members, as well as monitor progress in implementation of/compliance with management measures.

Figure 13: Organizational structure and governance for WECAFC as a large Art. XIV RFMO traditional style



Traditionally Art. XIV bodies are structured in the above way with working groups and sub committees, SAGs etc.

4.12.2 Option 3b WECAFC transforms into a large FAO or IGO RFMO new style (2 sub options)

In addition to the above options, it may be useful to consider further integration of CRFM and OSPESCA in the processes of the RFMO. Figure 14 below provides a model where decisions at CRFM and OSPESCA level are directly passed to the Commission level, without a scientific advisory committee review. It would in this case be regarded that such review has already fully taken place at sub-regional level.

Another innovative structure is represented in Figure 15. Here the structure embeds a private sector and civil society sub-committee, at similar level as other sub-committees. This means that these, so far limited represented groups will be fully included in the decision making process within the RFMO. The decision building process would be more inclusively and less hierarchical.

Another opportunity exists to incorporate in this structure the possibility that IGO's (e.g. ICCAT, UNEP/CEP), NGO's, Stakeholder Organizations, Civil Society Organizations and the Private sector would become full member of the sub-committees and could have voting rights on decisions in these sub-committees. That means that they would get a formal say in the advice that is passed to the Commission; they will get an increased role and more rights and responsibilities assigned in regional fisheries management.

Figure 14: Organizational structure and governance for WECAFC as a large Art. XIV RFMO new style 1

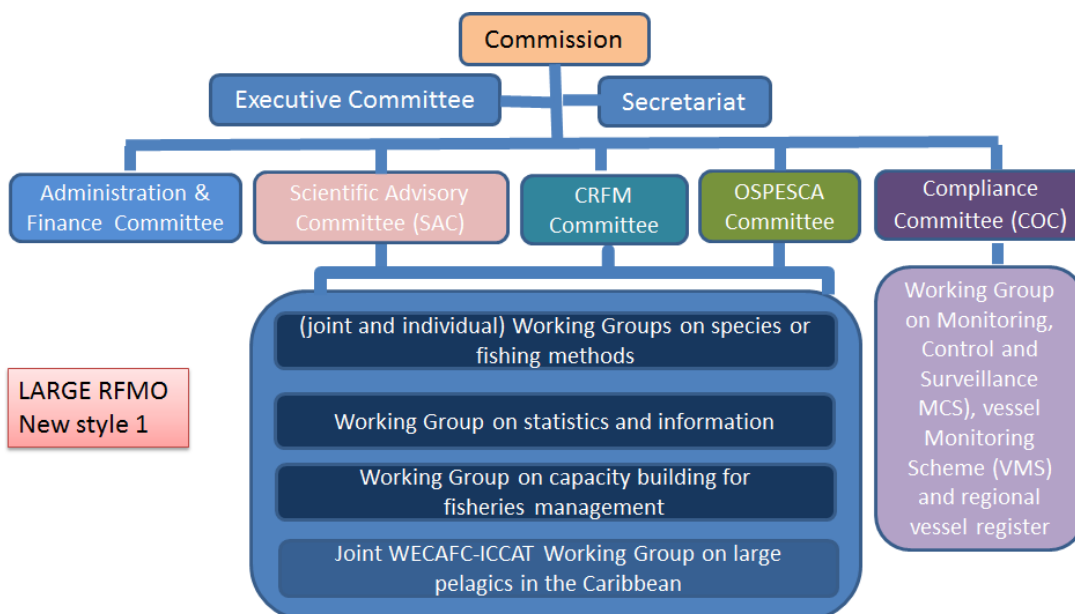
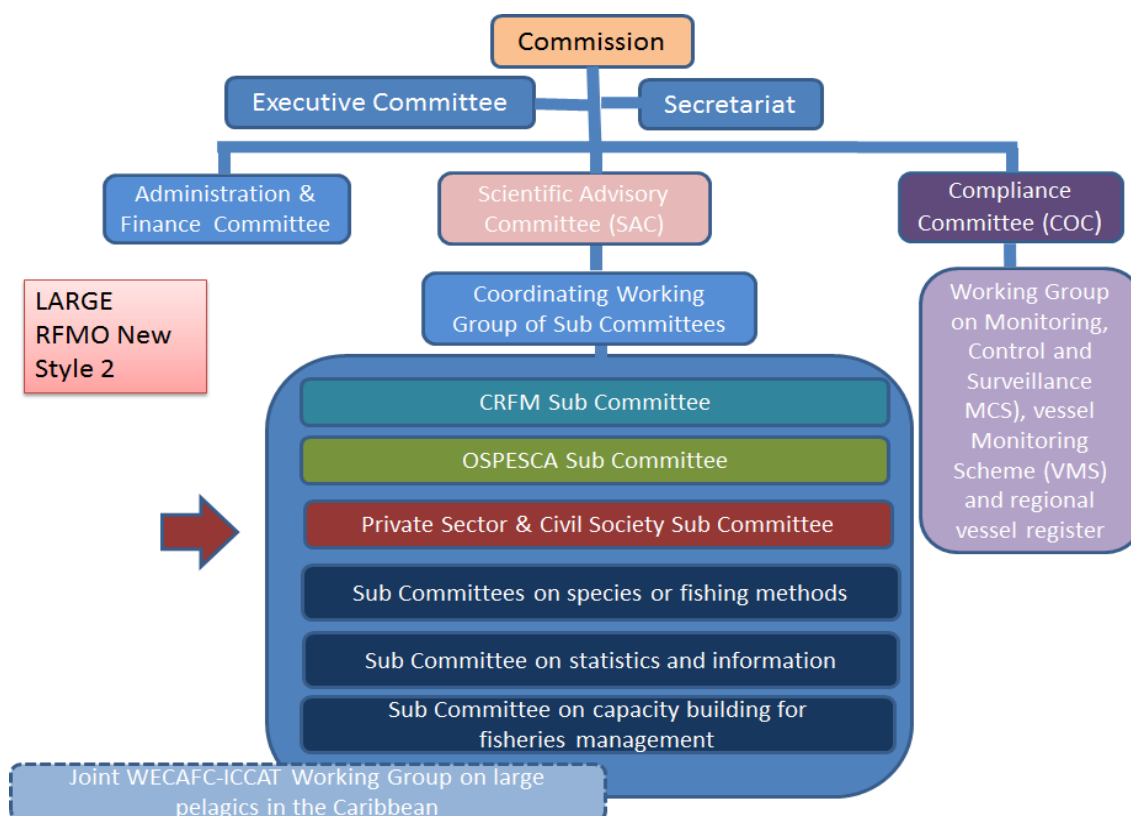


Figure 15: Organizational structure and governance for WECAFC as a large Art. XIV RFMO new style 2 (including CSO and Private sector)



Some advantages of these options are:

- Increased integration of CRFM and OSPESCA processes with those of the RFMO.
- Private sector buy-in and greater uptake of decisions taken by the RFMO among the private sector, NGOs and CSOs.

Some disadvantages of these options:

- Parallel structures for CRFM and OSPESCA in the large RFMO new style 1 structure would reduce exchange of information between groupings, as such would only take place at Commission level.
- Private sector membership in a sub-committee of large RFMO new style 2 will require that the private sector and CSOs get organized in associations, networks, etc., which is currently insufficient the case.

4.13. Benefits of the two types of RFMOs

4.13.1 Institutional benefits of both options

An RFMO can be established within the FAO framework (under Article XIV of the constitution) or independent of the FAO framework, as Intergovernmental Organization (IGO) in itself. These two

options were presented in the independent cost-benefit assessment by Dr Kjartan Hoydal.

The advantages and disadvantages of both options were studied recently in detail by the Indian Ocean Tuna Commission (IOTC) study: Cost and Benefit of the IOTC within and outside of the Food and Agriculture organization (FAO), by Prof. Glenn Hurry in 2015. Similarly, from a legislative perspective, the “Background, guidance and strategic options for the strategic re-orientation of WECAFC: Options paper”, presented by Dr. Judith Swan to WECAFC 15 (2014) provided insight in the two options.

The considerations detailed in the above study and paper generally hold true for WECAFC and are incorporated in the comparison below.

Benefits under Art. XIV of FAO	Benefits as independent IGO
<ul style="list-style-type: none"> • Well-known institutional structure which has been tested and implemented widely. • Automatic access to established human resource, administrative and financial systems, practices and procedures • Legal services available to members • Security and access accruing from a comprehensive set of privileges and immunities established between FAO and members’ countries • The process for establishing an Article XIV body is clearly outlined in FAO’s regulations and practice and allows for easier establishment provided it is well timed with the schedule of the FAO governing bodies • An established regional framework of offices and staff • Easy access to technical staff/expertise within FAO on a range of fisheries matters • Status within the international community as a FAO/UN organization • Article XIV bodies where members pay their way with autonomous budgets, have a certain degree of autonomy to decide on budgets, work programs and expenditure. 	<ul style="list-style-type: none"> • More sense of ownership and responsibility that members have in establishing an organization they are responsible for • The ability to fully determine the budget and financial structure of the organization • Ability to engage directly with fishing entities fishing in the region • The ability to enter directly into third party agreements for extra budgetary funding • The capacity to enter independently into agreements with countries and organizations for cooperation and information sharing; and • The capacity to participate in international meetings and workshops and represent members’ views on issues in an unrestrained manner • Possibility to design set-up and structure of systems that suits all members • Negotiating with the host country of the secretariat the set of privileges and immunities for the secretariat staff
<ul style="list-style-type: none"> • A safety net when working in the field and in helpful for delivery in-country activities, such as meeting organizations, paying tickets and per-diems etc. The FAO has regional offices that can assist and being able to travel as FAO staff members provides a level of comfort and 	<ul style="list-style-type: none"> • Flexibility in handling/carrying-out activities in the member countries • The ability to promote fisheries management measures that are not in line with the Code of Conduct for Responsible Fisheries (CCRF) • Organize visibility and media campaigns

<p>security.</p> <ul style="list-style-type: none"> • Some countries may still feel that being part of the FAO system provides them with some level of support and protection when dealing with developed countries. • FAO will ensure neutrality of the body, which is considered important in a region with standing conflicts between potential member countries • The FAO can potentially act as an intermediary with member and non-member countries over issues such as non-payment of fees and non-engagement. • Some potential donors may be more interested to work through a body which is linked to/under FAO, as FAO will ensure the use of funds following internationally agreed (United Nations) procedures. • Facilitates the support of poor members by wealthier members, including through an agreed formula for contributions • Facilitates joint statements within the UN General Assembly and opportunity to influence through FAO developments at global level • Rapid access to FAO data and information generated at global level and within the region 	<p>for fisheries measures independently of FAO</p> <ul style="list-style-type: none"> • Participate in UN General Assembly meetings and other UN conferences and present statements and opinion independently • Use of own data and information generated independently from FAO for management decision making processes
---	---

4.13.2 Administrative benefits of both options

When both options are compared in terms of administrative benefits, the following issues are to be considered.

Benefits under Art. XIV of FAO	Benefits as independent IGO
<ul style="list-style-type: none"> • Financial and administrative support systems and documentation are regularly updated and provide the framework for the provision of a professional and auditable process; • The FAO office network in the region facilitates linkage/collaboration with other sectors, transfers of funds and monitoring of activities as necessary; • The Human Resource systems provide a consistent global approach to salary scales and entitlement and a rigorous recruitment and staff management system; • FAO conducts a system of rolling audits of its work units; • Benefits to staff as members of the UN systems for pay and conditions; • FAO has an established IT network and support capacity; • Use can be made of FAO's media service. 	<ul style="list-style-type: none"> • The right to recruit and select staff independently; the Executive Secretary is selected solely by members; • Members determine salary scales and benefits for staff; in general, the cost of staff salaries and conditions of service will be lower than those paid at FAO rates; • No cost of the support services (between 5.9 and 13%) charged by the FAO; • No burden of FAO bureaucracy and the time spent in financial circuits; • The possibility to enter into third party agreements for extra budgetary funding without additional costs being charged by the FAO and improved ability to generate external income for projects. • It could be difficult to explain in the government, and particularly to the ministries of finance, that contributions should be made to the FAO for the Article XIV body, while the members are already paying their normal membership contribution to FAO; a challenge that an IGO would not have.

5. Conclusions and recommendations

5.1. Conclusions

5.1.1. Coordination and cooperation

There is a multitude of organizations working in the WECAFC area on fisheries issues. The main organizations operating in the WECAFC region are collaborating quite extensively. An additional step to formalize the collaboration was taken in January 2016 with the signing of the MoU between WECAFC, CRFM and OSPESCA. It should however be noted that this was not the first effort at enhanced collaboration. In 2013 CRFM and OSPESCA signed an MoU for mutual collaboration in the field of fisheries management and fisheries development.

FAO and its WECAFC are collaborating extensively with CRFM and OSPESCA in projects, studies, consultancies and the various Working Groups.

Coordination and collaborations has not been a problem for the main organizations in the region, but is now more formalized. An important shortcoming in the region is that none of the three RFBs operating in fishing Area 31 or the northern part of Area 41 has a binding management function. OSPESCA has however under the Article 22 of the Protocol of Tegucigalpa a binding authority, but still the SICA countries have to ratify any management measures decided by the Council. A similar situation we see with CRFM and the CARICOM. It has to be considered however, that even if these two RFBs would have binding functions and if these decisions would be fully implemented, the majority of the catch of the shared stocks would not be covered under these arrangements.

The wide range of countries and territories and their characteristics (sizes, development status, culture, economics, political situation, traditions, and languages) and the large number of these make collaboration among all a challenge. FAO-WECAFC has managed to establish collaboration between these countries and territories that otherwise would not have done so.

5.1.2. Stocks

The independent cost benefit study showed that WECAFC is the overarching organization in the region. CRFM and OSPESCA represent a majority of the WECAFC members, but in terms of production only cover some 20% of total catches in the region.

This would not have been a problem if targeted fish stocks would be sedentary. However most of the commercially interesting fish stocks are shared, transboundary, straddling or highly migratory species. Consequently, these stocks cannot be harvested by one country without affecting the stock status and harvest opportunities by other countries. Collaboration on the assessment and management and conservation of these stocks is therefore necessary.

The study considered five commercially important fisheries target species/stocks (Queen Conch, spiny lobster, shrimp, dolphin fish and sharks) and concluded that for the sustainable fishing of all these stocks the establishment of an RFMO would be essential.

Queen conch: to implement and monitor the Regional Queen Conch Management and Conservation Plan, carry out timely regional stock assessments, collaborate with CITES and importing countries, and to combat IUU fishing.

Spiny lobster: to stop further reduction in catches and associated economic losses of USD 84 million annually, end overfishing and rebuild stocks, carry out stock assessments, secure mid-term employment and harmonize management measures throughout the region.

Shrimp: to stop overexploitation, carry out stock assessments and rebuild stocks, reduce current losses (which add up to 115 million USD annually) harmonize management measures – increasing the economic and ecological feasibility of the shrimp fisheries sector.

Sharks: stop the decline in shark stocks, assist members in coordination of stock assessments, put management and conservation measures in place that support CITES, ICCAT and EU decisions, support and monitor implementation of measures towards rehabilitation of stocks, establish a sustainable shark fisheries with higher economic gains.

Dolphin fish: increase dolphinfish value for food security in the region, reduce IUU fishing of the species, analyse stock status and any relations with Sargassum and FADs, increase data and information available on the resource and develop and monitor harmonized management measures.

Apart from the above shared regional stocks, the **straddling fish stocks and deep sea fish stocks** in the Area Beyond National Jurisdiction (ABNJ) of areas 31 and the northern part of 41 require coverage by an RFMO. The fact that currently insufficient known about these stocks and their value for fisheries does not release the countries in the region from their responsibility to conserve these stocks and manage their fisheries.

The role of an RFMO with regards to the above regional stocks can be summarized as:

1. Coordinate collaboration on research and scientific advice generation on the stocks and their fisheries.
2. Conduct regional stock assessments.
3. Build capacity for stock assessments and fisheries management among the members.
4. Support sustainable fisheries development and responsible fisheries investments among the member.
5. Develop management and conservation plans supported by (binding) management recommendations.
6. Monitor and evaluate the implementation and impact of the management recommendations.
7. Facilitate regional coordination in fisheries activities monitoring and enforcement.

5.1.3. Area

An RFMO in the WECAFC region would need to cover the ABNJ in the Western Central Atlantic and the Northern part of the Southwest Atlantic. The RFMO would be able to make recommendations concerning fisheries of shared stocks, straddling stocks and highly migratory species conducted within the EEZs of members, provided that the members in question request such recommendations. WECAFC as an RFMO could initially focus on conservation and management of the resources in the ABNJ while supporting the countries with the resources under national jurisdiction, and then strengthen arrangements for the conservation and management of resources under national jurisdiction as necessary giving deference to the sovereignty and sovereign rights of countries within their territorial waters and EEZs.

5.1.4. Science and capacity building

An RFMO in the WECAFC region will fill an important gap in harmonization of methodologies for stock assessments and will coordinate the generation of fisheries scientific advice among all countries in the region, in close collaboration with research and educational institutions of the members and the sub-regional organizations. An RFMO has also a clear role to play in capacity building on MCS and VMS, stock assessments, fisheries statistics, fisheries inspections and the training of observers. Regional decision making based on the best available scientific advice will be possible through an RFMO; decisions and recommendations that can be enforced in collaboration with regional and national enforcement agencies. An RFMO will also be able to monitor compliance with recommendations and create a transparent playing field for the members, allowing them to combat IUU fishing effectively and ensuring the responsible use of the resources.

It is noted, that in several WECAFC member countries the Atlantic/Caribbean fisheries is just a small part of their overall fish production. Most catches originate from the Pacific Ocean and their fisheries in the Pacific are better managed than on the Atlantic side. In some countries the Atlantic is not even considered when implementing fisheries management and development. The creation of a RFMO could increase attention to Atlantic/Caribbean fisheries sector in these countries.

5.1.5. Trade

The role of the market is currently underestimated in fisheries management decision making processes in the region. The Queen Conch example shows that the market can impose its values and norms on the production side. The spiny lobster fishing practices are also under discussion in importing countries. In some markets the main importers are posing new standards that aim to increase safety at sea, reduce bad practices and support sustainable fishing. An RFMO could work together with importers and environmental NGOs to improve the communication of values, build capacity and avoid market distortions that work against fish producers in the WECAFC area.

5.1.6. SDGs and SAMOA pathway

The independent cost-benefit assessment by Dr Kjartan Hoydal already showed that the countries in the region are supposed to establish an RFMO if they are serious in implementing the provisions under the United Nations Convention on the Law of the Sea (1982), United Nations Fish Stocks Agreement (1995) and the FAO Compliance Agreement (1993).

Goal 14 “Conserve and sustainably use the oceans, seas and marine resources” of the Sustainable Development Goals (SDGs) has a target that states that “By 2020, effectively regulate harvesting and end overfishing, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics”. This and other targets are only achievable in the region if we have an RFMO.

The SIDS Accelerated Modalities of Action (SAMOA) Pathway, in its paragraph 58 promotes “the conservation, sustainable use and management of straddling and highly migratory fish stocks, including through measures that benefit Small Island Developing States that are adopted by relevant regional fisheries management organizations and arrangements”. This would be only achievable in the Caribbean if an RFMO is established.

5.1.7. Fisheries management tasks

It is clear that fish stocks that can be managed at national level should be managed at such level. Similarly, it is as clear that the management of those stocks that are shared and transboundary in a sub-region should be coordinated at that level. Fisheries for highly migratory species, straddling stocks, regionally shared stocks, as well as fisheries in ABNJ areas require in their turn a regional approach, with coordination through an RFMO. One main issue is the underlying question of the reasons why countries do not carry through and effectively implement decisions and recommendations made at the regional and subregional levels in a timely manner. In general, the key constraints are the availability of resources and the limited human and institutional capacity to do these things. Going forward these fundamental weaknesses must be addressed to achieve significant progress, and have to be addressed in the establishment process of the RFMO.

5.1.8. Institutional structures

A variety of institutional structures for an RFMO would be possible. However, it is clear that the CRFM and OSPESCA members will require their own sub-committees within a new RFMO for the Western Central Atlantic. This will facilitate generation of advice, decision making processes, as well as implementation of measures by these members. Also a formal link with ICCAT would be obvious, and maybe a connection with the UNEP regional seas framework. If the new RFMO could accommodate a private sector sub-committee, such would be a first of its kind among RFMOs and might generate greater ownership of management recommendations and larger impact in a shorter timeframe.

An alternative for the establishment of an RFMO does not seem to exist. The Western Central Atlantic region is lagging behind most other regions that have an RFMO. This is clearly visible in the stock status in the Western Central Atlantic. Programmes, networks of collaboration, consortia and other forms of collaboration do not present viable alternatives that could provide the long-term required functions of an RFMO.

5.1.9. RFMO benefits within and outside FAO

In the decision making process on the establishment of an RFMO the benefits of creating an RFMO under Article XIV of the FAO constitution and of an independent IGO have to be considered. The benefits of an FAO-RFMO relate largely to the existing structure and knowledge available, large technical and legal expertise, neutrality and the available office network that FAO has and which can contribute to the effective functioning of the RFMO. The benefits of an IGO-RFMO relate to greater flexibility in operations and procedures, more ownership by members, less bureaucracy, cheaper staffing, and probably lower costs of running projects.

5.2. Recommendations

This study confirms the findings of the independent cost-benefit assessment study carried out by Dr Kjartan Hoydal. It shows that there is a need for an RFMO in the WECAFC area, with authority to implement binding management decisions on regionally shared and straddling stocks and ABNJ stocks. The fact that over the past three decades the share of the WECAFC area in total fish production worldwide has declined from three percent to only 1.6 percent at present shows that something has to be done soon, in order to stop this continuous downward trend.

This assessment of the recent achievements and collaboration of CRFM, OSPESCA and WECAFC, including options for a regional institutional collaborative structure within an RFMO framework, particularly recommends the following steps:

- Members of WECAFC utilize the additional information presented in this report in their internal decision making processes on:
 - The area and stocks to be covered by the RFMO (proposed are the ABNJ and EEZs in Areas 31 and the northern part of area 41 for regionally shared stocks [Queen conch, spiny lobster, dolphin fish, wahoo, shrimps and sharks], straddling stocks, deep sea fish stocks and highly migratory species that are not covered by ICCAT).
 - The type of RFMO to be established: under FAO's constitution or an independent from FAOIGO.
 - The structure/set-up of the RFMO (proposed is an RFMO with formal ties with CRFM, OSPESCA and perhaps OLDEPESCA, which will have sub-committees within the RFMO. The private sector will also have a subcommittee within the set-up and a joint working group with ICCAT will enable effective collaboration with that organization. The RFMO will also include a coordinating working group of sub-committees, scientific advisory committee, administrative and finance committee and a compliance committee).
- Members of WECAFC come well-prepared to the WECAFC 16 session (Guadeloupe, 20-24 June 2016) and decide on a way forward with the establishment process of the RFMO.
- CRFM and OSPESCA (and OLDEPESCA) secretariats duly consult with their members on the preferred institutional set-up and the role of their organizations within the RFMO.
- WECAFC/FAO Secretariat to seeks the opinion of FAO senior management on the willingness to assist in a transformation process and to host and support a new RFMO under Article XIV of the FAO constitution, if the WECAFC members decide to follow such course.

References

- CFMC/OSPESCA/WECAFC/CRFM (2015), *Report of the second meeting of the Working Group on Queen Conch, Panama City, Panama, 18–20 November 2014. FAO Fisheries and Aquaculture Report No. 1097, Bridgetown, Barbados, FAO. 229 pp*
- CLME (2013), *the Strategic Action Programme For the Sustainable Management of the Shared Living Marine Resources of the Caribbean Large Marine Ecosystem and Adjacent Regions Draft version – 5 February 2013*
- FAO (2011) *Review of the state of world marine fishery resources, FAO Fisheries and Aquaculture Technical Paper 569*
- Hoydal, K. (2016). *Findings of the independent cost-benefit assessment of the options for strategic re-orientation of WECAFC.*
- Hurry, G. (2016), *Cost and Benefit of the Indian Ocean Tuna Commission (IOTC) within And outside of the Food and Agriculture Organisation (FAO)*
- OSPESCA/WECAFC/CRFM/CFMC (2015), *Report of the First Meeting of the OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean Spiny Lobster, Panama City, Panama, 21–23 October 2014, <http://www.fao.org/3/a-i4860b.pdf>,*

TERMS OF REFERENCE

Position title: Assessment of Regional Fisheries Bodies

Project: CLME+: Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems

Background Information

UNOPS

UNOPS supports the successful implementation of its partners' peacebuilding, humanitarian and development projects around the world. Our mission is to serve people in need by expanding the ability of the United Nations, governments and other partners to manage projects, infrastructure and procurement in a sustainable and efficient manner.

UNOPS Water and Energy Cluster

The UNOPS Water and Energy Cluster provides specialized project management services to partners such as the United Nations Development Programme (UNDP), the Global Environment Facility (GEF), the United Nations Environment Programme (UNEP) and the World Bank. Together with partners, the cluster executes a **wide array of projects** that support **sustainable development**, e.g. by:

- ***promoting international cooperation to prevent and reverse environmental degradation of international (transboundary) water systems***
- enhancing the resilience of communities and eco-systems to climate change

The CLME+ Project and Strategic Action Programme

The ***Caribbean and North Brazil Shelf Large Marine Ecosystems*** (jointly referred to as CLME+) are bordered by over 35 States and Territories. This vast marine area (4.4 million km²) is a major contributor to regional economic development and is key to many globally relevant ecological processes. Two economic drivers important to the region's economy and which are dependent on its marine ecosystems and associated living resources are fisheries and tourism.

The CLME+ is regarded as one of the most ***geopolitically diverse and complex*** sets of LMEs in the world. The culturally diverse countries and territories that border this maritime area range from among the largest (e.g. Brazil, USA) to among the smallest (e.g. Barbados, St. Kitts and Nevis) and from the most developed to the least developed in the world. Both the ***marine resources*** as well as key ***problems*** affecting these resources (***overfishing, pollution, habitat degradation*** and ***climate change***) are shared to a very large extent by the many territories that make up this region. Highly variable progress exists across the region with regard to ocean and living marine resources governance. Capacities for living marine resources management vary considerably at national, sub-regional and regional levels.

A ***10-year Strategic Action Programme (SAP)*** to ***reverse environmental degradation*** in the CLME+ was endorsed at high political levels by over twenty countries within the region in 2013. The SAP puts considerable focus on priority actions that aim at ***dealing with root causes*** of environmental degradation such as ***weak governance arrangements*** and capacity and information gaps, and overall lack of

coordination of efforts, as a result of geopolitical and sectoral fragmentation at the regional, sub-regional, national and local levels.

The **UNDP/GEF Project “CLME⁺: Catalysing Implementation of the Strategic Action Programme for the Sustainable Management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems”** (GEF ID 5542; 2015-2019) aims at facilitating the implementation of the CLME+ SAP. The project seeks to achieve this by facilitating ecosystem based management/an ecosystem approach to fisheries (EBM/EAF) within the CLME+ region, in such a way that a sustainable and climate resilient provision of goods and services from the region’s living marine resources can be secured. Given its regional and comprehensive nature, the CLME+ Project is uniquely positioned to address the root causes of environmental degradation, in particular the gaps and weaknesses in **transboundary and cross-sectoral governance arrangements**.

Purpose and Scope of Assignment

The CLME+ SAP recommends the establishment of an **interim coordination arrangement for sustainable fisheries** under its Strategy 2, as well as to assess the options for a **Regional Fisheries Management Organization (RFMO)**. The interim arrangement between CRFM, OSPESCA and WECAFC is currently being tested.

The 15th session of WECAFC, held in Trinidad and Tobago in March 2014, endorsed Resolution WECAFC/15/2014/10 on the Strategic Action Programme for the sustainable management of the shared living marine resources of the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ SAP), calling upon members to promote SAP implementation and on WECAFC itself to take responsibility as well. The report of the session noted (para. 29) that “within Strategy 2 of the CLME+ Strategic Action Programme, **the role of WECAFC and the relationship with its partners OSPESCA and CRFM should be further assessed**”.

The discussion paper on the Findings of the independent cost-benefit assessment of the options for strategic re-orientation of WECAFC recommended that the above assessment should be done “before the 16th session of WECAFC (Guadeloupe, 20-24 June 2016), defining a **clear institutional collaborative structure with operational linkages that are cost-effective, and avoid overlap and duplication**, for presentation to the Session”.

At the 2nd WECAFC Strategic reorientation workshop, held in Port of Spain, Trinidad and Tobago on 1-2 December 2015, 24 member countries and the EU attending the workshop recommended, amongst others, that **“An additional study be undertaken within the framework of the CLME+ for submission to WECAFC 16.”**

The **aim of the present consultancy** is to undertake **an assessment of the recent of CRFM, OSPESCA and WECAFC including proposing options for a regional institutional collaborative structure within an RFMO framework**. It is anticipated that the results from this consultancy will inform WECAFC country positions regarding WECAFC’s Strategic Reorientation Options to be discussed at the 16th Session of WECAFC in June 2016.

Activities

The consultant will:

1. Describe in summarized form the positive developments and achievements within CRFM, OSPESCA, WECAFC and CLME and CLME+ Project and provide an analysis of how an RFMO could add to these results.
2. Describe in a summarized form the results of the work in the period 2012 -2015 of WECAFC, CRFM, OSPESCA and CLME+ in a way that these can be identified as joint collaborative work, gaps and thematic work areas that could be entered by the new RFMO.
3. Design at least 3 options for clear institutional collaborative structures with operational linkages that are cost-effective, and avoid overlap and duplication between the WECAFC, CRFM and OSPESCA, for consideration by the members and partners.
4. Prepare fact sheets on the 5 most important identified shared and transboundary stocks (for instance Queen Conch, spiny lobster, round sardinella, gulf menhaden, shrimp/seabob, and dolphin fish) and their status and options for better management at regional level; including a short costs and benefits analysis for the regional level joint management of these specific fisheries.
5. Prepare a few pages on what specific species will be assessed and managed by the WECAFC if it becomes a RFMO. An additional table with the relative importance of these species for each countries of the zone would bring a better understanding on their expectation on an RFMO.
6. Provide a short analysis of the role of other stakeholders (i.e. amongst others CSOs, NGO's and seafood exporters and importers) within an RFMO framework and how they can participate, benefit and take part in decision and management processes
7. Prepare a draft common vision and common objectives for the management of fisheries in the region, acknowledging which fisheries stocks would be covered at regional level.
8. Assess whether the common objectives could be met through a different types of working arrangements.
9. Provide information on how an RFMO can better address the capacity building needs of member states for developing the scientific base for decision making and implementing fisheries management measures.

Deliverables

The consultant will be expected to submit the following deliverables at the time stipulated below:

- A draft comprehensive report in English of not more than 40 pages, excluding annexes, that covers the information detailed in the activities above, submitted by 15 February 2016.
- A final draft report (with proper layout and formatting), submitted by 28 February 2016.
- A PowerPoint presentation of not more than 30 slides summarizing the report, submitted by 15 March 2016

Qualifications and Experience

a. Education

A Masters degree (or equivalent) in fisheries management, governance, economics or related field.

b. Experience

- At least 7 years work experience on fisheries governance, Regional Fisheries Bodies (RFBs) and RFMOs

- Practical work experience within the CLME+ region/prior successful working experience with key CLME+ stakeholders and (prospective) partners, in a function relevant to the consultancy (ideally working in/with both Latin American and Caribbean countries)
- Knowledge of WECAFC, CRFM and OSPESCA activities in recent years, as well as of their institutional and governance structures
- Analytical capacity to assess stocks and fisheries status of the main fisheries in the region
- Experience with organizational/institutional development and/or management
- Experience of working with private and public sectors, and regional/international organisations

Key Competencies

- Adherence to UN Core Values: professionalism, integrity, respect for diversity
- Accountability, client orientation
- Ability to take initiative and to work independently as well as part of a team
- Ability to quickly acquire a good understanding of the regional (political, environmental, socio-economic, inter-institutional) context relevant to the assignment
- Strong interpersonal skills and ability to establish effective work relationships with people of different backgrounds and cultures
- Excellent communication skills, reporting with ability to express ideas clearly, concisely and effectively
- Proficiency in English and Spanish is required.
- Knowledge of French and Portuguese will be considered an asset.

Annex 2: Detailed catches by shared stock species

Table 11: Queen Conch catches (1980-2013) (in tonnes)

Country	1980	1985	1990	1995	2000	2005	2010	2013
Anguilla	75	75	82	37	75	75	277	345
Antigua and Barbuda			94	311	284	477	690	4000
Bahamas	2415	4058	2513	3705	5003	5115	5273	5642
Barbados	12	12	11	11	10	11	11	11
Belize	1234	1406	1254	1026	1745	2136	2395	3060
Bonaire/S.Eustatius/Saba								26
British Virgin Islands				43	6	9	5	5
Colombia			2438	1200	1185	38	713	
Cuba		617	61	32	1163	644	506	558
Curaçao								26
Dominican Republic	706	1798	5120	2210	1778	1473	256	2218
Grenada	3	2	8	2	0 0	16	1	39
Guadeloupe	280	300	520	500	350	250	225	225
Guatemala								
Haiti		200	400	350	300	300	150	200
Honduras	255	2258	1620	5063	5348		1575	1575
Jamaica			6000	15998	10000	4800	3300	4125
Martinique			178	138	98	58	25	25
Mexico	750	801	272	239	225	158	68	
Mexico	1503	2501	2688	4163	2097	1906		204
Netherlands Antilles			132	65	65	65	65	
Nicaragua					298	1149	5970	9857
Nicaragua								
Panama			31		1			
Puerto Rico				758	1710	1329	915	893
Saint Kitts and Nevis				167	545	1088	712	1435
Saint Lucia			30	240	300	315	210	615
Saint Vincent/Grenadines			56	58	52	48	294	336
Sint Maarten								13
Trinidad and Tobago								
Turks and Caicos Is.	4200	5685	3195	7148	5525	5103	5286	3630
US Virgin Islands	25	15	24	50	100	480	254	91
Venezuela, Boliv Rep of			35					15
TOTAL	11458	19728	26762	43514	38263	27043	29176	39169

Source: FISHSTAT J

Table 12: Lobster catches (1980-2013) (in tonnes)

Country (Country)	1980	1985	1990	1995	2000	2005	2010	2013
Anguilla	90 F	100 F	109	100 F	150 F	200 F	115	135
Antigua and Barbuda	64	117	97	149	275	309	175	150 F
Bahamas	2894	5513	5808	7750	9023	9278	9692	6088
Belize	369	654	383	608	503	439	672	652
Bonaire/S.Eustatius/Saba	...	...	...	...	...	...	...	45
Brazil	6218	6929	9223	10817	6469	6927	6866	6726
British Virgin Islands	35 F	62	75	32	3	50 F	40 F	40 F
Colombia	126	322	356	97	516	289	45	97
Cuba	10567	13578	7957	9405	7478	5834	4458	4621
Dominican Republic	166	784	750 F	619	1286	958	1001	2542
Grenada	2	2	2	57	47	23	19	23
Haiti	200 F	300 F	800 F	900 F	900 F	800 F	400 F	250 F
Honduras	2198	4065	4002	3771	2469	3321	3150	1657
Jamaica	0	200	200	350 F	517	738	200	300 F
Martinique	104 F	95 F	100 F	110 F	200	150 F	160 F	100 F
Mexico	689	702	658	896	747	767	370	934
Nicaragua	1848	1159	717	2260	6180	3787	3690	4278
Puerto Rico	...	...	...	...	212	157	148	98
Saint Kitts and Nevis	...	...	...	12	26	39 F	33	15
Saint Vincent/Grenadines	...	...	...	...	...	21	15	29
Trinidad and Tobago	-	-	-	-	5	6	60	21
Turks and Caicos Is.	330	279	210	376	187	388	154	211
US Virgin Islands	49	35	60	80 F	100 F	106	111	72
United States of America	2959	1667	2606	2934	2571	1534	2570	2452
Venezuela, Boliv Rep of	209	202	1126	629	105	70	90 F	...
Totals - Quantity (tonnes)	29117	36765	35239	41952	39969	36191	34234	31536

Source: FISHSTAT J

Table 13: Shrimp and seabob catches, by country and by species, (1980-2013) (in tonnes)

Country (Country)	Species (ASFIS species)	1980	1985	1990	1995	2000	2005	2010	2013	
Belize	Penaeus spp	58	55	87	49	45	52	4	0	87
Colombia	Natantia	-	-	65	17	19	...	...	...	65
Colombia	Penaeus spp	526	2267	2088	992	978	245	...	508	2267
Cuba	Penaeus duorarum	3943	3373	2381	1851	1588	1582	738	619	3943
Cuba	Penaeus spp	1690	1448	...	...	-	-	-	-	1690
Dominican Republic	Penaeus spp	821	65	30 F	375	...	55	126	47	821
Guatemala	Penaeus spp	-	-	-	120	163	191	210	186	210
Guyana	Xiphopenaeus kroyeri	-	2609	3510	9800 F	16733	14863	17686	23400	23400
Guyana	Penaeus spp	1974	617	354	400 F	1132	1021	854	653	1974
Guyana	Nematopalaemon schmitti	-	-	-	-	1464	2507	526	685	2507
Haiti	Natantia	...	100 F	100 F	133 F	530 F	550 F	50 F	100 F	0
Honduras	Penaeus spp	2612	2650	1421	3830	2057	853	1698	1080	3830
Jamaica	Penaeus spp	...	...	...	230 F	37	...	...	...	37
Japan	Natantia	-	-	-	-	-	-	-	-	0
Japan	Penaeus spp	3320	2662	1072	349	-	-	-	-	3320
Korea, Republic of	Natantia	-	-	-	-	1099	8	-	-	1099
Korea, Republic of	Penaeus spp	2949	1245	1306	653	-	-	-	-	2949
Mexico	Xiphopenaeus kroyeri	...	...	...	...	...	1937	638	1916	1937
Mexico	Penaeus aztecus	...	...	...	...	...	897	1381	6254	6254
Mexico	Penaeus duorarum	...	...	...	...	...	646	811	939	939
Mexico	Penaeus setiferus	...	...	...	...	...	2148	62	490	2148
Mexico	Penaeus spp	27610	25476	23847	23435	21288	18851	9216	3853	27610
Nicaragua	Penaeus spp	2741	769	380	2330	3328	3498	2383	1235	3498
Suriname	Xiphopenaeus kroyeri	...	...	...	...	8366	8926	7600	8333	8926
Suriname	Penaeus spp	1921	1359	2070 F	2300 F	5152	1060	1208	920	5152
Suriname	Penaeus subtilis	...	...	...	...	...	2804	...	...	2804
Suriname	Nematopalaemon schmitti	...	...	...	...	...	46	...	...	46
Trinidad and Tobago	Xiphopenaeus kroyeri	...	...	...	...	94	78	...	...	94
Trinidad and Tobago	Penaeus spp	452	365	815	700 F	755	701	879	687	879
United States of America	Xiphopenaeus kroyeri	3612	3431	1520	1724	3415	1073	490	905	3612
United States of America	Natantia	...	...	1088	4498	1800	1320	1363	1038	4498
United States of America	Penaeus aztecus	60928	70852	78667	57107	62713	44418	35420	46790	78667
United States of America	Penaeus duorarum	16193	12139	6051	9270	5573	6138	4183	2924	16193
United States of America	Penaeus setiferus	33784	44573	34104	39959	52280	50258	46692	41465	52280
United States of America	Sicyonia brevirostris	1747	924	3681	3848	3254	724	805	519	3848
United States of America	Pleoticus robustus	233	-	135	252	369	196	323	589	589
Venezuela, Boliv Rep of	Penaeus spp	8070	5953	8140	10786	9882	5924	240 F	2350 F	10786
Totals - Quantity (tonnes)		175184	182932	172912	175008	204114	173570	135586	148485	

Source: FISHSTAT J

Table 14: Shark catches by species (in tonnes)

Species (ASFIS species)	1980	1985	1990	1995	2000	2005	2010	2013
Blue shark	...	...	...	...	...	1337	5442	10491
Requiem sharks								
nei	6853	11056	11610	12209	6451	8025	4915	7455
Sharks, rays, skates, etc. nei	5948	12821	15424	12597	10340	8946	4552	6126
Dogfish sharks								
nei	-	-	-	26	104	201	1117	1000
Picked dogfish	-	-	-	-	-	-	-	930
Blacktip shark	...	...	...	...	630	559	3	452
Shortfin mako	...	...	...	...	15	125	337	449
Atlantic	...	...	...	...	...	139	153	399

Source: FISHSTAT J

Annex 3 Ex vessel prices of WECAFC species

Ex vessel prices (in USD/kg)	2012	2013
1. Gulf menhaden (<i>Brevoortia patronus</i>)	0.15	0.19
2. Round sardinella (<i>Sardinella aurita</i>)	0.35	0.39
3. Spiny lobster (<i>Panulirus argus</i>)	16.76	20.66
4. Yellowfin tuna (<i>Thunnus albacares</i>)	7.92	8.08
5. Skipjack tuna (<i>Katsuwonus pelamis</i>)	3.79	3.17
6. Albacore tuna (<i>Thunnus alalunga</i>)	3.36	3.27
7. Mullet (flathead grey mullet)	1.50	2.04
8. Red snapper (<i>Lutjanus campechanus</i>)	7.46	8.6
9. Northern brown shrimp (<i>Farfantepenaeus aztecus</i>)	7.00	7.00
10. Northern white shrimp (<i>Litopenaeus setiferus</i>)	4.10	5.38
11. Seabob shrimp (<i>Xiphopenaeus kroyeri</i>)	2.00	2.00
12. King mackerel (<i>Scomberomorus cavalla</i>) Atlantic Spanish mackerel (<i>Scomberomorus maculatus</i>) and/or Serra Spanish mackerel (<i>Scomberomorus brasiliensis</i>)	4.23	5.14
13. common octopus (<i>Octopus vulgaris</i>)	5.00	5.00
14. Blue crab (<i>Calinectes sapidus</i>)	2.29	3.16
15. Black stone crab(<i>Menippe</i> Spp.)	4.17	4.46
16. America Cupped Oyster (<i>Crassostrea Virginica</i>)	10.34	10.70
17. Atlantic Thread herring (<i>Opisthonema</i> spp)	0.36	0.38
Queen Conch	7.13	4.30
Bigeye tuna	10.23	9.30
Seacucumber	20.00	20.00
Shark	1.50	1.60

Annex 4: Sustainable Development Goals

Sustainable Development Goals³⁴

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10. Reduce inequality within and among countries
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts*
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

³⁴ Resolution adopted by the General Assembly on 25 September 2015, 70/1. [Transforming our world: the 2030 Agenda for Sustainable Development](#)

Annex 5: FAO-WECAFC publications in support of fisheries and aquaculture development and management in the WECAFC member states

Author(s)	Title	year
FAO/WECAFC	Report of the Regional Policy and Planning Workshop on the FAO Code of Conduct for Responsible Fisheries (CCRF) in the Caribbean: Achieving Improved Fisheries Management and Utilization in the Wider Caribbean Region, Bridgetown, Barbados, 6–9 December 2011. Fisheries and Aquaculture Report. No. 999. FAO, Bridgetown, Barbados. 2012. http://www.fao.org/3/a-i2675e.pdf	2012 (E)
FAO/WECAFC	Report of the fifth session of the Scientific Advisory Group Puerto Morelos, Mexico, 28–29 October, 2011. FAO Fisheries and Aquaculture Report N° 987. Bridgetown, Barbados, FAO. 2012. 66 pp. http://www.fao.org/docrep/015/i2573t/i2573t00.pdf	2012 (E/F/S)
FAO/WECAFC	Report of the fourteenth session of the Western Central Atlantic Fishery Commission, Panama City, Panama, 6-9 February 2012. Fisheries and Aquaculture Report. No. 1000. FAO, Bridgetown, Barbados. 2012. http://www.fao.org/docrep/017/i2677t/i2677t.pdf	2012 (E/F/S)
FAO/WECAFC	Report of the first meeting of the CFMC/OSPESCA/WECAFC/CRFM Working Group on Queen Conch, Panama City, Panama, 23–25 October 2012. FAO Fisheries and Aquaculture Report No. 1029. Bridgetown, Barbados. FAO. 2013. http://www.fao.org/docrep/017/i3193t/i3193t.pdf	2013 (E/S)

FAO/WECAFC	Report of the FAO/CRFM/WECAFC Caribbean Regional Consultation on the Development of International Guidelines for Securing Sustainable Small-Scale Fisheries, Kingston, Jamaica, 6–8 December 2012. Fisheries and Aquaculture Report. No. 1033. Rome, FAO. 2013. http://www.fao.org/docrep/017/i3207e/i3207e.pdf	2013 (E)
FAO/CLME	Report of the Final Regional Workshop: case study on shared stocks of the shrimp and groundfish fisheries of the Guiana’s-Brazil shelf, Port-of-Spain, 16-18 October 2012, CLME Case Study on shrimp and groundfish - Report. No.10, Rome, FAO. 2012. 25p	2012 (E)
CRFM	Report of the First Meeting of the CRFM/WECAFC Working Group on Flyingfish in the Eastern Caribbean, 18 – 19 June 2012, St. Vincent and the Grenadines, CRFM Technical & Advisory Document - Number 2012 / 12	2012 (E)
Flores-Nava, A./FAO	Diagnóstico Regional de la acuicultura de recursos limitados y la Acuicultura de la micro y pequeña empresa en América Latina. Serie Acuicultura y Pesca en Latinoamérica No. 7. FAO- Santiago, Chile. 26p	2012 (S)
FAO/RAA	Reporte del Seminario-taller sobre políticas nacionales relacionadas con la Acuicultura de recursos limitados en América Latina, 9-10 de mayo, 2013, Guayaquyil, Ecuador. FAO/RAA.	2013 (S)
FAO/RAA	Acuicultura de pequeña escala y recursos limitados en América Latina y el Caribe: Hacia un enfoque integral de políticas públicas http://www.fao.org/3/a-au437s.pdf	2014 (S)
Beltrán T.C.S./FAO	Contribución de la Pesca y la Acuicultura a la Seguridad Alimentaria y el Ingreso Familiar en Centroamérica http://www.fao.org/3/a-i3757s.pdf	2014 (S)
FAO	Informe del Taller sobre Impacto de Instrumentos Políticos Nacionales en el Desarrollo de la Acuicultura de Pequeña Escala en los Países Centroamericanos. 17-18 de septiembre 2012, Ciudad de Panamá, PANAMÁ.	2013 (S)
FAO/WECAFC	Report of the WECAFC–FIRMS Workshop on Marine Resources and Fisheries Inventories. Corpus Christi, the United States of America, 1–2 November 2013. FAO Fisheries and Aquaculture Report No. 1060. Rome. 22 pp http://www.fao.org/docrep/015/i2573t/i2573t00.pdf	2014 (E)
FAO/WECAFC	Report of the sixth session of the Scientific Advisory Group, Corpus Christi, United States of America, 3 November 2013. FAO Fisheries and Aquaculture Report N° 1061, Bridgetown, Barbados, FAO. 2014. 49 pp.	2014 (E)
Singh-Renton, S. & McIvor I./FAO/WECAF C	Review of current fisheries management performance and conservation measures in the WECAFC area. FAO Fisheries and Aquaculture Technical Paper No. 587, Bridgetown, Barbados, FAO. 293 pp. http://www.fao.org/3/contents/9c4073ec-869f-4d8a-aebf-ce496adfa94d/i4255e00.htm	2015 (E)
Salas, S.; Chuenpagdee, R.; Charles, A.;	Coastal fisheries of Latin America and the Caribbean. FAO Fisheries and Aquaculture Technical Paper. No. 544. Rome, FAO. 2011. 430p.	2012 (E)

Seijo, J.C. (eds)/FAO	http://www.fao.org/docrep/014/i1926e/i1926e.pdf	
FAO/WECAFC	Report of the WECAFC Reorientation and Strategic planning Workshop Gosier, Guadeloupe, 29–30 January 2014. FAO Fisheries and Aquaculture Report No. 1068, Bridgetown, Barbados. 19 pp http://www.fao.org/3/a-i3795e.pdf	2014 (E)
FAO/WECAFC	Report of the FAO/WECAFC workshop on implementing the 2009 FAO agreement on port state measures to combat illegal, unreported and unregulated fishing, Port of Spain, Trinidad and Tobago, 24–28 March 2014. FAO Fisheries and Aquaculture Report No. 1076. Rome, FAO. 45 pp. http://www.fao.org/3/a-i3925e.pdf	2015 (E)
FAO/WECAFC	Report of the fifteenth session of the Commission, Port of Spain, Trinidad and Tobago, 26–28 March 2014. FAO Fisheries and Aquaculture Report N° 1069. Bridgetown, Barbados, FAO. 132pp http://www.fao.org/3/a-i3790t.pdf	2014 (E/F/S)
FAO/WECAFC	Report of the first meeting of the WECAFC Working Group on the Management of Deep-sea Fisheries, Christ Church, Barbados, 30 September – 2 October 2014. FAO Fisheries and Aquaculture Report No. 1087. Bridgetown, FAO. 61 pp. http://www.fao.org/3/a-i4329e.pdf	2015 (E)
FAO/WECAFC	Report of the first meeting of the OSPESCA/WECAFC/CRFM/CFMC Working Group on Caribbean Spiny Lobster, Panama City, Panama, 21–23 October 2014. FAO Fisheries and Aquaculture Report No. 1095, Bridgetown, Barbados. 112 pp. http://www.fao.org/3/a-i4860b.pdf	2015 (E/S)
FAO/WECAFC	Report of the Regional Workshop on Marine Protected Areas as a Tool for Responsible Fisheries and Sustainable Livelihoods in the Caribbean, Barbados, 6–8 November 2014. FAO Fisheries and Aquaculture Report No. 1096. Rome, FAO. 35 pp. www.fao.org/3/b-i4855e.pdf	2015 (E)
FAO/WECAFC	Report of the second meeting of the CFMC/OSPESCA/WECAFC/CRFM Working Group on Queen Conch, Panama City, Panama, 18–20 November 2014. FAO Fisheries and Aquaculture Report No. 1097, Bridgetown, Barbados, FAO. 495 pp	2016 (E/F/S)
FAO/WECAFC	Report of the Workshop on Investing in Ecosystem-based shrimp and groundfish fisheries management of the Guianas –Brazil shelf, Barbados, 7-8 September 2015. FAO Fisheries and Aquaculture Report No. 1125, Bridgetown, Barbados. 150 pp.	2016 (E/S)
FAO/WECAFC	WECAFC Performance, planning and procedures. FAO Fisheries and Aquaculture Circular No. 1096. Bridgetown, Barbados, 2015. 150p.	2016 (E/F/S)
FAO/WECAFC	Issue brief #10, Securing fish for the Caribbean http://www.fao.org/3/a-ax904e.pdf	2014 (E)
FAO/WECAFC	Issue brief #15, Combating IUU fishing in the Caribbean through	2015

	policy and legislation http://www.fao.org/3/a-i5291e.pdf	(E)
McConney, P., Charlery, J., Pena, M., Phillips, T., Van Anrooy, R., Poulain, F., Bahri, T. /FAO	Disaster risk management and climate change adaptation in the CARICOM and wider Caribbean region – Formulating a strategy, action plan and programme for fisheries and aquaculture. Regional workshop 10–12 December 2012, Kingston, Jamaica. FAO Fisheries and Aquaculture Proceedings. No. 35. Rome. 123 pp. http://www.fao.org/3/a-i4369e.pdf	2015 (E)
McConney, P., Charlery, J., Pena, M., Phillips, T., Van Anrooy, R., Poulain, F., Bahri, T./FAO	Disaster risk management and climate change adaptation in the CARICOM and wider Caribbean region – Strategy and action plan. Rome. 29 pp. http://www.fao.org/3/a-i4382e.pdf	2015 (E)
McConney, P., Charlery, J., Pena, M., Phillips, T., Van Anrooy, R., Poulain, F., Bahri, T./FAO	Disaster risk management and climate change adaptation in the CARICOM and wider Caribbean region – Programme proposals. Rome. 21 pp. http://www.fao.org/3/contents/94f1152d-fb0e-48b5-b8cf-e1065a1aca2f/i4385e.pdf	2015 (E)
CRFM/FAO	Brochure on: The Caribbean Community Common Fisheries Policy is your fisheries policy. http://crfm.int/~uwohxjxf/index.php?option=com_k2&view=item&ask=download&id=208_cee7f4979d2532dfd46416a6d4bd793d&Itemid=336	2015 (E)
FAO/WECAFC	Brochure: Caribbean Billfish Projects Kicks off http://www.commonoceans.org/fileadmin/user_upload/common_oceans/docs/BillfishBrochure.pdf	2015 (E) +(S)
FAO/WECAFC	Report of the 2nd Regional Workshop on Caribbean Billfish Management and Conservation of the WECAFC/ OSPESCA/ CRFM/ CFMC Working Group on Recreational Fisheries. Panama City, Panama. 9–11 November 2015. FAO Fisheries and Aquaculture Report. No. 1137, Bridgetown, Barbados.	2016 (E/S)
FAO/WECAFC	Report of the seventh session of the Scientific Advisory Group, Panama City, Panama, 7-8 November 2015. FAO Fisheries and Aquaculture Report. N° 1138, Bridgetown, Barbados, FAO. 2016. 49 pp.	2016 (E/F/S)
FAO/WECAFC	Report of the Second WECAFC Strategic Reorientation Workshop, Port of Spain, Trinidad and Tobago, 1 - 2 December 2015. FAO Fisheries and Aquaculture Report No 1140. Bridgetown, Barbados, FAO. 45 pp	2016 (E/S)
Hoydal, K. /FAO/WECAFC	Findings of the independent cost-benefit assessment of the options for strategic re-orientation of WECAFC. FAO Fisheries and Aquaculture Circular No. 1117. Bridgetown, Barbados.	2016 (E/F/S)
FAO/WECAFC	Report of the Work Planning Workshop for the Sustainable Management of Bycatch in Latin America and Caribbean Trawl Fisheries (REBYC-II LAC) project: Workshop, Bridgetown, Barbados, 9–12 September 2015. FAO Fisheries and Aquaculture Report No. XXX, Bridgetown, Barbados	2016 (E/S)

CRFM	CRFM, 2015. Cost Benefit Analysis for the Integration of Curaçao as an Associate Member of the CRFM. CRFM Technical & Advisory Document No. 2015 / 01.	2015
CRFM	Mohammed, E. 2015. Developing a Model Logbook for the FAD Fisheries in the Eastern Caribbean. CRFM Technical & Advisory Document No. 2015 / 02. 66p.	2015
CRFM	Mohammed, E. 2015. Developing the CRFM's Fisheries and Aquaculture Research Agenda. CRFM Technical & Advisory Document No. 2015 / 03. 110p.	2015
CRFM	CRFM 2015. Report of the Write-shop on FAD Fisheries Management, Kingstown. St. Vincent and the Grenadines, 23-25 June 2015. CRFM Technical & Advisory Document No. 2015 / 04. 24p	2015
CRFM	CRFM 2015. 2015 Draft Sub-Regional Management Plan for FAD Fisheries in the Eastern Caribbean (Stakeholder Working Document). CRFM Technical & Advisory Document No. 2015 / 05. 94p..	2015
CRFM	CRFM 2015. Final Technical Report – Technical support to develop National and Regional Environmental Monitoring Programmes related to SPS for fishery and aquaculture products in the CARIFORUM States. CRFM Technical & Advisory Document No. 2015 / 06. 129 p.	2015
CRFM	CRFM. 2015. Final Technical Report – Technical support to develop model legislation, protocols, guidelines for health and food safety related to fisheries and aquaculture in CARIFORUM States. CRFM Technical & Advisory Document No. 2015/ 07. 368p	2015
CRFM	CRFM. 2015. Report of the Regional Validation Workshop for the Fisheries Component of the 10th EDF funded Sanitary and Phyto-sanitary Measures Project. CRFM Technical & Advisory Document No. 2015/ 08. 111p.	2015
CRFM	CRFM. 2015. CRFM Statistics and Information Report – 2014.	2015
CRFM	CRFM 2015 CRFM Working Groups: Terms of Reference. CRFM Special Publication No. 3. 41p.	2015
CRFM	CRFM. 2015. FAD Fishery Model Logbook. CRFM Special Publication No. 4. 21p.	2015
CRFM	CRFM. 2015. The CRFM's Fisheries and Aquaculture Research Agenda (Provisional). CRFM Special Publication, No. 5. 51 pp.	2015
CRFM	Gervain, P., Reynal, L., Defoe, J., Ishida, M., and Mohammed, E. 2015. Manual of Best Practices in Fisheries that use Fish	2015

	Aggregating Devices: FAD Design, Construction and Deployment. CRFM Special Publication No. 6. Vol. I. 52 pp	
CRFM	Eugene S., Andrews, C., Dromer, C., Ishida, M. and Mohammed, E. 2015. Manual of Best Practices in Fisheries that use Fish Aggregating Devices: Maintaining Good Quality of FAD-Caught Fish: From the point of capture to the point of sale. CRFM Special Publication No. 6, Vol. II. 21pp	2015
CRFM	CRFM 2015. Draft Report and Proceedings of the Thirteenth Meeting of the Caribbean Fisheries Forum, St. George's, Grenada, 30 – 31 March 2015. Volume 1. CRFM Management Report – PY 2015 / 16. 136 pp.	2015
CRFM	CRFM 2015. Report and Proceedings of the First Special Meeting of the Executive Committee of the Caribbean Fisheries Forum, 14 September 2015. Volume 1 – Supplement 2. CRFM Management Report –PY2015/ 16.16p.	2015
CRFM	CRFM 2015. Report and Proceedings of the Twenty-fifth Meeting of the Executive Committee of the Caribbean Fisheries Forum (Electronic Meeting), 23 October, 2015. Volume 1 – Supplement 3. CRFM Management Report – PY 2015 / 16. 34 p	2015
CRFM	CRFM 2015. Report and Proceedings of the Twenty-sixth Meeting of the Executive Committee of the Caribbean Fisheries Forum (Electronic Meeting), 3-4 March 2016. Volume 1 – Supplement 4.	2016
CRFM	CRFM 2015. Report and Proceedings of the Ninth Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, Flamboyant Hotel, St. George's, Grenada, 15 May 2015. Volume 2. CRFM Management Report – PY 2015 / 16. 93p	2015
CRFM	CRFM 2015. Terminal Report – CRFM SPS Legislation and Environmental Monitoring Media Coverage. CRFM Administrative Report. 108 p	2015
CRFM	CRFM. 2015. CRFM Annual Report, 1 April 2014 – 31 March 2015. CRFM Administrative Report	2015
CRFM	CRFM 2016. A Practical Guide to Implementing the St. George's Declaration on Conservation, Management and Sustainable Use of the Caribbean Spiny Lobster (<i>Panulirus argus</i>). FIRST DRAFT	2016
CRFM	Mohammed, E. 2016. Implementation Report (2014-2015): Sub-regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean. CRFM Technical & Advisory Document.	2016
CRFM	Mohammed, E. 2016. Implementation Report (2013-2015): Regional Strategy for the Control of the Invasive Lionfish in CRFM Member States. CRFM Technical & Advisory Document (in prep.)	2016
CRFM	Promoting Regional Trade and Agribusiness Development in the Caribbean: Case Studies of Linking Fisheries to Tourism-Related Markets. CRFM Technical & Advisory Document	2016
CRFM	CRFM 2014. Report of the Tenth Annual CRFM Scientific Meeting,	2014

	Kingstown, St. Vincent and the Grenadines, 10 – 17 June 2014. CRFM Fishery Report – 2014, Volume 1. 179p.	
CRFM	Report of the Tenth Annual CRFM Scientific Meeting, Kingstown, St. Vincent and the Grenadines, 10 – 17 June 2014 – National Reports, CRFM Fishery Report – 2014, Volume 1, Suppl.1. 48p.	2014
CRFM	Report of the Tenth Annual CRFM Scientific Meeting, Kingstown, St. Vincent and the Grenadines, 10 – 17 June 2014 – Report of the 3rd Joint Meeting of the CRFM Small Coastal Pelagic Fish Resource Working Group and the CRFM/WECAFC Working Group on Flyingfish in the Eastern Caribbean. CRFM Fishery Report – 2014, Volume 1. Suppl.2. 135p.	2014
CRFM	CRFM, 2014. Report of Workshop to Develop Strategy to Strengthen Capacity in CRFM States in the Area of Fisheries Statistics and Information, 10-12 February 2014, St. Vincent and the Grenadines. CRFM Technical & Advisory Document No. 2014 / 1	2014
CRFM	Asgeirsson, T. 2014. Training Needs Assessment of the Fisheries Divisions of the Caribbean Regional Fisheries Mechanism (CRFM) Member States. CRFM Technical & Advisory Document, No. 2014/ 2	2014
CRFM	CRFM 2014. Study on the Potential of Fish Farming in the Caribbean. CRFM Technical & Advisory Document No. 2014 / 3	2014
CRFM	CRFM 2014. The Sanitary and Phytosanitary Measures (SPS) Programme: Positioning CARIFORUM to Fish where the big fish are. CRFM Technical and Advisory Document No. 2014 / 4	2014
CRFM	CRFM response to the Notice of a 12-Month Finding on petition to list the Nassau Grouper (<i>Epinephelus striatus</i>) as Threatened or Endangered Under the Endangered Species Act (ESA)	
CRFM	CRFM 2014. Report of the CRFM / CNFO / CTA Regional Fisheries Workshop: Investing in Blue Growth, St. George's, Grenada on 20 - 21 November 2014. CRFM Technical & Advisory Document, No. 2014 / 5	2014
CRFM	CRFM, 2014. Report of the CRFM / CARICOM/ JICA Friendship Year: Regional Fisheries Workshop, 04 – 05 December 2014, Trinidad and Tobago. CRFM Technical & Advisory Document, No. 2014/ 6	2014
CRFM	Report of the CRFM / CARIFICO Regional Workshop on FAD Management, 05 December 2014, Trinidad and Tobago. CRFM Technical & Advisory Document, No. 2014/ 7	2014
CRFM	Barnwell, S. 2014. Review of Fisheries Data Collection Systems in Selected CRFM Member States and Recommendations for Integrating FAD Fisheries. CRFM Technical & Advisory Document No. 2014 / 8. 23p.	2014
CRFM	CRFM, 2014. Sub-Regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean. CRFM Special Publication No. 2	2014
CRFM	CRFM 2014. Report of the CRFM/CNFO/CTA ICT Consultancy on the Development of the Caribbean the Caribbean Fisheries	2014

	Knowledge Platform Project. CRFM Technical & Advisory Document No. 2014/ 9	
CRFM	CRFM (2014)(In prep). Report of Inaugural Meeting of the Working Group to Promote Sustainable CRFM Technical & Advisory 7 Aquaculture Development Grand Coastal Hotel, Georgetown, Guyana, 31 July to 1 August 2014. CRFM Technical & Advisory Document (In prep.)	
CRFM	CRFM 2014. Report and Proceedings of the Twelfth Meeting of the Caribbean Fisheries Forum, Roseau, Dominica, 23 - 25 April 2014. Volume 1. CRFM Management Report – PY 2014 / 15. 138p	2014
CRFM	CRFM 2014. Report and Proceedings of the Eighth Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, Fort Young Hotel, Roseau, Dominica, 23 May 2014. Volume 2. CRFM Management Report – PY 2014 / 15. 86p.	2014
CRFM	CRFM 2014. Report and Proceedings of the Fifth Special Meeting of the Ministerial Council of the Caribbean Regional Fisheries Mechanism, Paramaribo, Suriname, 09 October 2014. CRFM Management Report – PY 2014 / 15, Volume 2 – Supplement 1. 74p.	2014
CRFM	Mohammed, E., Theophile, D., Magloire, A., Hubert-Medar, P., Williams, M., Saddler, K., Isaac, C. and St. Louis, J. 2014. Report of the Caribbean Regional Fisheries Mechanism (CRFM) on Behalf of CARICOM. In: ICCAT, 2014. Report for biennial period 2013-2014. Part I (2013). Vol. 3. Annual Reports.	2014
CRFM	Policy Brief #4: Value Chain Approaches in Fisheries	
CRFM	Issue Paper #4: Opportunities and Challenges for Trade in Fish and Seafood (2014)	2014
CRFM	Issue Paper #5: The CARICOM Common Fisheries Policy and the S.A.M.O.A. Pathway: Connecting the Dots (2014)	2014
CRFM	Issue Paper #6: Efforts Implemented to Prevent, Deter and Eliminate Illegal Unreported and Unregulated Fishing in the Caribbean (2014)	2014
CRFM	Sargassum Seaweed Invasion: What, Why and What can we do? (2014) (Communication Brief)	2014
CRFM	Improving the Outlook for Caribbean Coral Reefs (A Regional Plan of Action 2014 - 2019): Guiding Actions for Fisherfolk (2014) (booklet)	2014
CRFM	Improving the Outlook for Caribbean Coral reefs (A Regional Plan of Action 2014 - 2019): Guiding Actions for Fisherfolk (2014) (Brochure)	2014
CRFM	Eastern Caribbean Flyingfish Management Plan: A Private Sector Brief (2014) (Brochure)	2014
CRFM	Sub-Regional Fisheries Management Plan of the Flyingfish in the Eastern Caribbean (2014) (Brochure)	2014
CRFM	Sargassum Seaweed Invasion: What, Why and What can we do? (2014) (Brochure)	2014
CRFM	Lionfish Control and the Private Sector (2014) (Brochure)	2014

CRFM	Action Plan for Climate Change in the Fishing Industry (2014) (Brochure)	2014
CRFM	What you need to know about Aquaculture! (2014) (Brochure)	2014
CRFM	The Caribbean Community Common Fisheries Policy: Celebrating Caribbean Fisherfolk Day (2015)	2015
CRFM	Fishing with Data: Building Partnership for Data and Information in Fisheries Management (Brochure)	
CRFM	Documentary titled: Sea Change – The Caribbean Fisheries Forum at Work	
CRFM	Documentary titled: Sea Change: A New Chapter in Fisheries Management	
CRFM	Documentary titled: Fishing with Data: What's the Catch	
CRFM	Documentary titled: Fishing with Data: The Information Net	
CRFM	Documentary titled: Fishing with Data: Best Practices	
CRFM	Today's News: CRFM Contributes to Landmark ITLOS Case 21 on IUU Fishing. Aug 2015	2015
CRFM		
CRFM	Today's News: An opportunity for economic growth in the Caribbean. Oct. 2014	2014
	CRFM News Scientific Issue, September 2015	2015
	CRFM News Management Issue, August 2015	2015
	CRFM News Scientific Issue, August 2014	2014

Annex 6: Activities in WECAFC area

Project Name	Project Code	Country or region	Main activities	Donor	Period	Implementing agency	Budget
International Ocean Institute (IOI)		CRFM region		Iceland	Annual Training Programme May-July 2014	CRFM	
Training in statistical and basic analysis using the R-software (delivered during		CRFM region			CRFM 10th Annual Scientific Meeting) 10-17 June 2014	CRFM	
ANCORS Fisheries Law and Management Training		CRFM region		Australia	1 September – 3 October 2014	CRFM	
UNU-FTP 6-month Fellowship Training Programme		CRFM region		Iceland	September 2014-March 2015	CRFM	
Strengthening Fisheries and Aquaculture Governance in the Bahamas	TCP/BHA/3501 (D)	Bahamas	Fisheries planning, policy, statistics	FAO	2014 -2016	FAO/DMR	USD 469 000
Strengthening Fisherfolk Organizations in St. Kitts and Nevis	TCP/STK/3401	Saint Kitts and Nevis	Fisherfolk org. strengthening, co-management	FAO	2012-2013	FAO/DMR	USD 60 000
Fisheries Component - Zero Hunger Challenge	TCP/ANT/3401	Antigua and Barbuda	Fish processing, fish fry, fishing, vessel repair	FAO	2013-2015	FAO/FD	USD 99 000
Strengthening Aquatic Animal Health Protection Systems in Suriname	TCP/SUR/3401	Suriname	Aquaculture planning, health management	FAO	2013 -2015	FAO/FD	USD 425 000
Development of a tilapia hatchery and aquaponics training and demonstration centre	GCP/RLA/190/BRA	Antigua and Barbuda	Aquaculture demonstration, training	Brazil	2013 -2014	FAO/FD	USD 30 000
Supporting Ecosystem-Based Fisheries Management In The North Brazil-Guianas Shelf Large Marine Ecosystem	GCP/SLC/004/IAB	Brazil, Guyana, French Guyane, Suriname, Trinidad & Tobago, Venezuela	shrimp and groundfish investment, economics and management	IDB	2014-2016	WECAFC	USD 75 000
Promotion of Small Scale Aquaculture in Guyana for Food Security and Rural Development	TCP/GUY/3501	Guyana	Aquaculture demonstration	FAO	2014-2016	FAO	122 000 USD
Climate Change Adaptation in the Eastern Caribbean Fisheries Sector	GCP/SLC/202/SCF	Sub-regional (Eastern Caribbean)	Climate change adaptation, Disaster risk management in fisheries and aquaculture	GEF	2013-2019	FAO/WECAFC	5.4 million USD
Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (REBYC-II LAC)	GCP/RLA/201/GFF	Brazil, Costa Rica, Colombia, Mexico, Suriname, Trinidad & Tobago	By-catch reduction, capacity building	GEF	2012-2018	FAO/FDs	5.7 million USD
Strengthening national data collection and regional data sharing through FIRMS to support priority regional strategy fishery management plans in the Western Central Atlantic Fishery Commission (WECAFC) area	GCP/SLC/007/EC	regional	Fisheries statistics	European Union	2015 -2016	FAO/WECAFC	130 000 USD
An independent cost-benefit assessment of the options for strategic re-orientation of Western Central Atlantic Fishery Commission	GCP/SLC/006/EC	Regional	Fisheries governance	European Union	2015 -2016	FAO/WECAFC	100 000 USD
Lobster conservation and management in the Wider Caribbean Region	GCP/RLA/197/USA	Regional	Lobster management, stock assessment	USA/NOAA	2014-2015	FAO/WECAFC	61 000 USD
Caribbean Billfish project	GCP/SLC/001/WBK	Regional (pilots in Grenada and Dominican Republic)	Billfish management, fisheries research, investments	World Bank/ GEF	2015 -2018	FAO/WECAFC	1.9 million USD
CITES - FAO joint capacity building for implementation of the Decisions on "Regional cooperation on the management of and trade in Queen Conch (Strombus gigas)	EP/SLC/003/UEP	Regional	Queen Conch management, conversion factors, Non-detriment findings	CITES/EU	2014-2016	FAO/WECAFC	90 000 USD
Strengthening fisheries legislation in St Kitts and Nevis	TCP/SKN/3501	Saint Kitts and Nevis	Fisheries legislation, NPOA-IUU, PSMA	FAO	2015-2016	FAO/DMR	91 000 USD
Updating Suriname's capture fisheries legal framework	TCP/SUR/3502	Suriname	Fisheries legislation	FAO	2015-2016	FAO/FD	118 000USD
Strengthening the National Standards and Certification System for Major Agricultural Products in St Lucia	TCP/STL/3401	Saint Lucia	(aquaculture code of practice) among other activities	FAO	2014-2015	FAO/FD	70 000 USD
Capacity building in resource assessment and management of the Jamaican sea cucumber fishery and potential for aquaculture	TCP/JAM/3502	Jamaica	Sea cucumber stock assessment	FAO	2015 -2016	FAO/FD	288 000 USD

development							
Asistencia para la formulación de una propuesta de desarrollo pesquero-acuícola del Lago Enriquillo	TCP/DOM/3401	Dominican Republic	Investment proposal fisheries	FAO	2014-2015	FAO/FD	46 000 USD
<i>Alliance in fisheries and aquaculture</i>	N/A	Belize, El Salvador, Guatemala, Honduras, Nicaragua, Panamá and Dominican Republic	Regional Alliance in fisheries and aquaculture	Republic de China (Taiwan)	2015 -2016	OSPESCA	USD 2, 000,000.00
<i>Governance assistance to prevent IUU fishing</i>	DUNS: 816052790	Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Dominican Republic.	Global record of fishing vessels	US state department	12 months	OSPESCA NOAA	USD 80, 000
<i>Implementation of the FAO Port State Measure Agreement</i>	Contac ID: 28869	SICA	Fisheries management	The Pew Charitable Trusts	12 months	OSPESCA PEW	USD 188,815
<i>Assistance to observer programme of OSPESCA member countries</i>	N/A	SICA	Capacity building and fisheries management	WWF/NOAA	2014-2016	OSPESCA	USD 45,060.00
<i>Integration of SSF and Small scale Aquaculture activities in SICA</i>	N/A	SICA	Improved of association of fishers on the value chain	AMEXCID, México	2015-2016	CONAPESCA SAGARPA OSPESCA	150,000.00
<i>Better use of by catch</i>	N/A	El Salvador, Guatemala, Honduras, Nicaragua	Capacity building in by catch utilisation	EU	2014-2016	OSPESCA	70,000.00
Desarrollo del Programa Nacional sobre Genética para peces de agua dulce	TCP/CUB/3501	Cuba	Tilapia genetics, aquaculture, training	FAO	2015-2016	FAO/FD	297 000 USD
Asistencia para el desarrollo de las bases de la planificación del sector acuícola	TCP/COS/3501	Costa Rica	Aquaculture planning	FAO	2015-2016	FAO/FD	47 000 USD

Project Name	Project Code	Country or region	Main activities	Donor	Period	Implementing agency	Budget
Apoyo Técnico y estratégico de la FAO al Ministerio de Agricultura y Desarrollo Rural en la formulación e implementación del Plan de Desarrollo Agropecuario y pesquero de la Región de La Mojana en Colombia	TCP/COL/3401	Colombia	Fisheries and aquaculture planning	FAO	2014-2015	FAO/FD	62 000 USD
Review and validation of draft fisheries regulations for Belize	TCP/BZE/3401	Belize	Fisheries legislation	FAO	2013-2014	FAO/FD	32 000 USD
Para la Promoción de la implementación de las Directrices Voluntarias de la Tenencia de la Tierra, la Pesca y los Bosques en el Contexto de la Seguridad Alimentaria Nacional en el Brasil	TCP/BRA/3401	Brazil	Tenure guidelines training	FAO	2013-2014	FAO/FD	34 000 USD
Technical assistance for the implementation of a Strategy for artisanal fisheries development in the RAAN	TCP/NIC/3305	Nicaragua	Fisheries planning	FAO	2015- 2016	FAO/FD	30 000 USD
Support to the Caribbean Regional Working Group on Illegal Unreported and Unregulated fishing (RWG-IUU)	GCP/SLC/008/USA	CARICOM	Capacity building against IUU fisheries	USA/NOAA	2015-2016	WECAFC/CRFM	40 000 USD
Technical assistance in support of a sharks NPOA for Antigua and Barbuda	EP/INT/227/UEP	Antigua and Barbuda	NPOA- sharks	CITES	2015	WECAFC/FAO/FD	20 000 USD
CITES-FAO collaboration on immediate actions in support of the implementation of CITES listings of sharks and manta rays	EP/INT/227/UEP	Trinidad and Tobago, Barbados	Assessments and NPOA-sharks	CITES	2015 -2016	WECAFC/FAO/FD	80 000 USD
Activación de los servicios y consolidación de la Red de Acuicultura de las Américas (RAA)	GCP/RLA/190/BRA	Regional	Aquaculture Networking, capacity building	Brazil	2013-2015	FAO	2 million USD
Mer Sud Project - Marine Environment Regeneration in the South of Haiti	EP/HAI/034/UEP	Haiti	FAD fisheries, training	UNEP	2014-2015	FAO/FD	100 000 USD
Assistance to the Government of Campeche, Mexico in the formulation of the State Fisheries and Aquaculture Strategy	UTF/MEX/099/MEX	Mexico	Aquaculture and fisheries planning	Mexico	2014-2015	FAO/FD	147 000 USD
Asistencia para la formulación del Programa Nacional de Pesca y Acuicultura 2014-2018 y diagnóstico técnico-operativo de los centros acuícolas operados por la CONAPESCA	UTF/MEX/116/MEX	Mexico	Aquaculture and fisheries planning	Mexico	2014-2015	FAO/FD	468 000 USD
Improving forest and protected area management in Trinidad and Tobago	GCP/TRI/003/GFF	Trinidad and Tobago	MPA development	GEF	2014-2018	FAO/FD	2.7 million USD
Improving the governance of fisheries in the Western Central Atlantic (16th Session of WECAFC-Guadeloupe)	GSP/SLC/011/EC	Regional	Fisheries governance	European Union	2016 -2017	WECAFC/FAO	130 000 USD
Fisheries and Aquaculture Parliamentarians Forum of Latin America and the Caribbean		Regional, All LAC countries	Support by fisheries and aquaculture Commissions of National Congresses , to activities and processes to increase the contribution of F&Aq to food security and poverty alleviation	FAO Regular Programme	Ongoing	RLAC	
Development of low-cost, alternative aquaculture diets for resource-limited aquaculturists	TCP/RLA/3504	Regional, Guatemala, Costa Rica, Colombia, Paraguay and Argentina	Formulation and testing of alternative, low-cost diets, utilising locally-available agriculture and/or industrial by-products to increase farmers competitiveness and economic sustainability	FAO regular Programme	Ongoing	RLAC	
Network of Aquaculture of the Americas		Regional, all RLAC	This inter-governmental organism promoted by FAO and supported by Brazil through a GCP. Currently 6 countries have ratified the international convention, two missing to make it effective.	Brazil	Ongoing	RLAC	

Project Name	Project Code	Country or region	Main activities	Donor	Period	Implementing agency	Budget
Agri-aquaculture demonstration units program		Regional, Guatemala, Costa Rica, Antigua and Barbuda, Bolivia, Colombia and Paraguay	Integrated agri-aquaculture field schools operated by small-scale farmers		Ongoing	RLAC	
Study of the labor conditions and legal status of diving-fishermen		Regional, Mexico, Nicaragua, Honduras, Dominican Republic and Chile	Review of legal frameworks and labor conditions of diving Fisher folk, to identify gaps and recommend improvements to the legal frameworks		About to start	RLAC	
Study of social protection schemes of small-scale Fisher folk		Regional, Guatemala, Honduras, Nicaragua,				RLAC	
National Fisheries and Aquaculture Policy		Colombia	Participatory formulation of the national sectorial policy.	UTF Colombia	Recently completed	RLAC	
National Aquaculture Extension Program		Colombia	Participatory formulation of the national aquaculture extensión program. Validation through community piloting	UTF Colombia	Second phase about to start	RLAC	
TCPF Formulation of the National Program to incorporate aquaculture in the Family Farming National Program		Guatemala	Participatory formulation of this national program for rural areas.	FAO TCP	Ready to be officialized as a national sectorial policy	RLAC	
UTF Formulation of the National Fisheries and Aquaculture development Government Program		Mexico	Sectorial diagnostic and participatory formulation of the state of Yucatan fisheries and aquaculture development plan	Mexico	completed	RLAC	
TCPF Formulation of the National Aquaculture development plan		Nicaragua	Sectorial diagnostic and participatory formulation of the national aquaculture development plan	FAO TCP	ongoing	RLAC	
Support to national processes to ratify and implement the PSMA to eliminate IUU in Latin American countries	TCP/RLA/	Regional, Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Colombia, Peru, Ecuador.	Upon request by various LAC countries, this regional TCP aims at strengthening institutional capacities as well as Foster inter-institutional articulation to better prepare the country to implement the PSMA	FAO TCP	Funds approved	RLAC	
Asistencia para el desarrollo de las bases de la planificación del sector acuicola.	TCP/COS/3501 BABY02	Costa Rica			ongoing	SLM	
Apoyo a la gestión de mercados agrícolas del PIMA (subcomponente terminal pesquero)	TCP/COS/3401 – Baby 01	Costa Rica			ongoing	SLM	
estudio de caso empleo rural decente en el sector de pesca artesanal y de pesca semi industrial en Costa Rica		Costa Rica		FAO regular Programme	ongoing	SLM	
Desarrollo del Programa Nacional sobre Genética para peces de agua dulce.	TCP/CUB/3501	Cuba			ongoing	SLM	

Project Name	Project Code	Country or region	Main activities	Donor	Period	Implementing agency	Budget
"Fortalecimiento Institucional para el Desarrollo de la Pesca y la Acuicultura Marina en El Salvador" bajo la cooperación Sur-Sur con Vietnam.	TCP/ELS/3401 BABY03	El Salvador		FAO TCP	ongoing	SLM	
Desarrollo del Plan nacional de desarrollo sustentable de la pesca y la acuicultura de El Salvador	TCP/ELS/3501 BABY04	El Salvador		FAO TCP	ongoing	SLM	
Capacitación Policultivo de Camarón y Tilapia - Taller		El Salvador		UTF Mesoamérica sin Hambre	ongoing	SLM	
Desarrollo de Tecnologías de Alimentos no Convencionales para el Fomento de la Acuicultura a Pequeña Escala en El Salvador. Baby 1.	TCP/ELS/3401	El Salvador		FAO TCP	ongoing	SLM	
Taller de Capacitación en Acuicultura Integral.		Guatemala		FAO Regular Programme	ongoing	SLM	
Fortalecer la Institucionalidad Ambiental para la Gobernanza y manejo de pesca en el río La Pasión. -	TCP/GUA/3506	Guatemala		FAO TCP	ongoing	SLM	
Desarrollo de capacidades técnicas para el cumplimiento de los compromisos en temas de pesca por el Gobierno de Honduras	TCP/HON/3401 BABY03	Honduras		FAO TCP	ongoing	SLM	
Intervención piloto para la elaboración y validación de una propuesta de asistencia técnica integral dirigida a la mejora de la seguridad alimentaria y nutricional en las	TCP/PAN/3401	Panamá		FAO TCP	ongoing	SLM	
Reducing and managing the risks of Acute Hepatopancreatic Necrosis Disease (AHPND) of cultured shrimp	TCP/INT/3502	Regional, Colombia, Ecuador, Guatemala, Honduras, Mexico, Panama, Peru India, Iran, Philippines, Sri Lanka)		FAO TCP	ongoing	INT	
Establecimiento e institucionalización de un sistema de formación de capacidades en resiliencia para los territorios de Centroamérica y República Dominicana en el marco de las políticas y estrategias del CAC (Componente acuícola).	TCP/SLM/3501	Central America and Rep. Dom		FAO TCP	ongoing	SLM	
Taller de Marea Roja		Central America and Rep. Dom + Mexico		FAO Regular Programme	ongoing	SLM	
Asistencia para la formulación de una propuesta de desarrollo pesquero-acuicola del Lago Enriquillo	TCP/Dom/3401/Baby 03:	Rep. Dom.		FAO TCP	2013	SLM	USD 23 235
Asistencia técnica para la implementación de la Estrategia para el desarrollo de la pesca artesanal, en la Región Autónoma del Atlántico Norte.	TCP/NIC/3305	Nicaragua		FAO TCP	2011-2013	SLM	USD 312 000
Transformation of the lobster fisheries in Honduras.		Honduras		FAO Regular Programme	2011-2012	SLM	15 000
. Capacity building in the Port States Agreement		CPPS, Chile, Colombia, Ecuador and Panama		FAO Regular Programme	2013	SLM	USD 20 000
. Awareness raising Marine Debris		CPPS, Chile, Colombia, Ecuador, Panama and Peru		FAO Regular Programme	2013	SLM	USD 20 000
Capacity building small scale aquaculture.		Panamá		FAO Regular Programme	2013	SLM	USD 10 000
Activities related to the Review of fisheries and aquaculture in Central America. (2012				FAO Regular Programme	2012	SLM	USD 35-40 000.
Mecanismo de Coordinación Regional de Salud, Sanidad e Inocuidad para el Desarrollo de la Producción Agropecuaria, Pesquera y Forestal	TCP/SLM/3502	Central America and Rep. Dom + Mexico		FAO TCP	ongoing	SLM	

Fortalecimiento de la resiliencia de la agricultura familiar y para la prevención y respuesta efectiva frente a las enfermedades fito y zoo sanitarias.	. GCP/SLM/002/SPA	Panamá, Costa Rica, Nicaragua, El Salvador, Guatemala, Honduras y Rep. Dominicana		Spain	ongoing	SLM	
Sustainable management of bycatch in Latin America and Caribbean trawl fisheries (PPG).	GCP/RLA/203/GFF	Brazil, Colombia, Costa Rica, Mexico, Suriname, Trinidad and Tobago		GEF	ongoing	SLC/SLM	
Taller sobre el Consumo de Pescado en Mesoamérica - Las perspectivas para aumentar su contribución a la nutrición de la población		Cuba, Panamá, Costa Rica, Nicaragua, El Salvador, Guatemala, Honduras, Mexico, Belice y Rep. Dominicana		UTF Mesoamérica sin Hambre	2015	SLM	
Meeting of WG lobster	GCP/RLA/197/USA	WECAFC member countries		USA	2014	SLC/SLM	
Lobster stock evaluation		WECAFC member countries		FAO Regular Programme	Ongoing	SLC/SLM	