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## **REPORT OF THE CRFM / CNFO / CTA REGIONAL FISHERIES WORKSHOP: INVESTING IN BLUE GROWTH**



**St. George's, Grenada  
20 - 21 November 2014**

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**CRFM Secretariat  
Belize 2014**

# **CRFM Technical & Advisory Document – Number 2014 / 5**

**Report of the CRFM / CNFO / CTA Regional Fisheries Workshop: Investing  
in Blue Growth, St. George's, Grenada, 20 – 21 November 2014**

Prepared by:  
Caribbean Regional Fisheries Mechanism (CRFM) Knowledge Management Project (KMP)

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CRFM Secretariat  
Belize 2014

# **Report of the CRFM / CNFO / CTA Regional Fisheries Workshop: Investing in Blue Growth, St. George's, Grenada, 20 – 21 November 2014**

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## LIST OF ACRONYMS AND ABBREVIATIONS

ACP	African, Caribbean and Pacific (states)
CCCFP	Caribbean Community Common Fisheries Policy
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum of African Caribbean and Pacific (ACP) States
CCRIF	Caribbean Catastrophe Risk Insurance Facility
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CNFO	Caribbean Network of Fisherfolk Organisation
COTED	Council for Trade and Economic Development
CRFM	Caribbean Regional Fisheries Mechanism
CSME	CARICOM Single Market and Economy
CTA	Technical Centre for Agricultural and Rural Cooperation
EEZ	Exclusive Economic Zone
EPA	Economic Partnership Agreement (EU and CARICOM)
EU	European Union
FAC	Fishery Advisory Committee
FAO	Food and Agriculture Organisation of the United Nations
FFO	Fisherfolk Organisation
GCFI	Gulf and Caribbean Fisheries Institute
ICCAT	International Commission for the Conservation of Atlantic Tunas
ICT	Information and Communication Technology
IFREMER	Institut Français de Recherche pour l'Exploitation de la Mer (French Research Institute for Exploitation of the Sea)
IICA	Inter-American Institute for Cooperation on Agriculture
IUU	Illegal Unreported and Unregulated fishing
JICA	Japan International Cooperation Agency
MMA	Marine Managed Area
MSY	Maximum Sustainable Yield
NFO	National Fisherfolk Organisation
NGO	Non Governmental Organisation
NOAA	National Oceanic and Atmospheric Administration
OECS	Organisation of Eastern Caribbean States
OIE	World Organisation for Animal Health
OSPESCA	Central America Fisheries and Aquaculture Organisation
PoA	Plan of Action
RFMO	Regional Fisheries Management Organisation
SPS	Sanitary and Phyto-sanitary Measures
SSF	Small-Scale Fisheries
UNCLOS	United Nations Convention on the Law of the Sea
UWI-CERMES	University of the West Indies - Centre for Resource Management and Environmental Studies
WECAFC	Western Central Atlantic Fishery Commission
WFFP	World Forum of Fisher Peoples

## EXECUTIVE SUMMARY

The Workshop which was organised by the Caribbean Regional Fisheries Mechanism (CRFM) Secretariat in collaboration with the Caribbean Network of Fisherfolk Organisation (CNFO) with support from the Technical Centre for Agricultural and Rural Cooperation ACP-EU (CTA), brought together stakeholders from the fisheries sector as well as the media to deepen their understanding of the “blue growth concept” on 20 – 21 November 2014, in St. Georges, Grenada.

It is expected that the media will help to deepen the understanding of the issues facing the sector by raising public awareness about Blue Growth in the Caribbean. It is also expected that fisherfolk will benefit through a deepening of the knowledge and a greater understanding of the issues surrounding Blue Growth and that all stakeholders will benefit through the expansion of the capacity of the primary industry stakeholders through more effective positioning and participation in fisheries policies and management actions.

The Government of Grenada hosted the Workshop whilst funding was provided by CTA and it was facilitated by the CRFM in collaboration with the CNFO and other partners. The purpose of the Workshop was to facilitate continuous engagement of fisherfolk organisations to familiarise them with policy development processes and the steps decision-makers use in the implementation of key regional agreements on fisheries.

Participants deliberated on several areas of Governance and Policy including the Agreement establishing the Caribbean Community Common Fisheries Policy (CCCFP); Illegal, Unreported and Unregulated (IUU) Fishing; the Sustainable Use, Conservation and Management of Regional Fisheries Resources as well as access to Market and Trade and the Value Chain Approach to fisheries in the Caribbean.

The two-day consultation provided participants with the opportunity to contribute to the formulation of policies, strategies and guidelines and to provide feedback and guidance on the proposed actions to be undertaken for the management of fisheries on a regional level and to influence the policies being developed at the national level.

In addition to providing information, the presentations mapped the timelines of recent policy processes and provided historical overviews and information on the actions taken in the development of: (1) the draft Declaration on Lobster Fisheries, (2) the Flyingfish Management Plan, and (3) the Common Fisheries Policy. Participants were also provided with the opportunity to contribute to planning the way forward on several issues of interest to the region as it relates to co-management of regional resources, data collection, conservation and protection.

In addition, participants were given up-to-date information on the status of various activities being undertaken by the CRFM and the wider fisheries community. They were updated on issues of concern to the region such as the US Authorities’ proposal to list the Nassau Grouper as a threatened species, and the favourable outcome of the attempts by a US-based NGO to have the Queen Conch listed as endangered or threatened. Participants were also briefed on the relevance of the recently adopted FAO Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) to the region and in relation to the enforcement of rules to prevent IUU fishing.

Lengthy discussions were held on the potential for and the challenges of establishing aquaculture in the region, and on potential areas for collaboration in research and development. Discussions also turned to the absence of relevant information regarding the successes and failures in the industry and availability of information to guide potential investors. With FAO predictions that the production of farmed aquatic products will overtake wild catches in the years ahead, many see the aquaculture sub-sector as open for exploitation, but fear the unknown particularly in light of the challenges posed by the absence of supporting legislation and structures.

In the wrap up, Chairman Justin Rennie, Chief Fisheries Officer, Grenada, noted that participants should look at revising and adapting existing policies and initiatives rather than reinventing the wheel.

## 1. INTRODUCTION

The fisheries sector in CRFM member countries provides a range of benefits to the region, including employment, poverty alleviation, food security, and foreign exchange earnings. Some of these benefits are not sufficiently understood and valued. Additionally, fisheries issues are usually managed under the general portfolio of agriculture, but are often marginalised, and as a consequence, attract low investment. This low investment has stifled the advancement of statistics, research, and development for supporting resource management, technological developments and marketing and trade.

At present, land and marine space use and planning do not reflect holistic consideration of the various sectoral needs, with low priority given to fisheries and aquaculture needs. This creates a challenge particularly with regard to the capacity for climate smarting – those activities that ensure that fishers will continue to enjoy their livelihoods even while experiencing climate change - and that adaptation measures are in place to ensure that their economic activities do not prevent them from making a living from the fisheries. The development of opportunities in aquaculture are doubly challenged by these and limited land and coastal marine space, environmental concerns, and issues relating to economic viability; all of which are exacerbated by the limited promotion and understanding of the sector’s potential, and its contributions to socio-economic development.



**Figure 1: CTA representative, Mr. Chris Addison, in his Video greeting during the Opening Ceremony for the Blue Growth Workshop. Photo Credit: CRFM-KMP**

Previous efforts by CRFM and CTA to build fisherfolk capacity to participate in the governance process include the establishment of the Caribbean Network of Fisherfolk Organisations (CNFO) which aims to improve fisherfolk understanding of key policy issues, and has led to more active CNFO participation in policy advisory activities. These capacity building and participatory activities are still young, hence it is essential that there is continued effort to further strengthen the understanding of fisherfolk particularly with regard to the more technical aspects of fisheries policies: for example the issues surrounding aquaculture, SPS, and the mainstreaming of precautionary and ecosystem approaches in the context of climate change. The continuation of these efforts will, overtime strengthen fisherfolk capacity to participate effectively to ensure the successful implementation, monitoring and evaluation of agreed policies.

This Workshop aimed to consolidate and build on the successes of previous and on-going initiatives between the CRFM, CNFO and CTA in fisheries and aquaculture in the Caribbean.



Additionally, in the course of boosting fisherfolk knowledge and capacity, and enhancing their input in policy development and implementation, there should be parallel efforts to educate and engage the public about the performance and potential of the fishing and aquaculture industry. It is envisioned that the more fisherfolk and the general public know and understand about the sector's contributions to the economic wellbeing of the society and its potential for enhancing the socio-economic development of the countries of the region, the easier it will be for the sector to gain their support for successful policy implementation.

## **2. OBJECTIVES**

The Workshop was intended to promote “blue” economic growth by enhancing the input of fisheries and aquaculture stakeholders into the policy process and via improved public understanding and appreciation of the challenges and opportunities of the industry, its policies, and the possibilities for investing in blue growth.

Specifically, the objectives of the Workshop were to:

- Deepen the knowledge and capability of primary industry stakeholders to become more effective at positioning themselves to participate in the development of fisheries policy and the management, planning and decision-making processes.
- Incorporate fisheries and aquaculture stakeholder input into policy development and implementation processes.
- Improve understanding of the industry's challenges and opportunities, and by this means, promote support for public and private sector investment in Blue Growth through use of online platform and social networking tools.

### **Expected Outcomes**

The expected outcomes from the Workshop were:

- Improved fisherfolk knowledge and capacity to engage in more technical aspects of policy formulation and implementation.
- Improved governance of fisheries and aquaculture through effective participation of stakeholders including the private sector in the policy process.
- Improved use and distribution of knowledge and information products
- Recommendations for next steps and contribution to policy developments
- Buy-in for the guidelines, policies and strategies being developed to enhance regional fisheries management.

### **Structure of the Workshop**

- The Workshop took the form of presentations followed by moderated plenary and group sessions, with time allowed for clarification on issues relating to each topic and the development of fisherfolk positions, for their recommendations and proposals in the working group sessions.

- The PowerPoint presentations made by CFNO representative, stakeholders and staff of the CRFM Secretariat facilitated the discussions.
- A media expert was contracted to facilitate media participation and distribute information from the meeting.
- Further, technical experts were contracted to develop key papers and information documents, including short features / video documentaries to contribute to the debates.
- Policy recommendations arising from the working groups will be addressed in various policy documents and also presented to policy makers during the CRFM Ministerial Council meeting in April / May 2015.

Through the Knowledge Platform Project, information relevant to the workshop was shared using internet-based tools including YouTube, Twitter and Facebook in combination with the CRFM's website and D-Groups. The Workshop was held on 20 – 21 November 2014 in Grenada.

Reports from the Working Groups were presented at the end of the Workshop.

### 3. OPENING CEREMONY

The Chairman, Mr. Justin Rennie, Chief Fisheries Officer, Fisheries Division, Grenada welcomed participants and introduced the officials. The Programme for the opening session is at *Appendix 1*.

At the opening of the Workshop on the theme “Investing in Blue Economic Growth” Minister of Agriculture, Lands, Forestry, Fisheries and the Environment, Hon. Roland Bhola, urged the participants to deliver sound recommendations on the way forward for a sustainable blue growth strategy for the Caribbean.

He noted: *“There is need to change the thought process to find solutions to overcome the challenges in the fisheries sector, through understanding the importance of sustainable management of the region’s resources. The CRFM Ministerial Council will meet in April 2015 and your recommendations will assist to optimise the benefits of blue growth in the region”*.

*“The world we live in is vastly different, and we must create an enabling environment to improve our social and economic status while considering the challenges, need to include effective management of the resources, climate change and variability, cooperation at the regional and sub-regional levels and take into account other international conventions,”* Minister Bhola said.



**Figure 2: Minister of Agriculture, Lands, Forestry, Fisheries and the Environment in Grenada, Hon. Roland Bhola, delivering the main address during the Opening Ceremony. Photo Credit: CRFM-KMP**

He continued: *“Grenada is a small island developing state with a vulnerable economy and the management of the sea space is critical since the maritime space is seventy times that of its land space and the government has been expanding on the opportunities of its exclusive economic zone (EEZ) that includes the demand for tuna and other pelagic resources including the tourism sector”*.

The Executive Director of the Caribbean Regional Fisheries Mechanism (CRFM) Secretariat, Mr. Milton Haughton, also called on stakeholders to support the development of the region’s fisheries sector not only for food consumption but also for job creation and economic growth in the region.

*“Globally the aquaculture sector is being developed to generate economic growth from the living resources in the oceans and seas. The Caribbean has to collaborate to meet the demands of the sector for economic growth within a sustainable context,”* he said.

Mr. Haughton outlined the major components of the Blue Growth concept which included optimising the human social and economic benefits from: (1) marine and inland capture fisheries, (2) aquaculture development, (3) food systems, and (4) ecosystem services and marine biodiversity conservation at regional and national levels.

A video message from Mr. Chris Addison, Senior Programme Coordinator, Technical Centre for Agricultural and Rural Cooperation (CTA) ACP-EU spoke to the importance of strengthening the value chain. In his message Mr. Addison noted that the CTA is committed to assist the region to strengthen the value chains and will continue to provide technical support initiatives towards smart agriculture and fisheries in the Caribbean.

Mr. Mitchell Lay, Coordinator, Caribbean Network for Fisherfolk Organisations (CNFO) said that while the workshop was also focused on capacity building among Fisherfolk, there is need to incorporate marine affairs programmes into the education system in schools to build interest in the sector at an early stage, and build on the knowledge platform of food and nutrition resources.

Grenada’s Chief Fisheries Officer Mr. Justin Rennie in his remarks noted: *“The sector in general is not understood by the public at large and the requisite attention is not forthcoming by governments. This situation should be reviewed since the marine space in most countries is more than 50 times the size of land space, and is providing significant opportunities for the sector and the region holistically.”*

Minister Bhola declared the Workshop open.

#### 4. PARTICIPANTS

Fifty-two (52) stakeholders representing 15 Caribbean States and drawn from all sections of the fisheries sector attended the two day meeting to discuss ways of improving economic growth and development by investing in “Blue Economic Growth,” that is, the creation of employment and economic growth and resilience through better use of the resources of the Caribbean Sea and Atlantic Ocean.

They also provided inputs into several critical policy instruments being developed to promote and implement region-wide harmonisation of policies and international best practices to govern the region’s marine resources and fisheries industry. The List of Participants is included as *Appendix 2*.

#### 5. METHOD

Mr. Justin Rennie, Chief Fisheries Officer, Fisheries Division, Grenada, chaired the Workshop. On the first day, Grenada’s Minister of Agriculture, Lands, Forestry, Fisheries and the Environment, Hon. Roland Bhola, delivered the main address and declared the workshop open during the **Opening Ceremony**. Following the opening session, there were introductions of each participant, an outline of the issues that were up for discussion and instructions on how the Workshop would proceed.

The Chairman explained to the participants, that the time allocated at the end of each moderated plenary session should be used to seek clarification and guidance on the issues presented, and that the discussions would take place during the Working Group sessions.

The Workshop covered the areas of Governance and Policy; Trade and Market Access; Combating IUU fishing, highlighting some successes in fighting IUU across the ACP; the Sustainable use, conservation and management of fisheries resources with specific references to the Eastern Caribbean Flyingfish Fishery, Spiny Lobster and Coral Reefs.

Presentations also looked at: (1) the status and implementation of the Caribbean Community Common Fisheries Policy (CCCFP), (2) the development of Aquaculture in the region, (3) the way forward for the EPA SPS Measures Project and (4) the Value-chain Approach to fisheries in the Caribbean.

On Day 1, presentations included: The status and lessons learnt in combating IUU Fishing and updates on the Sub-regional Flyingfish Management Plan as well as an update on the US authorities proposal to include the Nassau Grouper on its list of



Figure 3: Some of the participants at CRFM / CFNO / CTA Regional Fisheries Workshop: Investing in Blue Growth, St. George’s, Grenada on 20 - 21 November 2014. Photo Credit: CRFM-KMP

endangered and threatened species. During the afternoon session, Working Group were constituted to come up with recommendations to be included in CRFM's contribution to calls for comments on the Nassau Grouper by the United States, as well as elements to be included in the **Caribbean Community Common Fisheries Policy (CCCFP)**.

On Day 2, Chairman Rennie introduced the day's proceedings and the presenters. There were five presentations with stakeholder contribution on Aquaponics by farmer **Jimmi Jones of JimSan Aquaponics and Belizean Fresh Ltd**, as well as on marine aquaculture research and development being carried out by IFREMER, in Martinique, Guadeloupe and other French Overseas Territories.

The number of presentations over the two days was increased by one, with the addition of Coordinator of the CNFO Mitchell Lay who spoke on the SSF Guidelines, an explanation of how small-scale fishers could benefit from the inclusion of the guidelines in regional and national policies.

Guidance given to the Working Groups included:

- The refining of national legislations to reflect the CARICOM Common Fisheries Policy with a view to recommending ways to incorporate the CFP in policies at the national level;
- A review of the national level understanding of the pending listing of the Nassau Grouper and to make recommendations for the next steps; improvements and possible amendments to the 5-year Aquaculture Action Plan and validate the 1st year work plan developed for implementation of the Fisheries Component of the SPS project.

The number of Working Groups was increased by one on Day 2. **Working Group Reports are at Appendix 5.**

## 6. OVERVIEW OF THE PRESENTATIONS

All presentations are shown in *Appendix 4*.

### Under the heading of Governance and Policy

**PRESENTATION #1: Combating IUU - status, lessons learned from other ACP regions, future needs and expectations by Mr. Peter A. Murray, Programme Manager Fisheries Management and Development, CRFM Secretariat**

**PowerPoint Presentation** entitled Combating IUU - status, lessons learned from other ACP regions, future needs and expectations- entered as **Appendix 4.1**

The presentation defined IUU (Illegal Unregulated and Unreported) Fishing, noting that it happens everywhere in the world. It also provided an overview of situation in other regions/ jurisdictions that were struggling with the problem of IUU fishing and identified some of the violations of the laws governing fisheries.

It was noted that IUU fishing happens because people are trying to get more money or because those fishing illegally are in need of the benefits of the fisheries.

The presentation is summarised below, indicating the context in which the information was presented:

**Identified:** Three types of IUU fishing that takes place in the region were identified; these included domestic vessels in national waters; foreign vessels; and, foreign financing of local vessels in national waters.

**Noted:** The profits from IUU fishing generally outweigh the risks and sanctions offenders face making the practice a high risk, high value venture.

**Outlined:** The lessons from Indo-China highlighting the high levels of IUU fishing in that region, the resulting distraction, its contribution to other illegal activities and the impacts on fisheries management systems and food security.



Figure 4: CRFM's Mr. Peter A. Murray, delivering his presentation on IUU Fishing. Photo credit: CRFM- KMP

Lessons also indicate that effective management of IUU fishing must include among other things, vessel monitoring and inspections, boarding on the high seas and legal sanctions that are severe enough to be a deterrent.

Other lessons from the South Asian seas indicate that if left unchecked, IUU undermines maritime security; that combating IUU fishing requires bi-lateral, multi-national and international cooperation to be successful.

**Identified:** The drivers of the IUU fishing which include the high demand for marine products; over-capacity in the fishing sector; weak enforcement, organised crime, inadequate monitoring and surveillance. Other drivers identified include uncoordinated management, the lack of community and political will to address the problem, the money to be made from high value species and the absence of adequate legal and policy frameworks at the regional and national levels.

**Noted:** IUU is a threat to the regional fisheries and the livelihoods of the approximately 338,000 people who depend directly or indirectly, on the Industry's earnings of around US\$390.5 million.

**Noted:** The penalties for IUU fishing in the Caribbean are weak and in need of strengthening; IUU monitoring and enforcement in the region are difficult due to the number of countries, governments and their differing priorities.

**Identified:** Small fishermen and nations as the primary IUU fishers; Most common forms of IUU fishing in the region involves mainly nationals of individual countries.

Also identified are the factors that make IUU fishing a problem in CRFM member states: (1) high income source of undeclared money; (2) the fight against IUU fishing is high risk; (3) enforcement difficult because some EEZS are not delimited; (4) EEZS not contiguous and interspersed with other jurisdictions and (5) some countries lack the capacity to monitor their fishing zones.



Figure 5: Participants at the Opening of the Blue Growth Workshop in Grenada. Photo credit: CRFM- KMP

**Noted:** The vulnerability of States to the effects of IUU fishing, because small-island developing states and governments in the region have differing priorities and the region's marine resources are trans-boundary in nature. Organized crime and uncoordinated management systems are prevalent in the region.

It was also noted that initiatives were already in place including the Common Fisheries Policy, FAO / WECAFC / CRFM Working Group on IUU fishing and the Castries Declaration on IUU

Fishing. There is however need for a strategic framework to guide development and implementation of regulations.

**Proposed:** Monitoring and control systems that include inspections, boarding at sea and legal actions that included a mix of “big stick and the kid glove” approach to enforcement.

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Clarification was sought on the how the analysis was done in terms of the number of vessels reportedly involved in IUU fishing in the region.

CRFM Executive Director explained the challenges of the study on IUU fishing in the region, noting that corrections had been done but cautioned against wholesale use of the information. Cited: IUU issues paper #6 - available from the CRFM website [www.crfm.int](http://www.crfm.int).

Responding to a request for clarification on the issue of over-capacity in some local sectors, the CRFM Executive Director explained further that due to a failure to clearly define key concepts and terminologies used during the surveys to gather information about issues relating to IUU fishing in the region, some of the results might be biased and were open to misinterpretation. It was also pointed out that some states in the Caribbean had registered vessels in excess of the capacity required to sustainably harvest fish from waters under their jurisdiction, which gave rise to illegal fishing in the waters of neighbouring states.

Some CRFM states, for example Belize, have established open registers allowing foreign vessels to reflag and operate in international waters.



**PRESENTATION #2: Sustainable use, conservation and management of fisheries resources: Eastern Caribbean Flyingfish and Nassau Grouper - the Flying Fish by Dr. Susan Singh-Renton, Deputy Executive Director, CRFM Secretariat**

**PowerPoint Presentation Sustainable use, conservation and management of fisheries resources; Eastern Caribbean Flyingfish and Nassau Grouper - Flyingfish entered as *Appendix 4.2***

The presentation gave an overview of the fishery and reviewed the research that led to the recently approved Flyingfish Management Plan and provided an update on the status of the US announcement that the Nassau Grouper met the requirements to be listed as a threatened species under the USA Endangered Species Act (ESA).

It was noted that the Flyingfish and Nassau Grouper are two species that have been given attention by the Ministerial Council of CRFM. The single presentation was divided to provide focus on both species, separately.

The information from the Flyingfish presentation is summarized below, with an indication of the context in which it was presented.

***Informed:*** The Sub-Regional Fishery Management Plan for the Eastern Caribbean Flyingfish is the culmination of more than two decades of work on the Eastern Caribbean Flyingfish. Participants were invited to read the plan for more information. It is available from the CRFM website [www.crfm.int](http://www.crfm.int).

Participants were also informed that the plan had been presented and was adopted by the Council in May 2014. The Flyingfish fishery is the largest and most important small pelagic fishery in the Eastern Caribbean.

Participants were informed further, that the Flyingfish Management Plan provided full guidance on the various components of the proposed management system. Additionally, that it was based on in-country consultations carried out by the CRFM, the results of which were used to support the development of the full range of objectives (biological, ecological social and economic), in trying to address the full range of concerns from conservation to economic benefits.



**Figure 6: Delegates to the Blue Growth workshop. Photo Credit: CRFM- KMP**

***Informed:*** The Plan considers the concerns of stakeholders regarding their access to the resource and their livelihoods. It also urged the development of National Management plans in the relevant countries by 2016, an effective monitoring system, and the consideration of a freeze on fishing efforts as a precautionary measure if the agreed trigger catch level is reached. There are

also provisions to improve data used for generating statistically robust management advice in the future.

Participants were also informed that the Ministerial Council has already adopted a formal resolution toward an eco-system approach, which provides additional support for the Plan's provisions.

***Proposed:*** Supporting measures should include institutional strengthening, development of a regional database; should also ensure that stakeholders are involved, should ensure that national management systems are improved and stakeholders are informed of the progress of the plan.

#### **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

It was agreed that clarifications and questions would be taken after the Nassau Grouper presentation.

**PRESENTATION #3: Sustainable Use, Conservation & Management of Fisheries Resources: Eastern Caribbean Flyingfish and Nassau Grouper - The Nassau Grouper by Dr. Susan Singh-Renton, Deputy Executive Director, CRFM Secretariat**

**PowerPoint Presentation on Sustainable Use, Conservation & Management of Fisheries Resources: Eastern Caribbean Flyingfish and Nassau Grouper - The Nassau Grouper entered as Appendix 4.3**

**THE NASSAU GROUPE**r presentation gave an overview of the status of the USA proposal to list the Nassau Grouper as a threatened species; reviewed regional studies and available data that informed the ruling, as well as explained the process and the opportunities for contributing to the USA deliberations on the Nassau Grouper. (See PowerPoint Sustainable Use, Conservation and Management of Fisheries Resources: Eastern Caribbean Flyingfish and Nassau Grouper in Appendices).

The presentation provided an historical perspective on Nassau Grouper populations and spawning aggregations in the region and a brief overview of how researchers came to the conclusion that the species needed protection.

As established, the presentation is summarised below with an indication of the context in which the information was presented.



**Figure 7: Nassau Grouper Working Group meeting at the 2014 Blue Growth Workshop in Grenada. Photo Credit: CRFM-KMP**

**Informed:** The National Oceanic and Atmospheric Administration (NOAA) has allowed for a period of public comment following the USA government announcement that the Nassau Grouper meets the criteria of threatened species under the ESA.

**Noted:** The issues contributing to the decline and listing as a threatened specie include the overfishing of spawning aggregations, ineffective management practices, and other human impacts such as climate change and pollution that contribute to habitat degradation. Predators were not of significant concern in the US announcement.

**Informed:** Primary concerns relate to the reductions of spawning aggregations going back to 2007, the decrease in the length and size of the fish even in unexploited aggregations as well as a steady and persistent decline in reported landings.

**Informed:** The Nassau Grouper is not a major fishery in many CRFM member states however Belize has done some studies and has put in place management measures. Belize also had established 11 MPAs since 2002 and had instituted a closed season between December and March. In the Bahamas where a significant fishery also existed, management measures including a minimum size limit, a closed season from 1 December to 29 February and the establishment of protected areas have also been instituted.

Participants were also informed that the region had limited data on Nassau Grouper landings, as catches are aggregated with other species and reported together. The CRFM scientific meeting conducted only one stock assessment on Nassau grouper in 2007, and this was for the Belize fishery. However, the impact of the management measures in Belize could not be easily determined from the data analysed.

Participants were further informed that the Joint WECAFC / CRFM / OSPESCA working group had recommended a regional closed season for Nassau Grouper and Snappers.

**Informed:** NOAA will make its final decision on the listing of the Nassau Grouper in January 2015 and that if the species is listed as threatened, a recovery programme is likely to include designation of critical habitats, and possibly also prohibitions of the take and trade of the species.

**Proposed:** That Member States and stakeholders provide comments and recommendations for inclusion in the CRFM response to NOAA. This should include data on spawning aggregations, protection measures and other efforts that are already in place, as well as information on known threats.

**Informed:** The WECAFC Chairperson had submitted a letter to NOAA in support of the designation of the Nassau grouper as a threatened species under the USA Endangered Species Act.

For the present Workshop, the Working Group was charged with identifying any information not already presented to NOAA and to propose recommendations for management of the Nassau Grouper. These would be incorporated in the CRFM comment being prepared for submission to NOAA.

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

The Chairman asked the working group to simplify further, the information presented on the Nassau Grouper so all members who included a wide cross-section of stakeholders could more easily understand it, particularly those who may not be familiar with certain technical terms to enable them to actively participate.

Working Group discussions are available in **Appendix 5.2: Working Group Report on Nassau Grouper**

**PRESENTATION #4: Sustainable use, conservation and management of fisheries resources: the Action Plan for Improving the Outlook for Caribbean Coral Reefs presented by Mr. Peter A. Murray, Programme Manager Fisheries Management and Development, CRFM Secretariat**

**PowerPoint Presentation on Sustainable use, conservation and management of fisheries resources: The Action Plan for Improving the Outlook for Caribbean Coral Reefs entered as Appendix 4.4**

The Presentation provided an overview of the value and importance of coral reefs to the CRFM member states and the overall health and sustainability of fisheries locally and regionally. The summary below indicates the context in which the information was presented.

**Noted:** Coral reefs provide the region with: between US\$3.1 and US\$4.6 billion dollars annually in earnings, shoreline protection in rough weather, habitat for fishery and natural resources to support the vital tourism sector.

**Outlined:** The reasons behind current agreements and framework for the effective management and preservation of local fishery and the value of coral reefs to local economies, the protection of local fisheries, biodiversity and contribution to tourism

**Noted:** The reefs of the Caribbean: account for 10 per cent of the world's reef area, are under extreme stress from land-based sources of pollution and coastal development and are showing serious evidence of decline with about 75 per cent of regional reefs being impacted by human activities. There have been recorded declines in key coral species.



**Figure 8: Delegates from Belize at the Blue Growth Workshop. Photo Credit: CRFM-KMP**

**Noted:** The idea behind an Action Plan that provides a roadmap for the sustainable management of the regional resources in relation to human activities, climate variability, health and resilience and the adaptive capacity of communities.

**Examined:** The impact of pollution and diseases and the resulting loss to local fishery as well as the perceived impacts of Climate Change; the adaptive capacity of the communities that depend on the reef to minimise their vulnerability to the effects of pollution, weather and other hazards.

**Noted:** Communities that depend on the reefs must be engaged to build the foundation for National Action Plans that will be implemented at the national levels and build the information base to prepare for regional and global advocacy.

**Identified:** The reasons fishing communities protect Coral Reefs include: 60 percent of regional peoples live within 1.5 kilometers of the coast; reef loss could cause significant declines in the estimated earnings of between US\$95 and US\$140 million from fisheries, US\$100 and US\$300 million from dive fisheries and US\$140 and US\$420 billions in shoreline infrastructure losses.

**Informed:** The goal for protecting the coral reefs must be a commitment at the national level especially in terms of regional ocean governance and should include the building of information baselines; national development and management plans and advocacy at the global level.

**Noted:** CRFM has responsibility for the coordination of the plan to protect regional reefs in collaboration with the Regional Climate Change Centre (5Cs) and in keeping with the Caribbean Community Implementation Framework for Climate Change. An MOU between OSPESCA and the CRFM also speaks to coordination between the CRFM States and the Central American States with regard to activities related to climate change adaptation.

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Discussions included the call for the building of awareness among fisherfolk and their communities about the deleterious effect of climate change on marine life in the region. Participants noted that all sections of society, the private and public sectors as well as civil groups must be involved in creating critical linkages to broaden the discussions.

It was proposed that fishermen be educated not from an environmental level, but from a fisheries point of view of the impacts of climate change and the damaged reef systems on his livelihood.

The working group was asked to make suggestions of improving coordination including who should be involved and what they should be doing; to recommend a structure for how the work should be done as well as possible sources of funding.

Clarification was sought on the possible existence of a map of the players and their responsibilities and in the absence thereof, a proposal made that one should be produced.

It was noted that collaboration among stakeholders within country systems was inadequate and more needs to be done to build capacity and better prepare stakeholder representatives to advocate in regional and international settings.

In response to a query it was also noted that regional studies have indicated that Climate variability is already having an impact on the industry.

In response to a request for clarification on advocacy at the international level it was noted that the region had failed as a people to involve all stakeholders at the national level therefore impeding their abilities to advocate at the higher levels.

The Chairman also noted that it was critical to maintain linkages between stakeholders so that information can be shared at all levels to ensure that all are cognisant of the issues that affect marketing, trade and other areas of fisheries.

**PRESENTATION #5: Sustainable use, conservation and management of fisheries resources: Caribbean Spiny Lobster - Milton Haughton, Executive Director, CRFM Secretariat**

**PowerPoint Presentation on Sustainable use, conservation and management of fisheries resources: Caribbean Spiny Lobster entered as *Appendix 4.5***

The presentation provided background; expected outcomes and an overview of the contents of the Draft Declaration on Lobsters (available from the CRFM Website at [www.crfm.int](http://www.crfm.int)); and highlighted the key provisions and the next steps in the process. The presentation is summarised below to show the context in which the points were made.

***Informed:*** Participants were informed of the significance of the Lobster fishery to the region with studies valuing regional earnings from the Caribbean Spiny Lobster fishery at US\$450 million from the industry, which is the number one fishery on Belize and Bahamas.

The Draft Declaration contains eighteen (18) preambular paragraphs with general provisions including the scope, which covers sustainability, conservation and management of the Caribbean Spiny Lobster and its habitats including the territorial waters and EEZ of member states; the setting of minimum standards that all countries should work towards, and a recognition that some countries may have higher standards than the minimum indicated.

The Declaration's objectives include long-term sustainable use of the resource through the implementation of conservation and management measures for the lobster stocks and their habitats.



**Figure 9: Chairman Mr. Justin Rennie, takes a break with Mr. Peter A. Murray and Mr. Horace D. Walters, MBE, CNFO representative from Saint Lucia. Photo Credit: CRFM-KMP**

***Outlined:*** The guiding principles of the declaration include use of the best available scientific data and information for planning and decision-making, protection of biodiversity, and use of traditional and local knowledge in protecting the resource.

Responsibilities of Member States to include collecting data in sufficient detail and accuracy and the sharing of that information; requirements that fishers, processors and others submit data; and agreements on the type and format of the data collected and the collaboration between states for research and data sharing among other responsibilities.

***Informed:*** Historical overview – timeline leading to the draft declaration noting that CRFM was asked to develop the regional agreement in 2008 / 2009; the Ministerial Council agreed to pursue



greater harmonisation in the management strategies across the region because of a trend showing decline in regional lobster stocks. Brazil attempted to list the Caribbean Spiny Lobster in Appendix II of CITES due to decline in catches and the expanding degradation in habitat; several countries remain sympathetic to the listing.

CRFM countries are seeking to establish a regional agreement that sets common standards and principles that member nations can implement as minimum standards; Central American countries have already established an agreement which harmonises measures to conserve and manage spiny lobster in the Central American Region.

A Common Agreement is needed because the Caribbean Spiny Lobster is a shared resource, used by all countries of the region even if there are some local populations in the waters of individual member states.

A draft agreement was formally presented to countries (Forum and Ministerial Council) in April and May 2014, and a final revised draft is to be presented to the Council of Ministers for their approval through the Forum in April / May 2015.

The Draft Declaration also covers the habitats of the Caribbean Spiny Lobster; protect biodiversity and the interest of small-scale and subsistence fishers.

Partnerships are needed to ensure collaboration between fishers and government to ensure that all information is collected and shared to provide the data required for monitoring and decision-making.

An established format for the range and type of data is needed and collection must begin.

Article 6 covers the responsibility of the Ministerial Council in the development of national strategies to ensure long-term conservation, management and sustainable use of stocks and the protection as well as the use of scientific advice by the Forum and other competent bodies.

The Declaration Proposes:

- Preventing fishing without a license, setting closed season with recommendation for a single close season of at least four months across the region.
- Proposals for established guidelines to deal with non-compliance to the declaration and particularly in relation to IUU fishing
- Setting upper limits on the number of traps used in the fisheries as done in several Latin American countries and the US;
- Traps should be made with bio-degradable material and to global standards;
- Escape panels to allow lobsters to escape from lost traps, and a gap to allow smaller sizes to escape;
- Recommended times for the removal of the traps from the sea should be debated and agreed;
- Introduction of maximum and minimum limits with regards to size limits on lobster tail weight and or carapace length;

- Prohibition on the capture of breeding lobsters or scrubbed lobsters and the introduction of landing of whole lobsters instead of the tail

Article 7 speaks to monitoring control and enforcement particularly in terms of IUU fishing that targets lobster because of its high value. The use of ‘high value fines’ to deter IUU fishing in the lobster fisheries especially since the fisheries is at risk from IUU fishing.

**Noted:** In many countries of the region, sanctions of IUU fishing - when perpetrators are caught - are generally significantly below the market value of the product and is not a deterrent.

The imposition of more severe penalties and sanctions for infringement of the regulations should enhance the limited capacities of countries of the region to monitor and enforce their regulations. The Council would be responsible for evaluating and determining the effectiveness of regulations from time to time.

The need for public awareness programmes to enhance knowledge of stakeholders and the general public about the importance of the fishery and the need to protect it.



Figure 10: Participants discuss issues and prepare interventions at the Blue Growth Workshop. Photo Credit: CRFM-KMP

The declaration has already been reviewed by CRFM’s Scientific Working Group and comments provided.

### **THE NEXT STEPS:**

**Informed:** Comments from the Blue Growth Working group will also be included in the draft declaration. The revised draft declaration will be presented to the Forum in 2015 and to the Ministerial Council for adoption in April / May 2015. The declaration is non-binding but is expected to put the region in a good position to deal with international groups and other countries

### **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

A lively discussion regarding the commitment of governments to the proposals contained in the document and suggestions to ensure its effectiveness and legality followed the presentation.

Participants pointed to the need to ensure that the proposals consider the smallest states within the membership of the CRFM noting that attention should be paid to those countries who can only use scuba gear and hookah to fish for lobsters as well as alternative livelihoods for fishers particularly in off season, as it was noted, that increasingly more species are being targeted for management.

In response to a comment that governments and regional leaders consider compensation for fishers who are impacted by proposed closed seasons, the Executive Director explained that the question of compensation is a difficult one since fishermen were able to switch from one resource to another during closed seasons for specified species.

He urged fishers to consider the evidence that long-term management systems generally resulted in healthier stocks and better prices for the fishers. He provided examples from Belize and Jamaica where the introduction of a management system for Conch led to better prices and increased earnings. In Jamaica where the Conch quota reduced catches from 4,000 - 5,000 tonnes in the early 1990s to a quota system of 500 - 600 tonnes fishers had seen significant increases in earnings which made up for the cut in their catch while the resources base is now in a much healthier state.

The declaration includes measures to enhance and protect the rights of fishers, recognised the limitations of some of the proposals and therefore gave countries significant flexibility to deal with their own unique situations.

Working Group discussions are available in ***Appendix 5.5: Report from Working Group on the Declaration of Lobster***

**PRESENTATION #6: Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and expectations by Mr. Milton Haughton, Executive Director, CRFM Secretariat**

**PowerPoint Presentation on Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and expectations are attached as *Appendix 4.6***

The presentation described the CCCFP as a “*comprehensive instrument that covers all dimensions of fisheries and aquaculture*” and provided an overview of the articles and important points particularly as it relates to the role of states and provisions for fishers.

The presentation reaffirmed the COTED decision made at the 51<sup>st</sup> Special Meeting in October 2014 in Suriname, which confirmed that Caribbean Community Common Fisheries Policy - represented the “approved policy of the Community and should be applied in-so-far as possible”- meaning there is the possibility that some portions may need additional actions on the part of individual countries to be implemented. (Press release of COTED decision available from the CRFM website [www.crfm.it](http://www.crfm.it)). Below the presentation is summarised to indicate the context in which the presentation was made.

***Informed:*** The Policy includes principles aimed at combining best available information, the application of international best practice, standards and approaches to national and regional fisheries planning to strengthen capacity to trade, and maximise social and economic benefits; deal with IUU fishing; enhance the use of research and development and data collection, and among other things, establish the framework to achieve the goals laid out in the policy.

***Outlined:*** Vision of the Policy which seeks to facilitate cooperation and collaboration in conservation, management and sustainable utilisation of the fisheries and related ecosystem to secure maximum benefits for the peoples of the region; and the Goal which seeks to establish measures for conservation management and sustainable use of the regional resources to build capacities among fishers and optimise social and economic returns as well as the promotion of competitiveness and stable markets

***Outlined:*** The objectives of the policy takes into account sustainable development of fisheries and aquaculture; increase in trade and exports of products to increase food and



**Figure 11: Mr. Milton Haughton, Executive Director, CRFM Secretariat explained the CCCFP at the Blue Growth Workshop. Photo Credit: CRFM-KMP**

economic security and employment; harmonising measures for sustainable fisheries management; implementing modern codes of practice; building research and data collection capabilities and improving management of the sectors as well as establishing a regime for SPS.

It outlined the Principles of the Policy including the use of traditional knowledge; application of international standards and approaches including the precautionary and ecosystems approaches to fisheries; and ensuring that fishing efforts are commensurate with effort and are sustainable;

Also outlined was the Scope of the Policy includes development management of the fisheries and aquaculture; ecosystems production, marketing, trade and training of fishers and also included the areas for which individual States will have jurisdiction.

Among other things, States will take all appropriate measures to fulfill obligations under the plan, refrain from measures that will jeopardise the objectives and establish or designate a Competent Agency with responsibility for implementing the agreement and any accompanying Protocols.

**Informed:** The Designated Competent Agency would be advisory in function and where requested will provide technical assistance and advice, make recommendations and coordinate or undertake data collection, research and development and mobilise resources.

States reserve the right to control access to their waters; take account of UNCLOS and other instruments; optimum utilisation and access to surplus.

Article 10 includes adoption of measures to improve the welfare and socio-economic conditions of fishers and their communities by promoting training and joint venture; the improvement of business opportunities and capital investment. (The Caribbean Community Common Fisheries Policy was referenced and is available from the CRFM website [www.crfm.int](http://www.crfm.int).)

**Informed:** Portions of the policy may require further action by States before they can be implemented.

**Proposed:** The development of legally binding agreements starting at the Community level to ensure that fishers and fish farmers can benefit from the protections and/or provisions afforded under the Policy, even when fishers are on the high seas and/or operating in foreign waters.



Figure 12. Deputy Executive Director, CRFM Secretariat, Dr. Susan Singh Renton in conversation with Mr. Havland Honeyghan, a Jamaican delegate at the 2014 Blue Growth Workshop. Photo Credit: CRFM-KMP

**Informed:** Article 9 deals with access to resources but also preserves the status quo, that is, the exclusive right of States to grant and regulate access to their own waters.

**Noted:** Capacity to access the resources the high seas limited to a few countries - Belize and St. Vincent and the Grenadines operate open registers allowing fishers from other states and entities to operate on the high seas using their flags.

**Informed:** Commitments regarding statistics and research as well as conservation and management are very important to the success of the Policy

**Proposed:** A system of registration and licensing of fishers and boats in which licenses are given only when it is supported by the condition of the fishery resources in individual states and or relevant agreements such as the ICCAT.

Also proposed the establishment of a regional register of vessels to aid in the monitoring and enforcement of fisheries and a register of IUU vessels in the region as is now the requirement in many RFMOs. An IUU register can be helpful in the fight against IUU fishing.

Proposals also included the development of measures to protect the identity of people who provide information and the development of intra-regional markets and value added products to increase earning.

**Informed:** The policy also makes provision for public awareness, the dissemination of information, networking with international organisations, reporting, review and development, as well as provisions for dispute settlement and the withdrawal of states.

**Proposed:** The speedy development of protocols and policies to ensure implementation of the CCCFP and development of policy instrument to ensure fisheries and aquaculture are integrated into the CSME.

**Noted:** Provisions included for legal requirements of the policy, dispute settlement and resolution.

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Participants were provided with a draft of the TOR for the consultant who will develop the plan of action for the implementation of the Policy.

Detailed discussions were saved for Working Group meeting to develop the Plan of Action for the implementation of the policy.

Working Group discussions are available in **Appendix 5.1: A CCCFP Working Group Report**

## Presentations under the topic TRADE AND MARKET ACCESS

### **PRESENTATION #7: Aquaculture Review and Plan of Action - Lessons learned and recommendations - Peter A. Murray, Programme Manager Fisheries Management and Development - CRFM Secretariat**

#### **PowerPoint Presentation on Aquaculture Review and Plan of Action - Lessons learned and recommendations entered as *Appendix 4.7***

The presentation reviewed the current state of Aquaculture in CRFM member states, provided an historical overview of the sub-sector's past performance and proposed recommendations on the way forward for the region. Below the summary gives the context in which the information was presented.

**Outlined:** Reasons why aquaculture could be beneficial to the region including as a source employment and food for the small developing states of the region; providing food security and export earnings; growing levels of food imports - including fish imports which moved from US\$270.6 million in 2006 to more than US\$343 million dollars in 2009; in 2010 aquaculture was 6.25 percent of regional fisheries production.

An overview of the current state of Aquaculture in the region shows low production and underdeveloped industry which has been in decline since the economic crisis in 2007 with production falling from peak production of 18,879 tonnes in 2004; production in 2011 of less than 9,000 tonnes; main producers Belize and Jamaica with signs of recovery in Belize and Haiti.



Figure 13: On Day 2 there was one additional Working Group to cover the many issues related to Blue Growth. Photo Credit: CRFM-KMP

**Identified:** The main reason for decline of industry include global economic downturn; falling international prices; rising costs of inputs including finances, feed and energy; security and praedial larceny; competition from Asian imports and challenges with health and food safety issues.

Also identified were the 13 CARIFORUM countries currently involved in aquaculture production and the various stages of their development as well as the main species now under production.

**Noted:** Several species that may be suitable for aquaculture in the region but are not now being exploited.

**Identified:** The reasons why the CRFM is promoting Aquaculture as a way forward for the region. These include economics and poverty reduction; food security and foreign currency earnings.

**Informed:** Current community policy commitments support the development of an aquaculture industry. Policies include CARICOM and CRFM Strategic plans which includes a strategy to increase the supply of fish; adoption of an ecosystem approach to aquaculture; establishment of legal frameworks, policies, guidelines and best practice standards for the development and management of the industry as well as the formation of a Working Group to guide the development of policies and commitments.

**Outlined:** An assessment of governance structures in the CRFM states that are currently involved in Aquaculture and an assessment of the suitability of the products/ species currently under production.

Donor support for the development of aquaculture in the Caribbean and the achievements under the programmes and countries that benefitted were also outlined.

**Identified:** The main constraints to the development of aquaculture in the region.

**Noted:** Aquaculture has potential for making significantly greater contributions to the regions development and can help to revitalise communities.

**Outlined:** A Five-year Plan of Action for the development of aquaculture in the region. The plan includes the strengthening of governance frameworks; capacity building even in educational institutions to provide training and support for the sector; strengthening of data management capabilities; strengthening credit regimes and provision of financial support to main producing countries; conducting market studies; research into critical areas including feed, stock improvement and technology transfer; adaptation to climate change and the adoption of disaster risk management techniques to protect investments.

**Examined:** A Value chain analysis to highlight potential of the aquaculture industry; other activities aimed at improving performance of the sub-sector, reducing energy costs, cost of land, improving access to regional and international markets and building cooperatives within the regional sector.

**Identified:** Areas for which support is needed in building capacity, markets, access to research, costs reductions, high quality feed, strengthening governance, credit regimes and data gathering and sharing; building environmental management systems; building capacities in climate change and disaster risk management and the building of partnerships.

**Proposed:** Working Group deliberations that include improvements and or amendments to the Plan of Action; proposals that will ensure that the Plan of Action is implemented and suggest appropriate development / donor partners for the implementation of the Plan of Action.



It was also proposed that stakeholders work with CARICOM and CRFM to improve the policies and build best practice regimes utilising strategies in those countries with existing policies. Some administrative support was currently being provided for Belize. Some countries have policies but lack legislation to move this forward.

#### **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Participants asked whether there was available research on the suitability of species for various countries of the region and sought clarification on access to information that looked at small-scale systems that could work in the region. They pointed to the need for studies in terms of the specific needs of the industry on a country-by-country basis.

The participants also pointed to the need for more studies and access to funding support for aquaculture development, noting that investments have been small in comparison to what is needed to go forward. They pointed to the need for crop insurance for the industry; recycling of waste products and efficient energy management systems.

Participants also asked whether any studies were done that could say why some countries were more successful than others. They noted the need for more research to determine factors that result in success in one country over another.

Further discussions were saved for the Working Group session.

The Working Group report is available in ***Appendix 5.3: Aquaculture Working Group Report***

## **PRESENTATION #8: Aquaculture Development in the French West Indies by Mr. Emmanuel Thouard, IFREMER, Martinique and Guadeloupe**

### **PowerPoint Presentation on Aquaculture Development in the French West Indies- entered as Appendix 4.8**

The presentation provided an overview of the work of IFREMER in the French speaking Caribbean territories of Martinique and Guadeloupe and provided an update on the status of aquaculture production on those islands. The summary below gives the context in which the information was presented.

***Informed:*** Inland aquaculture production was on the decline in the islands for many of the same reasons the sector declined in other parts of the region. Constrains of aquaculture in Martinique and Guadeloupe are the same as in the rest of the region.

Farming in the sea has been on the rise as inland farming has declined. There are currently 16 marine fish farms, four hatcheries and two inland farms as opposed to two inland farms and two hatcheries in Martinique. On Guadeloupe there are two fresh water fish farms, one marine fish farm and seven farms producing crustaceans.



**Figure 14:** Mr. Emmanuel Thouard the delegate from IFREMER and the French territories of Martinique and Guadeloupe.  
Photo Credit: CRFM-KMP

Most of the species farmed are fresh water crayfish, tilapia, red drum (the main species produced) and fresh water prawns.

***Historical Overview:*** Fish farming in the French Caribbean Territories was first attempted in the 1980s with the opening of a sea bass farm; some research was carried out on local species in later years and the red drum was introduced from the US. Seawater production has been more successful and most fresh water production has fallen off. IFREMER began research in the 1987 to define techniques for rearing the red drum; examine the difficulties of creating new economic opportunities; transfer the species to other French Overseas Territories and since 2000 has continued to look at the development of fish farming in the OTs.

***Informed:*** IFREMER works with all stakeholders all areas including feeding, production of fingerlings, the out-growing process and health. The institute is part of a network of laboratories working together in research and development including genetic management, reproduction, disease management, feeding and waste management as well as brood stock management. The institution also works closely with farmers to provide the information that improves product quality.

**Reviewed:** Brood-stock management and reproduction control from production through to fertilisation and hatching; disease management to ensure healthy stocks; genetic management to provide the best quality products and the use of research and development techniques to improve marketing.

**Outlined:** Objectives of the research agenda aimed to increase autonomy of producers through education and through the production of high quality stock and other information on feeds and breeding that is beneficial to the home countries and the region.

#### **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Participants sought and gained confirmation that the research methodologies can be repeated in other countries of the region and the techniques used in similar set ups.

The workshop noted that a collaborative agreement is being negotiated between the CRFM and the IFREMER, which will provide for closer cooperation aquaculture research and development.

Mr. Thouard's knowledge was expected to strengthen the Working Group's deliberations on the development Aquaculture in the region.

See also The Working Group report is available in ***Appendix 5.3: Aquaculture Working Group Report***

## **PRESENTATION #9: Aquaculture some specific experiences and lessons from Belize by Jimmi Jones, JimSan Aquaponics and Belizean Fresh**

**PowerPoint presentation on Aquaculture some specific experiences and lessons from Belize entered as Appendix 4.9.**

The presentation provided an overview of Aquaponics, in which fish and vegetables are grown using the same water in a process that allows nutrient rich water from fish farming to nourish plants in a soilless environment. The process helps to clean the water that is re-circulated to the fishponds. This summary of the presentation indicates the context in which the information was delivered.



**Figure 15: Mr. Jimmi Jones, JimSan Aquaponics and Belizean Fresh, a fish and vegetable farm in Belize making his contribution to the Blue Growth Workshop. Photo Credit: CRFM-KMP**

***Informed:*** Benefits include water conservation; increased production from limited land space; reduction or elimination of the need for traditional fertilisers and the use of chemicals; environmental benefit from the removal of nutrients from water used in the fish farms; managed outputs allow operator to plan production to maximise profits; promotes family farming and food security.

Innovation in aquaculture and aquaponics could be important to reducing food cost and food import costs for the region; enhance production in small island states; prepare for the impacts of climate changes and reduce pressures on the use of natural resources.

accessing region-specific controlled environment structures. There is the absence of much needed sources of information/ training in safe/ alternative disease and pest control measures for this system of farming.

The method requires some level of competence in both aquaculture and production but few training opportunities exist as there are difficulties in

***Proposed:*** Development of training opportunities for skills transfer and information sharing on aquaculture and aquaponics farming in the Caribbean.

***Informed:*** Start-up costs can be prohibitive; requires reliable affordable supply of power; need for policy support and incentives to promote aquaculture and aquaponics in the region.

***Proposed:*** Marrying aquaponics with solar or alternative energy solutions as a “win-win” situation. There is need for collaboration among groups and countries to provide opportunities in the sector.

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

During the discussion, participants highlighted the absence of opportunities for training in aquaculture in region as well as the absence of a single source of aquaculture information. They proposed that regional universities and colleges look at the industry for possible study areas.

In response to comments on the high level of waste produced in aquaculture, it was noted that Aquaponics provides one solution for the waste produced by the industry as the nutrients from the water is utilised for growing vegetable that is also sold and the income used to supplement the operation.

Participants proposed that governments and academics also look at the opportunities for data collection and analysis and the documentation of experiences from existing and former practitioners as steps in the preparation of a guide for those who are interested in the sub-sector.

The presenter also proposed investigations into alternative sources of energy as a cost cutting measure for the aquaculture sub-sector.

See also The Working Group report that is available in ***Appendix 5.3: Aquaculture Working Group Report***

**PRESENTATION #10: EPA SPS Project- status First year workplace and other project arrangements by Susan Singh-Renton, Deputy Executive Director, CRFM Secretariat**

**PowerPoint presentation on the EPA SPS Project- status, 1<sup>st</sup> year workplace and other project arrangements entered at *Appendix 4.10.***

The presentation gave an update of the EPA / SPS project, an overview of the first year work plan and other project arrangements. The project supports the Caribbean Forum of African, Caribbean and Pacific States (ACP) commitments for the implementation of Sanitary and Phytosanitary Measures (SPS) under the Economic Partnership Agreement (EPA). The project is being implemented by IICA in collaboration with the CRFM, CARICOM Secretariat and Government the Dominican Republic.

The summary below provides an indication of the context in which the information was presented.

**Overview:** Project objective is to support the integration of CARIFORUM states into the world economy and specifically to increase production and trade of agriculture and fisheries that meet international standards while protecting plant, human and animal health and the environment.

**Informed:** The 11.7 million Euro project targets producers and stakeholders at all levels in the food industry (land crops, livestock, fisheries) including those in regulatory roles and will run for 42 months.

The three project components include: development of model legislation, regulations and guidelines; the development of coordination mechanisms to address the fragmentation of animal health and food safety systems at the national and regional levels; the development of local and regional capacities in regulatory bodies and industry to meet international trade requirements.

Capacity building proposals include training in plant and animal health, e.g. risk assessment, surveillance, inspection and quarantine, as well as other weak areas along the value chain; the building and accreditation of a network of laboratories to enhance regional capabilities; establishing regional environmental monitoring and national farm level monitoring programmes in aquaculture.



**Figure 16: Susan Singh-Renton, CRFM Deputy Executive Director (right) and Mr. Peter A. Murray, CRFM Programme Manager - Fisheries Management and Development at the Blue Growth Workshop, Grenada.**

The programme management structure and activities completed in 2014 were also reviewed.

**DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

There were no queries concerning the presentation however the working group dealing with the SPS project was asked to review and validate the fisheries component work plan for the first year of the project.

Working Group discussions are available in ***Appendix 5.4: Report from the Working Group on the SPS Project***

**PRESENTATION #11: Value Chain approaches to fisheries in the Caribbean - Lessons from other ACP regions by Mr. Milton Haughton, Executive Director, CRFM Secretariat.**

**PowerPoint presentation of Value Chain approaches to Fisheries in the Caribbean - Lessons from other ACP Regions entered as Appendix 4.11.**

The presentation introduced the concepts behind the value chain approach to fisheries with the aim of stimulating discussions among stakeholders and building support for its application in the aquaculture and fisheries sector in the region. The value chain approach is an analytical framework for formulating cohesive and inclusive strategies for development of the sector so that it benefits the stakeholders and environment by seeking to optimise value along the entire chain of the process.

The Value Chain concept is set against of the current situation where small-scale fishers sell their products rather than marketing them to get the best prices or share of the final price. The following summary indicates the context in which the presentation was made.

**Proposed:** Training in marketing for members of the sector to better prepare them to take advantage of the exiting opportunities.

Value chain concept proposed as a way to add value, improve food security, employment and socio-economic stability and domestic growth in member states of the CRFM; as one way to reduce the high levels of imported food; increase production and strengthen competitiveness in the region by providing a larger portion of the market share for fish products to the producers and fishermen.

**Explained:** Value chain covers the range of activities from harvesting to production and retail that is required to bring a product from conception, through the different phases of production, marketing and to consumers; an analytical framework designed to build cohesive and inclusive strategies for development so that all stakeholders benefit.

A Simple Value Chain linking fishing vessels to the landing of the products, to the primary processing, to secondary processing to, wholesale, retail and finally to the consumer was illustrated.

The following questions were posed, the answers to which should help to map the process:

- What do the value chains look like and are they functioning well?
- Where are the key constraints in the value chains?
- How do the constraints differ in relation to gender?
- What interventions will deliver the greatest development impact?

**Illustrated:** The Aquaculture seed value chain as Inputs and services of Quality breeds and broodstock; production of quality seed produced by hatcheries; Transportation-quality seed delivered to farmers and Marketing as in Quality seeds used by farmers.



***Informed:*** Value chain development as a practical tool for managers and other stakeholders; as a tool to assess the development status of the fisheries and aquaculture sector; analyse the opportunities and constraints for a sustainable future, determine how value can be added with the expectation of increased value and earnings.

**DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

*NEXT STEPS* in building the value chain must include building of awareness and understanding among the stakeholder groups; discuss its relevance; mapping the value chain and the position in individual stakeholder groups and developing detailed strategies for assessing the challenges and constraints and improving the value chain at each link in the chain.

**PRESENTATION #12: The SSF Guidelines Adapted from the FAO by Mitchell Lay, Coordinator of the Caribbean Network of Fisherfolk Organisations (CFNO)**

**PowerPoint Presentation on The SSF Guidelines Adapted from the FAO entered as Appendix 4.12**

The presentation provided an overview of the Small Scale Fishers guidelines developed by the Food and Agriculture Organisation (FAO) of the UN and the significance of these guidelines as the first ever document that speaks specifically to small-scale fishers and particularly in relation to the policies and guidelines being developed at the Caribbean regional level.

Participants were informed of the significance of the SSF Guidelines as a global document that complimented regional actions relating to Blue Growth. It fits in with recent regional plans for the management of fisheries and recognises the significance of the contributions made by small-scale fishers specifically in the production of food.

Participants were also informed that the SSF Guidelines brought together principles of social development with issues relating to responsible fisheries and complements existing international commitments to the right to food, responsible governance of natural resources and the code of conduct for responsible fishing. Within the context of the delivery, the presentation:



**Figure 17: Mr. Mitchell Lay, Coordinator of the Caribbean Network of Fisherfolk Organisations explained the merits of the SSF Guidelines. Photo Credit: CRFM-KMP**

***Outlined:*** The development process for the SSF guidelines from the start at the 2008 Global Conference on Small Scale Fishers in Bangkok, the technical and stakeholder consultations involving over 4,000 stakeholders to the 2014 Endorsement of the guidelines.

The contents of SSF Guidelines also covers the governance structure and tenure; value chain, post-harvest and trade; gender equality; disaster risk reduction and climate change; institutional cooperation, collaboration and capacity development; information exchange, research and communication; as well as implementation, support and monitoring.

***Noted:*** The Guidelines are grounded in a Human Rights approach and seek to have fishers develop a sense of dignity and worth.

***Proposed:*** Actions that will mainstream the SSF Guidelines in policies and actions at all levels as well as in FAO's work plan, including working with the FAO to advocate for inclusion in international policies such as food security and ocean management and the elaboration with the implementation of other instruments.

Because the Guidelines are more extensive than other regional policies, it was proposed that it should be used to strengthen and or supplement regional provisions for small-scale fishers particularly at the national levels.

**Informed:** Important factors include public awareness, strengthening the science-policy interface and empowering stakeholders

## **DISCUSSION AND WORKING GROUP INSTRUCTIONS:**

Discussions on the SSF included the need for a definition for small-scale fishers at the national level to take into account the differences from state to state; the mobilisation of resources in collaboration with other groups to assist fisherfolk organisations to participate at the highest levels of negotiations.

Participants noted that the involvement of regional stakeholders at the international levels is in the best interest of the region.

There was some disappointment among fishers that they were unable to discuss more of their local problems in a regional setting, in a way that would bring attention to the issues of concern in their countries.



**Figure 18: SSF Working Group deliberations during the 2014 Blue Growth Workshop in St. Georges, Grenada. Photo Credit: CRFM-KMP**

The participants reiterated recommendations to support training and educational opportunities to attract young people to the fisheries sector as well as to enhance knowledge and skills of those already in the sector.

Further discussions taken to the working group

Working Group discussions are available in **Appendix 5.6: Report from Small Scale Fisheries Guidelines Working Group**

## **SPECIFIC WORKING GROUP INSTRUCTIONS**

Working groups were charged with providing recommendations for the way forward and next-steps in the five areas selected over the two days. In relation to the Nassau Grouper, participants were asked to in addition to other things: (a) identify the key elements to be laid out in a CRFM Response to the listing of the Nassau Grouper; (b) identify the key elements that should be considered in a management plan and (c) make recommendations.

In relation to the Flyingfish Management Plan, participants were asked to make suggestions on (a) the issues that should be looked at in the next two to three years and (b) the elements that should be included in a plan of action for the implementation of the plan.

Participants were also asked to recommend ways to better implement the Coral Reef Management Plan by (a) suggesting who should be involved in the management i.e. who could do a better job (b) propose a management structure and (c) suggesting possible sources of funding.

## **7. KEY FINDINGS**

Findings may be found in the Working Group reports that are presented in *Appendix 5*.

## **8. NEXT STEPS**

### **Common Fisheries Policy**

- Commitments regarding statistics and research as well as conservation and management within the context of the policy.
- Preparation of a Plan of Action for the implementation of the Common Fisheries Policy
- Consultancy to assist with preparation of the Plan of Action
- Proposals for priority activities for the short and medium term implementation of the plan.
- The Designation of a Competent/ Responsible Authority

### **Spiny Lobster Declaration:**

- CRFM's Scientific Working Group has reviewed the draft declaration on the Caribbean Spiny Lobster and provided comments that will be incorporated in the revised document.
- Establish format for the range and type of data needed for assessment and management.
- Commencement of data collection at the regional level
- Working group recommendations will also be included in the final draft.
- The revised draft will be presented to the Forum and Ministerial Council in 2015 for adoption of the agreement.
- Issues relating to lobster habitat should be included

The declaration is non-binding but is expected to put the region in a good position to strengthen conservation and management of the spiny lobster and engage with the international community and other countries

### **Nassau Grouper**

- Comments compiled and possible sources for data identified for inclusion into the CRFM response
- CRFM response to be submitted to NOAA before 31 December 2014.

## **9. EVALUATION**

The specific objectives of the workshop were met:

1. The rationale, critical issues and mechanisms for implementation of regional fisheries policies and their governance were reviewed.
2. The implications of regional fisheries policies for small-scale fisheries governance and management were analysed and common positions of fisherfolk organisations were noted:
  - (a) The CFP was explained to fisherfolk and other representatives of the industry;
  - (b) IUU Fishing was explained and options for monitoring and enforcement explored;
  - (c) Issues surrounding the development of Aquaculture in the region were explored and explained;
3. Stakeholders provided proposals and suggestions for an Action Plan for the implementation of the CFP
4. Fisheries stakeholders identified areas for further strengthening of the CNFO network in relation to small-scale fishers guidelines, education and information sharing.
5. Opportunities for sharing and collaboration were identified with current and planned projects and initiatives in the Caribbean that contribute to the overall result of the CRFM / CNTO / CTA project.

## 10. LESSONS AND RECOMMENDATIONS

Please note that many of the recommendations below that were made throughout the workshop applied generally to several of the topics discussed, those that are specific to a particular topic are noted.

- I. It was recommended that as a general rule, fishers and fisheries officers often should be provided with the relevant information regarding fisheries; policy development and issues at the national and regional levels and should also be part of the negotiation and information sharing process so that the region is able to protect its assets at the international level. The recommendation came out of an observation that information is not readily available or shared across the stakeholder levels.
- II. Participants recommended that information on the Nassau Grouper should be gathered from the fishers themselves since the species is a migratory one and there are no specific reporting requirements in most jurisdictions. It was noted that in the absence of reporting requirements, fishers have no obligation to keep record or submit data on the species they capture.
- III. The participants also proposed the development of draft baseline guidelines on how the SSF should be applied and that consultations should begin as soon as possible with national bodies on how these guidelines could be used to build on existing laws and governance structures. They noted that the framework guidelines should also take into account all relevant groups, agencies and departments.
- IV. Participants recommended that immediate attention should be given to the development of a network of accredited laboratories across the region for species development; disease monitoring and research in aquaculture as well as for other pertinent research and testing.
- V. They proposed that authorities should be engaged to ensure that the various legislations, regulations and guidelines presented are implemented across member countries.
- VI. Also proposed was the development of appropriate mechanism to prevent duplication in regulatory and management systems that are to be used region-wide.
- VII. Noting that information on aquaculture was fragmented and not easily acquired, participants proposed the establishment of training and greater coordination through regional institutions to ensure that available information and developments can be shared.
- VIII. Also proposed was the application of international standards in all aquaculture producing countries specifically regarding species, seed stock, feed, diseases, research and development that is specific to the various countries of the region.



Figure 19: Working Groups presented the results of their deliberations. Photo Credit: CRFM-KMP

- IX. Participants called for information on aquaculture to be gathered across the board and for R&D and for training in all areas beginning as soon as possible.
- X. The participants agreed on the need for governments to implement aquaculture related projects consistent with regional plans for aquaculture and for on-going public awareness programmes to eliminate the myths surrounding fish farming and called on regional governments to find development partners for producers and for the provision of some private / public partnerships particularly in some areas of the industry.
- XI. Participants proposed that countries actively seek international funding partners for research, development and exploitation of aquaculture in the region and urged regional administrations to also pay attention to marketing and extension services for the sub-sector. Further, for the development of alternative markets for fisheries as well as sources of funding for other activities within the sector.
- XII. Participants proposed, that individual countries and stakeholders look at and collect information on business and management experience in the aquaculture sector to aid the sector in its development.
- XIII. The participants also called for the formal recognition of the contribution that small-scale fishers make to the sector and the economies of the region.
- XIV. It was proposed that fishermen should be educated in a number of areas including financial and business management; marketing, and about the environmental issues such as pollution and climate change that impact the fisheries.
- XV. There was also a recommendation for the further strengthening of the fisherfolk and their networks to enable them to pass on information to their members via the strengthening of their communication and outreach strategies.
- XVI. Participants also proposed the marketing, communication and ICT training and strategies specific to the individual membership in ways that would encourage participation, noting that fishers have to see the benefits of participation from their points of view.
- XVII. Given challenges with literacy in some groups of small-scale fishers, they called for the increased use of the visual communication tools including graphics and traditional tools like radio to focus on sustainability of livelihoods rather than conservation of resources.
- XVIII. Participants proposed that science information should be broken down to ensure that the information that is shared is presented in a way that can be understood by fishers. They also called for the empowering of the stakeholder through the building of capacities among the group and the inclusion of the small-scale guidelines in national and regional policies.
- XIX. Also proposed was the introduction of insurance as part of the policy framework for governments. While some governments are reportedly looking at existing risk pools such as CCRIF, participants believe more needs to be done to identify schemes that could benefit them.
- XX. Participants also recommended that fishers, through the CNFO be included in the implementation and planning processes and monitoring mechanisms to ensure that policies remain relevant after implementation.
- XXI. There was also a proposal for all stakeholders to participate in discussions and at meetings that are likely to impact the sector and that information from these gatherings are shared with stakeholders in the industry.

## **11. REFERENCES**

CRFM. 2010. Castries (St. Lucia) Declaration of Illegal, Unreported and Unregulated (IUU) Fishing.

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CRFM . 2012. Sub-Regional Fishery Management Plan for the Eastern Caribbean Flying Fish

CRFM, 2014. Study on the Potential of Fish Farming in the Caribbean. CRFM Technical & Advisory Document No 2014 / 2. p78



# **APPENDICES**

## APPENDIX 1: OPENING CEREMONY PROGRAMME

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



<http://www.crfm.int>  
<http://www.youtube.com/TheCRFM>  
<http://www.facebook.com/CarFisheries>  
<https://twitter.com/CaribFisheries>



### OPENING CEREMONY

**CRFM / CNFO / CTA Regional Fisheries  
Workshop: Investing in Blue Growth**



**20 – 21 November 2014**  
**Flamboyant Hotel**  
**St. George's, Grenada**



## INSIDE pages- Opening Ceremony Programme

<b>PROGRAMME</b>	
<p><b>NATIONAL ANTHEM</b></p> <p><i>Hail Grenada, land of ours</i></p> <p><i>We pledge ourselves to thee</i></p> <p><i>Heads, hearts and hands in unity</i></p> <p><i>To reach our destiny</i></p> <p><i>Ever conscious of God</i></p> <p><i>Being proud of our heritage</i></p> <p><i>May we with faith and courage</i></p> <p><i>Aspire, build, advance</i></p> <p><i>As one people, one family</i></p> <p><i>God bless our nation.</i></p>	<p><i>Chairman,</i> <b>Mr. Justin ESPRUIS,</b> <i>Chief Fisheries Officer</i> <i>Fisheries Division</i></p> <p style="text-align: right;"><i>National Anthem</i></p> <p style="text-align: right;"><i>Opening Prayer</i></p> <p><i>9:00 a.m. – 9:05a.m.</i>     <i>Welcome Remarks</i> <i>Chairman</i></p> <p><i>9:05 a.m. – 9:10a.m.</i>     <i>Opening Remarks</i> <i>Mr. Chris Addison</i> <i>Senior Programme Coordinator</i> <i>CTA Office, The Netherlands</i></p> <p><i>9:10a.m. – 9:15a.m.</i>     <i>Remarks</i> <i>Mr. Mitchell Lay</i> <i>Coordinator, CNFO</i></p> <p><i>9:15a.m. – 9:25a.m.</i>     <i>Remarks</i> <i>Mr. Milton Haughton</i> <i>Executive Director</i> <i>CRFM Secretariat</i></p> <p><i>9:25a.m. – 9:40a.m.</i>     <i>Feature Address</i> <i>Honourable Roland Bbola,</i> <i>Minister</i> <i>Ministry of Agriculture, Lands, Forestry,</i> <i>Fisheries and the Environment</i></p> <p><i>9:40a.m. – 9:45a.m.</i>     <i>Closing Remarks</i> <i>Chairman</i></p>

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<p>37. <b><u>SAINT LUCIA</u></b>  Mr. Horace D. Walters MBE  President  St. Lucia Fisherfolk Cooperative Society Ltd.  P.O. Box 3074  Castries  Tel: 758-718-6229  758-720-8606  Email: <a href="mailto:horacewalters@hotmail.com">horacewalters@hotmail.com</a></p>	<p>38. <b><u>SAINT VINCENT and the GRENADINES</u></b>  Mr. Lorenzo George  Senior Fisheries Assistant  Fisheries Division  Richmond Hill  Kingstown  Tel: 784-456-2738  Fax: 784-457-2112  Email: <a href="mailto:nashsvg@yahoo.com">nashsvg@yahoo.com</a>  <a href="mailto:fishdiv@vincysurf.com">fishdiv@vincysurf.com</a>  Skype: nashville646</p>
<p>39. <b><u>SAINT VINCENT and the GRENADINES</u></b>  Mr. Winsbert Harry  Vice President  National Fisherfolk Organization  Kingstown  Tel: 784-433-2614  Fax: 784-457-2112  Email: <a href="mailto:winsbertharry@yahoo.com">winsbertharry@yahoo.com</a>  <a href="mailto:nationalfisherfolk@gmail.com">nationalfisherfolk@gmail.com</a></p>	<p>40. <b><u>SURINAME</u></b>  Mrs. Muriel Wirjodirjo LLM  Head of Coastal, Inland and Deep Sea Fishery  Fisheries Department  Cornelis Jongbawstraat 50  Paramaribo  Tel: 597-479-112extn. 3128 / 3101  Fax: 597-424-441  Email: <a href="mailto:murielwirjodirjo@yahoo.com">murielwirjodirjo@yahoo.com</a>  <a href="mailto:kbdvisserij@gmail.com">kbdvisserij@gmail.com</a></p>

<p>41. <b><u>TRINIDAD and TOBAGO</u></b></p> <p>Ms. Lara Ferreira Senior Fisheries Officer (Ag.) Fisheries Division Ministry of Land and Marine Resources 35 Cipriani Blvd Newtown Port of Spain Tel: 868-625-9358 868-623-8525 868-623-6028 Fax: 868-623-8542 Email: <a href="mailto:lferreira@fp.gov.tt">lferreira@fp.gov.tt</a> Skype: ferreira.lara1</p>	<p>42. <b><u>TRINIDAD and TOBAGO</u></b></p> <p>Mr. Joslyn Lee Quay Deputy Coordinator Caribbean Network of Fisherfolk Organization Executive Member Trinidad and Tobago United Fisherfolk c/o Seafood Industry Development Company 6 Betucal Exit 1 Uriah Butter Highway CharlieVille Tel: 868-481-0181 Email: <a href="mailto:leequayj@yahoo.com">leequayj@yahoo.com</a> <a href="mailto:joslee_56@outlook.com">joslee_56@outlook.com</a> Skype: Joslyn Lee Quay</p>
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**ORGANISATIONS**

<p>43. <b><u>INSTITUT FRANÇAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (IFREMER)</u></b></p> <p>Dr. Emmanuel Thouard Delegate for French West Indies and Head of Martinique Station Research Unit “Marine Biodiversity and Environment” Institutfrançais de Recherchepourl’exploitation de la mer 79 route de Pointe Fort 97231 Le Robert Martinique Tel: 596-66-1960 GSM: 696-40-68 32 Email: <a href="mailto:Emmanuel.Thouard@ifremer.fr">Emmanuel.Thouard@ifremer.fr</a></p>	<p>44. <b><u>THE UNIVERSITY OF THE WEST INDIES</u></b></p> <p>Dr. Patrick McConney Senior Lecturer Centre for Resource Management and Environmental Studies The University of the West Indies Cave Hill Campus Barbados Tel: 246-417-4316 Fax: 246-424-4204 Email: <a href="mailto:cermes@cavehill.uwi.edu">cermes@cavehill.uwi.edu</a> <a href="mailto:patrick.mcconney@gmail.com">patrick.mcconney@gmail.com</a> Skype: pmcconney</p>
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**CARIBBEAN REGIONAL FISHERIES MECHANISM (CRFM) SECRETARIAT**

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51.	<p><b><u>GRENADA</u></b></p> <p>Mr. Leon Morain  Fisheries Division  Ministry of Agriculture  Melville Street Fish Market Complex  Melville Street  St. George's  Tel: 473-440-3814</p>	52.	<p><b><u>GRENADA</u></b></p> <p>Mr. Joshua Charles  Ministry of Agriculture  Botanical Gardens  Tanteen  St. George's  Tel: 473-440-2708</p>
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**APPENDIX 3: WORKSHOP AGENDA**

**CARIBBEAN REGIONAL FISHERIES MECHANISM  
SECRETARIAT**

**CRFM / CNFO / CTA REGIONAL FISHERIES WORKSHOP:  
INVESTING IN BLUE GROWTH**

**IBG 2014/ 01**

**St. George's, Grenada**

**20 - 21 November 2014**

**Document Date: 17 November 2014**

**ANNOTATED PROGRAMME**

<b>Day 1 - Thursday, 20 November 2014</b>		
	Registration of participants	0830 - 0900
ITEM1	<b>Opening ceremony</b> <i>Selected speakers will be invited to address the Meeting during a formal opening ceremony.</i>	0900 - 0930
	<b>SHORT BREAK</b>	0930 - 0940
ITEM 2	<b>Introductions and procedural matters</b> <i>The Meeting Chairperson will provide information on matters related to accommodation, breaks, transportation to the airport, reconfirmation of flights, etc.</i>	0940 - 0950
ITEM 3	<b>Governance and policy</b>	0950 - 1700

3.1	<p>Combating IUU – status, lessons learned from other ACP regions, future needs and expectations</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Peter Murray) will provide the relevant background for informing discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	0950 – 1010
3.2	<p>(i) Sustainable use, conservation and management of fisheries resources: Eastern Caribbean flyingfish and Nassau grouper</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Susan Singh-Renton) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1010 – 1030
	<b>COFFEE BREAK</b>	1030 - 1045
3.2 (cont'd)	<p>(ii) Sustainable use, conservation and management of fisheries resources: Coral Reef Action Plan</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Peter Murray) will provide the relevant background for informing discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1045 – 1105
3.2 (cont'd)	<p>(iii) Sustainable use, conservation and management of fisheries resources: Caribbean Spiny Lobster</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Milton Haughton) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1105 – 1125

3.3	<p>Caribbean Community Common Fisheries Policy (CCCFP) – status, lessons learned, and future needs and expectations</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Milton Haughton) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1125 – 1245
3.4	<p>Working Group Sessions –</p> <p><i>CRFM Secretariat staff will explain the objectives of the sessions. Workshop participants will select to participate in 1 of 2 Working Groups (Nassau Grouper and CCCFP), and will identify Chairpersons and rapporteurs for their respective working groups. Working groups will then be responsible for conducting their discussions and preparing a verbal and written report, to be presented at the end of Day 1.</i></p>	1245 – 1300
	<b>LUNCH</b>	1300 – 1400
3.4 (cont'd)	<p>Working Group Sessions –</p> <p><i>CRFM Secretariat staff will explain the objectives of the sessions. Workshop participants will select to participate in 1 of 2 Working Groups (Nassau Grouper and CCCFP), and will identify Chairpersons and rapporteurs for their respective working groups. Working groups will then be responsible for conducting their discussions and preparing a verbal and written report, to be presented at the end of Day 1.</i></p>	1 400 – 1530
	<b>COFFEE BREAK</b>	1530 – 1545
3.5	<p>Working Group Reports to Plenary Workshop session -</p> <p><i>Each Working Group will deliver its report to the Workshop (power point and word files), during which time the Meeting Chairperson will facilitate further discussion and obtain endorsement of each Working Group report</i></p>	1545 - 1700
<b>Day 2 – Friday, 21 November 2014</b>		
ITEM 4	<b>Trade and Market Access</b>	0900 - 1700

4.1	<p>(i) Aquaculture Review and Plan of Action – lessons learned, and recommendations</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Peter Murray) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	0900 – 0920
	<p>(ii) Aquaculture development in the French West Indies</p> <p><i>A 15-minute PowerPoint presentation will be made by the representative of IFREMER, to provide background on recent developments in aquaculture in the French West Indies</i></p>	0920 – 0940
	<p>(iii) Aquaculture – Some specific experiences and lessons from Belize</p> <p><i>A 15-minute PowerPoint presentation will be made by a representative of the government of Belize, on recent specific experiences in aquaculture and lessons learned</i></p>	0940 – 1000
4.2	<p>EPA SPS project – status, 1<sup>st</sup> year work plan and other project arrangements</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Susan Singh-Renton) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1000 – 1020
4.3	<p>Value chain approach to fisheries in the Caribbean – lessons learned from other ACP regions</p> <p><i>A 15-minute PowerPoint presentation by CRFM Secretariat (Milton Haughton) will provide the relevant background for informing discussions, including Working Group discussions, and development of recommendations for the Caribbean Fisheries Forum and the CRFM Ministerial Council</i></p>	1020 – 1040
	<b>COFFEE BREAK</b>	1040 – 1055



4.4	<p>Working Group Sessions –</p> <p><i>Secretariat staff will explain the objectives of the sessions. Workshop participants will select to participate in 1 of 3 Working Groups (Lobster Declaration, Aquaculture and SPS), and will identify Chairpersons and rapporteurs for their respective working groups. Working groups will then be responsible for conducting their discussions and preparing a verbal and written report, to be presented at the end of Day 2.</i></p>	1055 – 1300
	<b>LUNCH</b>	1300 – 1400
4.4 (cont'd)	<p>Working Group Sessions –</p> <p><i>Secretariat staff will explain the objectives of the sessions. Workshop participants will select to participate in 1 of 3 Working Groups (Lobster Declaration, Aquaculture and SPS), and will identify Chairpersons and rapporteurs for their respective working groups. Working groups will then be responsible for conducting their discussions and preparing a verbal and written report, to be presented at the end of Day 2.</i></p>	1400 – 1530
	<b>REFRESHMENT BREAK</b>	1530 – 1545
4.5	<p>Working Group Reports to Plenary Workshop session -</p> <p><i>Each Working Group will deliver its report to the Workshop (power point and word files), during which time the Meeting Chairperson will facilitate further discussion and obtain endorsement of each Working Group report</i></p>	1545 – 1700
ITEM 5	<p><b>Closing</b></p> <p><i>The Meeting Chairperson will provide a brief summary of the Workshop and confirm the procedures for taking recommendations forward</i></p>	1700 – 1710

**APPENDIX 4: POWER POINT PRESENTATIONS**

**APPENDIX 4.1: COMBATTING IUU FISHING**

**Combating IUU - Status, Lessons Learned from other ACP regions, future needs and expectations**



# Combating IUU - Status, Lessons Learned from other ACP regions, future needs and expectations

### LESSONS LEARNED IN INDOCHINA

- IUU Fishing in the Region is a major problem which affects all regional countries
- Major food security issue for many of the Regional countries
- If unchecked, IUU fishing can lead to other maritime security issues
- Combating IUU fishing requires bilateral, sub-regional and regional cooperation.




- Three distinct, but interrelated types of IUU Fishing in the Region
  - IUU Fishing by domestic vessels exclusively within national jurisdiction
    - Often major international or regional issue as effective national monitoring, control and surveillance can deal with the problem
  - IUU by foreign fishing vessels
    - Major problem- Often financed by international criminal syndicates
  - IUU fishing by domestic vessels in national waters, financed by foreign interests.
    - Can also be a major problem



### EFFECTIVE MCS MEASURES

- Use of vessel monitoring system (VMS)
- Observer programmes
- Boarding and inspection at sea
- Inspection in ports
- Application of legal sanctions of sufficient severity



### DETERRENCE OR ENCOURAGEMENT - OR BOTH?



<p>MANAGEMENT MEASURES PERALUE FISHERIES FOR NON-COMPLIANCE</p> <p>GOOD MCS - COST EFFECTIVE ASSET DEPLOYMENT &amp; TARGETED REDUCED OPERATIONAL COMPLIANCE ENFORCEMENT</p> <p>GOOD DETECTION/INTERDICTION CAPABILITIES</p> <p>OFFENSES WAIVED, FINING THROUGH (ENFORCEMENT NOTICES) AND PROSECUTION BASED ON OFFENSE SEVERITY</p>	<p>STAKEHOLDERS INVOLVED IN MANAGEMENT MEASURE DEVELOPMENT</p> <p>STAKEHOLDERS INVOLVED IN COMPLIANCE PLANNING</p> <p>WILLENARY COMPLIANCE PROMOTED AS ENFORCEMENT MULTIPLIER</p> <p>MEASURES VIEWED AS LEGITIMATE</p> <p>"SHIRAS, HIGH GROUND" IS MEASURE'S PARDON FOR "SHEEP"</p>
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### CURRENT SITUATION IN CRFM

- IUU fishing poses a significant threat to the sustainable development, and management of fisheries resources
- Region is made up of numerous Small Island Developing States,
  - many governments with differing goals and objectives
  - trans-boundary character of living marine resources

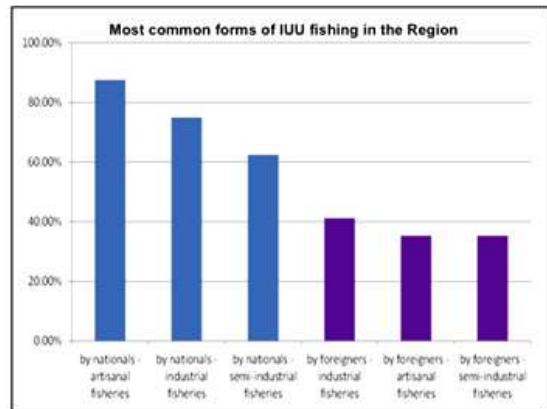
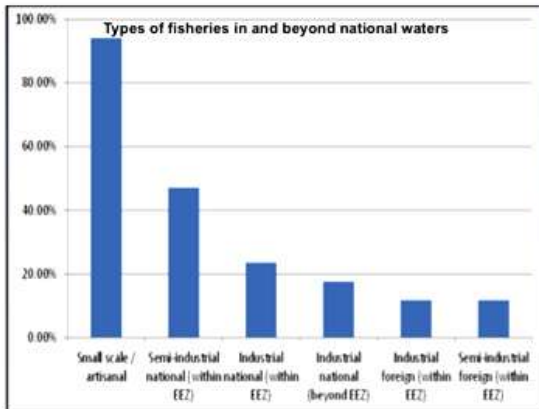


IUU fishing is a significant threat to the livelihoods of fishers and fisher communities in the region

- fisheries resources are an important contributor to the Gross Domestic Product (GDP) of many countries
- contributes an estimated US\$390.5 million directly to fisherfolk on an annual basis.
- employs over 338,835 persons, directly or indirectly
  - mainly from small scale fisheries in rural communities lacking other income earning opportunities.



## Combating IUU - Status, Lessons Learned from other ACP regions, future needs and expectations



### Illegal fishing by nationals within national waters takes a range of forms, the commonest of which reported by stakeholders includes:

- Fishing with an unregistered/unlicensed vessel
- Using illegal/unapproved gear
- Taking species during a closed season (e.g. spiny lobster)
- Taking undersized species (e.g. conch, spiny lobster)
- Taking of banned species (e.g. turtles)
- Fishing in a restricted /closed area (e.g. marine park, marine protected area)
- Transshipping catch at sea to avoid export duties (particularly conch and lobster)

### IUU fishing by foreign industrial vessels in national waters

- industrial vessels flying the flag of regional states, that enter into national waters of neighbouring States, to target high value demersal species such as conch, lobster, shrimp, sea urchin, bêche-de-mer and finfish
- industrial vessels flying the flag of DWFNs (particularly Asian, European and south American countries), targeting large pelagic species such as tunas and sharks.

### IUU fishing by foreign semi-industrial and small-scale vessels in national waters

- Primarily small-scale and semi-industrial fishers from neighbouring States, entering national waters to target conch, lobster and other high value species.
  - These forms of IUU fishing have the most palpable and immediate impact on strategic national resources
  - They compete directly for the same resources as the national small scale and semi-industrial sectors (mostly near-shore resources).

# Combating IUU - Status, Lessons Learned from other ACP regions, future needs and expectations

**Synoptic overview of impact for key forms of IUU fishing (risk analysis)**

Domestic IUU fishing by national fleets outweighs all other forms of IUU fishing by a factor of 4 to 10

- Main reasons for this are:
  - the higher opportunity to observe and report on such fishing,
  - its generally high adverse impacts across the board of relevant factors, especially in biological, and environmental terms, but also in longer term social and economic impacts.

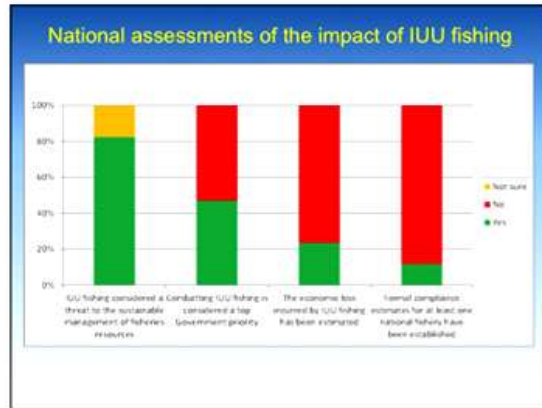
Unilateral poaching by regional operators is the second most frequently identified form of IUU fishing

- It has potential – in specific cases – to cause serious biological, social and economic damage.

Poaching by DWFNs in the deeper EEZ ranks third.

- It is more important than reciprocal poaching only
- impacts at the rent and social level may be more important – specifically in countries operating long-line fisheries themselves and countries seeking new tuna fishing opportunities.

Reciprocal poaching in mostly traditional fishing grounds is the form of IUU fishing with the least severe impacts.




**Initiatives Being Developed or Implemented Against IUU**

- Caribbean Community Common Fisheries Policy
- Castries (St Lucia) Declaration on IUU Fishing
- Fisheries Enforcement & Prosecution Manual
- FAO International Plan of Action-IUU
- FAO Code of Conduct for Responsible Fisheries
- The FAO Agreement on Port State Measures to prevent, deter and eliminate IUU fishing
- The United Nations Convention on the Law of the SEA (UNCLOS)
- WECAFC Regional Working Group on IUU fishing



Through implementing the various national measures, enforcement of fisheries and related regulations would increase

- increasing the cost of IUU operations
- reducing related benefits, resulting in increased level of compliance to regulations.



Penalties as well as risk of being apprehended engaging in IUU fishing are insufficient

- As such does not act as deterrents, thus would need to be strengthened in order to be effective.

Members of CRFM have recognized that IUU fishing is a huge threat to sustainable fishery management, fisher livelihood, food security and economic development in the region; and thus, needs to be addressed



**CRFM**

**Regional MCS Strategy**




## Combating IUU - Status, Lessons Learned from other ACP regions, future needs and expectations

h) Support and abide by initiatives such as the Marine Stewardship Council (MSC) or other means of certification, thereby blacklisting markets as well as fishers that support IUU fishing.

i) Establish awareness programs and to educate as well as promote participation and coordination of fishers to encourage fishermen to report any suspected IUU fishing activity.

j) Develop and strictly implement vessel marking/identification requirements in accordance with FAO standards and guidelines for marking and identification of fishing vessels at national, regional and international levels.



### Working group tasks

Mindful of the initiatives being developed or implemented Against IUU in the region and the drivers of IUU the Working group should discuss the IUU situation and:

- Suggest how the current measures can be enhanced/ encouraged
- make proposals to support strategic interventions currently being initiated
- suggest appropriate development partners for providing support to these initiatives

*Thank you*

**Merci**  
**Mèsi**

Dank je wel

Arigato gozaimasu  
ありがとう



Caribbean Regional Fisheries Mechanism  
[www.crfm.org](http://www.crfm.org)



APPENDIX 4.2 and 4.3

Sustainable use, conservation and management of fisheries resources: Eastern Caribbean Flyingfish and Nassau Grouper



# Sustainable use, conservation and management of fisheries resources: Eastern Caribbean Flyingfish and Nassau Grouper

**Management Resolution agreed**

CRFM Ministerial Council

**Resolution on the Sub-regional Fisheries Management Plan for Flyingfish in the Eastern Caribbean**

Basseterre, Commonwealth of Dominica  
13 May 2014

- To implement an ECOSYSTEM APPROACH TO FISHERIES
- To implement the Sub-regional FMP, including the management measures proposed.
- To be proactive in promoting the implementation of the FMP.
- Overall management needs to be improved to support implementation
- To communicate this resolution and discuss its implications with all relevant stakeholders (The PARTICIPATORY APPROACH)
- To report annually on progress of FMP implementation and management performance
- To initiate work to prepare a legally binding regional agreement for the conservation, management and sustainable use of the flyingfish resources in the Eastern Caribbean

**Nassau Grouper**

Source: Sabatny and Emond, 2009

**Distribution of Nassau Grouper, *Epinephelus striatus*, Western Central Atlantic**

- Long-lived predators with diverse diet
- Mature at 4-4 yrs, can grow > 80 cm (up to 55 lbs, and live >20 yrs)
- Spawning aggregations - few days per yr
- Post larval settlement period - few days per yr

**N. Grouper - Conservation & management**

**STRESSORS**

OVER FISHING  
OTHER HUMAN IMPACTS  
NATURAL PREDATORS

Increasing stressors → Decreasing reef health → Increasing stressors

Chlorophyll *a* is a good proxy for the presence of coral and that *a* is a depleted reef health is a positive sea sign.

**Natural Predators**

**N. Grouper - Conservation & management**

**THE EVIDENCE**

**FISH LANDINGS - The Bahamas 1986-2007**

**SPAWNING AGGREGATIONS Historically & - 2007**

**MEAN BODY SIZE (exploited vs unexploited) - Belize**

**N. Grouper - Conservation & management**

**BELIZE MEASURES**

- Heavy commercial exploitation → 11 aggregation sites declared protected in 2002.
- Belize Spawning Aggregation Working Group (SPAAG) → monitoring the 11 sites.
- Closed season from 1 December to 31 March.

**THE BAHAMAS MEASURES**

- A Closed season from December 1 through February 29
- A minimum size limit
- Established Marine Protected Areas

**MONITORING BY STATES**

- ANECDOTAL REPORTS, LANDINGS
- CRFM SCIENTIFIC MEETING 2007 - analysis of SPAAG data → impact of management measure not so obvious, possibly because of data quality and type of analysis, but likely some positive impact of measures
- VISUAL SURVEYS over time - continuing decline in numbers & sizes of aggregations.
- Scientific methods still developing.

**N. Grouper - Conservation & management**

Recommendation WECAF/IS/2011/1

**ON THE ESTABLISHMENT OF A REGIONAL CLOSED SEASON FOR FISHERIES IN THE WECAF AREA TO PROTECT SPAWNING AGGREGATIONS OF GROUPERS AND SNAPPERS**

- Protection of spawning aggregations
- Regional closed season (Dec-March) prohibit exports
- Establish/ enforce MPAs having known aggregations
- Research (aggregations, impacts, measures)
- National and regional management + conservation plans
- Reporting to WECAF WD.
- Mobilise resources for implementation support
- Communication and outreach activities



## Sustainable use, conservation and management of fisheries resources: Eastern Caribbean Flyingfish and Nassau Grouper

**CRFM N. Grouper – Conservation & management**

NGO PETITION & NOAA RESPONSE → 1. Biological Report  
2. Threat evaluation & Extinction Risk Analysis

NOAA DETERMINATION – SEPTEMBER 2014

CRITERION	FACTORS
HABITAT	spatial structure/ connectivity & habitat alteration
OVERUTILIZATION	historical harvest, fishing spawning aggregations, carry over abundance, current commercial harvest, artificial selection
DISEASE AND PREDATION	diseases, parasites, predation
REGULATORY MECHANISMS	inadequate law enforcement, foreign regulations, US federal, Florida and US territory regulations
OTHER NATURAL OR MAN MADE FACTORS	climate change, aquaculture, growth rates, productivity, diversity

**CRFM N. Grouper – Conservation & management**

NOAA FINAL LISTING JANUARY 2015

RECOVERY PROGRAMME >

1. CRITICAL HABITAT DESIGNATED
2. PROTECTIVE REGULATIONS → CONSERVING AQUATIC ECOSYSTEM HEALTH
3. POSSIBLE APPLICATION OF SOME OR ALL TAKE PROHIBITIONS

PUBLIC COMMENT OPPORTUNITY PRIOR TO FINAL LISTING

INFORMATION ON

LOCATION AND STATUS OF NASSAU SPAWNING AGGREGATIONS

1. THREATS
2. PROTECTION EFFORTS

**CRFM N. Grouper – Working Group**

1. Identify any information that was possibly not considered in NOAA determination
2. Examine WECAFC submissions to NOAA
3. Make recommendations on elements to comprise CRFM position comment, including comments on regulations suitable to accompany listing
4. Make recommendations on elements to comprise a regional management proposal to be adopted by CRFM

## APPENDIX 4.4: ACTION PLAN FOR CARIBBEAN CORAL REEFS

### Sustainable use, Conservation and Management of Fisheries Resources: the Action Plan for Improving the Outlook for Caribbean Coral Reefs

**CREM**  
CARIBBEAN REGIONAL FISHERIES MECHANISM

**Sustainable use, conservation and management of fisheries resources: the Action Plan for Improving the Outlook for Caribbean Coral Reefs**

**WHY?**

An important natural asset

Coral reefs provide region with benefits = \$3.1 - 4.6 billion annually.

They provide:

- shoreline protection,
- habitat for healthy fisheries
- the natural infrastructure that supports the economically vital tourism sector.

**WHY?**

- Internationally significant for unique Biodiversity – 10% of the world's reef area.
- Reefs are under unprecedented pressure:
  - Overfishing (most)
  - Water-shed based pollution (1/5)
  - Coastal development (1/3)
- Evidence of dramatic declines of key coral species
- In combination, more than 75 percent of Caribbean reefs are affected by local threats.
- As systems grow weaker, disease and climate change worsen the situation

**WHY?**

Mounting concerns:

60% of population living within 1.5km of shoreline.

Failure to reverse trends could cost:

- US\$95-140 million/yr (fisheries)
- US\$100-300 million/yr (dive tourism)
- US\$140-420 million/yr (reduced shoreline protection services)

**AIM & PREPARATION**

AIM - A roadmap for sustainable management of coral reefs in the face of threats from increasing human activity impacts and climate change

**PARTICIPATORY PROCESS -**  
Regional consultations with regional leaders, government officials, stakeholders, scientific experts

**ROADMAP - GOAL # 1**

**1. HEALTH & RESILIENCE OF REEFS**

PUBLIC AWARENESS/STAKEHOLDER PARTICIPATION

MPAs

SUSTAINABLE USE

POLLUTION CONTROL

RISK MANAGEMENT

COASTAL INTEGRITY

INVASIVE SPECIES

# Sustainable use, Conservation and Management of Fisheries Resources: the Action Plan for Improving the Outlook for Caribbean Coral Reefs



**REGIONAL COORDINATION - WHO?**

**CARICOM CLIMATE CHANGE CENTRE (5Cs)**  
The CARICOM Regional Framework for Achieving Development Resilient to Climate Change (2009)

**CRFM (CARICOM's Regional Fisheries Body)**  
Regional Strategy, Action Plan, and Programme Proposal on Disaster Risk Management, Climate Change Adaptation and Fisheries and Aquaculture in the CARICOM Region

**CLME Strategic Action Programme**

**2012 Report Card for the Mesoamerican Reef**

**Working group tasks**

The Working group should consider the:

- reasons for developing the Coral Reef PoA
- overall aim of the PoA
- Goals and expected outputs/outcomes of the PoA

Against the backdrop of the above, the Working group should discuss the Coral Reef PoA and:

- make proposals to ensure/encourage implementation of the PoA
  - identify roles for the various stakeholders
  - outline a suggested governance structure for effective implementation of the PoA
- suggest appropriate development partners for support to specific aspects of the PoA

**Thank you**

**Merci Mési**

**Dank je wel**

Arigato gozaimasu  
ありがとう

**CRFM**

## APPENDIX 4.5: CARIBBEAN SPINEY LOBSTER

### Sustainable use, Conservation and Management of Fisheries Resources: Caribbean Spiny Lobster

**CRFM/CNFO/CTA  
Blue Growth Workshop**

**Draft Regional Declaration on the  
Conservation, Management and Sustainable  
Use of the Caribbean Spiny Lobster  
(*Panulirus argus*)**


Milton Haughton



Caribbean Regional Fisheries Mechanism  
www.crfm.int


**Content**

- Background to the Declaration
- Expected outcome
- Overview of the Declaration
- Key Provisions
- Next Steps




**Preamble**

1. Introductory statement
2. purpose, goal & justification
3. doesn't create rights or obligations
4. Helps with interpretation substantive paras
5. 18 preambular paragraphs



**General Provisions**

- Art. 1 Use of terms /definitions
- Art. 2 Scope
  - sustainable use, conservation, management
  - *P. argus* & habitats
  - Waters of Member
  - Minimum standards
- Art. 3 Objective
  - long-term sustainable use through effective implementation of conservation and management measures for the stocks, and their habitats [based on the best scientific evidence available]



**Art 4 - Principles**


- (a) Precautionary and ecosystem approaches
- (b) Long-term sustainability & optimum utilization;
- (c) Best scientific evidence available
- (d) Protect biodiversity;
- (e) Levels of fishing effort match sustainable use of stocks;
- (f) Interests of small-scale and subsistence fishers and promote their participation in the decision-making;
- (g) traditional ecological knowledge and local knowledge
- (h) Collect and share data and information;
- (i) Ensure compliance through MCS & public education



**Art. 5. Research, Data Collection and Sharing of Data & Information**

Member States shall:

- Collect and share data
- Sufficient detail and accuracy
- Requiring vessel owners and masters, fishers, processors & traders to submit data
- Agree on specification of data and the format
- Conduct scientific research & promote the publication and dissemination of results
- Cooperate with neighbouring States in research



## Sustainable use, Conservation and Management of Fisheries Resources: Caribbean Spiny Lobster

### ART.6: CONSERVATION & MANAGEMENT MEASURES

- Ministerial Council shall:
  - make policy decisions to ensure long-term conservation, management and sustainable use of stocks, & protect their habitats
  - Use scientific advice provided by the Forum or other competent body



### ART.6: CONSERVATION & MANAGEMENT MEASURES

- Member State shall:
  - Develop national strategies, plans, programmes or regulations to give effect to the decisions of the Council
  - Integrate conservation and management measures into relevant national plans and policies



### ART.6: CONSERVATION & MANAGEMENT MEASURES

- Prohibit fishing without a valid licence
- Closed Season not less than 4 months, between 15<sup>th</sup> February - 31<sup>st</sup> August
- Upper limit on Traps
- Trap made of biodegradable material
- Trap equipped with an Escape Panel
- Trap equipped with Escape Gap
- Removal of traps from sea during closed season
- Declaration of inventory at beginning of CS



### ART.6: CONSERVATION & MANAGEMENT MEASURES

- Minimum size 80 mm Carapace Length;
- Maximum size limit ?
- Adopt, 5 ounces tail weight;
- Prohibit catch, Possession, storage, sale:
  - (i) with tar spot;
  - (ii) Berried Lobster;
  - (iii) moulting;
  - (iv) that has been scrubbed; and
- Require landing of the whole
- Prohibit the use of scuba diving and hookah.



### ART 7. MONITORING, CONTROL & SURVEILLANCE

- Member States shall:**
- Cooperate in taking enforcement action to deter IUU fishing
  - MC shall adopt regional guidelines to:
    - Establish sanctions for non-compliance
    - adequate in severity
  - Evaluate systems of sanctions to ensure that the penalties are effective



### Art 8. Public Education & Awareness

- Member States shall:
- Promote understanding of importance of lobster & need for conservation & management measures
  - Cooperate in developing educational and public awareness programmes
  - Promote use of ICT tools including social media, in order to improve public awareness and understanding



## Sustainable use, Conservation and Management of Fisheries Resources: Caribbean Spiny Lobster

### Next Steps

- Scientific Working Group comments - received
- Other comments – this meeting
- Revise document
- Discuss at next Forum March/April 2015
- Present to Ministerial Council for adoption 2015
- Implementation

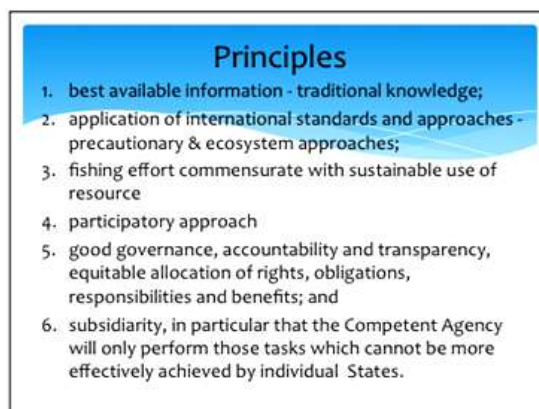
### Working Group – some Questions?

1. Are principles adequate?
2. Management Measure
  1. Should there be maximum size limit?
  2. Should scuba be prohibited?
  3. Should there be a limit on the no. of traps?
  4. How much time should be allowed to soak traps before the start of fishing season ?
  5. Should fishers be required to land whole lobster?



## APPENDIX 4.6: COMMON FISHERIES POLICY

### Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and expectations



# Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and Expectations

## Scope: Art 6

6.1 Development & management of fisheries and aquaculture; ecosystems; the production, processing, marketing and trading of fishery and aquaculture products; and to the welfare of fishers.

- 6.2. Areas under the jurisdiction of States,
- on board fishing vessels flying the flag
  - on the high seas or
  - in the waters of a Third State,
  - to nationals of Participating Parties.

## Undertakings on Implementation

- 7.1. States shall take all appropriate measures to secure the fulfilment of obligations & abstain from any measures which could jeopardise the attainment of its objectives.
- 7.2. undertake to adopt detailed rules for the implementation of this Agreement, in particular by preparing Protocols
- 7.3. undertake to establish or designate a regional organisation as the Competent Agency with responsibility for implementing this Agreement and, as appropriate, any Protocols adopted

## Competent Agency

1. Not yet designated
2. Advisory function - not decision-making
3. "where requested by one or more States...., Function include:
  - (a) providing technical assistance and advice
  - (b) making recommendations
  - (c) coordinating or undertaking data collection, research and development activities;
  - (d) Mobilize resources

## Access to Fisheries Resources – Art 9

- 9.1. States preserve their right to control access to their waters – by way of access agreements ;
  - take account of UNCLOS and other instruments,
  - optimum utilisation and access to surplus
- 9.2. High Seas and waters of Third States:
  - \* develop opportunities and promote the equal participation in fisheries on the high seas,
  - \* develop opportunities in waters of Third States,

## Fisheries Sector Development (Art 10)

- \* "...adopt measures to improve the welfare and socio-economic conditions of fishers & communities by:
  - \* Improving business, financial & insurance environment;
  - \* promoting and facilitating joint ventures;
  - \* promoting access to training;
  - \* supporting capital investment;
  - \* promoting the involvement of stakeholders in planning and management activities, by supporting the formation and strengthening of fisherfolk organisations; and
  - \* supporting and protecting the rights of traditional, subsistence, artisanal and small-scale fishers.

## Statistics and Research (Art 11)

### States must:

- \* collect and compile catch & effort, registration & licensing, biological, ecological, economic, social, aquaculture
- \* conduct research in order to:
  - \* ascertain the status of fish stocks;
  - \* determine effects of environmental changes on fisheries
  - \* analyse effectiveness of management & conservation measures;
  - \* evaluate social and economic performance of sector
- \* develop & maintain national and regional databases,
- \* adopt appropriate standards for data and information sharing



## Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and Expectations

### Conservation and Management (Art 12)

- \* shall formulate, adopt, implement conservation and management measures and fisheries management and development plans on the basis of the best available information & traditional knowledge.
- \* adopt harmonised measures, legislation, plans or strategies.
- \* cooperate with RFMO in the management of shared, straddling and highly migratory fish stocks.

### Registration and Licensing (Art 13)

- \* take account of status of resources & fishing capacity when registering & licensing vessels, fishers
- \* To maintain balance between fishing capacity & resources:
  - establish national register of vessels;
  - establish national licensing system for vessels ;
  - establish record of licences or authorisations issued –
  - establish regional fishing fleet register.
- \* harmonised procedures or common standards for licensing systems.
- \* Share info with Competent Agency

### Inspection, Enforcement & Sanctions (Art 14)

- \* States must develop inspection and enforcement measures to ensure compliance :
  - \* Rules adopted under CFP
  - \* national regulations;
  - \* rules of international law
- States must
  - \* Conduct - MCS
  - \* Use VMS
  - \* Port and "at sea" inspection schemes;
  - \* take measures necessary to ensure compliance
  - \* Ensure effective measures/penalty against violators



### Confidentiality and Intellectual Property Rights (Art 15)

- \* Intellectual property
- \* The identity of individuals from whom research data or information is obtained shall be kept strictly confidential.
- \* Unless the individual concerned has given prior consent in writing to such inclusion.



### Marketing & Trade (Art 18)

- States shall develop:
- \* harmonised food quality assurance legislation;
  - \* harmonised intra-regional SPS measures;
  - \* common marketing standards for fisheries products;
  - \* Policies, measures and standards to:
    - \* encourage stable market conditions;
    - \* promote the production and marketing of fishery products;
    - \* develop new and existing markets;
    - \* Enhance market intelligence internal and external markets
    - \* facilitate intra regional trade;
    - \* Strengthen human, institutional and technological capacities,
  - \* improve management of fish-handling practices, marketing or trade



### Article 20 Protocols

- the Competent Agency;
1. research on fisheries and associated ecosystems;
  2. harmonisation of fisheries legislation;
  3. cooperation MCS and to combat IUU fishing;
  4. establishment of a common fisheries zone;
  5. aquaculture;
  6. establishment of a RFMO or arrangement;
  7. sanitary and phyto-sanitary measures;
  8. data and information sharing;
  9. enforcement;
  10. settlement of disputes; and
  11. other matter



## Caribbean Community Common Fisheries Policy (CCCFP) status, lessons learned and future needs and Expectations

### Other Provisions

- Article 16 Dissemination of Information
- Article 17 Public Awareness
- Article 19 Links with International Organisations
- Article 21 Reporting, Review and Development
- Article 22 Amendments
- Article 23 Dispute Settlement
- Article 24 Depositary
- Article 25 Signature
- Article 26 Accession
- Article 27 Entry into Force
- Article 28 Withdrawal



### Conclusion

- \* Policy instrument to ensure fisheries and aquaculture integrated in the CSME
- \* Ensure sustainable use and conservation to provide optimum social and economic benefits to the people of the region.



### NEXT STEPS

#### Implementation

- \* Preparation of Plan of Action
- \* Consultancy to assist
- \* What are priority activities that should be pursued in the short term? Medium term?

# APPENDIX 4.7: AQUACULTURE REVIEW AND PLAN OF ACTION

## Aquaculture Review and Plan of Action - Lessons Learned and Recommendations

**Aquaculture Review and Plan of Action – lessons learned, and recommendations**



Caribbean Regional Fisheries Mechanism  
www.crfm.org

### BACKGROUND

- Small Island Developing States
- Reliance on aquatic resources
  - Per capita consumption – 32kg (global -19.2kg)
- Dependence on trade
- State of Marine fisheries
- High unemployment (14-15%)
- High Food import bill – US\$5 billion/ yr
- Poverty & increasing crime among youth



Labeled States and Approximate Shores: The shaded countries shown in this figure are a selection only, and do not represent any one from a country. Additional countries are not shown here for brevity.

### Fish Imports (MT)

Year	2006	2007	2008	2009
Quantity	112,198	123,122	116,312	117,252
Value (US\$ 000)	270,594	302,593	346,718	343,098

Overall food import bill – **US\$5 billion/yr**

❖ Aquaculture ???

In 2010 aquaculture production was estimated at 6.25% of total Caribbean fisheries production

Demographics suggest that by 2012 the majority of the Caribbean aquaculture production was primarily male dominated

- females being more prevalent in the post-harvest and fish processing sectors.

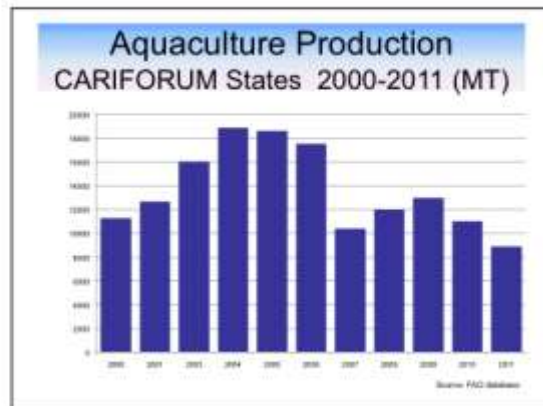


### Current State of Aquaculture Development

- Not well developed - Low production
- 14,146 MT per year from 2000 -2010
- Belize and Jamaica main producers
- Production peaked at 18,879 MT in 2004
- Declined since 2007 < 10,000 MT
- Signs of Recovery in Belize and Haiti




Seaweed products made in Antigua, Photo – Courtesy Fisheries Div. Antigua & Barbuda



## Aquaculture Review and Plan of Action - Lessons Learned and Recommendations

Main Producers –2011 & 2012 (MT)		
	2011	2012
Belize	5290	5869
Jamaica	1149	644
Dominican Republic	240	300



### Reasons for Decline

- Global economic downturn
- Falling prices in world markets
- Rising cost of input
  - Financing, Feed, Energy, Transportation
- Security / praedial larceny
- Competition: imports (Vietnam/China)
- Health and Food Safety challenges

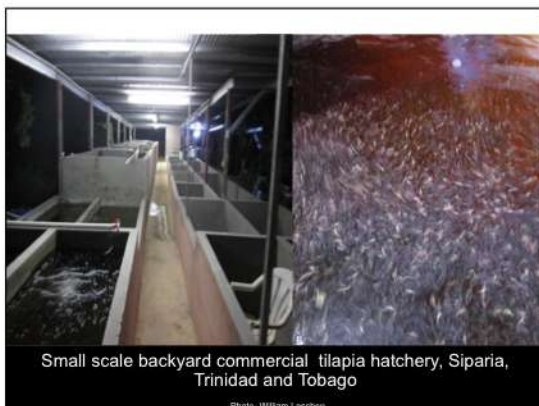


### National level of aquaculture development for Cariforum countries

Aquaculture Category - National level of development	Countries
Early Industrial Commercial phase	Belize, Jamaica
Intermediate Developing phase	Dominican Republic, Guyana, Haiti, Suriname

### What are the Main Species?

Guyana	Tilapia, Colossoma, indigenous shrimp & fish ( <i>P. schmitti</i> , <i>P. aztecus</i> , <i>braziliensis</i> )(hassar)	
Haiti	Tilapia, carp, catfish	



### What about smaller Islands?

- Tilapia, seaweed, shrimp
- Limitations – land, fresh water, human
- Aquaponics – fish and vegetables



Seaweed farming in St. Lucia



Cobia farming in seawater



Tilapia farming in seawater – St. Kitts

# Aquaculture Review and Plan of Action - Lessons Learned and Recommendations



### Why interest ?

- Economic resilience
- Increase local supply of fish
- Food & nutrition security
- Employment
- Poverty reduction
- Revitalize communities
- Earn hard currency - export-oriented

### Policy commitment

- CARICOM Strategic Plan (2015-2019)
- CRFM Strategic Plan (2013-2021)
  - A strategy to increase supply of fish
  - Adopt Ecosystem approach to aquaculture
  - Establish Regional Working Group
  - Enabling policy and legal frameworks
  - Voluntary guidelines, best management practices and standards

### Aquaculture Governance in the Caribbean

Country Group	Country	Policy & Planning		Legislation			Investment		Export or Ad-Stop
		Policy	Strategy	Nat. Dev. Plan	Fish Act/Provis.	Aqua. Reg. Act/Reg.	Input Feed	Licensing Facilities	
Continental Countries and Greater Antilles	Belize		X <sup>o</sup>		X	X <sup>o</sup>	x	X	X
	Dominican Republic								
	Guyana								X
	Haiti								
	Jamaica			X					X
Lesser Antilles	Suriname								
	Bahamas						X <sup>o</sup>		
	Barbados								
Other	Comorica	X			X				

### Suitability assessment for spp currently or recently cultured in the region

Key: xxx = best case, x = worst case, x (?) = worst case and information insufficient/unavailable

Spp./Group	Control of Breeding	High Fecundity	Short Larval Cycle	Rapid Growth	Simple Technology	Compound Diet Available	Fingerling Availability	Market Potential
Freshwater Species : Indigenous Stocks								
Bay Snook (Petenia splendida)	x	xx	xxx	x	xxx	x	o	xx
Tambaqui (Colossoma macropomum)	xxx	xxx	xxx(?)	xxx	xxx	x	xx	xx
Honeycreeper (Myiophobus)	x	x (?)	xx?	x (?)	x?	x	o	x

Spp./Group	Control of Breeding	High Fecundity	Short Larval Cycle	Rapid Growth	Simple Technology	Compound Diet Available	Fingerling Availability	Market Potential
Freshwater Species : Indigenous Stocks								
Tilapia (Oreochromis niloticus)	xxx	xxxx	xxx	xxxx	xxxx	o	o	xx
Casidura (Hoplosternum littorale)	x	x(?)	x(?)	x(?)	xx(?)	o	o	xx
Eel (Aeugilops marmorata)	xxx	xxxx	xx	xx(?)	xxx	xxx	o	xxx
Goldfish (Carassius auratus)	xxx	xxx	xx	xxx	xx	xxxx	xx	xx

## Aquaculture Review and Plan of Action - Lessons Learned and Recommendations

Spp./Group	Control of High Breeding	High Fecundity	Short Larval Cycle	Rapid Growth	Simple Technology	Compound Diet Available	Fingerling Availability	Market Potential
<b>Marine Species</b>								
Red Drum ( <i>Sciaenops ocellatus</i> )	xxx	xxx	Xxx	xxx	xx	xxx	x	xxx
Dolphin Fish ( <i>Coryphaena hippurus</i> )	xx	xxx	x	xx(?)	xx(?)	xx(?)	x	xxxx
Cobia ( <i>Rachycentron canadum</i> )	xx	xxxx	Xxx	xxxx	xx	xxxx	x	xx
Pompano ( <i>Trachinotus</i> )	x	xxx	Xxx	xx	xx	xx	x	xxx

Spp./Group	Control of High Breeding	High Fecundity	Short Larval Cycle	Rapid Growth	Simple Technology	Compound Diet Available	Fingerling Availability	Market Potential
<b>Marine Species</b>								
Mexican Brown Shrimp ( <i>Penaeus aztecus</i> )	x	xx(?)	xxx(?)	xxx(?)	xx(?)	xx(?)	x	xx
Australian Freshwater Lobster ( <i>Cherax quadricarinatus</i> )	xxx	xx	Xxx	xx	xx	xxx	x	x
Green Shrimp ( <i>Penaeus monodon</i> )	xxx	xxx	Xxx	xxxx	xx	xxx	x	xx

Spp./Group	Control of High Breeding	High Fecundity	Short Larval Cycle	Rapid Growth	Simple Technology	Compound Diet Available	Fingerling Availability	Market Potential
Queen Conch ( <i>Strombus gigas</i> )	xx	xxx	Xx	x	xx	xx	x	xxxx
Sea Moss ( <i>Gracilaria spp.</i> )	xx	-	-	xxxx	xxxx	-	xxx	xxx

### Recent Donor Support

- ACP Fish II - policy and legislation
- USAID and FAO - Guyana
- Taiwanese - St. Lucia, Dominica and Belize
- Haiti – Significant investments since earthquake (Cuban Gov, Clinton Foundation, Operation Blessing Intl...)
- JICA – Belize and Jamaica

### • ACP Fish II supported primarily National Policy development

- Strategic assessment of the aquaculture potential in Haiti
- Aquaculture land and water use development plan for Jamaica
- Aquaculture development strategy for St. Kitts and Nevis
- Fisheries and aquaculture policy Dominica, Grenada, and St. Vincent & the Grenadines
- Support to formulate a fisheries and aquaculture policy for Dominican Republic

### Main Constraints

- High input cost (energy, feed, land ...)
- High cost of credit – cash flow to support
- Seed supply
- Water management systems
- Competition from imports from Asia & S. America
- Health and Food Safety Systems
- R & D, Extension & Support Services
- Lack of Skilled & Quality Human Resources
- Climate change & disaster risk disaster
- Policy, legislation, governance

# Aquaculture Review and Plan of Action - Lessons Learned and Recommendations

## CONCLUSION

Aquaculture has the potential for making significantly greater contribution to the region's development

Notwithstanding that

- It has not been widely promoted and supported as an important economic activity in the region
- It faces numerous constraints for environmental and economic sustainability and international competitiveness

- Growing interest in aquaculture
- Important role in food security, poverty reduction, employment, & blue economy
- Policy and regulatory reforms, technical support, capacity building, and investments need to realize the potential of the sector

## 5-year PoA

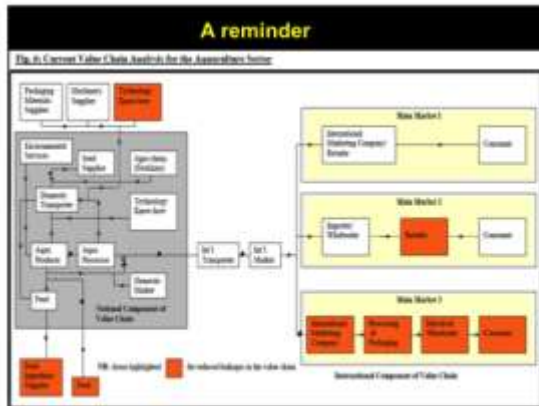
Objective	Activities	Beneficiaries	Time-line					
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
<b>Thematic Area</b> Strengthening governance and networks	Support formulation and implementation of aquaculture policies, strategies, legislative frameworks, institutional frameworks at the public and private sector level	Bah., Bdos., Bz., Jam., DR., Haiti, Guy., Sur.	X	X				
Capacity Building	Strengthening of educational institutions in the region; support for study tours to country; Strengthen collaboration with the private sector; Training Workshops	Bah., Bdos., Bz., Jam., DR., Guy., Sur., T&T	X	X	X	X	X	X
	1 - 2 yrs M Sc Aqua Programmes	Bz., Jam., Guy	X	X	X			
	2 - 3 Yrs PhD Aqua Programmes	St. Lucia, St. Kitts-Nevis	X	X				

Objective	Activities	Beneficiaries	Time-line					
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
<b>Thematic Area</b> Strengthening Data Mgmt. Sys. For Aquaculture	Development of the Management Information systems data collection; Capital Assistance Equipment Grant - Set up info exchange network	All Countries	X	X	X			
Strengthen Credit regimes	Access US\$10 million soft loan to Credit Unions to on-lend to Small farmers	Jam., Bdos., Bz., Sur., Bz., Jam., Guy., Sur., T&T		X	X	X	X	X
	Access US\$25 million soft loan to on-lend to farmers to dev start-up shrimp farms and Tilapia Farms	Bz., Jam., Guy., Sur.			X	X	X	

Objective	Activities	Beneficiaries	Time-line					
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
<b>Thematic Area</b> Market Studies	Market feasibility studies for indigenous and locally occurring species	Bz., Guy., Sur., T&T, JAM			X	X		
	Market and Technical feasibility assessments of Ornamental Fish Culture	Dom., St. Kitts/Nevis, Grenada, St. Lucia, St. Vincent		X	X			
RAO	Industry research local feed material substitution small scale fish farming; Strengthen south south cooperation for the transfer of technologies and production systems to the Caribbean; Support the development of the value chain for aquaculture	All Countries	X	X	X	X	X	

Objective	Activities	Beneficiaries	Time-line					
			Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
<b>Thematic Area</b> RAO centre	Industry research for local substitute; Institutional research reproductive biology indigenous and local species; Institutional Research Low trophic level species (see annex, see cucumber, blue land crab)	All Countries	X	X	X	X	X	
Adaptation to Climate Change	Generation disaster preparedness plan for sector	Bz., Jam., DR., Haiti		X	X			
	Feasibility study on crop insurance for sector	Bz., Jam., DR., Haiti				X	X	
	Mainstreaming C.C consideration in aqua plan							

## Aquaculture Review and Plan of Action - Lessons Learned and Recommendations



### Other activities

- Regional exchanges with Africa and Pacific
- Utilization of waste – guts, etc
  - Improving production and access to low cost good quality feeds
  - Reducing energy cost and cost of land and access to land for aquaculture
  - Improving marketing including access to regional and international markets
  - Improving fish health and food safety systems
- Capacity building on co-operative approaches, online approach
- Regional conference on aquaculture – private sector/ public

### Future support needed

- Strengthening of governance frameworks
- Building capacity at various levels
- Knowledge management - Data gathering, documenting and sharing of information
- Strengthening credit regimes - SME
- Lower cost, good quality feeds
- Reducing energy cost
- Fish health and food safety systems
- Marketing including regional & international trade

- Environmental management / ecosystem sustainability
- Climate change & disaster risk management
- Research and Development
  - indigenous and locally occurring species (low trophic level spp. e.g. sea cucumber)
  - alternative feeds, fish meal
  - alternative / renewable energy systems
- Partnership
  - Inter- ACP (knowledge sharing)
  - EU –ACP private sector partnership

### Working group tasks

The Working group should consider the:

- existing governance frameworks for Aquaculture
- suitability of species for aquaculture
- current value chain analysis for aquaculture

Against the backdrop of the above, the Working group should discuss the 5-year PoA and:

- suggest possible improvements/amendments
- make proposals to ensure/encourage implementation of the PoA
- suggest appropriate development partners for support to specific aspects of the PoA





# APPENDIX 4.8: AQUACULTURE DEVELOPMENT

## Aquaculture Development in the French West Indies

**ifremer**

### Aquaculture in the French West Indies

Thoward E. et Falgoutte J.C.  
Ifremer - Martinique

November 2024

### Aquaculture in the French West Indies : The species

<p>St Pierre (Hagpie) (<i>Hirocarichthys sp.</i>) 1988</p>	<p>Freshwater Crayfish (<i>Chirona guadalupensis</i>) 2004</p>	<p>Freshwater Tilapia (<i>Microbrachium pinnatum</i>) 1976</p>
<p>Cobia (<i>Rachycentron canadense</i>) 2005</p>	<p>Red Drum (<i>Sciaenops ocellatus</i>) 1983</p>	

### Aquaculture farms in Martinique

- Freshwater Fish Farms
- Freshwater crustacean farms
- Marine Fish Farms (17 / 22)
- Marine fish hatcheries (4 / 2)
- Freshwater hatcheries

### Aquaculture farms in en Guadeloupe

- Freshwater Fish Farms
- Freshwater crustacean farms
- Marine Fish Farms
- Marine fish hatcheries
- Freshwater hatcheries

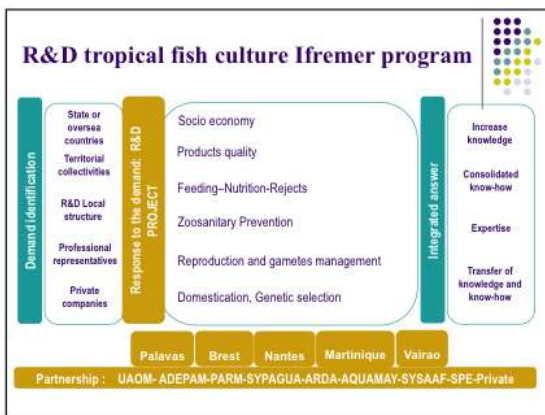
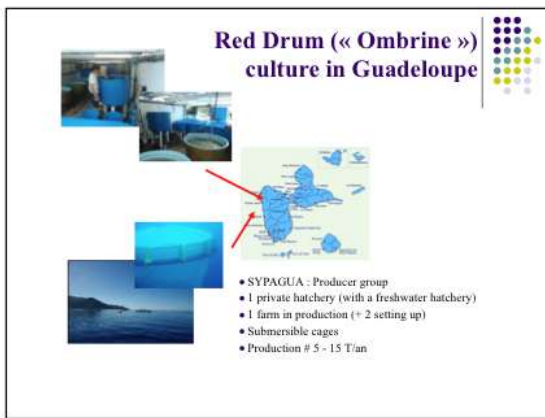
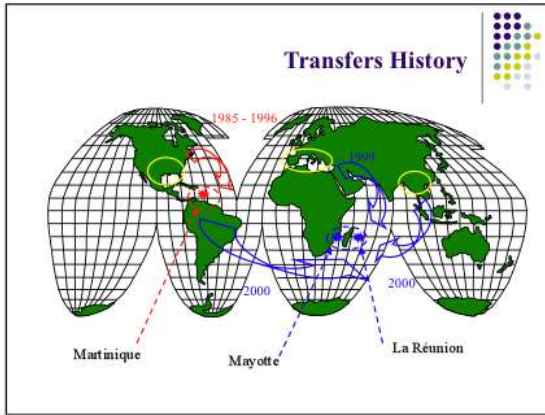
### History of marine fish aquaculture in Martinique

- Beginning of 80's : First interest declared for marine fish culture in Martinique
  - Opening of a European Sea bass farm
  - Preliminary research works on local species
- Mid 80's : The disappointment
  - Closing of the Sea bass farm (nodavirus pathology)
  - Bottlenecks in the biological cycle of local species
- 1985-1987 : The Red Drum opportunity (so called « long des zambes »)
  - Introduction from the USA
  - First successful growing out trials

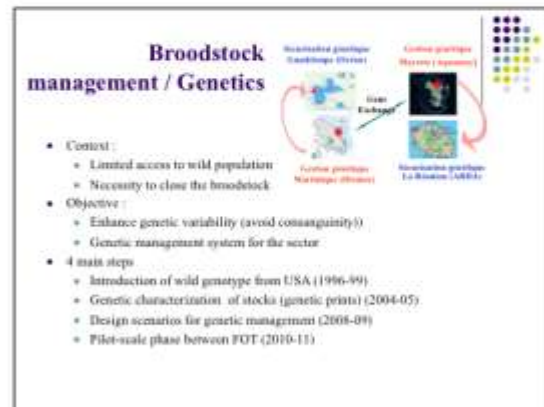
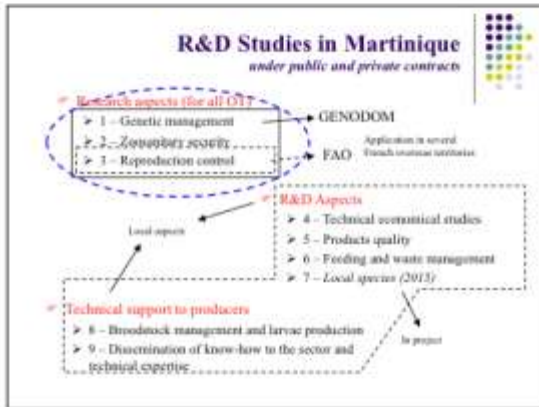
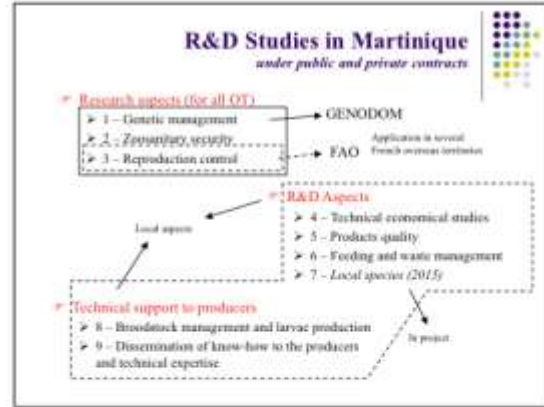
### The Red Drum *Sciaenops ocellatus* : an imported species

- Natural subtropical area of repartition
- Existing biological knowledge
- Strong political will to develop aquaculture
- Involvement of Ifremer (Research Institute):
  - 1987-1993 : definition of rearing techniques
  - 1993-2000 : the difficulties to create a new economical activity
  - 1999-2000 : transfer of the species and know-how to other French overseas territories
  - From 2000 : development of the activity

# Aquaculture Development in the French West Indies



# Aquaculture Development in the French West Indies



# Aquaculture Development in the French West Indies

### R&D Aspects Perspectives

- Merging genetic and reproduction aspects
  - Use of the pilot-scale results
  - Gene exchange with Indian Ocean Islands (Mayotte et La Réunion)
  - Establishment of a unique genetic management center in Mayotte → dissemination of genetic improvement in other FOT.
- Starting of studies on local species : identification and rearing technics
  - To answer the market and consumer demand
  - To prevent from impact on local ecosystems (local species and/or sterile hybrid)
  - To complement local fisheries
  - Regional stake and possible extension to the caribbean

### R&D Studies in Martinique under public and private contracts

The diagram illustrates the structure of R&D studies in Martinique. It is divided into three main areas:

- Research aspects (for all OT):** Includes 1 - Genetic management, 2 - Zoosanitary security, and 3 - Reproduction control. These are linked to GENODOM and FAO, with a note on application in several French overseas territories.
- R&D Aspects:** Includes 4 - Technical economical studies, 5 - Products quality, 6 - Feeding and waste management, and 7 - Local species (2015).
- Technical support to producers:** Includes 8 - Broodstock management and larvae production and 9 - Dissemination of know-how to the sector and technical expertise. This area is noted as being 'In project'.

Arrows indicate that 'Local aspects' encompass both the R&D Aspects and the Technical support to producers.

### Technical support aspects Milestone

- Support to the sector
  - Management of the broodstock
    - 300 fish in cages and tanks
  - Providing D1 larvae to hatcheries
    - 1, 2 M larvae / year (average /15 years)
    - = 8 delivering / year
    - => Producers depending upon Ifremer
- Transfer of hatchery know-how completed
  - 2004-08 in Martinique (2 hatcheries)
  - 2010-13 en Guadeloupe (1 hatchery)
- Support to farmers (expertise)

The charts show 'Evolution de la production de larvaires en Martinique (millions)' and 'Evolution de la production de broodstock en Martinique (%)'.

### Transfer and technical support Perspective

- Objective :
  - To increase producers autonomy
- How ?
  - Genetic management at FOT level
  - Broodstock management and larvae production :
    - Transfer of know-how and training of dedicated persons (2014 - 2016)
  - Regional technical center for aquaculture (Project)
- Synergy Martinique – Guadeloupe to develop
  - A common structure for broodstock management and larvae production

### Summary

- Marine aquaculture still limited but an important potential for development, especially for fish culture
- Development in FWI based on small scale farms with sustainable procedures
- Development supported by a research institute following 3 aspects:
  - Research to support the sector at FOT scale
  - R&D local support
  - Direct technical support to producers
- This model can be applied on local species in order to answer to the global and common caribbean demand.

Merci de votre attention !

## APPENDIX 4.9: AQUACULTURE EXPERIENCES FROM BELIZE

### Aquaculture - some specific experiences and lessons from Belize



## Aquaculture - some specific experiences and lessons from Belize

### Benefits Of Aquaponics

- Water Conservation (Uses approximately 90% less water than traditional farming).
- Produces up to 10 times more within the same foot print as compared to terrestrial farming.
- Eliminates the need to use traditional fertilizers, Herbicides, Insecticides, Pesticides and Fungicides.
- Produces multiple crops (Fish & Plants) within the same infrastructure



### Benefits Of Aquaponics

- Utilizes the fish effluent and eliminates the negative impact on the environment from effluent dumping.
- With the use of Controlled Environment Structures year round production will be the norm.
- Promotes Food Security as well as Family Farming
- Aquaponics Farms can be established near to or in the middle Metropolitan areas.



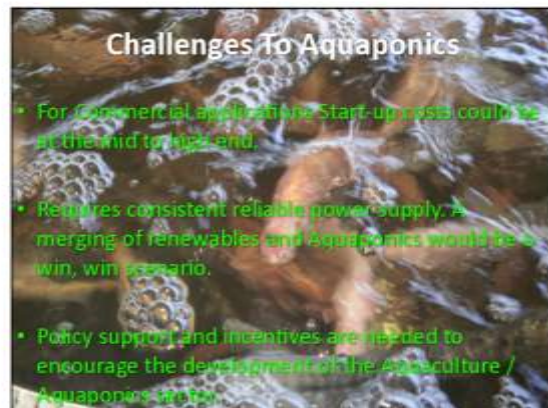
### Challenges To Aquaponics

- Requires competence in both Aquaculture and plant production. Training opportunities are needed.
- Difficulty in accessing Controlled Environment structure technologies, specific to our region and climate.
- Pest, Insect and Fungus control require fish safe and creative approaches and the knowledge base is lacking.



### Challenges To Aquaponics

- For Commercial application the Start-up costs could be at the mid to high end.
- Requires consistent reliable power supply. A merging of renewables and Aquaponics would be a win, win scenario.
- Policy support and incentives are needed to encourage the development of the Aquaculture / Aquaponics sector.



### Final Thoughts

In the face of the many challenges that our small Island states face from over fishing, high food import bills, low farming production, climate change and foreign pressures etc.

It is necessary for us to pivot and innovate to develop technologies that would address our needs as a region. We have all the skills and resources we need, all we lack is coordination.

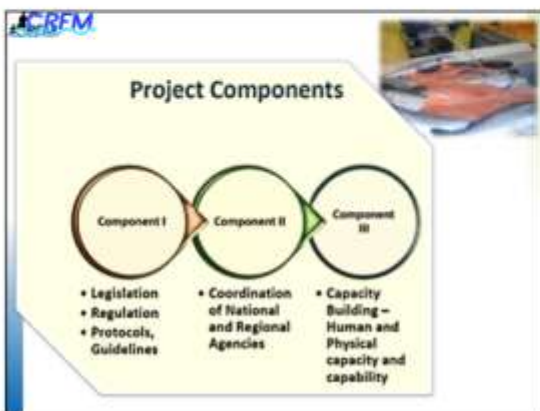
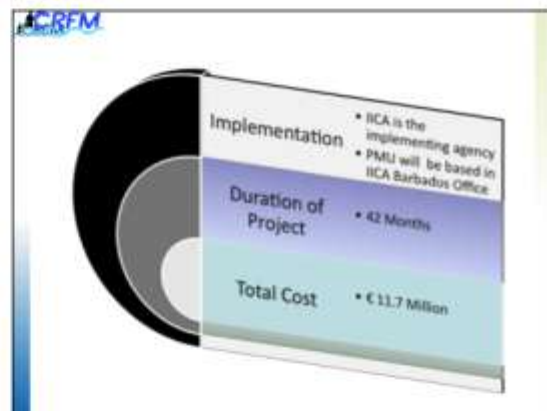
We can meet the future without fear if we work together

Let's do this.



## APPENDIX 4.10: EPA SPS PROJECT REVIEW

### EPA SPS Project- status First year workplan and other project arrangements



# EPA SPS Project - status First year workplan and other project arrangements

**Component 2: Develop effective national and regional coordination mechanisms in the support of the SPS regime**

Constraint Addressed: Fragmentation of Agricultural Health and Food Safety Systems (nationally and regionally)

Activities:  
 National level : Support for coordinating systems  
 Regional level: Support for coordinating groups such as CAHFSA, CPHD, CaribVet

**National and regional coordination mechanisms in the support of the SPS regime**

- Establishment of National AHFS coordination mechanism
- Support to national coordination bodies and attendance to selected meetings - SPS, Codex etc
- Facilitate the programme of work - regional SPS coordinating mechanisms (CNMSF, CAHFSA)
- Support the technical regional AHFS fora: CPHD, CaribVET network, CGPC etc.
- Data collection, management, monitoring, and evaluation, and reporting systems for the national and regional agencies.



**Component 3: Develop/strengthen the national and/or regional regulatory and industry capacity to meet the SPS requirements of international trade**

Constraint Addressed: Inadequate capacity and capability of human and physical resources within the public and private sectors.

Activities:  
 Capacity building for both the public and private sectors, networking of laboratory systems, environmental monitoring (fisheries and aquaculture).



**Capacity building of national and regional regulatory agencies and industry**

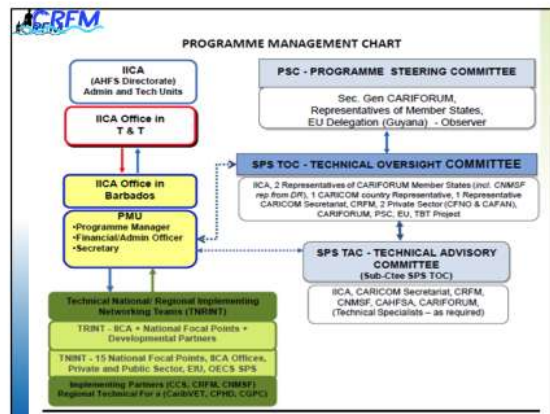
- Training programmes for animal health, plant health and food safety (Risk assessment, Surveillance, Plant quarantine course, Inspection procedures, Diagnostics, GAPs, GLP, HACCP)
- Training programmes for value chain stakeholders (GAP, GMP, GLP, HACCP etc)
- Strengthening and enhancing Laboratory systems and networks (SPS TBT)
  - Identifying laboratories for accreditation
  - Network strategy



**Capacity building of national and regional regulatory agencies and industry**

- Establishing national and regional environmental monitoring programmes.
- Establishing national (aquaculture) farm level residue monitoring programmes.







## EPA SPS Project - status First year workplan and other project arrangements

**Project Status - Progress**

- Project Management Unit established (May 2014)
- Governance structure established (oversight committees)
- Workplan and Budget formulated (2014-2015)
- Establishment of National Technical Networking Teams initiated
- Call for Consultants on-going



**Project Status – Progress  
(Coordination, Capacity Building)**

- Caribbean Plant Health Directors Forum - Annual meeting
- Trained plant health personnel in principles and practice of plant quarantine (in collaboration with UWI, USDA, FAO; 7 countries supported)
- Review of International Standards Phytosanitary Measures (ISPMs)
- Capacity building Plant Health Professionals - standard setting process (in collaboration with IPPC)
- WTO Risk Analysis Workshop (9 countries supported)
- One-Health Leadership Series (in collaboration with UWI, PAHO; 11 countries supported)

**Thanks for your attention**





## APPENDIX 4.11: VALUE CHAIN APPROACHES

### Value Chain Approach to Fisheries in the Caribbean

**CRFM/CNFO/CTA Blue Growth Workshop, 2014**

**Fisheries Value Chain Approach**  
**Milton Haughton**



**Purpose**

- Introduce concept of value chain approach in fisheries
- Discuss on value chain approach
- Build support for use of the value chain approach in fisheries and aquaculture



**Challenges**

- A strategic sector
  - Food security
  - Employment & social stability
  - Domestic economic growth
- Characterised by:
  - low productivity,
  - weak competitiveness
  - low added value
- Generates low income levels among fishers & fish farmers
- High levels of imported food



**Challenges**

- Sustainability issues
- Improving income of fishers/ farmers
- Improving **competitiveness**
- Compliance with SPS requirements
  - quality and food safety
- Diversification
- **Value addition and optimization**
- Value chain approach
  - identify suitable strategies to enhance the value fish and seafoods



**Value Chain Development**

- Small-scale & traditional fishers often just sell their catch & do not "market" them.
- Do not get fair share of the value added in the supply chain
- Training in marketing to increase revenue

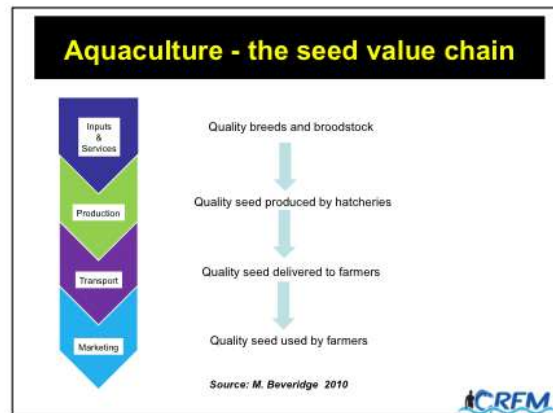
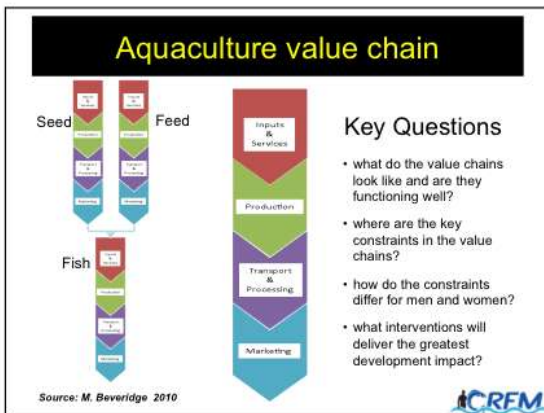
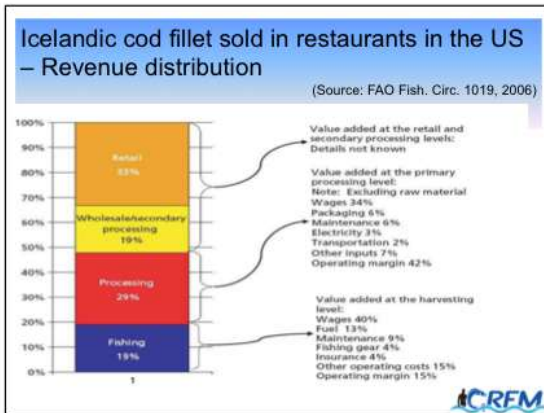
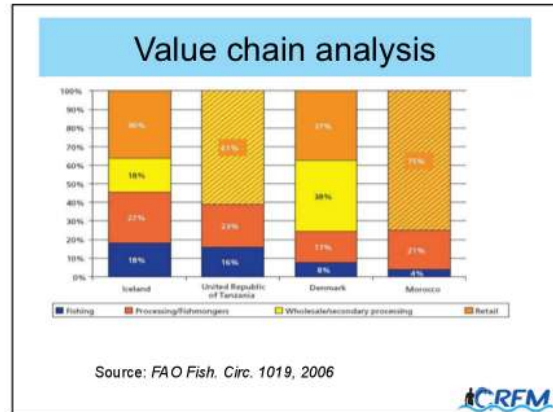
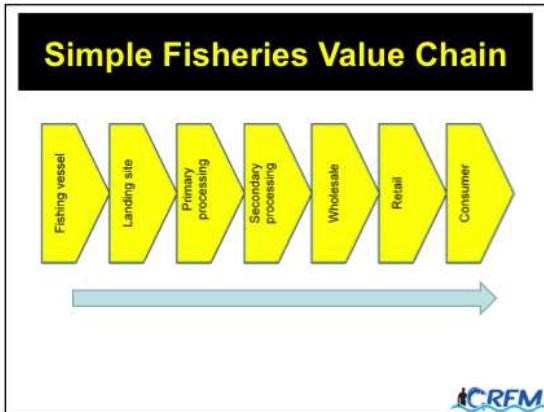



**Fisheries Value Chain**

- Value Chain refers to the range of activities required to bring a product from conception, through the different phases of production, marketing, delivery to final consumers
- An analytical framework for formulating cohesive & inclusive strategies for development of the sector so that it benefits the stakeholders & environment
- Cover from input supply to production, processing, wholesale & retail.



# Value Chain Approach to Fisheries in the Caribbean



## Value Chain Approach to Fisheries in the Caribbean

### Value Chain Development

- Useful & practical tool for managers, fishers, policy makers
- Assess the development status of the fisheries and aquaculture sector
- Analyse the opportunities & constraints for future sustainable development
- Determine how /where value can be added
- Increased fish production ??
- Must add value, reduce cost



### NEXT STEPS

- Next steps in implementing the Value Chain approach in fisheries/Aquaculture:
  - Building awareness and understanding
  - Discuss relevance in region
  - Value Chain mapping exercise,
  - Stakeholder mapping and positioning,
  - Detailed strategies for addressing the challenges and constraints & improve value at each step in the chain



# THANK YOU

- [www.youtube.com/TheCRFM](http://www.youtube.com/TheCRFM)
- [www.facebook.com/CarFisheries](http://www.facebook.com/CarFisheries)
- [www.twitter.com/CaribFisherie](http://www.twitter.com/CaribFisherie)



Caribbean Regional Fisheries Mechanism



[www.crfm.int](http://www.crfm.int)

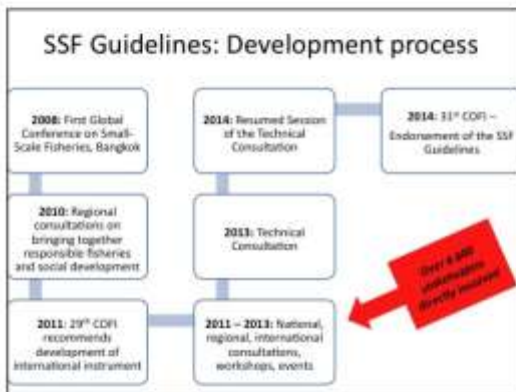
## APPENDIX 4.12: SSF GUIDELINES:

### The SSF Guidelines Adapted from the FAO



#### Global significance of the SSF Guidelines

- First ever **international instrument** entirely dedicated to SSF
- Bring together social development and responsible fisheries → **beyond fisheries**
- Complement important international instruments
  - Code of Conduct for Responsible Fisheries
  - Right to Food Guidelines
  - Voluntary Guidelines on the Responsible Governance of Tenure of Land, Fisheries and Forests
- **Common grounding in human rights principles**
- Instruments that guide governments and others in improving food security and poverty eradication policies and in advancing sustainable development

#### SSF Guidelines: Content



**Part I: Introduction**

1. Objectives
2. Nature and scope
3. Guiding principles
4. Relationship with other international instruments

**Part II: Responsible fisheries and sustainable development**

5. Governance of tenure in SSF and resource management
6. Social development, employment and decent work
7. Value chain, post harvest and trade
8. Gender equality
9. Disaster risks and climate change

**Part III: Ensuring an enabling environment and supporting implementation**

10. Policy coherence, institutional coordination and collaboration
11. Information, research and communication
12. Capacity development
14. Implementation support and monitoring



#### Global Assistance Programme

<b>Raising awareness and providing policy support:</b> Knowledge products and outreach	<b>Strengthening the science-policy interface:</b> Sharing of knowledge and supporting policy reform	<b>Empowering stakeholders:</b> Capacity development and institutional strengthening
<b>Supporting implementation:</b> Programme management, collaboration and monitoring		

# The SSF Guidelines Adapted from the FAO

**1: Raising awareness and providing policy support:**  
**Knowledge products and outreach**

**Why?**  
 SSF Guidelines can only be implemented if those concerned and able to make a difference are aware of their existence and understand their contents

→ Strategic engagement with partners to influence policies and funding priorities towards supporting SSF Guidelines




**2: Strengthening the science-policy interface:**  
 Sharing of knowledge and supporting policy reform

**Why?**  
 Need for a strengthened knowledge base and promotion of policy reforms – using available knowledge – for sustainable resource management combined with social and economic development

→ Holistic approaches to include the full range of perspectives, e.g. value chain analysis, gender equality, and disaster risk and climate change consideration: will need strong support from partners!



**3: Empowering stakeholders:**  
 Capacity development and institutional strengthening

**Why?**  
 SSF actors and their communities should be effective partners in implementation (planning and when carried out)

→ Requires attention to organizational structures and modalities for fair and effective representation




**4: Supporting implementation:**  
 Programme management, collaboration and monitoring

<b>Examples of activities</b>	Development of results-based programme management framework (including baseline information) Promotion of implementation experience exchanges + collaborative planning (e.g. meetings), web-based information sharing applications Establishment of mechanism for participatory/inclusive discussions on best practices Development of monitoring and reporting system
<b>Expected outcomes</b>	Transparent and efficient programme management Strengthened collaboration leading to overall more effective implementation Publicizing implementation outcomes to raise awareness of the SSF Guidelines → create virtuous circle of events

Thank You



## **APPENDIX 5: WORKING GROUP REPORTS**

### **APPENDIX 5.1: CCCFP WORKING GROUP REPORT**

#### **CCCFP Working Group Report**

##### **GENERAL STATEMENTS:**

1. Need to conduct an awareness campaign on the contents and principles of the CFP
2. Engage fishers on how they would want to participate in realising the implementation of the policy
3. The question was raised as to whether the content of our national legislation reflects all the tenets of the CFP

##### **ARTICLE 10**

This article was chosen as it was felt it held most of the visible benefits to fisher folk, and specifically item (e)

Most of our discussions were focused on strengthening of fisherfolk organisations (FFOs) through:

- A. Developing interest groups
- B. FACS should be mandatory as opposed to optional
- C. Compulsory provision of feedback from Ministers and the FAC to the fisher folk
- D. Compulsory representation of FFOs on FAC
- E. A post in FD dedicated to promotion and development of FFOs
- F. The provision of grants and subventions to support building organisations
- G. Incentives for fishers should be linked to membership of organizations
- H: Engaging fishers

##### **TRAINING and LEARNING**

Use of success stories from FFO like Jamaica to show the benefits of cooperatives.

1. This can be used also in training in (a) business management and structures
2. Build capacity therefore fishing cooperative organisation

##### **BENEFITS – INSURANCE**

This should include encouraging fishers to contribute to their pension benefits through contributing to NIS schemes

## **DATA COLLECTION**

Important to explain the reason for collecting the data to fishers

Importance of this to sustainable management and the important role of fishers in providing this data, consider someone from the community to assist in collection

Need to feedback data analysis and results of research to fishers

Important concept of OPEN DATA to facilitate more research and feedback

Recommendation that countries should adopt open data standards, which would add value to the data

The important role FFOs can play in data collection

EXTENSION - role of fisheries officers

## **PROTOCOLS**

Recommendations:

1. Work on structure use standard text approach
2. Participation from fisher folk
3. Conduct in short time frame



## APPENDIX 5.2: NASSAU GROUPER WORKING GROUP REPORT

### REPORT OF WORKING GROUP ON NASSAU GROUPER (NG)

#### 1. WORKING GROUP MEMBERSHIP

2. ELECTION OF CHAIRPERSON AND RAPPORTEUR: Vernel Nicholls (chair); Thomas Nelson (rapporteur)

#### 3. **Review of current national level understanding, data and information**

- In the absence of empirical or scientific data we have to seek necessary data from fishers and other sources
- There is need for additional data collection at the national and regional level which may end up softening the listing of NG
- The group noted that NG is highly vulnerable
  - o Grouper is a slow growing fish and doesn't reproduce as regularly as such very vulnerable.
  - o NG is harvested to its max during the spawning period
  - o It was noted that aggregation sites of NG may be disappearing
  - o In Bahamas about 26 aggregation sites have been identified but fishers are reporting that there are more than that.
- There is some research ongoing in the Bahamas but findings have not been released. Nonetheless, other findings have reported declines due to fishing pressure particularly spawning aggregations.
- Any response to the sustainable management of NG would require a period of time for evaluating effectiveness of those measures.
- Fishers in Grenada are reporting sightings of juvenile NG, which means that there would likely be spawning grounds but this would have to be investigated.
  - o There has never been a substantial fishery for NG
  - o Overfishing of spawning grounds in the USVI may have contributed to decline of NG in the region
- Sharks may be having an impact on the NG aggregations in the Bahamas since there is no shark fishery in the Bahamas.
- In Belize there are available reliable data from NGOs on the movement of NG and spawning aggregation
- SKN – Since 2011 there has been an increase in the FAD fishery, which means that there is greater focus on other pelagic fishery. Divers are reporting an increase in NG sightings
- Av. Btw 9-10 NG in fish pots; high price; high effort and demand makes it vulnerable esp. in Bahamas
- The group noted that there is limited/no trade with the US for NG but need to look further at other potential restrictions by non-compliance with fisheries management measures
- The group recognized the potential impact of listing NG as threatened and endangered – USA restricting imports for not only NG but probably for other SP.

4. Elements (Data, information, positions) for inclusion in CRFM submission to NOAA during present public comment period

**5. RECOMMENDATIONS FOR NEXT STEPS, i.e. elements to be included in a management proposal (refer also to WECAFC recommendation).**

- CRFM has to respond to NOAAs intention to list NG as a threatened species
- We should determine how much scientific info we have in order to respond to such perceived by NOAA
- Need for a regional assessment of the stocks and trade
- Need for the establishment of MMA for spawning and aggregation of NG
- Need for PEA to target schools, fisher folks, tourism sector re: vulnerability of NG locally and regionally
  - o Bah currently undertakes PEA; and mgmt. measures are not receiving support of fishers
- Target hotels and restaurants to have the NG removed from their menus
- Belize has a number of mgmt. measures: size limits, close periods and areas – Dec 1-Mar 31, proposed bag limit for NG and other SP.
- CRFM may be able to ask for a grace period of 3 yrs? to gather more data and information.
- Countries should determine and state to what extent they are or have implemented the WECAF recommendations. It is noted that the chair of WECAF provided a support letter for the listing of NG??? Are we fighting a losing battle or are there any merits in fighting the battle??
- There is need for fisher folk to be more informed about such issues and get involved in the process
- A small questionnaire should be sent to each country to provide any information and look at the WECAF recommendations to see if countries have or are implementing any of them.
- CRFM and countries must note that time is against us for an urgent submission regarding the proposed listing
  
- **What data should countries collect in the event that the US bans the importation of NG. Otherwise, it may soon be another species that will proposed**
  - **Socioeconomic data**
  
- **Impress upon big countries that a species that is threatened internationally may not be threatened regionally**

## APPENDIX 5.3: AQUACULTURE WORKING GROUP REPORT

### Aquaculture working group - report

#### Working Group membership

- Jimmi Jones (Chair) – Belize
- Muriel Wirjodirjo (Rapporteur) – Suriname
- Horace D Walters – Saint Lucia
- Gregory Bethel – Bahamas
- Shirlena Oudith – Guyana
- Jamie Herbert – Antigua and Barbuda
- William Andrew – Grenada
- Vincent Wright – Jamaica
- Emmanuel Thouard – Martinique / IFREMER
- Henderson Inniss – Barbados
- Peter A. Murray (Resource person) – CRFM

#### Discussion points

- **Suggest possible improvements / amendments and / or make proposals to ensure / encourage implementation to 5-year Aquaculture Plan of Action for CARIFORUM (PoA)**
  1. Screening of the species, develop a regional database on aquaculture and share the information
  2. Determination of commercial viability based on the investigation (screening)
  3. Networking
  4. Explore / diversification including integrated multi-trophic Aquaculture and Aquaponics
    - a. Other relevant R&D
  5. Develop wider policy document.
    - a. Development of the regional/national standards that meet the international standards.

- **Indicate priorities / re-prioritisation of activities in PoA**
  - o Current prioritization acceptable until “screening” takes place
    - However R&D should start ASAP (as part of research agenda for UWI and other universities in the region?)
  - o Encourage implementation of developmental projects consistent with CARICOM Strategic plan, CRFM Ministerial Council directive and PoA
- **Consider synergies for collaboration with the French DOMs and / or IFREMER**
  - Collaboration with IFREMER on how to develop local species, whether commercial viable or not (South / South technology transfer)
  - CRFM / IFREMER collaboration through MoU should be finalised ASAP
- **Consider linkages between aquaculture and capture fisheries and/or integration into the wider fisheries sector**
  - Pass information to the farmers / fishers through training and training of the extension officer
  - Public education / awareness on the development of the sector
  - Public awareness to eliminate myths and misconceptions regarding aquaculture and its products
- **Suggest appropriate development partners for support to specific aspects of the PoA**
  - South / South cooperation on technical exchange
  - Establish criteria for public / private developmental projects
  - Seek funds for aquaculture development projects from EU, FAO and others (including BINGOs and philanthropic organizations)

## **APPENDIX 5.4: SPS PROJECT WORKING GROUP REPORT**

St. George's, Grenada

20 - 21 November 2014

Document Date: 21/11/2014

### **REPORT OF WORKING GROUP ON SPS PROJECT**

**Group members:** Lisa Chetram, Barbara Gibbs, James Nicolas, Hermione Bruno, Susan Singh-Renton, Johnson St.Louis

**Chairperson / Presenter:** Ms. Joyce Leslie (Barbados)

**Rapporteur:** Ms. Nadine Nembhard (Belize)



**Chair and Rapporteur of SPS working Group**

### **Component 1 Develop / adapt / validate model legislation, protocols, guidelines for health and food safety.**

- a. Regional and national level review and up upgrading of existing guidelines
- b. Development of guidelines for fisheries imports

- c. Identification of existing entities that can be a part of governance framework
- d. Determination of linkages of fisheries and aquaculture component
- e. Providing support for promulgation

**Component 2 Develop effective national and regional coordination mechanisms for the fisheries and aquaculture component.**

- a. Support establishment of SPS governance framework
- b. Develop advocacy
- c. Support “testing”
- d. Support regional coordination
- e. Meetings

**Component 3 Develop / strengthen the national and/or regional regulatory and industry capacity in fisheries and aquaculture.**

- a. Develop and disseminate food safety operational manuals.
- b. Develop and implement training programmes
- c. Encourage and support countries in developing microbiological laboratory capacity
- d. Encourage and promote development of regional testing capabilities

**A. Develop / adapt / validate model legislation, protocols, standards, measures and guidelines for health and food safety (AHFS) in fisheries (regional with consultant country visits primarily to non-OECS and small # of OECS MS with budget). This would include the following tasks.**

- a. In consultation with the relevant bodies / institutions, regional and national level review / customization and / or upgrading / updating of:
  - i. draft “Guidelines for OECS region on sanitary standards for marine products for human consumption;
  - ii. draft “Sanitary standards for marine products (human consumption) regulations”;
  - iii. draft outline of Export Act.
  - iv. Any other existing drafted documents / instruments that was developed to inform legislation for the quality and safety of fishery products, e.g. Draft Fish Quality Assurance legislation (Barbados)
- b. Development of technical white paper, guidelines, legislation, regulations and standards for fisheries imports.

- c. Identification of existing entities that could be a part of governance framework (with emphasis on coordinating mechanism), including stakeholder analysis that considers and rationalizes existing and potential roles and relations.
- d. Determination of linkages of fisheries and aquaculture component with appropriate regional entities, including analysis of regional stakeholders.
- e. Providing support for promulgation of guidelines / legislation / regulations, including incorporation into fisheries management plans
  - i. Consultative process
  - ii. Customisation, taking into account in-country realities regarding implementation
  - iii. Advocacy of passage

**B. Develop effective national and regional coordination mechanisms for the fisheries and aquaculture component and for its incorporation into the overall SPS regime.**

- a. Support establishment / formalization of SPS governance framework (including coordination mechanisms) in each country comprising of the Ministry or Ministries who are the competent authority including bureau of standards in the context of the WTO Sanitary and Phyto-sanitary Agreement and other arrangements. This body should include competent authority representatives for all foods that are produced locally exported and imported;
- b. Development of public sector-private sector partnership (PPPs) and advocacy, in keeping with CRFM efforts to realize participatory approaches to fisheries management
- c. Determine and support “testing” of fisheries and aquaculture component of national policy / management cycle.
- d. Support regional coordination of fisheries and aquaculture SPS policy / management cycle (including “testing” of regional policy cycle)
- e. Support strengthening of representation at the international level in SPS forum (CODEX, OIE)
  - i. National and / or regional.

**C. Develop / strengthen the national and/or regional regulatory and industry capacity in fisheries and aquaculture to meet the SPS requirements of international trade [in areas such as inspection, import / export certification, diagnostics, risk assessment, surveillance, reporting, e.g. HACCP, GAPs, GMPs, GHPs, fishery products standards].**

- a. Develop<sup>1</sup> and disseminate food safety operational manuals and training in these manuals (field / environmental at sea, fishing vessel, market, laboratory, trade) to support the activities of designated persons (operators and businesses) and / or entities responsible for the safety of fishery products in countries.
- b. Develop and implement training programmes including exchange visits to relevant institutions, ports of entry inspection system or accredited laboratory :
  - i. for the development and implementation of SPS plans at all levels of the policy cycle as they relate to fishery inspection requirements along the industry chain and traceability of fishery products;
  - ii. for SPS auditing capacity where SPS plans are used by the fisheries industry.

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<sup>1</sup> Develop includes prepare and test manuals

- c. Encourage and support countries in developing accredited microbiological, chemical and biochemical laboratory capacity (HRD and equipment; include certified training) for:
- Routine testing of water and ice:
    - Total aerobic count at 37 degree C
    - Total aerobic count at 22 degree C
    - Total coliforms
    - Faecal coliforms
    - Faecal *streptococci*
    - Sulphite reducing *clostridia*
  - Routine testing of fishery products:
    - Coliforms
    - Total aerobic count at 37 degree C
    - *Escherichia coli*
    - *Staphylococcus aureus* (Coagulase positive *Staphylococcus*)
    - *Salmonella*
    - *Vibrio cholerae*
    - *Vibrio parahaemolyticus*
    - *Listeria monocytogenes*.
  - Other chemical or biochemical test such as heavy metals (mercury, lead, copper, cadmium); Histamine and other bio-toxins.
- d. Encourage and promote development and coordination of regional testing capabilities:
- i. Include networking with other food safety-related initiatives (e.g. agriculture; livestock; health).
  - ii. Include networking for ring testing.



## **APPENDIX 5.5: LOBSTER DECLARATION WORKING GROUP REPORT**

### **Report on The Declaration of Lobster**

#### **Working Group Members**

**Chairperson :** Mr. Rigoberto Quintana, Belize  
**Presenter :** Mr. Havelon Honeygan, Jamaica  
**Rapporteur :** Mrs. Shellene Reynolds-Berry, Jamaica

Mr. Adrian LaRoda - Bahamas

Mr. Craflan Isaac - Grenada

Mr. Wilner Romain - Haiti

Mr. Thomas Nelson - St. Lucia

Mr. Francis Calliste - Grenada

Mr. Milton Haughton - CRFM

#### **Update on Lobster Declaration**

- In May 2015, the CRFM is hoping to come up with new recommendations that prohibit the possession or trade of Spiny Lobster that do not satisfy sustainable fishing guidelines within the region. In March 2015, the annual meeting of the Caribbean Fisheries Forum will revisit the Declaration, and the Ministerial Council will meet at the end of May 2015 to sign off on it so that implementation can take place.
- This Draft agreement needs to be reviewed and finalized in the coming months.
- National authorities will customize and apply the provisions as necessary and appropriate to achieve the objectives in their states based on the local fisheries and socio-economic conditions and culture of each country.

#### **General Comments:**

The Working Group:

- Confirmed that the Declaration addresses a very important issue for stakeholders and that it should be supported. They were emphatic that the agreement is needed.

- Agreed that the Spiny Lobster is a very important resource within the region and stakeholders and governments must not take any chance with the future of the fishery by ignoring this document
- Agreed that what is being proposed are the different types of fishing methods, data collection, research and enforcement and management measures needed within the Region to protect the lobster fishery and livelihood of fishers.

### **How will it affect the Countries / Stakeholders?**

- It does not create legally binding obligations but creates guidelines and moral obligations on each country and stakeholder to achieve sustainable lobster fisheries based on international best practice

### **General principles**

- Participatory Approach should be strengthened in the document

### **Issues and Concerns:**

#### **Use of Gear**

- A Distinction should be made between artisanal fishers who use multi-species traps as oppose to industrial fisher.
- The removal of traps from the sea will not be easy in all cases – there are logistical challenges with taking traps from the sea on to land. Many fishers do not use special traps made for lobster as fishers use multi species traps.
- What are the escape panels on a trap?
- The removal of traps from the water during the closed season should only be applied to traps that fish for lobster. It would be difficult to remove traps from the sea within a given time frame
- Bahamas – fishers use traps and casitas. Casitas are placed on seabeds. In bad weather they move and destroy other fishermen’s traps
- Prohibiting the use of scuba and hooka would pose a problem in some countries. What would happened to fishers who have been using this gear all of their life.

#### **Enforcement**

- Enforcement is difficult in some countries. Example in Jamaica, the Coast Guard and Marine Police are very vigilant. However, They do not have the funding to do patrol. Nor do they have funding to go far to do patrol.

#### **Close Season**

- The group felt strongly that countries should aim to have a harmonised close season throughout the region in order to capture the peak season.

- The prohibition against the possession of Lobster during the close season is very difficult to enforce but it is better to have it because as long as there is a market, you will have buyers and persons willing to harvest illegally to supply the buyers.
- During the close season there should be no sale or harvesting of lobster. Fishers will be able to harvest lobsters during the start of the season if they are allowed to set traps days before the season.
- Importation of the species during the close season should be prohibited by all the countries.
- Some countries prohibit the landing of parts of lobster; hence the landing of whole lobster will pose a problem with some countries based on the timeframe vessels are at sea and the limited storage capacity on the vessel.

### **Habitat**

- Nothing much is spoken about habitat in the document

### **Recommendations for Improving the Draft Lobster Declarations**

- ❖ Cooperation should be done within neighbouring states in the wider Caribbean to conduct research.
- ❖ Data collection programme should be standardized. The CRFM should determine the format and specification required. Member state should cooperate by collecting the data as agreed.
- ❖ Countries should continue to do research to check performance and make adjustments to conservation levels where necessary - Studies could start with the Trap fishermen
- ❖ The conversion from head to tail measurement needs more research
- ❖ The language regarding the limitation on the number of traps should be soften but where necessary countries should set upper limits for traps
- ❖ Ensure that there are fishing opportunities for the small-scale fishers. There should be equality within the industry.
- ❖ Consideration should be given by setting catch quotas. These should be based on scientific studies and Maximum sustainable yield (MSY).
- ❖ Reduce conflict between users in particular small-scale fishers who would not have access to the fishing grounds
- ❖ Countries should consider the sealing of products during the close season. Preferable by the Competent Authority (e.g. Customs Department of each country). At the end of the season, the seal will be removed.
- ❖ A business decision has to be made as to a cutoff point when lobsters should not be caught or sold in any establishment.
- ❖ Close Season Regulations should be regional and apply to all Caribbean countries.
- ❖ A reasonable time should be set for fishers to set traps prior to the opening of the season
- ❖ Based on the situation of each country, the language should be soften to make room for vessels that fish for more than one day.

- ❖ Finding alternative livelihood opportunities for fishers who now use scuba and hookah to fish for lobster and would be affected by restrictions of these methods of fishing is recommended
- ❖ Scuba Divers fishing for lobster should be properly certified and this method of fishing for lobster should be phased out in the future based on health reasons.
- ❖ Additional information / provisions relates to the protection and rehabilitation of critical habitat for lobster should be included in the declaration
- ❖ Public awareness and education programmes should be promoted in all sector of society, e.g. schools, tourism sector, airports / hotels
- ❖ When sanctions are developed, different levels should be set for artisanal fishers, industrial fishers and foreign illegal fishers. In all cases these sanctions should be severe.
- ❖ Fishing for lobster should only be done using authorized gears. Fishing methods and gears that are not authorized should be prohibited.

## APPENDIX 5.6: SMALL-SCALE FISHERIES GUIDELINES WORKING GROUP REPORT

### Small Scale Fisheries Guidelines Working Group

#### Membership

Chairman: Mitchell Lay  
Resource Person: Dr. Patrick McConney  
Rapporteur: Lara Ferreira  
Presenter: Pamashwar Jainarine  
Huron Vidal  
Desmond Gill  
Joslyn Lee Quay  
Norman Norris  
Royan Isaac  
Winsbert Harry  
Lorenzo George  
Vernel Nicholls

#### Global Assistance Programme

1. **Raising awareness and providing policy support: knowledge products and outreach**
  - ❖ Need strengthening of the fisherfolk capacity to pass on the information –training of fishers by CNFO and partners so that fisherfolk organizations can take the lead in awareness raising
  - ❖ Consultations
  - ❖ Take the information to the Schools
  - ❖ Develop a Marketing programme - have a champion / mascot, develop a catch phrase
    - o Partnership with media
      - TV and radio (interviews, morning programmes)
      - Billboards , slogans
    - o Utilize ICT: use social media eg facebook
    - o Utilizing major events to disseminate information on the SSF guidelines
    - o Use of Graphics in addition to print
  - ❖ Outreach could be focused on sustainability of livelihoods as opposed to sustainability of fish
  - ❖ Use case studies that demonstrate successes

- ❖ Link awareness to issues so that information is demand driven
- 2. Strengthening the science-policy interface: sharing of knowledge and supporting policy reform**
- ❖ Research agenda must be driven by the needs of the industry
  - ❖ Develop scientific models appropriate to small scale fisheries
  - ❖ Holistic approach: stock assessment, ecosystem services, socio-economic and cultural aspects, occupational health and safety (decent work)
  - ❖ Mainstreaming of gender issues
  - ❖ Fisherfolk need to be involved in the process at each stage and make sure the science gets into policy and gets implemented –
  - ❖ Collaboration of fisherfolk with recognized scientists in the field should be facilitated so that research done is recognized
  - ❖ National policy should include reference to the SSF guidelines and other global guidelines
  - ❖ Insurance issues:
    - o There should be more risk-based science to ensure protection of fisherfolk against disasters
    - o There are also informal forms of insurance e.g. “Sou Sou”
- 3. Empowering stakeholders: capacity building and institutional strengthening**
- ❖ Need to build capacity of NFOs to engage in policy discussion and be well represented
  - ❖ Develop a culture of accountability and transparency (this is linked to reporting)
  - ❖ There needs to be oversight of fisherfolk organizations
  - ❖ Training: administrative procedures, Leadership training, succession planning, attachments to learn about success stories
  - ❖ There should be funding available for NFOs to participate at various fora
  - ❖ Need the enabling environment: policy, infrastructure, Market access,
  - ❖ There should be fisherfolk representation on fisheries committees at national, regional and global levels (e.g. CNFO attends Forum meetings as an Observer)

#### **4. Supporting implementation of Monitoring, evaluation, adaptive management, and learning**

- ❖ Fisherfolk to be included at all levels including implementation process
- ❖ There should be informal arrangements where Civil society and state can collaborate - NGOs need to sit at the table with state representatives
- ❖ There should be a simple score card system to evaluate status of implementation of the SSF guidelines in three main areas: socio-economics, governance, and ecology

#### **5. Next Steps**

- ❖ CNFO will do prioritization exercise (based on the above) with support from CANARI and UWI/CERMES
- ❖ CNFO will make representation at FAO meeting in Rome
- ❖ CNFO will share information with global partners (WFFP)
- ❖ Pursue collaboration with regional partners (CRFM, GCFI, JICA, TBTI, CANARI, etc)
- ❖ Summary points will be sent to FAO in Rome as part of agenda setting
- ❖ Develop protocol for the CCCFP and national policies based on the SSF guidelines

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