



IC Net Limited

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REPORT OF THE CRFM / JICA MASTER PLAN DISSEMINATION WORKSHOP



**16 – 17 January 2012
St. Lucia**

**CRFM Secretariat
Belize 2012**



IC Net Limited

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Acronyms and Abbreviations

ACP	African Caribbean Pacific
AUSAID	Australian Agency for International Development
CANARI	Caribbean Natural Resources Institute
CARICOM	Caribbean Community
CARIFIS	Caribbean Fisheries Information System
CCA	Climate Change Adaptation
CCCCC	Caribbean Community Climate Change Centre
CDEMA	Caribbean Disaster Emergency Management Agency
CERMES	Centre for Resource Management and Environmental Studies
CFP	Common Fisheries Policy
CFTDI	Caribbean Fisheries Training and Development Institute
CLME	Caribbean Large Marine Ecosystem
CNFO	Caribbean Network of Fisherfolk Organisations
CoMARNet	Research Communication Network
CRFM	Caribbean Regional Fisheries Mechanism
DBS	Diamond Back Squid
DRM	Disaster Risk Management
EAF	Ecosystem Approach to Fisheries
EBM	Ecosystem-Based Management
EEZ	Exclusive Economic Zones
EU	European Union
FAD	Fish Aggregating Device
FAO	Food and Agriculture Organisation of the United Nations
GCFI	Gulf and Caribbean Fisheries Institute
IUU	Illegal, Unreported and Unregulated
JICA	Japan International Cooperation Agency
MarGov	Marine Resource Governance in the Eastern Caribbean
MCS	Monitoring, Control and Surveillance
NACA	Network of Aquaculture Centres in Asia-Pacific
NOAA	National Oceanic and Atmospheric Administration
OECS	Organisation of Eastern Caribbean States
OPAAL	OECS Protected Area and Associated Livelihoods
OSPESCA	Organization for Fisheries and Aquaculture of the Central American
PSEPA	Point Sable Environment Protection Area
RRACC	Reducing Risk to Human and Natural Assets Resulting from Climate Change
SAG	Scientific Advisory Group
SOG	Sustainable Ocean Governance
SJP	Samuel Jackman Prescod Polytechnic in Barbados
SMMA	Soufriere Marine Management Area
SVM	School of Veterinary Medicine
TCP	Technical Cooperation Programme
TCDC	Technical Cooperation among Developing Countries

TDA	Transboundary Diagnostic Analysis
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
UWI	University of the West Indies
WECAFC	Western Central Atlantic Fishery Commission

1. Opening Ceremony

Mrs. Sarah George, Chief Fisheries Officer in the Department of Fisheries in St. Lucia, chaired the Opening Ceremony, which began with a prayer offered by the head of the Trinidad and Tobago delegation, Ms. Christine Chan A Shing. Following the Opening Prayer and singing of the National Anthem of St. Lucia, Mrs. George then acknowledged and welcomed the presence of members of the head table and proposed speakers at the Opening Ceremony: St. Lucia's Minister of Agriculture, Food Production, Fisheries and Rural Development, the Honourable Mr. Moses Jn Baptiste; the Executive Director of the CRFM Secretariat, Mr. Milton Haughton; the representative of the Embassy of Japan in Trinidad and Tobago, Mr. Tsuyoshi Koga; the representative of JICA, Mr. Shunji Sugiyama; the current Chairman of the Caribbean Fisheries Forum, Mr. Philmore James; and the Permanent Secretary in St. Lucia's Ministry of Agriculture, Food Production, Fisheries and Rural Development, Mr. Hubert Emmanuel. Mrs. George also acknowledged and welcomed the presence of the representative of the OECS Secretariat, Mr. Peter A. Murray, other fisheries professionals and stakeholders, as well as observers from regional institutes and organizations. Mrs. George then invited the Permanent Secretary, Mr. Hubert Emmanuel, to deliver the official Welcome on behalf of the government of St. Lucia.

In his Welcome, Mr. Emmanuel noted that it was a privilege to be able to offer the official welcome to participants on the occasion of such an important workshop. He was pleased to observe good attendance. Mr. Emmanuel gave a special welcome to the representative from the Embassy of Japan and several officials and consulting experts from JICA, whose presence reflected a continuing, firm commitment by Japan to offer fisheries development assistance to countries in the region. Mr. Emmanuel noted that the Workshop was taking place at a time when the exploitation of marine resources was receiving increased attention and focus. He expressed his hope that the Workshop would yield good ideas to guide and galvanize the process of change. In closing, Mr. Emmanuel invited participants to enjoy the hospitality of St. Lucia, though he noted his regret that the Workshop did not afford any overlap with the usual weekend activities at Gros Islet. He wished all an enjoyable and successful workshop.

Mr. Tsuyoshi Koga, Second Secretary in the Embassy of Japan in Trinidad and Tobago, also addressed the Workshop. Mr. Koga extended greetings to members of the head table and to all guests, noting that it was an honour to attend and to address the Workshop during the opening ceremony. Despite difficulties encountered during the early stages of implementation, Mr. Koga noted his satisfaction that the project had entered its final phase of international cooperation. Mr. Koga recalled the purpose of the project, and its relevance to CARICOM countries for which the fisheries industry was important for diversification and improving livelihoods of those living in the region. Recent increases in the demand for seafood and the accompanying increase in fish production emphasized the necessity to ensure sustainable management of fisheries. Mr. Koga noted that Japan had optimized usage and profits from its marine resources. He was pleased that Japan's extensive knowledge and experience in marine resource management was being shared to assist CARICOM countries in reaching their own fisheries management goals. Mr. Koga then recalled the evolution of Japan's assistance in fisheries in the region, and noted that the current

project's success was expected to lead to further development of relations between Japan and CARICOM countries. More recently, the business/ economic component had been introduced into the assistance package, involving the private sector in Japan. In closing, Mr. Koga expressed his sincere gratitude to all parties involved in this project. Mr. Koga's full remarks are provided in *Appendix 3(a)*.

The newly appointed Executive Director of the CRFM Secretariat, Mr. Milton O. Haughton, then offered his Welcome and good wishes on behalf of the management and staff of the CRFM Secretariat. He acknowledged the presence of Member States representatives, as well as representatives from several partner organisations, institutions and regional projects. Mr. Haughton thanked the Workshop hosts and took time to offer a special welcome to all the officials from Japan, whose support made the present project and Workshop possible. He recognized the significant contribution of the government of Japan to the present initiative, and to related activities in the Caribbean, which had continued during a period of hardship for Japan and which reflected a true bond of friendship in working towards common goals of sustainable fisheries management. Mr. Haughton then went on to provide details of the Japan-CARICOM agreement, and recalled the developments that led to the successful realization of the current project and its achievements. Additionally, Mr. Haughton reflected on the approach to project implementation and how these were managed throughout the life of the project. Particular mention was made of the efforts to apply a consultative/cooperative strategy, which involved JICA experts working closely with national counterparts and stakeholders during the three pilot studies. CARICOM's cooperation with Japan covered several areas, and in the case of fisheries, Mr. Haughton noted that close cooperation was to be maintained for continued work in improving management, impacts of climate change on fisheries, and adoption of mitigation measures to protect livelihoods. He urged CARICOM countries to be ready to make use of these opportunities, and to rise to the challenge of protecting the sea's good and services in the face of ongoing challenges and demands. The Workshop had a responsibility to improve awareness of the importance of these resources. In closing, Mr. Haughton reminded the Workshop of the expected outputs. He looked forward also to strengthening the bond between CARICOM and Japan to work for sustainable fisheries management and development. Mr. Haughton's full remarks are given in *Appendix 3(b)*.

Mr. Shunji Sugiyama offered his Welcome and official Remarks on behalf of JICA, noting that it was an honor for him to do so. Mr. Sugiyama congratulated the CRFM Secretariat and Member States for their continued and excellent support for coastal community development. He recalled JICA's contributions for a number of co-operation activities ranging from infrastructure to training, and provided details of the evolution of such assistance. Like Mr. Koga, Mr. Sugiyama noted that there was universal concern about depletion of fisheries resources, and the attendant implications for food security. In view of this, international fisheries agencies had shifted policies to address these concerns, and new management approaches were being advocated. Given the complexity of the bottom-up approach to management, there was the challenge of being effective. In this regard, the present project had applied a stepwise approach to ensure understanding of priorities, proper planning and successful testing of proposed management

models. Mr. Sugiyama noted that the project outputs would be instructive in shaping the future. He indicated the important aim of the Workshop in providing a critical review of the project. In closing, Mr. Sugiyama thanked those who contributed their time and effort towards the project, and wished all a successful Workshop. Mr. Sugiyama's full remarks are provided in *Appendix 3(c)*.

The Feature Address was delivered by St. Lucia's Minister of Agriculture, Food Production, Fisheries and Rural Development, the Honourable Mr. Moses Jn Baptiste. Minister Jn Baptiste joined others in extending welcome to participants, and noted his pleasure in being able to address so many fisheries experts and our extended family from Japan. He spoke of his love for the sea and its gifts, and gave recognition to the constant hardships faced by fisherfolk. Minister Jn Baptiste went on to highlight the importance of fish to the national population's diet and health, and for the livelihoods of over 2000 fisherfolk in St. Lucia. He highlighted the fact also that the value of fisheries resources was not limited to the fishing industry. However, global environmental change was creating challenges for the continued contribution of fisheries resources to food security and employment. In view of the fragility of the environment, it was essential to strike a balance between exploitation and environmental conservation. Minister Jn Baptiste reflected on his government's efforts in helping the fishing industry to meet the challenges of achieving sustainable fisheries management. Social security for rural communities, and conflict resolution were areas of concern and a collaborative approach was being pursued, with emphasis on promoting co-management arrangements, such as exists for the SMMA.

Minister Jn Baptiste then recalled the basis for development of the FAD technology, and the benefits and challenges of its application in St. Lucia. He spoke of efforts to ensure sustainable development and management of FAD fisheries in St. Lucia, especially in view of the national interest in making use of unutilized resources such as diamondback squid. Minister Jn Baptiste expressed his hope that one of his national fishers could eventually have the opportunity to land huge bluefin tuna like one landed in Japan recently, and enjoy similar economic returns. Minister Jn Baptiste also shared his appreciation of the need for collaboration at the regional level owing to the existing patchwork of EEZs, and fisheries targeting shared resources. In this regard, Minister Jn Baptiste noted that the Member States were fortunate to have the CRFM, and the assistance of other partners, especially Japan. Minister Jn Baptiste was pleased that the project addressed data and aquaculture issues as well; and briefly referred to St. Lucia's progress in aquaculture via Taiwan-assisted initiatives. He looked forward to the links that would be gained between the national effort and the JICA-CRFM related initiative in aquaculture. Finally, Minister Jn Baptiste appealed to the press to partner with the fisheries experts in sharing the information and being an agent of change. The Minister's full remarks are provided in *Appendix 3 (d)*.

The present Chairman of the Caribbean Fisheries Forum (CFF), Mr. Philmore James of Antigua and Barbuda, delivered the Vote of Thanks, in which he thanked each of the speakers individually. Mr. James also thanked Mrs. George for chairing the opening ceremony, and for leading the singing of the national anthem. The support of the staff of the St. Lucia Fisheries

Department was also recognized. Mr. James also gave a special acknowledgement of appreciation to the representatives of JICA for their contributions and support. In respect of project coordination, Mr. James acknowledged the efforts of IC Net Limited, CFTDI, and the CRFM Secretariat. The CRFM Secretariat's new Executive Director also received special thanks for his comprehensive update on the project. Mr. James recognized the important work of CRFM for the region. He thanked the Chief Fisheries Officers for giving their time to attend the Workshop, and their work within CRFM for ensuring regional coordination of all fisheries management activities, especially necessary for shared resources. Mr. James also recognized the presence of representatives of other international organizations, institutes, and projects, and thanked them for their contributions to the project and Workshop. In closing, Mr. James expressed his appreciation to the media for providing a direct communication link between Workshop and the public, and noted the desire on the part of all for a very productive workshop.

In closing the Opening Ceremony, Mrs. George thanked participants for their attention.

ITEM 1: Pelagic Resource Development and Management Using FADs (Component 1)

Item 1 was introduced and a brief background on the selection process for the pilot projects was presented by IC NET Limited.

Presentation summary:

The presentation of the Pilot Project on Pelagic Resource Development and Management Using Fish Aggregating Devices (FAD) in Dominica and St. Lucia provided a review of FAD fisheries in both islands, the objectives of the study, outputs and the way forward. The objectives of the project were: (i) to improve the capability of FAD fishery management on the part of the fisheries officers and fishers and; (ii) increase the productive output of the FAD by developing the skills and capacity to utilize potential species. A bottom up management approach based on community participation involving fisher groups, individual fishers, Fisheries Division/ Department staff in Dominica and St. Lucia, and counterparts from IC Net Limited and CRFM was explored. Components of the pilot study included: monitoring activities; technology development activities; fund generation activities; development of under / unutilized species; development of a FAD Fishery Management Plan and finalization of FAD regulations and legislation. Educational materials in the form of FAD and DBS fishery text books were also developed for training fishers. A major achievement was the establishment of Working Groups on FAD and DBS fisheries, which will continue research, development and marketing activities. Institutions such as CFTDI, CRFM and UWI are expected to facilitate sharing of these outputs at the regional level and assist in the development of the way forward.

Discussion:

It was noted that a number of Member States was in disagreement with and had previously registered official protests to the United Nations Secretary General regarding the representation of EEZ's in Figure 1.1 in the Master Plan and it was agreed that this figure would be replaced with a less contentious one.

There was considerable discussion about the FAD fishery in Dominica and St. Lucia. It was queried whether increases in catches of pelagics as a result of FAD use was also observed in other countries. It was clarified that in the case of Dominica, FAD fisheries started on the West Coast and were then introduced on the East Coast (Marigot) which previously only supported seasonal fisheries. However with the introduction of FADs, the East Coast has now become the highest fishery production area. In terms of the contribution to catch rates made by FADS and the graph shown by St. Lucia, it was pointed out that the equation of the slope / line was not shown and this would indicate whether the catch rates have really changed. There was also concern that the increased reef fishes catches in Dominica concurrent with introduction of FADs indicated that the FAD fishery was not taking pressure off the nearshore reefs. A query was made regarding the progress of the FAD fishery regulation development in Dominica. The meeting was informed that numerous consultations were held with fishers to develop the draft regulations, and were facilitated by a legal attorney and Fisheries Division staff. These regulations are now awaiting review by the Cabinet, however in the meantime the National

Fisheries Cooperative and the fishers are being encouraged to undertake activities on a voluntary basis and so far the results have been promising.

The topic of export markets was also discussed and it was indicated that this option remains to be explored and is highly dependent on the FAD fishery development process and gathering of market information. The point was made that the principal focus of the FAD fishery in Dominica was self-reliance and food security. The need for proper monitoring of catches was highlighted and it was agreed that factors such as age and size composition and ICCAT quotas needed to be taken into account. It was noted that there was not an opportunity to examine all these aspects during the pilot study; however it was agreed that in the future these aspects deserve attention. The need for a standard code of conduct at the FAD to ensure sustainable development and management of the fishery was also recognized. It was agreed that the working groups established between the Fisheries Division (Dominica) and Fisheries Department (St. Lucia) would continue the work started during the pilot study.

The success of the co-management experience in Dominica was commended and it was noted that the co-management arrangement allowed fishers to identify the need to manage the resource. Concern was expressed that fixed FADs may disrupt the migration patterns of the pelagic species. The recent Sargassum experience was mentioned as an example where the juvenile dolphinfish which followed the floating mats were targeted and now low catches are being experienced during the peak fishing season. It was clarified that the purpose of the FADS is to improve the social and economic status of the fishers by decreasing operational costs. However, it was recognized that they were also holding the species at a fixed area and a critical review of the fishery was considered to be necessary to minimize any negative distribution and migration effects. The need for further research activities at the regional level that will provide the data and information necessary for the development of best practices was highlighted.

There was discussion about the development of the DBS fishery and concern that it was targeting spawning individuals was expressed. Clarification was sought on whether any differences in depth distribution have been observed for non-gravid DBS. It was noted that these details were not available at the present moment. The Meeting was informed that the data collected during the pilot shows that they can be caught monthly and it was suggested that given the short life span of a 1 year cycle, a seasonal limited access fishery could be developed. It was also pointed out that the small number of DBS caught early in the year were smaller in size and were sexually developing. The Meeting was also reminded that a productive DBS fishery exists in Japan and has been operating for the past 15 years and there were biological data available. It was pointed out that if the DBS fishery is going to be developed, consideration to arrangements such as limited access and licenses should be given. Concern was expressed about the shift from open access to limited access as this would present a political challenge given the cultural arrangements in the Caribbean. The Meeting was informed that the DBS fishery in Okinawa, Japan would be used as a case study to inform management and development of the fishery in the Caribbean. It was also pointed out, that if necessary, gear modifications could reduce catches. The availability of gear was also another factor to consider in developing the fishery as they are expensive. The importance of adopting a precautionary approach was discussed and the meeting was informed that many countries are in the process of adopting the legislation for the precautionary approach. It was agreed that there remains more work to be done on the biological

aspects of the DBS in the region. The Meeting was also reminded that the DBS Working Groups which were set up in St. Lucia and Dominica during the pilot studies are intended to continue addressing these matters. The importance of sharing information amongst countries will also be necessary to develop regional arrangements for this fishery. The role of CRFM and UWI in supporting information sharing for this resource was highlighted.

The presentation was considered to be an excellent one. The importance of co-management in countries with limited resources for monitoring and surveillance was recognized. An example of a successful rights based approach to management in the sea-cucumber and whelk fisheries in Belize was shared with the Meeting. The importance of data collection, which is critical for good management of these fisheries, was discussed and it was noted that in addition to a regular fishing license, these two fisheries required a special paid license with conditions including submission of data. As such there is a definite need for legislation to support these arrangements. The Meeting was also informed that Belize was currently undertaking a study on limited access in the lobster and conch fisheries. An enquiry was made regarding the costs of FAD materials. It was indicated that costs are influenced by the deployment location, materials and complexities of the FAD, and can range between \$4,000EC - \$8,000EC. It was agreed that good construction practices and standards are important in avoiding loss of FADs and to minimize deployment and construction costs.

Given the discussion about information management and the sharing of experiences, clarification was sought on the type of existing mechanisms to allow for this in terms of lessons learnt, and technologies developed. It was pointed out that the pilot project has shown that there is a poor arrangement for the sharing of this information and highlights the need for this. The Meeting was informed that networking arrangement for experienced FAD fishers to visit other countries and share best practices in terms of FAD fishing and development is also to be undertaken in the future.

Clarification was sought as to whether the project had a mechanism in place for sharing outputs, technologies and lessons learnt from the pilot study with a wider audience, including policy makers and fishers. The issue of information sharing and results was recognized as important and the Meeting was reminded that the FAD pilot study was implemented in two countries with the understanding that the experiences would be shared with other countries through workshops and steering committee meetings. The Meeting was also informed that all the reports of the pilot study workshop are available on the CRFM website. The importance of utilizing existing mechanisms such as the CRFM Forum to disseminate information was emphasized.

Finally it was noted that although the pilot studies were conducted for only a relatively short time, yet the results were clear and positive, and supported the proposition that pelagic resources can be developed and managed using FADs, and can result in the reduction of fishing pressure on the nearshore coastal resources.

IC Net Limited, CFTDI and CRFM were thanked for their key roles in completion of the pilot studies.

ITEM 2: Aquaculture Development Policy Formulation (Component 2)

(a) Pilot project on low cost input small-scale aquaculture in Belize

Presentation summary:

The 'Low Cost Input Small Scale Aquaculture' pilot project for conducting trials on alternative feeds for small-scale tilapia production was implemented in Belize from August 2010 to June 2011 at the Belize Fisheries Department Biscayne Tilapia Seedstock Production Facilities. The project forms part of the activities being implemented to guide and inform the process on the 'Study on the formulation of the Master Plan on Sustainable use of Fisheries Resources for Coastal Community Development in the Caribbean Region'.

One of the major economic factors in aquaculture production is the high cost of commercial feeds. Given the importance of small-scale aquaculture activities in providing food security and economic opportunities, the implementation of alternative feed trials was seen as priority. The experimental trials were conducted by the Fisheries Department with support from JICA, CRFM and IC Net Limited.

The main purpose of the project was to identify and evaluate the suitability of using low cost input and low cost aquaculture production techniques focused on the reduction of feeding cost for small-scale Tilapia farming. The project had two phases. In phase I, eight experimental ponds were stocked at a rate of five fish per square meter and were fed four different diets (shrimp feed, fermented rice bran, regular rice bran, mill feed). Four ponds were fertilized with chicken manure in order to enhance natural pond productivity as a means of improving feed conversion ratios and reducing production cost.

Phase II of the project also consisted of eight experimental ponds utilizing three new diets in addition to those introduced in phase I (50%:50% shrimp feed and fermented rice bran; 50%:50% fermented rice bran and fermented mill feed; and fermented mill feed).

Apart from the commercial shrimp feed which outperformed all trial results during the two phases, the combination of 50%:50% shrimp feed and fermented rice bran had better performance in terms of the growth rate, feed conversion ratios which resulted in reducing the feed cost by 21.6% when compared to shrimp diets and by 40% when compared to the actual cost of commercial tilapia feeds.

Discussion:

In response to a query about the culture practices, it was pointed out that only males were utilized. However, in the first set of trials, due to the fact that a manual method was used for sex differentiation, some females might have been included. In the second set, it was noted that sex reversal was done using hormone treatments.

With regards to some concern being expressed about the use of hormones, it was pointed out that sex reversal using hormones is an acceptable practice. It was also noted that mortality during

the trials would be due to stress in transferring fingerlings; temperature shock, predation by birds, etc. and not diseases.

In terms of the feed trials, it was indicated that the cost of feed was a major concern and as such there was need to identify local materials to make low cost but suitable feeds. The causes of ‘off-flavor’ in fish flesh and the means to address them were also mentioned.

It was noted that the results obtained were very promising and recommended that such studies should continue.

(b) Pilot Project of Aquaculture Training and Extension in Jamaica

Presentation summary:

Jamaica’s pilot project commenced in October 2010 and ended in August 2011. It was composed of two (2) programs: the local program - the objective of which was the verification of proper extension models for small-scale fish culture activities; and a regional program which dealt with the formulation of action plans for aquaculture development in respective target countries.

The local program targeted twenty-five (25) subsistence and small scale farmers for training. Of that number eleven (11) were selected based on the baseline survey to receive seed stock and extension monitoring for six months (one crop production cycle). Evaluations were conducted to determine the success of the project during and at the end of the project. Five (5) areas were evaluated (1) technical improvement of fish farmers; (2) fish production of fish farmers; (3) effect of local training; (4) influence of extension services; and (5) intension to continue fish culture. All farmers indicated that the training was beneficial to them and will help to improve their production practices. Additionally most indicated that they intended to continue fish culture activities after the project and were happy with the extension services and expected this assistance to continue.

The regional program involved the conducting of two (2) workshops held in March and August 2011 targeting six (6) countries, Jamaica, Guyana, Trinidad and Tobago, Suriname, Haiti and Belize. At the end of the workshops the six (6) countries forwarded action plans which they considered important for the continued development of their aquaculture sub-sector.

An analysis of the lessons learned from both programs was conducted and indicated that for the local program there was a need to promote intermediate fingerling producers; to decrease fish mortality; to organize the farmers in clusters; to promote the use of grass carps to reduce aquaculture weeds; and to continue better record keeping. For the regional program it was suggested that there was the need to develop a regional aquaculture network and importantly to develop “Centers of Excellence” to drive aquaculture development in the region.

In summary both components of the pilot project was successfully implemented and achieved their desired objectives.

Discussion:

In response to a query about the economic viability in small island situations in shortening the phases of the farm production activities to maintain farmer interest and reduce risk, it was opined that it may not be economically viable, but this would have to be researched.

The need for the establishment of a CRFM Regional Aquaculture Development Network was stressed, with it being noted that this network could in turn establish links with the one for the Americas and with NACA. It was noted that the CRFM had already established a formal relationship with NACA to facilitate exchange of experiences and strengthening of aquaculture in the CRFM Member States. As part of the aquaculture development process, it would be necessary to determine and address the capacity requirement, with a part of this being the strengthening extension capacity in the various countries.

It was recommended that as part of the Master Plan, assistance should be provided to Belize, Guyana, Haiti, Jamaica, Suriname and Trinidad and Tobago in the finalization of their aquaculture plans and in the mobilization of resources for their implementation. It was also agreed that the aquaculture development strategy, and support for the expansion of sustainable aquaculture would encompass all the countries in the CRFM region, including the smaller island states with potential for aquaculture development, and not only the larger Member States. In the case of smaller island states, the Meeting was reminded that the sustainability of aquaculture would be influenced by the availability of land space and water.

ITEM 3: Component 3: Development of Fisheries Statistics Systems Model for the Region

Presentation summary:

Two pilot projects were conducted under this component, one in St. Vincent and the Grenadines and the other in Guyana. Mr. Kazuo Udagawa of the IC Net Limited team presented a background of the two projects, in which he outlined the findings of the JICA / CRFM statistical baseline study. Mrs. Cheryl Jardine-Jackson, Fisheries Division, St. Vincent and the Grenadines, and Ms. Ingrid Peters, Fisheries Division, Guyana, presented an overview of the statistical pilot projects in their respective countries. The overview highlighted the achievements, recommendations and lessons learned during the progress of the pilot study. Both presenters reported that the fisheries data collection systems in their respective countries had improved. This improvement was mainly attributed to the review of the data collection sampling plans and the computer hardware provided for the improvement of data handling and management. They also indicated that further work was needed.

Discussion:

One Member State, St. Lucia, noted its intention to seek to review its data collection / fisheries statistical system, and as such the work done by the two countries (St. Vincent and the Grenadines and Guyana) to improve their statistical systems, would be very useful to St. Lucia. The problem faced by St. Lucia in this regard, is in finding the funds to properly undertake the activity. It was pointed out that sometimes financial resources were made available to undertake aspects of the activity but it was preferable to address the subject area in a comprehensive manner. It was pointed out that if the issue was not addressed in a comprehensive manner, an ad hoc approach could worsen the problem.

The Workshop was also advised of the importance of including statistical monitoring of the losses of the fishers. It was proposed, for example that if the data collector recorded that the fisher landed X amount of fish, the data collector should also record that the fisher lost a gear valued at \$Y while catching the fish, when this is the case. It was argued that recording the losses of fishers would foster the cooperation of the fishers for data collection activities, as fishers would interpret the recording of their losses as a positive step.

ITEM 4(a): Master Plan on the Sustainable Use of Fisheries Resources for the Coastal Community Development in the Caribbean

Presentation Summary:

Representatives from IC Net Limited, Mr. Kazuo Udagawa, and Dr. Hiroaki Terashima, presented this item, which provided a proposed regional framework for implementation of the Master Plan. The IC Net Limited Consultant noted that the proposed framework gave consideration to the CFP being developed by CARICOM countries, and also considered how identified fisheries management priorities could be practically addressed, based on lessons learned during the pilot studies. The proposed framework attempted to use the existing CRFM structure, but rationalized the modification of the CRFM structure taking into account resource constraints of the CRFM and other challenges. This resulted in modification of existing programs and the addition of new programs to reflect priorities identified in the Master Plan. Additionally, the proposed framework advocated the use of regional working groups to facilitate improved and expanded networking and knowledge and information exchange. The Master Plan was formulated to address the ongoing development needs of subsistence and small-scale fisheries operated by coastal and rural communities.

Discussion:

It was pointed out that the proposed structure / organogram assumed that individual countries had the required human resource capacity for implementation of the proposed Master Plan, but every Member State had highlighted its human resource constraints during earlier Workshop sessions. In response, the IC Net Limited Consultant noted that countries would be expected to prioritize their needs and so reserve resources for the identified priorities.

Still on the proposed structure/organogram, a concern was raised that it did not match the structure and roles of national fisheries authorities. The distinction between the scientific and management functions and who would be responsible for these at the national level were not clear. The organogram also did not indicate clearly the interactions occurring at the Ministerial level or the legal mandate and functions of the different organs of the CRFM. In view of the fact that the diagrams in any report usually attract the attention of the policymakers, the need for these diagrams to be accurate was emphasized. Furthermore, regarding the CRFM Secretariat structure, the organogram did not reflect correctly the relations – neither organizational or programme structure. The IC Net Limited Consultant then explained that the structure was intended only to reflect major work areas and responsibilities. He also clarified that the Caribbean Fisheries Forum and Ministerial Council were expected to interact, and so this was an omission.

Also on the proposed structure / organogram, there was considerable discussion and disagreement on the manner in which components were depicted, relative to each other. In particular, it was suggested to the Workshop that the law and policy component should be placed above all other programme components, and likewise, the fisheries management and development component encompassed activities that were currently listed separately. Though the IC Net Limited Consultant argued that the organogram was developed to emphasize key

subsectors requiring separate attention, and that coordination among the programs was expected, the Workshop agreed that the organogram should be revised to more accurately reflect the organizational relationships and how programmes should flow from each other, and hence they should be organized, level-wise, to relate to each other, and thus show the hierarchical and reporting relationships.

Also on the proposed structure / organogram, the Workshop was also reminded of the need to consider fully the implications of changing the CRFM Secretariat organogram. In particular, there would be a cost of establishing and maintaining the new structure, and there were also legal implications to be taken into account. It was clear that more information would need to be provided to inform a decision on this issue.

In considering the implications of the suggested structure, the Workshop was informed that Central American countries had made tremendous progress in fisheries development and management, but this progress had required a high level of commitment, up to the political level. The political level commitment was essential because all programs informed and were informed by the law and policy program. The point was also made that it was necessary that national and regional policies were harmonized, in order for the proposed regional structure to achieve any progress. For small institutions, it was necessary for resources to be deployed in an optimal way, and whichever structure was agreed upon, it would require resources and commitment. In this regard, the Workshop was urged to appreciate that regional structures were not able to address all needs and that some needs had to be managed at the national level as well. It was essential to acknowledge the dual level of operation required.

Several parties expressed concern about the lack of the incorporation of the other sectors into the structure at both the national and regional levels so as to guarantee an integrated approach, e.g. tourism, coastal zone management. Involvement of stakeholders had not been formally elaborated and incorporated into the structure. The Workshop was reminded about the CLME project and efforts to promote and adopt the ecosystem approach to fisheries (EAF).

The IC Net Limited Consultant accepted that coastal communities were not dependent on fisheries resources alone and other activities needed to be taken into account. The Consultant further noted that the proposed framework was for small-scale activities only. While the IC Net Limited Consultant warned about the complexity of the EAF, and the potential for other sector issues to be given more attention than fisheries issues, he accepted the need to incorporate inputs from other sectors, but explained that this could be worked out by the different programmes proposed in the structure. In response, many parties reiterated that EAF was a necessary way forward, and a suggestion was made to give this task to the proposed working groups. Given that some stakeholders were already named in the proposed structure, there was an additional suggestion to include a box labeled 'other stakeholders', as a placeholder in the present organogram, until the actual details of cooperative arrangements could be formally elaborated. It was also argued that EAF should not be regarded as too complex, and that the region could adopt an incremental approach to achieving EAF aims.

A concern was raised regarding the extent to which the Common Fisheries Policy (CFP) was used to inform development of the proposed structure. In particular, there appeared to be areas of

priority identified by the CFP that were not covered, e.g. marketing and trade. The IC Net Limited Consultant reassured the participants that the CFP served as an important reference document and CFP elements had been incorporated into the detailed master plan. The IC Net Limited Consultant also highlighted the fact that in the proposed framework, member States would have the opportunity to discuss CFP in the Working Groups and to make plans in accordance with priorities. He reminded the Workshop that the law and policy program would oversee all other activities, and in this way, CFP considerations would inform all other programs.

Nevertheless, Member States remained concerned about the incomplete and compartmentalized approach proposed for addressing marketing and trade, which were key components of the CFP. In response, the IC Net Limited Consultant explained that marketing was species-specific, and hence the issues pertaining to capture species were anticipated to be different to those for farmed species. Moreover, it was not likely that tilapia culture, covered in the aquaculture pilot study, would be conducted for the international market. The consultant argued that Caribbean people should enjoy high quality fish too, and that this should be promoted in the region. Related to this, the consultant considered that it was important for the Caribbean to establish its own marketing standards as well. Nonetheless, recognizing that market access was critical to fisheries development in the region, it was recommended that marketing should be more consolidated in the structure.

In some concluding remarks offered by the CRFM Secretariat's Executive Director, the Workshop was reminded that the present recommendations would have to be presented to the Caribbean Fisheries Forum and the Ministerial Council for further deliberation and endorsement, in accordance with the roles and responsibilities of these two organs of the CRFM. Additionally, there were other activities ongoing that would also be used to inform any desired process of change. Recalling that the CRFM was established in 2003, an organizational structure had been agreed upon at that time, consistent with the agreed objectives. Hence, it was necessary to re-examine the objectives of the CRFM, so as to inform any decision on change. The Workshop was also reminded that as priorities have arisen, the CRFM has established subsidiary bodies, such as working groups and committees. Hence, while fundamentally, the working group approach was accepted to offer a solid approach, it was noted that these should be set up to address priorities. Additionally, all the functions of the CRFM had to be given consideration. More recent policy documents had emphasized a number of priority areas that were in urgent need of attention, such as: marketing, trade, IUU Fishing, MCS, poverty alleviation, economic empowerment, the welfare of fishers.

Additionally, it was pointed out that several CRFM-supported projects were underway (e.g. Spain funded Project assessing the extent of poverty, CLME Project, ACP Fish II Project among others) that were designed to inform the way forward. In this regard, additional information on CLME activities and countries' obligations regarding promotion of the EAF were reiterated. The issue of resources was therefore a significant issue and would need to be given consideration for planning purposes. It was also pointed out that the CRFM was in its final months of implementing its first strategic plan, and a review of the CRFM had been proposed. In view of the fact that a new strategic plan was to be developed in the near future, this would provide a good opportunity to re-evaluate the CRFM structure, as the structure should be consistent with the overall programs and priorities agreed by the countries. In addition to present, ongoing

initiatives, the Workshop was also reminded of earlier activities and meeting reports on organizational development that would have served as valuable information sources that should have been considered and incorporated into the master plan.

It was also pointed out that consideration of research priorities, and related initiatives, e.g. UWI's effort to develop a research agenda, had not been incorporated into the master plan, and these ought to be an integral part of the plan.

The IC Net Limited Consultant again reminded the Workshop that the present master plan was for small-scale fishers only, and in view of this, was more action-oriented. The issue of fishers' incomes had been given attention because this was central to the success of the proposed master plan.

ITEM 4(b): Detailed Activities of the Master Plan

Presentation summary:

Dr. Terashima and Mr. Udagawa gave an overview of the detailed activities covered in the Master Plan. In this presentation they covered the vision and goals for the Caribbean region-wide fisheries development and management plan; composition of development and management plans; artisanal fisheries resource management and development; assessment of fisheries situations; development of alternative income sources and conclusions and recommendations.

Discussion:

In terms of the finalization of the plan, it was suggested that it should be human centered, with attention being paid to governance; stakeholders and their organizations; micro-financing and other loan arrangements; disaster risk management; etc. Also, it should take into consideration lessons learned in these areas in the region and beyond.

In terms of the use of diagrams in the Chapter, it was pointed out that there was need to ensure that the concepts being promoted are being properly conveyed in the respective diagrams.

In relation to aquaculture, some concern was expressed about its promotion primarily as an alternative means of income for small islands, with mention being made that it involved moving marine fishers having particular skill sets to aquaculture. As such, it was suggested that some thought should be given to involving them in more complementary activities e.g. in tourist sector. The issues of them accessing land and financing were also raised. Furthermore, this focus was considered too narrow and was not consistent with the policy objectives and interest of all states. For example, some States were interested in promoting small-scale aquaculture development for food security, employment generation, or to boost export earnings.

In terms of the management and sustainable development of the reef fisheries, it was noted that the establishment of artificial reefs may not be the most appropriate solution in all cases, so further thought should be given to framing such recommendations. Also, in relation to the existing fishing facilities in some of the Member States, it was pointed out that it may be better to speak about optimizing the use of such facilities, not re-utilisation.

In relation to the recommendation concerning the use of specific types of engines, it was suggested that it may be better to look at overall vessel design and operations and not just engines.

It was noted that the CRFM Working Groups take the multispecies nature of fisheries into consideration as they address management and development. The need for harmonized approaches to data collected was pointed out, especially bearing in mind the shared nature of many of the species being targeted and the need for harmonized conservation and management measures to ensure long-term sustainable use of such resources.

Due to the call for bottom up approaches to fisheries development; involvement of all stakeholders; and inter-sectoral approaches, etc. it was suggested that the EAF should be incorporated in the master plan delivery. The need for careful stakeholder identification and involvement was recognized.

It was suggested that economic evaluation of fisheries versus other sector activities should be undertaken as a means of establishing the importance of the fisheries sector.

The UWI - CERMES representative indicated that they would provide additional written comments, and these are provided in *Appendix 4*.

ITEM 5: Information Sharing by Institutions / Organizations

Food and Agriculture Organisation of the United Nations (FAO / Western Central Atlantic Fishery Commission (WECAFC)

Some major activities of the FAO in the Caribbean Region for 2012

- 14th Session of WECAFC in Panama 6 – 9 February 2012

Items on the Agenda of this meeting are:

- Review of the State of Fisheries and Aquaculture in the region
- Advice from the Fifth Session of the Scientific Advisory Group (SAG)
- Support to the implementation of international guidelines and agreements
- Proposal for amendment of the Rules of Procedure of WECAFC
- Disaster Risk Management in fisheries
- Programme of Work of WECAFC (2012 - 13)

Side meetings at the 14th Session include:

- Project Information Form (PIF) discussion meeting for a GEF project on Climate Change adaptation in Caribbean Fisheries Management. (CARIBSAVE)
- CLME project meeting to discuss Strategic Action Programme contents

Other FAO activities

- Awareness creation / capacity building on the Code of Conduct for Responsible Fisheries among fisherfolk organizations (With CNFO)
- Regional Study on the State of fisheries management in the Caribbean (with CRFM)
- Assessment study on the interface between DRM, CCA and fisheries and aquaculture in the CARICOM region, with a focus on small scale fisheries and aquaculture (with CRFM, CDEMA, CCCCC)

Projects of the FAO

- Barbados – Fisheries infrastructure review and advisory services on fish safety and quality. (ongoing)
- Dominica / St. Lucia – Disaster risk management strategies formulation (including fisheries) (ongoing)
- Belize – legal assistance to fisheries (ongoing)
- Suriname – Aquaculture development planning and aquatic animal health strategy formulation (hard pipeline)

Opportunities for FAO support

- Activities under the WECAFC Programme of Work 2012 -13
- Requests from fishers / fish farmers groups for Telefood projects (10,000 USD projects)
- FAO's Technical Cooperation Programme (TCP) (national and regional level) – Government requests required.

The Organisation of Eastern Caribbean States (OECS)

The overall objective of the OECS sustainable ocean governance (SOG) programme is: to promote OECS maritime cooperation arrangements as a framework for the sustainable management of ocean resources, and for the protection of the marine environment. Programme outcomes will be facilitated by three areas. The one relevant to the Master Plan is: Facilitating the provision of technical services in the area of sustainable ocean resource and marine environmental management. Among the expected programme outputs are technical studies leading to the formulation of a Sustainable Oceans Governance policy and strategy.

In the context of the Master Plan, issues for consideration in the OECS SOG programme would likely include:

- Marine Science and Technology
- Fisheries Conservation and Management
 - Collaboration with regional fisheries-related organisations such as CRFM. In addition, OECS Secretariat collaborates with CERMES in the MarGov and other initiatives as well as being on the steering committee of the CLME project
- Marine Biodiversity
 - The OPAAL project sought to address fisheries livelihoods issues within the context of protected areas and provided support in this regard as part of the livelihoods sub-projects of the OPAAL project
- Protection of the Marine Environment
- Climate change
 - The recently initiated, USAID-funded RRACC project has the scope to incorporate fisheries supportive activities as part of the national initiatives under component 2 of that project
- Capacity building

Priority for the programme includes development of an overarching policy and strengthening of frameworks in support of such a policy; the context for this remains the OECS Fisheries Management and Development Strategy and Action Plan of 2000

Included in the issues that would be considered are:

- Maritime Boundary Delimitation
 - Provision of technical assistance in collaboration with the Commonwealth Secretariat, which is supporting a workshop to be held in Saint Lucia on 8 - 9 February 2012
- Trade and fisheries
 - In particular, fisheries subsidies in the WTO are on the agenda of OECS Brussels and Geneva Missions

The Caribbean Network of Fisherfolk Organizations (CNFO)

The Caribbean Network of Fisherfolk Organizations (CNFO), is a network of fisherfolk organizations located in CRFM Members States and was established in 2007. Its mission is *to improve the quality of life for fisherfolk and develop a sustainable and profitable industry through networking, representation and capacity building.*

Current Activities of the CNFO includes:

- Observers at the CRFM Fisheries Forum
- Participation in the GCFI Fisheries for Fisher Initiative
- Participation in the ACP Fish II Project
- Collaborating with MARGOV project
- Participate in: practice to policy meeting (meeting to be held in SLU looking at CCF and EAF)

The partners of the CNFO are UWI, CANARI, GCFI, CRFM, FAO, UNEP, and Fisheries Divisions / Departments of the region.

The Centre for Resource Management and Environmental Studies (CERMES)

CERMES is a part of the University of the West Indies (UWI), Cave Hill Campus. It promotes and facilitates sustainable development in the Caribbean through:

- graduate education
- applied research
- innovative projects
- professional training
- involvement in national, regional and global initiatives.

CERMES facilitates extensive fisheries research and has a Memorandum of Understanding with CRFM which allows for research documents and technical documents to be shared on an annual basis.

CERMES teaches at the post-graduate level, offering an MSc in Natural Resource and Environmental Management comprising a choice of specialization streams: Coastal and Marine Resource Management; Climate Change; and Water Resources Management. Various MPhil and PhDs are also facilitated.

With regards to outreach / regional projects, CERMES is involved in a large number of projects including:

- Caribbean Large Marine Ecosystem (CLME) project: assisting Caribbean countries to improve the management of their shared living marine resources.
- Sustainable Grenadines: now operating as a sustainable programme after 7 years of research and development funding with the mandate to increase the capacity of civil society in the Grenadines to manage their natural resources.

- Marine Resource Governance in the Eastern Caribbean (MarGov Project); research focusing on understanding governance related to small-scale fisheries and coastal management in the eastern Caribbean mainly through network analysis.
- Research Communication Network (CoMARNet); which encourages sharing of information amongst Caribbean researchers and marine resource management practitioners.
- Socio-economic Monitoring by Caribbean Fishery Authorities (Fisheries SocMon) project; to promote the use of social and economic data in fisheries management
- Capacity building for small coastal communities.

Marine Mammal Medicine and Aquatic Animal Health, University of the West Indies, St. Augustine Campus, Trinidad and Tobago

The Marine Mammal Medicine and Aquatic Animal Health through the Aquaculture / Aquatic Animal Health Unit at the UWI School of Veterinary Medicine (UWI-SVM) is focused on disease diagnosis, treatment and health monitoring of aquatic species (primarily food fish, ornamental fish, marine mammals and sea turtles). The current thrust of the unit is towards training in fish health management and providing for the diagnostic needs of Member States. The Unit has been participating in fisheries related forum/meetings in an effort to ascertain the diagnostic needs of Member States with the objective to tailor diagnostic services and training in aquatic health and disease diagnosis towards the needs of the Member States.

It was noted that the issue of health monitoring was not discussed in the forum, however it is of tremendous importance and needs to be considered especially when there is an increase in the number of facilities / producers managing intensive rearing systems for aquatic species. Food safety issues (fresh products and value added products) should be considered. The health monitoring and management of live animals intended for public consumption is of great importance, especially with regards to health certification of the product.

The recommendation therefore is that the services provided (diagnostic and treatment services of the Aquatic Animal Health Diagnostic Laboratory and the services provided by the Public Health / Food Safety Laboratory at the UWI-SVM) with regards to food safety assurance and animal health certification, are incorporated into the Master Plan.

University of South Florida Sea Grant

Florida Sea Grant, hosted by the University of Florida, is a programme of NOAA and operates a statewide research and extension program through partnerships with local governments, industry and Florida's State University System. Florida Sea Grant programming addresses issues including fisheries science, aquaculture, seafood production and safety, coastal law and policy, marine economics, and marine spatial planning.

The Florida Sea Grant also supports some Caribbean research and outreach activities. For example:

GCFI: where Florida Sea Grant Marine Agent, Mr. LeRoy Creswell, has been involved

- * A large grant was provided by NOAA for a lionfish control programme
- * Facilitated research on the spread of disease in Caribbean Spiny Lobster
- * There is also a visiting scholar from Dominica who will be undertaking research in the Caribbean
- * We are also looking at cooperative agreement for international capacity building and reciprocal professional development training opportunities / research projects of mutual interest or joint project. In February 2012 the CRFM and Florida Sea Grant will undertake a joint project to examine the capability of fisherfolks organizations for fisheries co-management.

Brochure on Programme of activities, available for download from the Florida Sea Grant website (www.flseagrant.org) was distributed to interested parties.

The Caribbean Fisheries Training and Development Institute (CFTDI)

The Caribbean Fisheries Training and Development Institute (CFTDI) is a leading provider of training and development in both seamanship and fisheries technologies for the Caribbean. Administrative offices and the Training Centre are located at Chaguaramas, Trinidad and Tobago. Established in 1974, the institute has served the region for 38 years.

The Institute provides training in all sectors of the fishing industry and includes such courses as Personal Survival Techniques; which exposes fishers and maritime operators to life saving skills Fire Fighting, Boat Mastery and First Aid. Given that a mandatory educational/training component for fishers as a condition for registration is slated to be implemented the CFTDI will be able to facilitate this initiative. Also, the CFTDI established an MOU with Samuel Jackman Prescod Polytechnic in Barbados (SJP) and two cohorts have been trained. The intention was for OECS personnel to be trained at SJP. The CFTDI has had a 10 year Technical Co-operation Project with the Government of Japan in sea food technology / food handling and processing.

Our current focus is:

- Targeting secondary school children in coastal areas (so far the response has been good).
- Working with the National Training Agency in Trinidad and Tobago; to develop occupational standards (already developed for aquaculture).

What is underway?

- We are open to providing online programmes and we are currently seeking personnel to manage this aspect of our development.

Clarification on the capacity for training of trainers from the various islands was sought in addition to the possibility of in country visits from CFTDI staff. It was indicated that this

capacity does exist and the summer programme for Home Economic teachers and fish handlers was given.

Japan International Cooperation Agency (JICA)

JICA has been involved in capacity building and Technical Corporation/assistance in the region (particularly in 6 OECS countries, and using two specialists). This includes work in the areas of quality assurance, fishery product development, and research and fisheries management.

Some specific areas of assistance include:

- Fishing gear and technology
- Improvement of management of fisheries complex donated by ODA
- Frozen fish in SLU; sharing will be done in February at the workshop to share good practice.
- JICA will formulate an action plan on the better management of use of fisheries complexes for each country.
- Antigua and Barbuda's export of live lobster to EU market experience sharing (we are anticipating that fresh fish export to EU will be soon approved)
- Assistance to St. Kitts and Nevis with FADs (good catches of marlins have been observed)
- Assistance provided to Dominica for; ghost fishing research and bio-degradable materials. A squid recipe book was also produced.
- Fisheries Census and improvement of statistical databases
- Conch morphometric analysis being done in Antigua and Barbuda
- JICA is also considering new technical project and expanding services from 6 countries

JICA has a long history of working in the region and would like to share with others in the region some of the good practices that have been learned over the years. During 2012, JICA will convene workshops to facilitate the sharing of these good practices.

Upcoming workshops include:

- CRFM-JICA Regional Workshop on the Promoting the development of good practices for quality assurance and marketing of fish and fish products, 15 - 17 February 2012, Kingstown, St. Vincent and the Grenadines
- 2nd CRFM - JICA Regional Workshop on the Capacity Development of Fisheries Organization for better use of Fisheries Complexes (July - August)
- Fisheries Extension Methodology and Approaches at St. Lucia (February)
- Regional BFTC (Basic Fisherman Training Course) (March)
- Promotion of Catch and Consumption of DBS (Diamond Back Squid) (April)
- Resource Assessment and Export Requirement (May)
- Promotion of Biodegradable Material for Ghost Fishing by Derelict and Lost Fish Pots (June)
- Fresh Tuna Export and Hygiene for Fish Processing Plants (July)

Caribbean Large Marine Ecosystem (CLME) Project

The Caribbean Large Marine Ecosystem project is a Global Environment Fund (GEF) funded project. 25 countries are participating in the project.

The progress of the project to date is as follows:

- A preliminary Transboundary Diagnostic Analysis (TDA) identified three priority transboundary problems that affect the Caribbean Large Marine Ecosystem (CLME): unsustainable exploitation of fish and other living resources, habitat degradation and community modification, and pollution.
- Case Studies and Pilot Projects on specific transboundary fisheries are being undertaken.
- The CRFM has been contracted to implement two of the Case Studies; the Case Study on the Eastern Caribbean Flyingfish Fishery: and the Case Study on Large Pelagic Fishery.
- Advances are being made towards the implementation of the Strategic Plan.

The current focus of the project is the development of a Strategic Action Plan, which will have to be endorsed at the political level in all participating countries, hence the importance of countries establishing National Inter-Sectoral Committees.

Other Partners that have formal agreements with the CRFM

- University of the West Indies
- University of Belize
- University of Florida Sea Grant
- University of Virginia Marine Institute
- IOI, Dalhousie University
- Dominican Republic
- United Nations University – Fisheries Training Programme
- IOC / IOCARIBE
- NACA
- IMA
- EU / ACP Fish II
- Government of Spain
- CTA
- AUSAID ... currently developing an agreement

ITEM 6: CRFM Member States only session

General matters

The Workshop was reminded of the recent change in CRFM administration, and a brief update on a number of upcoming activities was provided. These included:

- The Diagnostic Poverty Study to be completed in the first week of February. Countries were reminded to provide nominations of their representatives.
- The Quality Assurance and Management Workshop to be held by JICA / CRFM in the 3rd week of February
- The Caribbean Fisheries Forum meeting in March hosted by the Government of The Bahamas
- Ministerial Council meeting in April also hosted by the Government of Bahamas
- CRFM / OSPESCA meeting sanctioned by Heads of Government Meeting to be held in April or May in collaboration with the Government of Belize.
- Project Cycle Management workshop funded by the Government of Iceland to be held in May
- Workshop to develop a strategy on climate change and fisheries under a FAO contract
- CLME Flyingfish and Large Pelagic Project workshop
- Project Cycle Management Training Workshop

Attention was brought to the current financial challenges being experienced by the CRFM. In this regard, the importance of Member States contributions was highlighted.

The Workshop was also informed of the consultancies currently in progress under the CLME project: (i) a review of existing policy, legal and institutional arrangements for governance and management of Large Pelagic fisheries and the Flyingfish fisheries; (ii) a stakeholder analysis of these two fisheries, and: a study of the nature and importance of recreational fisheries in the CLME. It was pointed out that the results of the first two consultancies would be presented at a regional workshop.

JICA 'Master Plan' project and report

An enquiry about the time frame for finalizing the Master Plan was made and it was indicated that the IC Net Limited contract ends in early February and therefore the document would have to be finalized by then. It was also clarified that a bridging project proposal was submitted to JICA for consideration.

There was some discussion about the original goal of the aquaculture pilot study. Following considerable discussion, Member States accepted that the Master Plan aquaculture pilot study had limited its focus to exploring approaches involving rural communities that would sell mainly to a local market. In view of this, there was concern about the implications of proposed recommendations in the master plan that did not address the full range of countries' aquaculture development interests. Additionally, it was recommended that instead of viewing aquaculture as an activity which required limited skills and technology, improvements in these areas should be

considered. It was also noted that aquaculture as an activity in terms of economics and food security could be developed with assistance from JICA. It was recommended that research and development for the culture of additional species (e.g. *Macrobrachyium* sp.) need to be considered which would allow other countries to participate in the funding activities. These species should be listed in the Master Plan. In particular, Member States noted that aquaculture development was being promoted for three main reasons: to provide an alternative income source that included consideration of export opportunities; to reduce fishing pressure on the near shore resources; to contribute to food security. The primary interest/goal of aquaculture often varied with the country, being influenced by the current political will at the national level.

Consequently, Member States agreed that the proposed recommendations were too narrow and should be broadened in scope to address multiple aquaculture development objectives. The recommendations should include, but should not be limited to the recently concluded study aims.

Additionally, the Workshop was reminded of the outcomes of the aquaculture planning workshops which included a way forward for each country. It was suggested that the outcomes of the planning workshops should also be included in the Master Plan. The importance of commitment by Member States to these planning activities was highlighted.

Concerns were also raised about the specific mention of use of artificial reefs in the report. Member States varied in their level of acceptance of the benefits of artificial reefs, and hence this should not have been highlighted specifically in the report.

It was agreed that clarification was necessary to determine whether the reefs were to promote tourism activities, or fishing activities, or to reduce fishing pressure on the natural reefs. In addition, the report should not propose artificial reefs in the way it does, as if there were universal acceptance of the approach to resource enhancement and management.

Regarding the statistics component, it was acknowledged that various platforms for database development were presented in the Master Plan; however, details on the regional situation with regard to regional database development and the evolution of CARIFIS were lacking. The importance of examining the challenges associated with these developments was highlighted and considered as necessary to inform the way forward.

The meeting therefore agreed that the limitations of the 'Master Plan' to address the regional database and CARIFIS development should be reflected in the report and the corresponding recommendations.

Member States also reflected on the fact that the base-line surveys were done in a short time frame and this did not allow for full analysis and some of the information included in the documents was dated. The importance of CRFM Secretariat liaising with the counterparts and Member States to plan for and to participate in these missions was highlighted and considered necessary to ensure that future information gathering is done accurately and within an adequate time frame.

The meeting agreed that these lessons should therefore be appreciated and reflected in the report, to inform the planning and implementation of future projects.

Regarding the overall acceptance of the report, the Workshop discussed the use and interpretation of the term Master Plan, as there was some concern that once countries agreed to the document, JICA and other donors may not want to provide funding and technical assistance beyond the scope of the activities recommended in the document. The Meeting was referred to page 4 of the document for clarification on the use of Master Plan in the title.

It was finally agreed that the insertion of a section explaining the scope of this “Master Plan” was necessary. It should clearly explain that this is not a comprehensive Master Plan for fisheries development and management in the region. The new section should clarify the limits of the current proposed Master Plan, i.e. it focuses mainly on sustainable development of smallscale fisheries and aquaculture in rural, coastal communities, operating for local marketing purposes only.

The value of the results obtained particularly from the pilot projects, and effort in preparing the report were acknowledged. Member States, however, remained concerned about the inaccuracy of some information included in the report.

It was agreed that Member States would provide additional feedback and corrections to the CRFM Secretariat by 20 January 2012, and that the CRFM Secretariat would assume responsibility for incorporating all suggested revisions submitted.

The importance of using appropriate terms and correct language was discussed and considered an important part of the reporting process. It was pointed out that diagrams which depict organizational structure should be accurate representations as they were often referred to by policy makers.

It was agreed that the CRFM Secretariat assume responsibility for considering how best to correct those errors and concerns regarding diagrams and organograms that had been raised and discussed during earlier agenda items.

The Workshop agreed on the need to document the level of acceptance of the final report by the CRFM, and it was decided that the relevant statement(s) should be placed in a preamble, as well as the introduction section.

The Workshop noted that the project’s achievements, and hence the resulting Master Plan report should be judged relative to the Scope of Work and aims that were agreed during the Steering Committee meeting held in December 2008.

It was suggested that priority areas, not addressed by the Study to prepare the Master Plan and which need additional attention, should be documented for future projects. *It was agreed that CRFM Secretariat in collaboration with Member States would undertake this task.*

Member States were advised of the 20 year Japanese programme of funding which identified climate change and adaptation measures as priority areas. This information was considered useful for developing project proposals to receive funding. The Meeting was also reminded that CARICOM meets with Japan every two years and representatives at these meetings should therefore be adequately briefed about the relevant fisheries issues with the aim of establishing these as priority needs for support.

It was agreed that the meeting would have the following outputs:

- *Reviewing and editing of the Master Plan document in collaboration with CRFM Secretariat, Member States and IC Net Limited, for the purpose of correcting errors and of reflecting accurately the fact that the current Master Plan focused on specific areas only, and given time and funding constraints, not all fisheries development interests were addressed.*
- *Preparation of a Workshop Report by CRFM Secretariat.*

In terms of the way forward after finalization and submission of the report to JICA, the issue of resource requirements for countries and the absorptive capacity for coping with the outputs and recommendations of the numerous projects was raised and it was suggested that synergies were necessary.

The Workshop was also reminded that an application for future funding had been submitted to JICA. Concern over the process used to develop and submit the proposal was raised and *it was agreed that the approach of sharing information between CRFM Secretariat and Member States should be followed at all times. Participants were informed that the bridging proposal submitted to JICA for funding would be re-circulated to Member States.*

ITEM 7: Closing Remarks

Mr. Masanosuke Sakaki on behalf of JICA, thanked the participants and congratulated the productive discussions and hard field work done on implementation of the pilot project activities. He commented that the officers who provided the technical back-stopping for these projects worked very hard, but the details of the extent of the field work was lost and this was also the first opportunity to hear what other activities were necessary. JICA indicated that the activities initiated should not stop, as JICA desired to continue with activities on the ground (implementation of technical corporation activities to follow up on these projects). Mr. Sakaki requested cooperation from Member States to decide on the activities necessary for follow-ups. Mr. Sakaki thanked the CRFM Secretariat, staff members of the St. Lucia Fisheries Department and CFTDI staff members for organization of the workshop and compilation of documentation / products which was well done. In closing he again reiterated the wish for continued corporation.

The Chairman of the Workshop and the Caribbean Fisheries Forum, Mr. Philmore James, thanked the participants for their cooperation, hard work and persistence in terms of what has been achieved so far bearing in mind that more work needs to be done. He also thanked the participants for cooperating during the meeting (and being patient with him) over the two days of the workshop. He further stated that as the region continued to work together we must remember that whatever is done, it should be in a sustainable way so that we will have fish for the next generation. In closing he challenged the participants to continue collaboration in all efforts in developing fisheries for the future.

The Executive Director of the CRFM Secretariat, Mr. Milton Haughton, thanked the Chairman of the workshop for so ably guiding the meeting. He also thanked the staff of the St. Lucia Fisheries Department, the Permanent Secretary and the Ministry of Agriculture, Food Production, Fisheries and Rural Development, St. Lucia, for the support in organizing and conducting the workshop. The press was also acknowledged and thanked for media coverage of the workshop. Mr. Haughton also thanked the participants and partners who were encouraged to continue collaboration/working together. Mr. Haughton also thanked IC Net Limited for the tremendous amount of work that was done over the past three years, and noted that CRFM was pleased with the results achieved thus far. Mr. Haughton noted that this is the first step and the implementation remains to be done. Finally, Mr. Haughton thanked JICA for its support, funding, responsiveness and technical support, and looks forward to building the relationship for mutual benefits. He also acknowledged JICA's firm commitment to funding the project at this time when development funds are difficult to source.

Appendix 1: Draft Annotated Agenda

DAY 1
16 January 2012

Registration of Participants	8:30a.m. – 9:00a.m.
OPENING CEREMONY	9:00a.m. – 10:00a.m.
C O F F E E B R E A K	10:00a.m. – 10:15a.m.
ITEM 1: Component 1: Pelagic resource development and management	10:15a.m. – 1:15p.m.
<i>The report of the pilot study intended to inform this component of the master plan, titled “Pelagic fishery resource development and management in Dominica and St. Lucia” will be presented for review and discussion. In particular, the Study’s findings and recommendations will be presented by the counterpart staff of each country, with emphasis on sharing and discussion of the lessons learned, and good practices achieved. The relevant documentation for this agenda item is provided in Chapter 4 (section 4.4) and Appendices 3 and 4 of the Draft Final Report.</i>	
L U N C H	1:15p.m. – 2:15p.m.
ITEM 2: Component 2: Aquaculture development policy formulation	2:15p.m. – 4:15p.m.
<i>The report of the pilot study intended to inform this component of the master plan, titled “Low Cost Input Small-scale aquaculture in Belize, Aquaculture Training and Extension in Jamaica” will be presented for review and discussion. In particular, the Study’s findings and recommendations will be presented by the counterpart staff of each country, with emphasis on sharing and discussion of the lessons learned, and good practices achieved. The relevant documentation for this agenda item is provided in Chapter 4 (sections 4.6 and 4.7) of the Draft Final Report.</i>	

C O F F E E B R E A K

4:15p.m. – 4:30p.m.

- ITEM 3: Component 3: Development of Fisheries Statistics systems model for the region** **4:30p.m. – 6:30p.m.**

The report of the pilot study intended to inform this component of the master plan, titled “Fisheries Statistical System Improvement in St. Vincent and Guyana” will be presented for review and discussion. In particular, the Study’s findings and recommendations will be presented by the counterpart staff of each country, with emphasis on sharing and discussion of the lessons learned, and good practices achieved. The relevant documentation for this agenda item is provided in Chapter 4 (section 4.5) of the Draft Final Report.

DAY 2
17 January 2012

- ITEM 4(a): Master Plan on the Sustainable Use of Fisheries Resources for the Coastal Community Development in the Caribbean** **8:30a.m. – 10:30a.m.**

The Regional Framework of the Master Plan and the proposed function of CRFM will be presented for review and discussion. The relevant documentation for this agenda item is provided in Chapters 2, 3 and 5 of the Draft Final Report.

C O F F E E B R E A K

10:30a.m. – 10:45a.m.

- ITEM 4(b): Detailed Activities of the Master Plan** **10:45a.m. – 12:00noon**

The vision and goals of the Fisheries Resource Management and Development Plan are presented for review and discussion, together with detailed plans for proposed activities classified under the following titles: (1) Artisanal Fisheries Resources Management and Development, which expands the work commenced under Component 1 of the master plan formulation study; (2) Assessment of Fisheries Situations, which expands the work commenced under Component 3 of the master plan formulation study, and; (3) Development of Alternative Income Sources, which expands the work completed under Component 2 of the master plan formulation study. The relevant documentation for this agenda item is provided in Chapter 6 of the Draft Final Report.

ITEM 5: Information sharing with other organizations 12:00noon -12:30p.m.

The institutions and organizations participating in the workshop will be asked to provide a brief update on their main activities and interests in respect of sustainable and responsible fisheries development in the CARICOM/CRFM Member States.

LUNCH 12:30p.m. – 1:30p.m.

ITEM 6: CRFM Member States only session 1:30p.m. - 5:00p.m.

ITEM 7: Closing Remarks 5:00p.m. – 5:30p.m.

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Appendix 3: Opening Ceremony Addresses

3(a): Address by the Second Secretary, Embassy of Japan, Trinidad and Tobago, Mr. Tsuyoshi Koga

Thank you Mrs. Sarah George, Madame Chairperson and Chief Fisheries Officer of St. Lucia,
First of all, let me extend courtesies to:

- The Honourable, Mr. Moses Jn Baptiste, Minister of Agriculture, Food Production, Fisheries and Rural Development of St. Lucia.
- Mr. Milton Haughton, Executive Director, CRFM Secretariat
- Mr. Philmore James, Chairman of Caribbean Fisheries Forum
- Distinguished Representatives from CARICOM countries
- Mr. Shunji Sugiyama, Representative of JICA
- Other Distinguished Guests, ladies and gentlemen....

Good morning,

I am honoured to attend and address you at this Opening Ceremony as the representative of the Government of Japan. This project, which started in May 2009, has encountered many difficulties, but through the hard work of many people, they have all been overcome, and we now mark the implementation of the Project with this auspicious ceremony. It is to my great satisfaction that this Project has entered into its final phase after years of international cooperation.

As everyone here knows, the purpose of this Project is to finalise the Master Plan on Sustainable Use of Fisheries Resources, and to create a proposal on future fisheries resource management strategies.

For Caribbean countries, the fisheries industry is an important tool in fostering diversification of national and regional economies, as well as implementing improvements in the livelihoods of those living in the region. In recent years, people have become more health-conscious, and eating fish has gained popularity. As a result, the demand for marine products has steadily increased, resulting in the landing quantity of each country also increasing. With this significant increase in fish catch, also comes great concern about the additional pressure that is put on the coastal resources of this area. Creation of the Master Plan is therefore necessary to provide guidelines to ensure that fisheries resources are utilized sustainably.

Japan, which is surrounded by the sea and ocean, like mostly CARICOM countries, has enjoyed many profits from our marine resources and has greatly developed. In our long history of fisheries, Japan has had a vast amount of experience in practicing coastal resource management in collaboration with local governments and fishing communities. It gives us great pleasure to know that our knowledge and experience can contribute in some way to advancements in the fisheries field of the CARICOM countries.

So far, Japan has provided economic cooperation in the form of providing materials, or hardware, through grant aid for fisheries as a part of Japan's ODA scheme in CARICOM

countries. With reconstruction of the fisheries infrastructure, such as a new jetty, a new fisheries center with cold storage equipment and so on, I believe that the fisheries environment in the area has improved. In its grant schemes, Japan also provides aid in the form of software, or technical support, such as the training and dispatch of experts and JOCV, in order to ensure that the hardware component is used more effectively. This Project is an example of such collaboration.

It is expected that the Master Plan, which will be the finished product of this Project and will be announced at the end of this workshop, will greatly contribute to the economic development of the CARICOM countries through synergy between the hardware and the software. This Master Plan is only the beginning however, merely a step towards a brighter future. It is hoped that each country's government will embrace the Master Plan and create new, innovative strategies tailored to their own country's particular resources and developmental needs.

The success of this Project will surely lead to the further development of good relations between Japan and the CARICOM countries. In September 2010, at the Second Japan-CARICOM Ministerial Level Conference held in Japan, the "Partnership for Peace, Development and Prosperity between Japan and CARICOM (Framework for Japan-CARICOM Cooperation)" was adopted by the attending countries. Moreover, in November 2011, based on this Framework, the Japan-CARICOM Public-Private Joint Economic Mission was dispatched to the Caribbean from Japan in order to create new business ventures in the Caribbean region and to expand economic relations.

I sincerely hope that through constant dialogue and cooperation we can continue to deepen the bilateral relations between Japan and the CARICOM countries.

In closing, I wish to express again my sincerest gratitude to all parties involved in this Project.

Thank you.

3(b): Address by the Executive Director, CRFM Secretariat, Mr. Milton Haughton

1. Madam Chairperson, Mrs. Sarah George, Chief Fisheries Officer
2. Mr. Herbert Emmanuel, Permanent Secretary, Ministry of Agriculture, Food Production, Fisheries and Rural Development
3. Mr. Tsuyoshi Koga, Second Secretary, Embassy of Japan, Trinidad and Tobago
4. Mr. Shunji Sugijama, JICA, Headquarters, Tokyo, Japan
5. Hon. Moses Jn Baptiste, Minister of Agriculture, Food Production, Fisheries and Rural Development, Government of St. Lucia
6. Mr. Philmore James, Chairman of the CRFM Forum and Deputy Chief Fisheries Officer, Antigua and Barbuda

Ladies and Gentlemen:

1. I bring you greetings and well wishes from the Management and Staff of the CRFM Secretariat. I extend a very warm welcome to all of you Chief Fisheries Officers, Directors of Fisheries and Fisheries Officers from the CARICOM and CRFM Member States that came in yesterday. Welcome also to the representatives of our partner organizations including Professor Oxenford from CERMES, UWI, Barbados and Dr. Phillips from UWI, Trinidad and Tobago, Peter A. Murray from OECS, Dr. Sidman from the University of Florida, Dr. van Anrooy, from Food and Agriculture Organization of the United Nations, Ms. Ible and her team from CFTDI, Trinidad and Tobago, Mr. Mitchell Lay, Coordinator of the Caribbean Network of Fisherfolk Organisation, and Ms. Laverne Walker, the newly appointed Senior Scientific Officer, CLME Project, based in Colombia.
2. Thanks to the Government of St. Lucia for agreeing to host this workshop here in Rodney Bay and for generously assisting with the organisation and logistical arrangements. Special thanks to the Permanent Secretary, Chief Fisheries Officer and staff of the Ministry of Agriculture and Fisheries Department.
3. Madam Chairperson please allow me to extend special welcome our partners from Japan, without whom this workshop would not have been possible. I already mentioned Mr. Koga from the Embassy of Japan in Trinidad and Tobago, and Mr. Sugiyama from JICA. In addition we have Mr. Sakaki, Hori, Mikuni, and Mr. Ishida from Japan International Cooperation Agency. I also want to acknowledge the presence of Dr Terashima, Mr. Udagawa, Mr. Fuji and Mr. Nishiyama from IC Net Limited, the Japanese Executing Agency for this Project.
4. Madam Chairperson, I would like to recognize the significant contribution of the Government of Japan and thank them sincerely for their generous support and commitment to this project and indeed to the sustainable development and management of aquaculture and fisheries in the CARICOM countries. The government of Japan committed over US\$3.5 million to improve the contribution of aquaculture and fisheries to the economic development of the CARICOM States by the preparation of a regional master plan.

5. The fact that the Government of Japan is willing, in this difficult economic climate, to contribute so generously to the sustainable development of aquaculture and fisheries in the region is indeed a true reflection of the special bond of friendship and common interests of Japan and the Caribbean.
6. Japan is without a doubt the major contributor of financial and technical assistance for development of the fisheries sector in the region at the bilateral and regional levels.
7. **Let me now provide a little background information on the development of the Master Plan.** In 2000 the CARICOM Governments and Japan signed a partnership agreement entitled “*A New Framework for Japan-CARICOM Cooperation for the Twenty-first Century*”. Under this agreement the Government of Japan provided funding and technical assistance to CARICOM Governments in several areas of economic and social development. These included among others, Trade and Investment, Education and Human resource development, Disaster Risk Reduction, Environment and climate change, Integration in the Global Economy, and Fisheries and Agriculture.
8. It is under this agreement that the Government of Japan is currently providing funding and technical assistance for this development study to prepare a Master Plan for sustainable use of fisheries and aquaculture for coastal community development. The Agreement for the Study was signed on December 15, 2008 by CARICOM, CRFM and JICA after several years of negotiations. The Study commenced in March, 2009, with the appointment by JICA of IC Net Limited as the Japanese Executing Agency for the Study. The CRFM is the counterpart implementing Agency on behalf of the CARICOM States.
9. The overall objectives of the Study are:
 - To formulate a master plan for sustainable use of fisheries and aquaculture in the Caribbean, focusing on small-scale operators in coastal communities; and.
 - To transfer relevant technologies to the CARICOM countries during the course of the Study.These are addressed through five main components:
 - 1) Pelagic resource development and management
 - 2) Aquaculture development
 - 3) Regional fisheries database development
 - 4) Support for community-based management, and
 - 5) Education and Training in the component fields in the CARICOM Countries
10. The Project commenced with the **Inception Mission**, when the Japanese Executing Agency visited the 13 target states to re-confirm the main activities to be undertaken, and finalize the Inception Report.
11. This was followed by a comprehensive **Baseline Survey** of the fisheries sector during the latter half of 2009. Field visits were made to each participating State to obtain data and information relevant to the various components of the Study and to analyse the policy, legal and institutional arrangements for fisheries development and management. Problem

analysis, objective analysis and focused group discussions were conducted. Country reports, sector reports and a long list of potential pilot projects were prepared.

12. The data and information collected during the Inception Mission and baseline survey were used to prepare a **Preliminary Master Plan**, which was reviewed and validated by the First Project Steering Committee Meeting in December 2009.
13. The Steering Committee also agreed on a number of **Pilot Projects** to test the technical and economic feasibility of certain activities identified in the Preliminary Master Plan.
 - Pelagic Fishery (including diamondback squid) Development and Management using Fish Aggregating Device (FAD) in St. Lucia and Dominica.
 - Development of suitable model Fisheries Statistical System in Guyana and St. Vincent and the Grenadines
 - Smallscale aquaculture training in Jamaica and low cost small-scale aquaculture development in Belize. These were implemented in the selected countries during 2010 and 2011.
14. These Pilot projects were elaborated and implemented using an innovative and participatory approach involving all key stakeholders, including in particular, the fishermen and smallscale fish farmers. They eagerly shared their knowledge, and enthusiastically undertook practical field activities working in cooperation with government officials, regional and Japanese experts to collect data and test the technical and economic feasibility of different options. This resulted in tangible benefits to the participating fishermen and fish farmers, such as increased catches of pelagic fishes including the hitherto unutilized diamondback squid, reduced pressure on the nearshore reef species, transfer of knowledge and technology in the construction, deployment, management and maintenance of fish aggregating devices, and aquaculture techniques. It also enable them to explore innovative ways of doing business using new technology, diversifying their activities, applying cooperative, business oriented, and ecologically sustainable approaches to fishing and aquaculture, and improving their earnings.
15. Today and tomorrow we will receive much more information about the results achieved and recommendations arising from the pilot projects, and the proposed activities making up the Master Plan.
16. In September 2010, CARICOM and Japan renewed their partnership when they negotiated and signed the document entitled '*Partnership for Peace, Development and Prosperity between Japan and the Member State of the Caribbean Community (CARICOM)*'.
17. The new agreement will both expand and deepen cooperation in traditional areas and new areas including **Climate Change, Conservation of Biological Diversity, Renewable Energy and Energy-Saving Technology, and Fisheries.**
18. In respect of fisheries CARICOM and Japan agreed that they would maintain close cooperation in the area of sustainable development, conservation and management of the

region's fisheries and marine resources to ensure that they contribute to economic and social development. They also emphasized the need to better understand the impacts of climate change on the fisheries and marine ecosystem, and implement adaptation and mitigation measures to protect food security and the livelihoods of coastal communities of CARICOM Member States.

19. We must, therefore, complete the master plan as a roadmap to guide us in acquiring the resources and technology, and implement the reforms needed to conserve, protect and utilize the fisheries resources under our jurisdiction to ensure we create a brighter and more prosperous future for our children.
20. Indeed the CARICOM States have extensive ocean resources including our Territorial Seas, Exclusive Economic Zones and in some cases Legal Continental Shelf extensions with living and non-living resources that we must develop and use in a responsible manner for economic development. Commercial activities derived from the coastal and marine resources have long contributed to our economies, and the potential exists for significantly increased contributions in the future. The Caribbean Sea and Atlantic Ocean represent for us a vast sea of opportunities. We must rise to the challenge of using and managing these resources for human development. It is indeed an unfortunate reality that too many of our people and leaders in the region are not as acquainted as they should be about the resources and opportunities that are available to us from the Sea and Ocean surrounding us. There is a lot more that we can learn from Japan in this regard. But we here also have the responsibility of improving awareness and understanding of the importance, opportunities and challenges related to the use and management of our ocean resources.
21. In closing, we look forward to not only finalizing and implementing the Master Plan, and developing new collaborative projects towards this end. But also to strengthening the bond of friendship and cooperation between Japan and CARICOM to ensure sustainable development and responsible use of our coastal and ocean resources and indeed, the growth and development our countries.

Thank you very much

14 January 2012.

3(c): Address by the representative of JICA, Mr. Shunji Sugiyama

Mr. Moses Jn Baptise, honorable Minister of Agriculture, Food production, Fisheries, and Rural Development, St. Lucia

Mr. Hubert Emmanuel, Permanent Secretary of the Ministry of Agriculture, Food production, Fisheries, and Rural Development, St. Lucia

Mr. Tsuyoshi Koga, Second Secretary of the Embassy of Japan, Trinidad and Tobago

Mr. Milton Haughton, Executive Director, CRFM Secretariat

Mr. Philmore James, Chairman of the Caribbean Fisheries Forum

Distinguished representatives of CRFM member states;

Ladies and Gentlemen;

It is a great honor for me to provide the opening remarks for this occasion of “CRFM / JICA Master Plan Dissemination Workshop as part of the CRFM/JICA project on the “Study on Formulation of Master Plan on Sustainable Use of Fisheries Resources for Coastal Community Development.

On behalf of the Japan International Cooperation Agency (JICA), I would like to take this opportunity to congratulate CRFM secretariat and its member states for their continued and excellent efforts to support coastal fishing communities for their well-being.

JICA has been working in the Caribbean region to enhance its partnerships with countries through a number of cooperation activities in the fisheries sector, which are ranged from infrastructure development, dispatch of fisheries experts and JOCV/SV, provision of training in Japan and to technical cooperation projects. One of iconic activities in the region was a technical cooperation project started in 1996 at the CFTDI of the Trinidad and Tobacco. This “regional fisheries training project” provided fisheries officers in the region training opportunities in the fields of fishing methods, marine engineering and fish processing.

Ladies and gentlemen

When we look back to the fisheries sector of the 80’s and 90’s, we still have plenty of fish at the sea at that time and we could only think of development: how we can increase the fisheries production, and how we can increase sector’s contribution to the national economy.

However, such development era came to an end shortly and depletion of fisheries resources became an evident in many parts of the world including this Caribbean region. The importance of fisheries sector is now discussed more in the context of national food and nutrition security as well as sustainable livelihoods of fishing communities.

Most of national fisheries agencies are aware of the situation and have shifted their policy emphasis accordingly. If I characterize the fisheries policy of the old days, it can be described as “development driven, Revenue / employment generation oriented, industrial fisheries centered policy with centralized top-down approach”. On the other hand, recently reviewed new policies can be probably termed as “management driven, sustainable fisheries livelihood centered, small-scale fisheries focused policy with decentralized bottom-up approach”.

In general, such shift in fisheries policy is very much welcome; however, to have good fisheries policy and to implement the policies on the ground in an effective and efficient way is a totally different story. In fact, ensuring sustainable supply of fish while effectively managing fisheries resources and aquatic eco-systems is a complex and challenging task that is given to national fisheries agencies.

This has also raised an important question to us at JICA; how can we be responsive in meeting the current needs of the fisheries sector and how can we be effective in providing needed assistance to address the issue.

Ladies and gentlemen

In this development study project, baseline studies were conducted in each CRFM member state, results of which were thoroughly analyzed so as to identify the priority fisheries issues of the region. Based on the information, the draft master plan was formulated in which strategies for sustainable use of fisheries resources were defined. Then a series of pilot activities were conducted in selected states to field-test the validity of the strategies.

We have been monitoring the progress of the project with strong interest because we envisage that the outputs of this project could be very instructive in terms of shaping the future course of JICA's cooperation action in the fisheries sector of the region.

In the next two days, we will go through major contents of the draft final report. During the process, we would like to request all the participants of the workshop to carefully and critically review the document and provide us with your valuable comments. We believe that the report developed in this way will be of high value.

Lastly, we would like to extend our sincere appreciation for CRFM secretariat, staff of the fisheries department St Lucia, staff of CFTDI and those who worked hard in the preparation of the workshop and I wish you all a very productive and useful meeting.

With that, I would like to finish my opening remarks.

Thank you Mrs. Chairperson

3(d): *Address by St. Lucia's Minister of Agriculture, Food Production, Fisheries, and Rural Development, the Honourable Moses Jn Baptiste*

Let me join others in extending a warm welcome to you all on behalf of the Ministry of Agriculture, Food Production, Fisheries and Rural Development. Special welcome to our friends who are here in Saint Lucia for the first time.

I have recently taken up the mantle as Minister with responsibility for Fisheries, it is indeed a pleasure to address so many fisheries experts from our family in the Region and our extended family from Japan. Having grown up in St Lucia, I love the sea and its gifts to us. I also have a profound respect for fisherfolk as they risk their lives each day to venture out into what is often a hostile and unforgiving ocean in order to bring back a healthy source of protein for us to enjoy. Fish remains the number one source of locally produced animal protein in St Lucia with our 2010 landings being just over 1800 metric tons. Fish is therefore critical to national health and also important to the livelihoods of over 2000 local fishers and their families.

Many Caribbean countries depend heavily on the valuable but scarce marine and coastal resources for tourism, fisheries, local recreation and human wellbeing. Our fisheries and marine resources are worthy of conservation. In the face of recent globalization, environmental changes, economic uncertainties and growing pressure on renewable natural resources, the need to sustainably use our coastal and marine assets cannot be over-emphasized. Likewise, concerns regarding over-exploited fisheries resources and unsustainable fishing practices are the order of the day as we all seek to grapple with the current global climate and evolving consumer lifestyles. Yet fisheries continue to be fundamental to food security, rural employment and potential foreign exchange earnings within the Caribbean.

In the case of St Lucia, our heavy reliance on nearshore fisheries in the past and the declining health of our reefs and seagrass beds have led to the depletion of nearshore fisheries resources including jack-fish, lobster, conch and reef fisheries. This has affected our coastal communities that rely on healthy coastal habitats such as reefs, seagrass and mangroves for food and livelihoods. The sustainable use and conservation of marine resources remains of paramount importance if fishing is to continue to provide a key source of rural employment, food security and sovereignty. With this in mind, the Government continues to provide the necessary training and tools to encourage fishers to focus more on offshore fishing areas and resources so they can better target oceanic fish species such as tunas, dolphinfish and wahoo.

Indeed, the fragile environment of small islands like Saint Lucia makes the balance between extractive use and environmental integrity a particular challenge. This has worsened as economies decline and increasing populations demand more goods and services. The management of the fishing industry must continue to provide socio-economic security to vulnerable fishers and dependent communities. A tool to achieve sustainable fisheries is cooperation between fishers, government agencies and civil society in decision-making. Collaborative management of fisheries helps to reduce conflicts, increase commitment to sustainable practices and conservation, and provides the forum for open and continuous dialogue increasing acceptance of each other's part in the process of sustainable development. In St Lucia, the Government seeks to take this sort of approach to natural resource management and as

such has embraced co-management in the establishment and management of marine coastal space through participatory mechanisms such as the Soufriere Marine Management Area (SMMA) and the Point Sable Environment Protection Area (PSEPA) among others.

For many generations, fishers have known that fish gather, often in very large numbers, around floating logs and other drifting objects which in St Lucia are referred to as “bwa”. As you are aware, the Fish Aggregation Device [FAD] works on the basis of this naturally-occurring phenomenon. However the FAD, being anchored in place, allows fishers to return time and again to catch the fish gathered at such locations. FADs, or “Pie-yow” in Japanese, were introduced to St Lucia in the early 1990’s. They have helped fishers reduce their cost of operation by providing specific locations to catch fish rather than the traditional approach where they has to search for birds as a sign of fish, consuming much fuel in the process. The FAD has also reduced the seasonality of our fisheries sector which normally sees a marked drop in fish landings during the July to December period when the pelagic fish species migrate out of the region into the wider Atlantic. FADs have demonstrated that these species can be encouraged to remain in and around the FAD and to attract other large predator species such as marlin and sharks. FAD technology has evolved through the years and will continue to develop in order to make FADs stronger, more affordable, and easier to construct, deploy and maintain. The main goal for the FAD programme is to maintain at least one FAD in waters adjacent to each coastal community in Saint Lucia so they can continue to provide benefits to fishers as a more secure livelihood in support of their families.

Despite the benefits of FADs, their management must play a vital role in guaranteeing a future catch for fishers. We must establish a management system that supports the sustainable financing of FADs and thereby ensure the procurement of materials and deployment of FADs in a timely manner. Such a system must also provide a maintenance schedule for FADs and their quick replacement when damaged or lost. The need for continued research in FAD technologies is also critical so we can achieve a better cost-benefit ratio. An effective system will require fishers and fisher co-operatives to work together with the Fisheries agencies and other interested parties to make the FAD management system a reality.

Another area of particular interest to St Lucia is the as yet un-tapped potential that under-utilized species such as the Diamondback squid offer. We have the potential to benefit from capture of Blue Marlin and other Billfishes and large tunas, but only if these resources can be used sustainably and not overfished by excess fishing capacity and industrialized technologies of regional and third party states. By participating in wise fisheries management, one of our fishers may one day be able to land a large Blue-fin tuna like the one caught in Japan 2 weeks ago and sold at over 700 thousand US dollars.

As a region, we have already made significant strides and in general, we have recognized that sustainable use, improved self-sufficiency and effective management of our marine and coastal resources can only be achieved when the benefits to present and future generations include food security, sovereignty and socio-economic well-being. The patchwork of Exclusive Economic Zones within the Caribbean region dictates cohesiveness in the management of shared fishery resources. In order to show sustainable progress over the long term, countries of the region will need to make a concerted effort to collaborate in the management of the valuable ocean

resources. We must take into consideration, among other factors, the shared nature of these resources, our limited financial, human, technical and technological capacities, and the added strength to be derived from integration and unity. Thus, a joint regional management scheme for migratory pelagic species and shared resources is required to achieve their sustainable use. We are fortunate to have at our disposal the Caribbean Regional Fisheries Mechanism (CRFM) of CARICOM, an entity which was established to provide Member States with the technical support and framework through which such collaborative action can be facilitated. We also acknowledge the assistance over the years of many friendly governments and development partners, including the invaluable technical assistance, training and infrastructural support which has consistently been given to the region by the Government and people of Japan. Japan's maritime history and sensitivity as a fellow island State has engendered a very beneficial partnership over the years, culminating in this very project supported by the Japanese International Cooperation Agency of Japan in collaboration with our very own CRFM.

I am glad to see that in the development of a Master Plan for fisheries, this project has recognized the importance of improving our fisheries data management systems. Fisheries data and information must provide the basis for wise resource management and fisheries development. Recognizing the challenges that the sea presents in terms of effectively assessing available resources and monitoring catch and effort by the fisheries sector, I look forward to the lessons learnt and guidance that this area of focus will generate for our countries through the pilot projects in data management. I also note with pleasure the work that has been done in the area of aquaculture under the pilot phase of the project. Aquaculture, both freshwater and marine, are areas of great interest to St Lucia, particularly given the fall out caused in many of our rural communities due to the loss of the preferential market and other challenges facing the banana sector. We have invested substantially in advancing our cultivation of tilapia and freshwater shrimp, with welcome technical and financial support from Taiwan. We are already seeing benefits from such investments and hope that the outputs of the aquaculture pilots conducted as part of the JICA-CRFM pilots will only assist us further in this regard.

As the Minister responsible for Fisheries, I wish you a very fruitful and constructive meeting and look forward to the further work of this most important project. The Ministry which I serve through its Department of Fisheries and through our active involvement at all levels within the CRFM, will continue its participation and support for sustainable development of the region's fisheries resources and livelihoods.

Ladies and Gentlemen,

I thank you.

Appendix 4: Comments from CERMES, submitted on 24 January 2012

We recognise the extent and value of JICA's substantive contribution to development of the region's small scale fisheries. We offer these constructive criticisms and comments in brief to help improve the draft 'Master Plan'.

1. Document with appendices is overly long (339 pp) rambling and highly repetitive.
2. Numerous language errors and ambiguities should be corrected / clarified throughout.
3. Generally poor graphics, especially organograms and tables.
4. Errors of fact should be corrected (e.g. Caribbean countries do not form continuous island chains, Barbados does have fisher organisations, flyingfish are part of the offshore large pelagics fishery not part of the nearshore fishery, lack of information is not the reason for lack of fishery management plans, "all issues and constraints within fisheries resource management discussed in the previous chapters could be summarized as caused by a decline of reef species" is not true! ...etc)
5. There is inconsistent and limited use of citations for important facts presented. Thorough referencing and bibliography are report requirements.
6. Represents a very good presentation and follow-up of the specific pilot projects but cannot be considered a comprehensive 'Master Plan' for sustainable fisheries across the region even in the areas piloted. Suggest changing title?
7. Need to link the JICA project to relevant preceding and ongoing initiatives, especially in recognizing plans and outputs/recommendations of previous substantial projects, studies, etc. relevant to proposed recommendations given here (e.g. link co-management to initiatives - FACs, CNFO, EAF initiatives, CTA-funded project; link coastal management to poverty study; link regional networking to CLME SAP, OSPESCA; link policy development to ACP Fish II projects; link all to national FMPs, OECS, CRFM plan and CARICOM Common Fisheries Policy; link aquaculture to previous conclusions).
8. Concerned that the FAD pilot project was considered a complete success although evidence is provided that capture of reef fish resources remains the same (indicating that fishing mortality on these resources has not been alleviated). Furthermore, no consideration is being given to the potential ecological impacts of disrupting migration patterns of target species, nor increasing mortality on these species, some of which are internationally recognised as over or fully exploited
9. Major omission – there is no mention or recognition of the ecosystem approach (EBM / EAF) to which the region is already committed (FAO Code of Conduct, CARICOM Common Fisheries Policy, CLME).

10. Little attention given to improving economic valuation of fishery resources and no recognition of the importance and economic value of coastal / nearshore resources to other resource users / sectors which may even be in direct conflict (e.g. recreational fisheries, tourism infrastructure development, watersports / diving industry etc.)
11. Lack of attention to strengthening human capacity regarding fisherfolk organisations, microfinancing etc for loans, insurance etc.
12. Aquaculture ignores previous findings of regional reviews and conclusions regarding the suitability of aquaculture in small islands with limited land and freshwater resources. Focus is on tilapia and there is no consideration of mariculture and native species.
13. Some concern that success and some of the conclusions drawn from the results of diamond back squid project may be overstated – since they appear to be based on a total capture of 35 animals in Dominica and 9 in St Lucia.
14. Concur with the many interventions regarding the proposed working group structure for CRFM – need to rethink the organisation of this section, particularly the graphics: Management and Development of Fisheries is the overarching objective; law and policy should be linked across all; Marketing and Trade is a central theme and should not be fragmented; Monitoring, Control and Surveillance (MCS) should be included.
15. Concur with several useful interventions regarding ‘alternative’ employment for fishers which should be better focussed on capital assets and skill sets of fishers.
16. Concur with the interventions that do not consider that this represents a true ‘Master Plan’ for fisheries development in the region, but is a good summary and follow-up of the pilot projects.
17. Specific recommendations should be emphasised in the text (e.g. italics) and a check made to ensure that each one is incorporated into the final summary.
18. The notion of technical cooperation among developing countries (TCDC) is to be applauded as the primary means of implementation. Explain further.
19. Any suggestion to change the structure and programs of the CRFM must take the CARICOM Common Fisheries Policy more into account to support it.
20. The vision and goals are not appropriate or appropriately worded in all cases.