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

CRFM Secretariat
Belize 2012
CRFM Technical & Advisory Document -
Number 2012 / 1

Promoting the Development of Good Practices for Quality Assurance and Marketing of Fish and Fish Products, 15 – 17 February 2012, St. Vincent and the Grenadines

CRFM Secretariat
Belize 2012
Contents

1. Background ........................................................................................................................................... 1
   1.1 Meeting Objective ............................................................................................................................ 1
   1.2 Scope and Strategies ........................................................................................................................ 1
2. Opening Remarks .................................................................................................................................. 1
3. Case study of good practices in quality assurance and marketing of fish and fish products ............ 4
   3.1 ‘Grenada Tuna Fishery’ ................................................................................................................... 4
       3.1.1 Presentation Summary .......................................................................................................... 4
       3.1.2 Discussion ............................................................................................................................. 4
   3.2 ‘Evolution of Spice Isle Fish House’ ............................................................................................... 5
       3.2.1 Presentation Summary .......................................................................................................... 5
       3.2.2 Discussion ............................................................................................................................. 6
   3.3 “Status of Antigua and Barbuda’s Fishery Export Regime regarding the European Union in 2011” ............................................. ............................................................................................................................................ 8
       3.3.1 Presentation Summary .......................................................................................................... 8
       3.3.2 Discussion ............................................................................................................................. 9
   3.4 “St. Lucia Fish Marketing Corporation Limited, Frozen Fish and Product Development” .......... 10
       3.4.1 Presentation Summary ........................................................................................................ 10
       3.4.2 Discussion ........................................................................................................................... 11
4. Japanese experience of fisheries cooperatives’ business: Consignment, sales and financial services 12
   4.1 “Photographic Introduction to Fisheries Cooperative Associations” ............................................. 12
   4.2 “Major Businesses (Credit, Marketing and Supply) of Fisheries Cooperative Associations in Japan” ...................................................................................................................................................... 13
       4.2.1 Presentation Summary ........................................................................................................ 13
       4.2.2 Discussion ........................................................................................................................... 13
5. Challenges facing the management of fisheries facilities: Experiences in St. Vincent and the Grenadines ........................................................................................................................................... 14
5.1 “Establishing a Sanitary and Phytosanitary System to meet EU Requirements” ......................... 14
  5.1.1 Presentation summary ........................................................................................................ 14
  5.1.2 Discussion ........................................................................................................................ 15
5.2 “Improving the Operational Efficiency of Fisheries Facilities” .................................................... 15
  5.2.1 Presentation Summary ....................................................................................................... 15
  5.2.2 Discussion ........................................................................................................................ 16
6. Useful Tools ................................................................................................................................... 16
  6.1 Cost-Benefit Analysis of Fisheries Centres ................................................................................ 16
    6.1.1 Presentation Summary ..................................................................................................... 16
    6.1.2 Discussion ...................................................................................................................... 16
  6.2 Project Cycle Management ...................................................................................................... 17
    6.2.1 Presentation summary ..................................................................................................... 17
  7. Practices of Stake holder analysis, Problem analysis, Objective analysis, Project design matrix, and Plan of Operation ........................................................................................................... 17
    7.1 Participatory Planning ........................................................................................................... 17
      7.1.1 Case 1: Hygiene practices at the Kingstown Fish Market .............................................. 17
      7.1.2 Case 2: Financial Revitalization of Calliaqua Fisheries Facilities ................................ 18
      7.1.3 Case 3: Project development for under-utilized products at St. Lucia Fish Market Cooperative Limited ................................................................................................................................. 18
    7.2 Discussion ........................................................................................................................... 18
8. Facility Reports ............................................................................................................................. 18
9. Way forward .................................................................................................................................. 19
10. Tasks to be completed .................................................................................................................. 19
    10.1 Discussion ........................................................................................................................... 19
11. Closing Remarks ......................................................................................................................... 20

APPENDIX 1: List of Participants ...................................................................................................... 22

APPENDIX 2a: Grenada Tuna Fishery ................................................................................................. 27
1. **Background**

Quality assurance and marketing are key concerns in satisfying consumer’s needs and increasing the value of fish and fishery products. Japan has cooperated with Eastern Caribbean States in the construction of the fisheries facilities and the development of the capacity of responsible organizations for their management. Good practices in the management of these facilities in specific country case studies have shown the potential for fisheries development, quality assurance and marketing. The participating countries were Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St Vincent and the Grenadines where JICA fisheries experts are presently assigned. As such, JICA in collaboration with the CRFM sought to share these results and develop an action plan and a way forward for the region through this workshop.

1.1 **Meeting Objective**

(i) To exchange information on good practices in quality assurance and marketing of fish and fish products and outline action plans for the effective management of fisheries facilities involved in processing, product development and marketing.

1.2 **Scope and Strategies**

1. The workshop addressed ongoing quality assurance and marketing practices and capacities of the organizations responsible for implementing these practices.
2. The workshop built on the achievements of preceding activities in the region to promote quality assurance and marketing of fish and fish products.
3. Taking into consideration differences in culture, customs and traditions, business models from other regions were examined to see if and how they could be applied.
4. Limited financial and human resources are common problems among countries in the region, and it is a fair assumption that these problems would persist. Therefore, the workshop focused on approaches that could be implemented in situations of limited budget and man-power.

2. **Opening Remarks**

Chief Fisheries Officer of St. Vincent and the Grenadines, Mr. Raymond Ryan, opened the workshop by welcoming guests and visitors to St. Vincent and the Grenadines. He acknowledged the strong relationship among Fisheries Departments and Divisions throughout the Organization of Eastern Caribbean States (OECS) and how these relationships have been crucial in the information exchange among fisheries agencies. He highlighted the relationship between the OECS territories and the Government of Japan and offered thanks for the invaluable technical and financial assistance that Japan has provided to the region over the last three decades. Special mention was made to Japanese technical experts that have provided assistance and made sterling contributions within the Caribbean fisheries sector, in particular Mr. Senga and Mr. Fujii. Recognition was given to the CRFM Secretariat for the role of coordinating, implementing and promoting activities to improve the management and development of fisheries within the region. Mr. Milton Haughton, Dr. Susan Singh-Renton and Mr. Terrence Philip were
given special recognition for their contributions to the fisheries sector since the early 1990’s. It was noted that the region has made significant strides in development over the last three decades and has made significant improvements in areas such as the livelihoods of fishers, fishing technology, improved infrastructure and management and conservation of fisheries resources. Mr. Ryan indicated there is still much work to be done as external challenges arise such as the global economic crisis, climate change and stringent trade requirements. He indicated the importance of forums such as the current workshop to facilitate the exchange of knowledge and experiences to chart a way forward to alleviate problems faced in the fisheries sector throughout the region.

Dr. Susan Singh-Renton, newly appointed Deputy Executive Director of CRFM Secretariat, also addressed the workshop and welcomed JICA and the business partners of Japan. She thanked the government of St. Vincent and the Grenadines and the Fisheries Division for their continued support to CRFM and its many partners during workshops. She acknowledged the bilateral relationships between Japan and the OECS and noted the efforts to work at the regional level through CARICOM since 2003. The Meeting was reminded about the JICA / CRFM Formulation of Master Plan for Sustainable Coastal Fisheries Development, which began in 2008 and concluded this year. This plan focused on small-scale operators and was based on close collaboration with private stakeholders and the fisheries managers while considering the various challenges in economic development. The Meeting was informed that it was expected that the lessons learned during the formulation of the Master Plan are implemented and it was pointed out that a follow up phase was planned as it is important to keep up the momentum. Dr. Singh-Renton indicated that CRFM was happy to co-convene the Quality Assurance and Management Workshop and noted that it allowed the lessons learned from the bilateral arrangements between JICA / individual countries to be shared at the regional level. She acknowledged that the CARICOM / JICA / CRFM cooperation was assisting the countries to meet their fisheries management and development goals and noted that the benefits were real. She indicated that CRFM was pleased to partner with JICA in hosting the Master Plan dissemination workshop and as co-conveners of the Quality Assurance and Management workshop. She reminded the participants that it was their responsibility to share lessons learnt on the return home so that the entire fisheries sector could appreciate them. She expressed her wishes for a successful and enjoyable workshop.

Mr. Nariaki Mikuni, Senior Fisheries Expert of JICA then welcomed participants to the workshop and expressed his delight that there were so many people involved who could change the future of the fisheries facilities constructed by Japan. Mr. Mikuni gave a brief history of Japanese cooperatives touching on how Japan has cooperated with the Caribbean Fisheries Division / Departments since the 1990s and that there are many fisheries facilities constructed by Japan. He also noted that JICA experts and many staff who studied in Japan transferred knowledge and technology such as fishing gear, methods and quality assurance to Caribbean Fisheries. It was noted, however, that the fish supply still does not meet the national demand.

Mr. Mikuni indicated he thought the capacity to fully utilize the facilities and those knowledge / technology should be developed and from this, the present workshop was organized to develop the capacity of Fisheries Division / Department and fishermen’s organization responsible for the management of the facilities. He indicated that the approaches to capacity development in this
workshop are good practice sharing and action planning. He also acknowledged that there are several good practices in the Caribbean region. It was pointed out that during this workshop, these good practices will be addressed, and the factors that make them successful and the difficulties encountered when applying it will be discussed. Based on those discussions, action planning will commence. Mr. Mikuni indicated that workshop attendees will acquire planning skills and be expected to formulate and implement specific action plans in their various fields, and that JICA is happy to support each of them as a follow up to this workshop.

He informed the Meeting that new, good practices will be generated from the action plans developed, and another workshop will be organized to share them through which new action plans will be formulated and implemented again. Through such positive cycle, the capacity of Fishery Division / Departments and fishermen’s organization will be developed. He noted that the road ahead is long and ownership and commitment of the individual countries is the most important factor.

In this regards, Mr. Mikuni expressed his appreciation for the participant’s contribution to this workshop in the preparation of the presentations and the information of the fisheries facility in each respective country. He also expressed appreciation to CRFM for working with JICA to formulate this workshop. It was noted that JICA is a bilateral agency and without the help of CRFM’s network it would be difficult to organize this kind of regional workshop. He expressed his hope that the workshop would serve as a “kick-off” to collaboration focusing on capacity development to achieve real goals.

The Former Director of International Affairs with the Department of National Federation of Fisheries, International Co-operative Fisheries Organization (ICFO), Mr. Masaaki Sato, indicated that the expectation of this workshop was for a clear depiction of problems in the fisheries within OECS. He expressed his hope to assist countries in addressing their needs and in shaping the future of their respective fisheries sector development. Mr. Mitsuhiro Ishida of JICA also informed the meeting that many ‘island workshops’ for developing fisheries sectors in the near future in each country were planned. One had already been completed in St. Lucia, two are planned for Dominica, one in Antigua, and one in Grenada. It was noted that this current workshop was a “kick-off” to the subsequent scheduled workshops to continue capacity building in the Fisheries sector.

The newly appointed Executive Director of the CRFM Secretariat, Mr. Milton Haughton, offered his welcome and reminded the meeting of the opportunities presented at the regional and international level for trade and emphasized the importance of this workshop in realizing the benefits associated with trade. Mr. Haughton expressed his pleasure at the consensus to apply the knowledge shared by the various countries.

All workshop attendants then introduced themselves and expressed an overwhelming consensus to learn as much information as possible from this workshop and looked forward to implementing these activities on returning home. Participants were present from; Antigua and Barbuda, Grenada, Dominica, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines; CRFM Secretariat; and JICA. The list is attached as Appendix 1.
Mr. Nariaki Mikuni then closed the opening ceremony by thanking attendants for their attention and involvement in the present workshop.

3. Case study of good practices in quality assurance and marketing of fish and fish products

3.1 ‘Grenada Tuna Fishery’

Mr. Moran Mitchell, Fisheries Officer II (MCS), Grenada Fisheries Division delivered two presentations entitled: “Grenada Tuna Fishery” and “Evolution of Spice Isle Fish House.”

3.1.1 Presentation Summary

The exportation of yellow fin tuna from Grenada began in 1989 and there are currently three fish exporting establishments on the island, of which Spice Isle Fish House is the major buyer and exporter. The yellowfin tuna export trade facilitated the improvement of the fishing fleet, enhanced job creation, generated foreign exchange, boosted quality assurance, improved the livelihoods of fisher, facilitated the desire of locals for fish as a protein source and fostered food security. Presently there are over 1500 persons that benefit directly or indirectly from this trade. The fishing gear suppliers as well as the agents for outboard and inboard marine engines are direct benefactors of this trade as well as the dry dock marinas, which play a vital role in the docking of long liners and benefit tremendously. The presentation is attached as Appendix 2a.

3.1.2 Discussion

Prior to discussion about the presentation, it was indicated that there would be another workshop through JICA hosted in Grenada and that tours or visits of Spice Isle Fish House (SIFH) could be arranged without difficulty.

Clarification was sought by Mr. Milton Haughton (CRFM) on the statistics presented of the production of tuna in Grenada and if the total value of fish exported from SIFH, NSL and SFA were from a seven-year period (2003 - 2010) of total fish catches or from one specific fishery. It was indicated the values presented were specifically for yellowfin tuna. Mr. Chris James (St. Lucia) queried how SIFH was able to get a specific value from the production of fish from each facility, and if operation costs were taken into consideration when determining fishers’ profit. Mr. Moran Mitchell (Grenada) clarified that the fish processors have production values by vessel from which fish were purchased on an annual basis and that accurate and timely data were necessary for accurate record keeping and that the fishers’ were merely breaking even when taking operation costs into consideration. Mr. Ian Horsford (Antigua and Barbuda) made a comment on the global study of cost and earnings and how it is important to note whether the fishers make a significant profit. Representatives from Grenada and Barbados supported this point.

Dr. Lucille Grant (St. Vincent and the Grenadines) queried how Grenada was able to obtain European Union (EU) certification for export yellowfin tuna, which was followed by a similar
query raised by Mr. Terrence Phillips (CRFM) about the level of enforcement of the regulations by the FDA for the North American market. Mr. Moran Mitchell indicated that the American Food and Drug Administration (FDA) visited Grenada and indicated that the establishments needed to be redone according to HACCP requirements. On a revisit by the FDA, the areas in the establishment that were weak were indicated and once these areas were addressed and improved, certification was achieved. In terms of the EU market it was pointed out that Carriacou and Petit Martinique had an established market already in place with the EU and when the new protocols were introduced, this trade was stopped. Grenada then undertook the task of becoming EU certified so as to continue this lucrative market.

Mr. Jerson Badal (St. Lucia) inferred that there is a similar situation in St. Lucia regarding the ownership change of a facility. Discussion continued about Hurricane Ivan and how it was, in some ways, responsible for the destruction of a government run company. It was pointed out that as a government owned industry there is a guaranteed price to fisherman, which is above market price and above international selling price. Mr. Badal inquired how, in Grenada, the fisherman coped with making the transition from government owned facilities to a private company owned facility where the price is not guaranteed. Mr. Mitchell clarified that the government facility had lots of difficulties and the Hurricane was just one small event of many that lead to the change of ownership. It was noted that even though buyers were offering a lesser amount, there was always the option of alternative buyers who were happy to take the fish. Mr. Haughton (CRFM) queried what the current situation was in Grenada, with regards to bait and fuel issues. Mr. Mitchell (Grenada) clarified that fisherman receive a concession for fuel from the government to go on expeditions, however the smaller vessels lose money if daily fishing trips are unsuccessful. He indicated that bait is another issue, alluding that if there is no bait, there is no industry. He noted that smaller vessels in Grenada receive concessions, but they lose ‘interest’ on these concessions because they can’t hold as many tuna, whereas larger vessels have the ability to. It was pointed out that small vessels are an important supplier of yellowfin to the local market as they do not carry ice and this is a requirement for yellow fin tuna destined for the export market.

3.2  ‘Evolution of Spice Isle Fish House’

3.2.1  Presentation Summary

Spice Isle Fish House (SIFH) evolved from the parent fish-exporting facility, Alex Swan, which took over The Grenada Commercial Fisheries Ltd. (GCFL) in 1993. The main product of the company is yellowfin tuna, which is exported to North America and there is a real focus on fish quality. The present facility was constructed by JICA and the company has made internal arrangements to be in strict accordance with the HACCP method and has stringent quality assurance principles that fishers must abide by in order to have their catch purchased. SIFH regulations include: grading the fish upon arrival, cleaning, proper packaging with frozen gel packs and insulated boxes, proper labeling at all critical steps, and shipping. SIFH maintains a strong working relationship with the government as they receive some assistance in the form of concessions from the government and remains a liaison between fishers and government as they will speak to the government on behalf of the fishers and will assist government institutions (e.g. Ice donations). SIFH also has a strong relationship with fisherman as they hold consultative
meetings, advise fishers on their finances, and provide services such as: a landing jetty, ice, water, fuel, an outlet fishing retail shop and boat repairs. One of the main problems encountered is regular maintenance of the jetty as it is available for usage by multiple stakeholders. Other income generation activities of the company include: sales of ice, water, lobster, shrimp, conch, engine parts, fishing gear / accessories, outlet retail shop and engine repair. The presentation is attached as Appendix 2b.

3.2.2 Discussion

Mr. Mikuni (JICA) led the discussion and reminded the meeting that management is very important in addition to training and capacity development for all Fisheries Division staff.

It was noted by Mr. Phillips (CRFM) that the fishers may not be doing as well as the company regarding revenues / incomes and suggested that further studies should be done to determine the fishers’ earnings. He pointed out that just breaking even would not be contributing to improvement in their respective livelihoods. He also indicated that when the government is involved in the business aspects of fisheries, they tend to pay fixed prices, and cannot compete with the middlemen, so the fishers only go to them when there are gluts, etc., which raised the question as to whether governments should be involved in operating businesses or focusing on policy and regulation. Regarding SIFH, he further asked if their exports were affected by the financial crisis in North America in 2008. Mr. Mitchell (Grenada) pointed out that every year there is a crash on the financial market and when international fleets approach local waters, there is a price drop because of the amount of fish landed. He noted that SIFH would inform the fishers of the drop in price on the international market and would offer a lower price than usual. It then became the fishers’ decision to continue fishing during this period or seek alternative buyers. Mr. Phillips enquired as to whether the EU requirements and the North American requirements for quality assurance and safety were complementary to which Mr. Mitchell indicated that the EU system is very stringent; their standards are higher than the North American system which makes it easier to achieve export to North American markets.

Mr. Badal (St. Lucia) queried as to how SIFH changed from government owned and driven to private sector driven. The issue of when the social / political objectives overpower that of money making and quality assurance was also mentioned. Mr. Mitchell (Grenada) indicated that the manager of SIFH was previously managing a private fish house and was experienced in the business and quality assurance aspects of fish exports, before and after the evolution of SIFH. The problem of when it is a government run operation was discussed and an example of fishers being unable to receive their money when the Minister was away and could not sign the checks was given. This added to the demise of the previous company. GFCL also owed many companies and SIFH paid the outstanding bills to win the bid for the company.

Mr. Mikuni (JICA) interjected that this is a case of Government versus Private sector. He pointed out that the objectives to donate the facilities are for improved social and economic benefits of fishers and increase supply of fish to the local market and are not specifically for the success of one company. He also reminded the meeting that it was not the intention of the government of Japan to lease these facilities to private companies. He pointed out that fisherman cooperatives and government organizations could learn something from this operation. He
added that this company provided additional service to the fishers and thus increased the supply to meet the demand of the local market and increased economic benefits. Mr. Haughton commended Mr. Mitchell for a well-done presentation, however concern was raised that it reflected the company’s opinion regarding their policy and the relationship with the fishers. It was noted that the fishers’ perspectives should have also been shared. Another point of concern was the fact that the government is a major shareholder in the company and an enquiry about the actual percentage was made. The issue of regulation and standards in place (e.g. no purchase from fishers who don’t meet the standards) was discussed and the importance of having standards for processing companies was noted. The importance of understanding the role of the government and the framework for the company’s operations were highlighted. A query about the challenges faced by SIFH was also made.

Mr. Mitchell indicated that he could not speak to the percentage owned by the government. In terms of standards and regulations, he indicated that the company did not deviate from these. He also pointed out that a series of workshops were conducted around the island to encourage the use of ice and that larger fishing vessels must be registered and on board specifications met. In terms of species other than yellowfin tuna, it was noted that the purchasing criteria were not as strict. The Bureau of Standards and the Ministry of Health are the agencies responsible for setting national standards and regulations and regular visits are conducted once a month to ensure that national standards are being met. The meeting was also informed that Spice Isle Fish House does not export to the EU, but rather the trading vessels. All fish processing plants are under these regulations, and if deviations from these occur the government could revoke the license or not renew it.

In terms of EU certification, Mr. Ian Horsford (Antigua and Barbuda) raised the point that that the Competent Authority (CA) is responsible to review the facility to ensure that the EU standards are being met. There is a difference between standards and technical regulations. All countries have local standards, In Antigua, for example, there is less efficiency on the exporting side because the fishers determine the price and this reduces the profit for processors. Fish is therefore imported to subsidize. These models need to be weighed against each other for a clearer picture. Mr. Mitchell (Grenada) added that there are three processors, and SIFH always offers $0.50 more to fisherman for their product. Therefore fisherman will always get more from them if they meet the requirements.

It was noted by Mr. Sato (JICA) that SIFH, operates as a cooperative, and is similar to fisheries cooperatives in Japan, and that the ‘bonus’ that is offered to fishers is similar to how dividends in a Japanese cooperative work. He also indicated that depending on the taxation system, the company might be doing better than a cooperative. He also enquired about the total number of fishers in Grenada and the proportion that deals with SIFH as opposed to other processors. He pointed out that all fishers should enjoy the economic benefits, not only those that sell to SIFH. The possibility of exporting additional species was also discussed. Mr. Mitchell (Grenada) replied that if 80% of fishers are involved in the yellowfin tuna fishery, at least 45% sell to SIFH. He also indicated that SIFH is trying to expand their fisherman base and is willing to purchase all types of fish from East Coast by propositioning fishers on the East Coast.
3.3  “Status of Antigua and Barbuda’s Fishery Export Regime regarding the European Union in 2011”

Mr. Ian Horsford, Senior Fisheries Officer / Food Safety Specialist, Antigua Fisheries Division delivered a presentation entitled “Status of Antigua and Barbuda’s Fishery Export Regime regarding the European Union in 2011.”

3.3.1  Presentation Summary

The key to meeting EU requirements for import of fishery products lies in addressing the following four core areas:

**Infrastructure** – from the vessel used for fishing to the vehicle used for distribution, all infrastructures involved in production, processing and distribution must meet EU technical requirements.

**Operating Procedures** – Sanitation Standard Operating Procedures (SSOP), Good Manufacturing Practices (GMP) and Hazard Analysis and Critical Control Point (a preventive-based food safety system) must be in place.

**Human Resource** – the staff of fish processing establishments, markets, etc. as well as the Competent Authority must have the required training and necessary resources; the Competent Authority is responsible for verifying that any product exported from third countries (countries outside the EU) is in compliance with EU food law.

**Legislation** – legislation of exporting country must be at least equivalent to the EU and the Competent Authority must have the necessary legislative authority to control exports.

By addressing the fore-mentioned, Antigua and Barbuda was able to be included in the list of third countries for which the import of fishery products is authorised. The passage of EC Regulation 1005 / 2008 on Illegal, Unreported and Unregulated (IUU) Fishing now adds a "sustainability" criteria to the food safety and quality assurance technical requirements for imports. This regulation which took effect from 1 January 2010 requires all seafood entering the EU to be certified as having been caught legally and provisions are in place for the EU to adopt retaliation measures against States and vessels involved in IUU fishing. The presentation is attached as Appendix 3.

The following supporting documents were also made available electronically to participants: Standard Procedural Manual for the Safe Handling of Live Lobsters in Antigua and Barbuda and Procedural Manual for the Approval and Assessment of Live Lobster Exporters in Antigua and Barbuda (http://www.fisheries.gov.ag/information/publications/pdf/Standard_Procedural_Manual_for_Live_Lobster.pdf). It was noted that these documents were prepared in 1998 and are due to be updated.
3.3.2 Discussion

Mr. Phillips (CRFM) opened the discussion by commenting that this was a well-structured presentation and noted that in terms of the EU, one needed to be regularly updating SPS and related regulations when exporting to the Europe, since the EU, as a major importer, are constantly upgrading their standards / requirements. He also pointed out that the region, should seek to develop a core / minimum set of standards in fisheries that would meet the local, tourism market, and export requirements. The meeting was reminded that at a previous CRFM SPS workshop, countries had considered the development of such a single set of standards. The importance of conducting a critical evaluation of all aspects within the fisheries (e.g. vessels, landing sites and processing facilities) in relation to meeting the EU’s SPS requirements was pointed out. It was also indicated that the EU inspectors like to see that the Competent Authority (CA) has a plan to address the issues relating to SPS and that it was being implemented. This way, the CA could also indicate where assistances were needed in meeting the requirements. He mentioned that in situations in which some countries had two CA’s, (e.g. one for fisheries and another for agriculture) it might be more beneficial to have one CA covering both areas. Mr. Horsford (Antigua and Barbuda) indicated that the EU approach is a preemptive one and Mr. Phillips agreed with this and suggested that an evaluation of the current SPS situation in countries should be done. It was agreed that there was a need for such an evaluation. Mr. Horsford also agreed that one CA is the best option and that maintaining two CA’s is quite costly. Concern was also raised about the fact that very few laboratories accredited to do testing due to low demand for services. Mr. Phillips indicated that some tests needed to be done locally, but depending on the regularity needed and type of testing required consideration could be given to collaboration with a regional laboratory.

Mr. Phillips (CRFM) also commented that CARIFORUM is working on an SPS programme under the EU-CARIFORUM Economic Partnership Agreement and that many of the issues (e.g. SPS legislation, monitoring programmes, etc.) being identified seemed to be validating the need for and direction of the programme. It was recognized that while the programme was being developed at a regional level, national stakeholders needed to be involved. Mr. Haughton (CRFM) added that the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) is an important new agency that was established in 2010. Their mandate includes fisheries and regional food safety, but it is still in the developmental stage. The meeting was reminded that countries should ensure that the fisheries sector is included under this mandate and the challenge for specific companies and individual countries laboratories to establish linkages with CAHFSA was noted. The meeting was also reminded about the project looking at Sanitary and Phytosanitary Standards (SPS) and fisheries should get off the ground with this soon. It was noted the recent EU SPS project involved various countries, but some countries benefited more than others and the point was raised that even though facilities exist, the associated benefits may not be realized unless you push the fisheries sector to become compliant with these standards. Mr. Horsford (Antigua and Barbuda) also added that there is a transfer benefits across the board in that if the product is good enough for the EU market, it is good enough for the tourism market. He also suggested Inter-laboratory testing can be used as a short stop. Mr. Haughton (CRFM) commented that legislation is important and it sets the basic framework on which to build. The importance of the documentation system and manuals on all the procedures
was noted. This is a systematic and logical approach that was recognized as one which could assist other countries in moving into the export market.

Mr. Mikuni (JICA) enquired if logbooks were a requirement for the export to the EU and how difficult it was to get fishers to meet this requirement. Mr. Horsford (Antigua and Barbuda) clarified that fisherman are supposed to make returns to the chief fisheries officer, but this is not implemented because within the Fisheries sector, in terms of literacy rates, etc. it is harder to collect this information from the fisherman. There was a consensual agreement with this point and following discussions centered on how to improve this issue. Mr. Patrick Palmer (Antigua and Barbuda) added that there needs to be clarification to the fishers that we don’t need their exact fishing spots just the general areas they are getting their fish from (as it relates to possible contaminated areas such as those associated with Ciguatera). A solution would be if it were possible to put radio tags on each vessel.

Mr. Sato (JICA) queried if the shipment was of live lobsters, and if so, inquired about the mortality rate during transport. It was clarified that the shipment is of live lobsters, and because the distance is short (flying time is approximately 15min) there is not significant mortality and when transferred by boat, the longest trip is 2 hours. In house aquarium or crawls at sea are also used to keep lobsters alive until they are shipped and this represents a “critical control point” regarding water quality, conforming to the HACCP method.

At this point discussion was suspended and a video clip on Hazard Analysis Critical Control Point (HACCP) was shown.

Mr. Ishida (JICA) closed the discussion and commented that HACCP itself is not a huge entity and noted that if Sanitary Standard Operating Procedures (SSOP’s) are already in place, then HACCP can be implemented step by step. The FDA is responsible for checking facilities, and the importer in the USA is responsible for the HACCP in the origin country. Therefore, SSOP’s must be submitted to them. However, the EU is different, as they will come and check the facility. The importance of consistent testing was noted.

3.4 “St. Lucia Fish Marketing Corporation Limited, Frozen Fish and Product Development”

Mr. Jerson Badal, Senior Manager, St. Lucia Fish Marketing Corporation Limited delivered a presentation entitled “St. Lucia Fish Marketing Corporation Limited, Frozen Fish and Product Development.”

3.4.1 Presentation Summary

The St. Lucia Fish Marketing Corporation Limited (SLFMC) was registered in 1984, originally funded through the Canadian International Development Agency (CIDA) and later through the Japanese Government. The main objective of the corporation is: to organize, promote and develop St. Lucia’s fishing industry in the interest of St. Lucian fisherman. There are currently three facilities in operation: Castries Plant, Vieux Fort Plant and Dennery. Problems faced by the SLFMC include: the lack of selection requirements for fish catch, the fierce competition with
vendors, the dumping of undesirables, a guaranteed price system and a faulty payment plan with fishers. Further challenges faced by the SLFMC are the lack of funding for promotion and advertising, the local notion that “frozen fish is bad fish”, imports, quality assurance, inventory management and a lack of technology.

The main focus of the SLFMC has been marketing. Examples include: pairing healthy living with fish consumption, product development (e.g. “The Sustainable Seafood Festival”), and exporting fresh snapper to North America. The local niche Markets exploited by SLFMC include: school canteens, business canteens, households, small restaurants / fast food buyers, walk-in customers and unions (e.g. Nurses). The Corporation offers special perks to maintain relationships with customer including: special discounts on holidays, free delivery service, sample tasting, custom orders, and credit facilities. The presentation is attached as Appendix 4.

3.4.2 Discussion

Mr. Mikuni (JICA) led the discussion and noted that this is a good practice in the face of many problems. He pointed out that the facility achieves JICA’s objectives with regards to fisherman relations, but has many conflicting problems. With regard to purchasing unpopular fish, regional trade should be considered as opposed to international trade (US and EU). The importance of educating the St. Lucian public about the improved quality of fish stored on ice was highlighted. Mr. Phillips (CRFM) commended the presentation and noted that shifting the focus from the production / supply side to one that is more market driven is a positive move when looking at the whole company. It was recommended that the entire company needed to be reviewed to bring it in line with such a direction and a policy shift would be necessary. The policy should serve to provide guidance as to whether the goal of the organization is profit, cost recovery or breaking even. The need for an outline describing the approach to be used was recognized and it was recommended that consultations with all the stakeholders would be necessary to obtain buy-in to the new market driven direction. In terms of value added activities, it was pointed out that the facility and operations may need to be evaluated and some sections modified or extended. It was noted that many market opportunities were available to St. Lucia and these should be explored. Mention was also made of the CSME and the opportunities for marketing in the region, but it was pointed out that this would require good marketing intelligence and knowledge of the species available, seasonality, etc. Mr. Badal (St. Lucia) clarified that this facility was originally intended for the fisherman. Throughout CARICOM, policy makers support the supply side and not demand side of transactions, which makes it difficult for policy decisions to be made because the fishers are content which leads to a lack of incentive to change. Mr. Phillips (CRFM) commented that there should be a policy shift, as it is necessary to know where you want to go and determine the costs associated. At present, fishers may appear to be happy because they are being subsidized. However, if stakeholders are on board and understand the importance and benefits of marketing then the transition may be easier. Mr. Haughton (CRFM) supported this and further added that the clarification of objectives is necessary. Under previous objectives of these facilities, they may have been met in terms of social functions. The need to ensure that competent people are involved in running these facilities was noted. Mention was made of the regions high import food and fish bill and it was pointed out this was a great opportunity to provide fish and satisfy this need with awareness building and marketing efforts. The promotion of fish consumption as a healthy alternative is recognized globally and is also a useful marketing
strategy. Mr. Horsford (Antigua and Barbuda) supported this as well and added that the sustainability approach is the method to move forward. Using sustainability as a grading system has implications for fishers, and sooner or later they may be locked out of a market because of the sustainability issue.

Mr. Mitchell (Grenada) commented that other fisheries facilities in the region are envious of the storage capabilities in St. Lucia. He inquired about issuing of the licenses to import fish when there are storages full of fish that can’t be sold. Mr. Badal (St. Lucia) clarified that the Fisheries Department issues the licenses and the importers house products with a shift in tariff line e.g. Dolphin fillets versus frozen Dolphin. Mr. Mitchell (Grenada) further added that, in terms of public relations, it seems St. Lucia is moving forward, which is very important and he noted the need for stakeholder involvement in order to appreciate the value of yellowfin tuna.

Mr. Lorenzo George (SVG) brought attention to the exorbitant costs and enquired about how close the maintenance personnel were involved. A suggestion was made for a cost analysis of equipment on a monthly basis. The fixed price for fish purchases was another issue as well as storage costs.

These issues were addressed by Mr. Badal (St. Lucia) who noted that the majority of the freezers have separate meters and that, because the facility was donated, the community frequently utilizes the utilities. In terms of storage, it was indicated that selling prices during the year were adjusted (e.g. fresh products are sold differently from frozen fish). He added that consultants were hired to help conserve energy. An example of an improved method of measuring the temperature of the actual fish instead of the air temperature was given, however, this shift requires technology changes, and they are awaiting further results. Mr. Jullan Defoe (Dominica) indicated that the blast freezer at the SLFMC May not be necessary as it requires a lot of energy and the same rapid cooling could be achieved using a cheaper method e.g. ice slurry. Mr. George (St. Vincent and the Grenadines) supported this point.

4. Japanese experience of fisheries cooperatives’ business: Consignment, sales and financial services

Two presentations were made by Mr. Masaaki Sato, entitled “Photographic Introduction to Fisheries Cooperative Associations,” and “Major Businesses (Credit, Marketing and Supply) of Fisheries Cooperative Associations in Japan.”

4.1 “Photographic Introduction to Fisheries Cooperative Associations”

A review of Japan’s fisheries cooperatives, fishing activities and retails services was done through photographs. The presentation is attached as Appendix 5.
4.2 “Major Businesses (Credit, Marketing and Supply) of Fisheries Cooperative Associations in Japan”

4.2.1 Presentation Summary

The presentation focused on an introduction to fisheries cooperative associations of Japan, marketing business, credit business (banking and borrowing services), supply business (bulk purchase and retail sales), fisheries insurance, and issues which need to be considered when transferring Japan’s FAC system to developing countries. The presentation is attached as Appendix 6. A report on the Major Businesses of Fisheries Cooperative Associations in Japan is available at [http://www.caricom-fisheries.com/ComingEvents/tabid/57/Default.aspx](http://www.caricom-fisheries.com/ComingEvents/tabid/57/Default.aspx).

4.2.2 Discussion

Chris James commented that the Caribbean system is basically the same, just at a smaller scale and noted that fishers have inadequate financial resources and it is difficult to deprive them of the necessary means for their livelihood (i.e. fuel or tackle). The issue of money being “tied up” in receivables was also raised. Mr. Sato (JICA) responded that a possible solution is ‘Harvest insurance system’ and ‘aquaculture insurance’. In the fisheries insurance system, the member fisher has to pay a premium and must continue to sell his catch through the cooperative. The cooperative has a record of each individual members yearly income, so if the fishers’ income is lower, they are paid harvest insurance up to a maximum of 80% of net loss from previous yearly income. In the aquaculture insurance system, if there are escapees from seacages, then there is an insurance policy instated to account for losses.

Ian Horsford (Antigua and Barbuda) inquired if the average income of individuals inside the program was higher or lower than those outside the program and if the system could lead to under performance of fishers. Mr. Sato (JICA) responded that those who are insured, on average, are good performing fishers. The high premium they have to pay counteracts the desire to underperform but the ‘moral hazard’ does exist. It was also noted that because the cooperative contributes to community development as a whole, the community holds the cooperative in high regard. The meeting was reminded that the most important function of the cooperative is education and training (through guidance activities).

Terrence Phillips (CRFM) indicated that it was an interesting and informative presentation and agreed that the principles are universal. He noted that Japan was far ahead and within the region it is more supply side oriented and fishers are encouraged to go out and fish e.g. sympathy to fishers is common and credit is given even though repayment is not completed. In this scenario, the business is subsidizing the fishers and credit issues need to be addressed. The fact that the cooperatives do not fully understand their operating costs and therefore the real charges are not being realized was raised. The importance of marketing intelligence was highlighted in addition to understanding how the fishery is operating. The need to have a good information system which is based on research about regional and global production was also discussed as well as the need for proper agreements between buyers and sellers. The meeting was reminded that good facilities and quality assurance are also necessary for marketing in addition to the other marketing aspects such as auctions at the facility. It was recommended that cooperatives could
focus on either the marketing aspects or providing services. The difficulty of implementing insurance schemes for the region was noted. Mr. Haughton indicated that there are successful cooperatives and gave the Belize example. He noted that the challenge is with fishers respecting their obligations with regards to credit. The meeting was informed that the cooperatives in Belize were involved in processing and exports, capacity building and at the end of the fishing season the fishers received dividends and bonuses. The lack of transparency in the Caribbean situation was listed as a major issue. The fact that Japan has strong regulations and sanctions while the Caribbean does not was also raised as an issue for review. Mr. Sato agreed that regulations and sanctions developed from the top down do not work and need to be created in collaboration with the fishing community. All countries were in agreement with this point. Mr. Makuni (JICA) added that members within Japan’s FCA’s have fishing rights, and must comply with regulations or they lose their rights.

5. Challenges facing the management of fisheries facilities: Experiences in St. Vincent and the Grenadines

5.1 “Establishing a Sanitary and Phytosanitary System to meet EU Requirements”

Dr. Lucille Grant, Fisheries Officer-Quality Assurance and Product Development, Fisheries Division, St. Vincent and the Grenadines delivered a presentation entitled, “Establishing a Sanitary and Phytosanitary System to meet EU Requirements.”

5.1.1 Presentation summary

A brief history of the EU inspection was given: there were two, one in 2000 and the other in 2008. The 2008 mission concluded that although the control system developed with regard to fishery products was developed, the effectiveness could not be evaluated as it wasn’t being implemented at the time of the mission and three recommendations were made: The CA should ensure:

1. “that the training of all staff involved in signing of the export certificates and performing official controls in relation to the Community fishery product export requirements is further enhanced in order to ensure adequate knowledge”
2. “that a programme based on the HACCP principles in accordance with Article 5 of Regulation 852/2004 is in place, implemented and maintained at the establishments”
3. “that standards equivalent to those laid down in Regulation (EC) No. 852/2004 are implemented and controls should be established in this respect”

In response to these recommendations, an action plan was developed and in 2009 the CA made a request through TradeCom Facility for assistance with implementing necessary corrective actions. Three consultancies which looked at official controls, laboratory, and establishments were completed in 2010 and since then, the CA has commenced the evaluation and implementation of recommended tasks. The identified pending issues and the way forward included: updating the legislation; building lab capacity; continued enforcement of legislations and official procedures; plan a national strategy to address IUU requirements; obtain JICA
technical assistance during the next five months to guide two lobster facilities towards EU compliance.

The case study of improvements in quality assurance and management at the National Fisheries Marketing Limited was also presented. Notable upgrades at the facility included: concrete landing facilities; ice machines and cold storage; unidirectional product flow; and fitted ice holds for vending. Training sessions in good practices are also held regularly for market personnel. The presentation is attached as Appendix 7.

5.1.2 Discussion

Mr. Horsford (Antigua and Barbuda) queried about the relationship of the Public Health Department and the Fisheries Division in regards to an agreement of management. Dr. Grant (SVG) commented that public health handed over management easily because of the harsh requirements of the EU. The Fisheries Division was willing to take the challenge and the working relationship between Public Health and the Fisheries Division is strong.

5.2 “Improving the Operational Efficiency of Fisheries Facilities”

Mr. Hyrone Johnson, Fisheries Officer, Fisheries Division, St. Vincent and the Grenadines delivered a presentation entitled: “Improving the Operational Efficiency of Fisheries Facilities”

5.2.1 Presentation Summary

Calliaqua is the most southern landing site located on St. Vincent and the Grenadines out of a total of nine facilities. The Calliaqua Fisheries Centre was completed in 1997 through a Japanese Grant Aid Programme. The facilities and services include: jetty; lockers; ice making machines; cold storage; toilet and shower; a fuel depot which isn’t currently functioning; and a retail market. The centre was leased to the Calliaqua Fisherfolk Cooperation (CALFICO) in 2004. In running the centre, CALFICO has experienced many problems including: financial difficulties; poor hygiene standards; and accountability issues. A committee as recommended by the Fisheries Division, was put in place to address these issues. Short term activities, which were identified for the committee included: assuming control of the facility for six months; developing a management team; establishing an appropriate accounting system; and reconnection of the utilities. The long term activities, which were identified included: construction of additional lockers; re-establishment of the fuel depot; and construction of a fish cleaning area. Cost cutting measures such reducing energy use and using sea water where possible instead of tap water were also identified.

The challenges have included; fishers being reluctant to pay for use of the facilities and inadequate participation in management; lack of funding; and old / poorly maintained machinery. The proposed expenditures total $6680 EC, while the proposed income total is $6300 per month. However, the actual income and expenditure statement for the July - December 2011 period was $7891.40 and $15,938 respectively resulting in a loss of $8046.95. Training workshops on institutional strengthening, capacity building and business management for all the stakeholders
have been identified as a way forward, in addition to formulation and implementation of a management and operational plan. The presentation is attached as Appendix 8.

5.2.2 Discussion

Ms. Petronila Polius (St. Lucia) inquired if safety gear was included in operational costs and also added that fisheries cooperatives needed to take more responsibility when it comes to operational costs instead of depending solely on the Fisheries Division. Mr. Johnson (SVG) clarified that capital costs include safety gear and that it is necessary to have the proper safety gear in place to acquire registration. He also added that there are future plans to revitalize the fuel business. Mr. Horsford (Antigua and Barbuda) commented that it was hard to hear the stories of struggle that were presented and noted that “Political Will” was a reoccurring theme. Implementation was also noted as a problem. Mr. Haughton (CRFM) agreed that there is a fundamental problem and that these models cannot make profit the way they are currently structured. It was reiterated that the stakeholders needed to decide what type of organization they require (service, marketing, etc.). The types of activities that will generate profit are the ones that the cooperatives are involved in such as providing services, credit etc. and clear objectives need to be agreed upon in order to determine the appropriate operational plans. Mr. Sato (JICA) supported this point. Mr. Chris James (St. Lucia) left a final comment that the Japanese facilities are good facilities, but fishers in the Caribbean do not fully utilize the facilities and therefore more consultations are required. Mr. Johnson (SVG) supported this point.

6. Useful Tools

6.1 Cost-Benefit Analysis of Fisheries Centres

Mr. Kei Kusaka, a JOCV stationed in Owia, St. Vincent and the Grenadines delivered a presentation entitled “Cost-Benefit Analysis of Fisheries Centres.”

6.1.1 Presentation Summary

The most important part of analysis is considering the life span and implicit values (cost and benefit). CBS (Cost Benefit Analysis) is used for project evaluation. Also, it helps in recognizing whether projects make profits or deficits over the life span. Fisheries centers have intangible costs and benefits, in other words, capital costs and social benefits. The costs and benefits are converted to monetary values. Life span of fisheries centers is assumed and future values are converted to present values. The present values of costs and benefits are added up respectively, and they are compared. In this analysis, the total present value of costs was approximately $10,000,000 higher than that of profits. The gap should be filled with tangible profits from new businesses and improvement of current businesses. The presentation is attached as Appendix 9.

6.1.2 Discussion

The presentation was summarized by Mr. Mikuni (JICA) who reminded the meeting that the cost and benefit of the fisheries facilities, most of which are constructed by the foreign aid, are not
usually accounted for in the OECS countries. It was pointed out that although maintenance and refurbishment of facilities account for a large cost, due to public use, the revenue generated generally do not allow recovery. It was indicated that public funding should be used for the facilities and in this way the accountability would be on the taxpayers. The reason given was that the economic and social benefits generated by the facility should be converted to a monetary value and this would allow the taxpayers to understand the real benefits. He added further that the public facilities request cost recovery within their mission, and that a cost benefit analysis can set cost recovery as an objective, which is the first step of action planning.

6.2 Project Cycle Management

Mr. Terrence Phillips of the CRFM Secretariat made a brief presentation entitled: “Project Cycle Management.”

6.2.1 Presentation summary

In preparation for the working group exercise on action planning, Mr. Phillips (CRFM) gave an overview of the Project Cycle Management (PCM) tool. He mentioned that it had been introduced by the IC Net Limited team during the implementation of the recently completed CRFM / JICA Master Plan Study and had been used in the background review field studies, aquaculture development planning workshops and FADs pilot study. In the presentation, he outlined the PCM approach to planning and implementation and covered such aspects as Stakeholder Analysis, Problem Analysis, Objective Analysis, Project Selection, Project Design Matrix (PDM) and Plan of Operation. The presentation is attached as Appendix 10.

7. Practices of Stakeholder analysis, Problem analysis, Objective analysis, Project design matrix, and Plan of Operation

7.1 Participatory Planning

Participants worked through the following three case studies:
Case 1: Hygiene practices at the Kingstown Fish Market
Case 2: Financial Revitalization of Calliaqua Fisheries Facilities
Case 3: Project development for under-utilized products at St. Lucia Fish Market

As a result, Problem analysis, Participatory analysis, Objective Analysis and PCM making were practiced. Participants identified the role of each stakeholder and several outputs that should be undertaken for achieving the objectives stated clearly in each case e.g. Project Goal and / or Core Objective.

7.1.1 Case 1: Hygiene practices at the Kingstown Fish Market

The National Fisheries Marketing Limited (NFML) is one of best facilities in the OECS countries in terms of hygiene standards and working toward export to the EU and USA market. The Project Goal was set as “Development of Adequate Sanitary and Phytosanitary (SPS)
Capability in NFML” and the management and financial issues were focused on achieving this goal. The outputs of the group are attached as Appendix 11a.

7.1.2 Case 2: Financial Revitalization of Calliaqua Fisheries Facilities

Calliaqua Fisheries Facilities provides many services to fishermen. The Project Goal, “Improving the Financial Management of Calliaqua Fisheries Facilities” was identified as one of the key issues for “Financial Revitalization of Calliaqua Fisheries Facilities.” The outputs of the group are attached as Appendix 11b.

7.1.3 Case 3: Project development for under-utilized products at St. Lucia Fish Market Cooperative Limited

The abundance of under-utilized Skip Jack Tuna in St. Lucia was identified as the issue, and the St. Lucia Fish Market Cooperative (SLFMC) was identified as major stakeholder for this case study. The two Project Goals included:
1. “To Increase Sale of Skip-Jack Tuna Year-round”
2. “Product Diversification to Enhance Sale and Viability at SLFMC”

The outputs of the group are attached as Appendix 11c.

7.2 Discussion

Mr. Ishida noted that the focus of the working groups was on both the management and financial aspects of good practices and identifying the issues of importance using the discussions held throughout the workshop, to form the bases of these planning practices.

It was highlighted that in order to develop these plans, the following points should be considered:
1. Further discussion with stakeholders
2. Forming a list of necessary inputs and activities for each desired output, which should then be reviewed by the stakeholders.
3. Involvement of fisheries officers with all main stakeholders, especially with the monitoring and evaluation of each step, under the observation and direction of the Department of Fisheries and/or Fisheries Division.

8. Facility Reports

Facility reports were also provided by the following countries:

Dominica: Newton Fisheries Cooperative (Appendix 12)

Grenada: Gouyave Fish Market and Grenville Fish Market (Appendices 13a and 13b)

Nevis: Nevis Fisheries Complex (Appendix 14)
St. Lucia- Choiseul Fisherman’s Cooperative and Anse La Raye Fishing Port (*Appendices 15a and 15b*).

9. **Way forward**

The following activities were discussed and agreed upon for the formulation of Action Plans:

1. **Description of situation**: Stakeholder analysis (Problem analysis, Objective analysis, Project design matrix) followed by an overall goal, project objectives, output and finally activities

2. **Plan of Operation** (break down of activities/tasks, discuss indicators to monitor progress and create a deadline)

3. **Country workshop** to share the output of the workshop and the draft action plan

4. **Finalizing and authorizing** the action plan

5. **Implementing** the action plan

6. **Regional workshop** to share the good practices generated from the actions

10. **Tasks to be completed**

The following tasks to be completed were agreed upon by the participants:

1. **Schedule** for the formation of Action Plan

2. **Network** for the promotion of action plan and good practices

3. **Report** on the Workshop

4. **Share** output of workshop on CRFM website

Mr. Mikuni reminded the Meeting that commitment of the countries to complete and implement the Action Plans were the most critical steps in developing the fisheries sector. He also thanked the participants for their involvement and acknowledged it as a sign of their commitment.

10.1 **Discussion**

Dr. Singh-Renton (CRFM) reiterated that the purpose of the exchanges and sharing of the case studies throughout the workshop has led to some level of achievements in the marketing field and lessons were also learned along the way. The challenges that remain were noted, but it was pointed out that the aim is to continue to strengthen the skills within countries so as to keep
moving forward to the next step. She asked attendants to consider a schedule to develop an Action Plan, and elaborated on the explanations already provided by Mr. Mikuni concerning the Action Plans required. The Workshop agreed that it was important that the Action Plan was realistic and hence achievable and that goals needed to be set that were practical / attainable / realistic with the available resources. Participants were also reminded that Mr. Mikuni and Mr. Ishida would continue to be available for a few months to assist countries with the development of their respective Action Plans.

Mr. Mitchell (Grenada) commented that, in terms of government control, strong and precise recommendations to the agencies responsible are essential. Mr. Phillips (CRFM) reminded the meeting that action planning at the regional stage needed to be looked at in different levels. These included: national workshops to be held where participants can facilitate the action planning and those decisions that need to be made at a government level can be discussed; and development of individual working groups where examples of case studies could be shared. Mr. Haughton (CRFM) clarified that all stakeholders, including the government, need to be identified and engaged in the entire analysis to ensure a cooperative process. Based on the discussions of this workshop, it has been identified that 'personal problems' regarding skills and competency are a common theme. It was noted that strong leadership is critical, and will be a key tool in mobilizing resources through the government.

Mr. Mikuni (JICA) added to the discussion that this approach is bottom up at a political level. Since JICA representatives do not currently have the channel to the respective policy makers, a possible outcome of the encompassing island workshops will be to set up the necessary meetings between policy makers and technocrats. Dr. Singh-Renton (CRFM) elaborated that, depending on the country; there is flexibility when it comes to involving policy makers. The engagement of government was emphasized especially in dealing with issues at an international level. A conclusion was drawn that information sharing and training opportunities as a cooperative effort between countries needs to be continued following the conclusion of the workshop.

The workshop was reminded by Mr. Ishida (JICA) that Island workshops will be held, and time limits are flexible. It was indicated that JICA is willing to hold multiple workshops in areas of interest and welcomes communication and ideas for future workshops.

Dr. Singh-Renton and Mr. Haughton from CRFM further acknowledged the availability of JICA’s representatives and encouraged representatives to take advantage of this resource. It was reiterated that countries are expected to produce specific Action Plans, which have the potential to lead to further development. Once drafted, Action Plans should be available for sharing amongst countries.

11. Closing Remarks

Milton Haughton (CRFM) closed the workshop by thanking the JICA representatives and the government of Japan. He noted that there have been significant improvements in the fisheries sector at the national and regional levels and hopes to continue these cooperative projects. He acknowledged that the current workshop issues are important within the fisheries sector and that policy makers and stakeholders will both benefit. It was recognized that if progress is made with
respect to international export markets and quality control, the prospective outcomes will lead to significant improvement in fisheries organizations and increase the incomes of fishers. The numerous multiple opportunities for improvement across the region with respect to quality and trade were noted.

Mr. Haughton acknowledged the support and knowledge exchange of both JICA and the Caribbean representatives. Acknowledgement was also given to the presenters of the individual case studies. The idea of sharing this information with respective Ministers during council meetings as topics of interest within the fisheries sector was raised and it was suggested that case studies, such as those presented during this workshop, would be useful to share with Ministers as this would sensitize them to the reoccurring fisheries sector issues and encourage support. Mr. Haughton left a final remark that the future within the Caribbean fisheries Sector is one to look forward to.
APPENDIX 1: List of Participants

**Antigua and Barbuda**

Ian HORSFORD  
Senior Fisheries Officer / Food Safety Specialist  
Fisheries Division  
Point Wharf Fisheries Complex  
Lower North Street  
St. John’s  
Antigua  
Tel:  268-462-1372  
Fax:  268-462-1372  
Email: fisheriesantigua@gmail.com, ihorsford@gmail.com

Wayde BURTON  
Fisheries Manager  
Barbuda Fisheries  
Codrington Village  
Barbuda  
Tel.:  268-720-6171  
Fax:  268-460-0410  
Email: duevaughn@yahoo.com

Patrick PALMER  
Processing Plan Foreman  
Fisheries Division Processing Plant  
Point Wharf  
St. John’s  
Antigua  
Tel:  268-462-1372  
Fax:  268-462-1372  
Email: silversnail69@hotmail.com

**Dominica**

Jullan DEFOE  
Fisheries Liaison Officer  
Fisheries Division  
Roseau Fisheries Complex Building  
Dame M.E. Charles Blvd.  
Bay Front, Roseau  
Dominica  
Tel:  767-448-0140  
Fax:  767-448-0140  
Email: jullan.defoe@gmail.com

**Grenada**

Hilthia JOHNSON  
Manager  
Newtown Fisheries Co-operative / Roseau Fish Market  
Roseau Fisheries Complex Building  
Dame M.E. Charles Boulevard  
Bay Front, Roseau  
Dominica  
Tel:  767-616-4034  
Email: roseaufishmarket@hotmail.com

Francis CALLISTE  
Fisheries Officer  
Fisheries Division  
Melville Street Fish Complex  
St. George’s  
Grenada  
Tel:  473-440-3814  
Fax:  473-442-7320  
Email: tobex00@hotmail.com

Lisa CHETRAM  
Fisheries Extension Officer  
Fisheries Division  
Melville Street Fish Complex  
St. George’s  
Grenada  
Tel:  473-440-3814  
Fax:  473-405-5677  
Email: lisa.chetram@gmail.com

Moran MITCHELL  
Fisheries Officer II  
Fisheries Division  
Ministerial Complex  
Tanteen  
St. George’s  
Grenada  
Tel:  473-440-2708 / 405-4348  
Fax:  473-440-6613  
Email: MitchellMoran767@gmail.com
St. Kitts and Nevis
Joann DORSETTE
Administrative Assistant
Department of Marine Resources
Bay Road
Basseterre
St. Kitts
St. Kitts and Nevis
Tel.: 869-465-8045
Fax: 869-466-7254
Email: dmrskn@gmail.com

Hazelmay RICHARDS
Assistant Manager
Old Road Fisheries Complex
Old Road
Main Street
St. Kitts
St. Kitts and Nevis
Tel.: 869-465-6793
869-665-8797
Fax: 869-466-7254
Email: hazel00721@hotmail.com

Delisia RICHARDS
Fisheries Extension Officer
Department of Fisheries
Prospect Estate
St. John’s Parish
Nevis
St. Kitts and Nevis
Tel.: 869-469-5521 Ext. 2088/2161
Fax: 869-469-0839
Email: fisheries@nia.gov
delisia.richards@live.com

Melissa ALLEN
Acting Manager
Nevis Fishermen Supply Inc.
Market Street
Charleston
Nevis
St. Kitts and Nevis
Tel.: 869-469-5793
Fax: 869-469-5793
Email: FisheriesComplexNevis@gmail.com

St. Lucia
Petronila POLIUS
Fisheries Extension Officer
Department of Fisheries
Ministry of Agriculture, Food Production,
Fisheries and Rural Development
Sir Stanislaus James Building
Waterfront
Castries
St. Lucia
Tel.: 758-468-4135
Fax: 758-452-3853
E-mail: Petronila.Polius@maff.egov.lc
ppolius@hotmail.com

Christopher CHARLES
President
Choiseul Fishermen’s’ Cooperative Society
Black Bay
Vieux Fort
St. Lucia
Tel.: 758-459-3120
758-720-1364
Fax: 758-459-3120
Email: chris7077@hotmail.com

Jerson BADAL
Senior Manager
St. Lucia Fish Marketing Corporation Ltd.
San Souci
Castries
St. Lucia
Tel.: 758-451-7677
Fax: 758-451-7073
Email: slfmc@candw.lc
St. Vincent and the Grenadines
Jennifer CRUICKSHANK-HOWARD
Senior Fisheries Officer
Fisheries Division
Ministry of Agriculture, Rural Transformation, Forestry and Fisheries
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com
jencruickshankhoward@yahoo.com

Lucille GRANT
Fisheries Officer
Quality Assurance and Product Development
Fisheries Division
Bay Street
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com
lucillesvg@yahoo.com

Hyrone JOHNSON
Fisheries Officer
Fisheries Division
Bay Street
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com

Alisa MARTIN
Fisheries Officer
Fisheries Division
Bay Street
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com
alisamartin@gmail.com

Lorenzo GEORGE
Senior Fisheries Assistant
Fisheries Division
Bay Street
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com

Guenette King
Fisheries Assistant
Fisheries Division
Bay Street
Kingstown
St. Vincent and the Grenadines
Tel:  784-456-2738
Fax:  784-457-2112
Email: fishdiv@vincysurf.com

Japan International Cooperation Agency
Nariaki MIKUNI
Senior Fisheries Expert
Latin America and the Caribbean Department
Japan International Cooperation Agency
Nibancho Center Building
5-25 Niban-cho
Chiyoda-ku
Tokyo 102-8012
Japan
Tel:  81-3-5226-8563
Fax:  81-3-5226-6361
Email: Mikuni.Nariaki@jica.go.jp
Masaaki SATO  
Former Director  
International Affairs Department  
National Federation of Fisheries  
Co-operation Associations and Former Secretary  
ICFO, ICA  
972-75 Higashi – Fukai  
Nagareyama-Shi  
Chiba-Ken  
Japan  
Tel.:  81-04-7103-8728  
Fax:  81-04-7103-8728  
Email: m.sato-1948@nifty.com

Mitsuhiro ISHIDA  
Japan International Cooperation Agency  
c/o Fisheries Division  
Antigua and Barbuda  
Email: paramichan@gmail.com

Kei KUSAKA  
JOCV  
JICA  
Owia  
St. Vincent and the Grenadines  
Tel.:  784-495-3905  
Email: kei.kusaka@gmail.com

CRFM SECRETARIAT  
Milton HAUGHTON  
Executive Director  
CRFM Secretariat  
Princess Margaret Drive  
Belize City  
Belize  
Tel:  501-223-4443  
Fax:  501-223-4446  
Email: haughton@caricom-fisheries.com

Susan SINGH-RENTON  
Deputy Executive Director  
CRFM Secretariat  
3rd Floor Corea’s Building  
Halifax Street  
St. Vincent and the Grenadines  
Tel:  784-457-3474  
Fax:  784-457-3475  
E-mail: ssinghrenton@vincysurf.com

Terrence PHILLIPS  
Programme Manager  
Fisheries Management and Development  
CRFM Secretariat  
3rd Floor Corea’s Building  
Halifax Street  
St. Vincent and the Grenadines  
Tel:  784-457-3474  
Fax:  784-457-3475  
Email: terrencephillips@vincysurf.com

Maren HEADLEY  
Research Graduate  
Research and Resource Assessment  
CRFM Secretariat  
3rd Floor Corea’s Building  
Halifax Street  
St. Vincent and the Grenadines  
Tel:  784-457-3474  
Fax:  784-457-3475  
E-mail: marenheadley@vincysurf.com

June MASTERS  
Research Graduate, Information & Statistics  
CRFM Secretariat  
3rd Floor Corea’s Building  
Halifax Street  
St. Vincent and the Grenadines  
Tel:  784-457-3474  
Fax:  784-457-3475  
E-mail: junemasters@vincysurf.com
APPENDIX 2a: Grenada Tuna Fishery

**Fishing Vessels**
Grenada has a fishing fleet of over 700 vessels.

- Over 800 commercial Tuna Long-liners.
- 87 large long-liners (30 – 60 feet) with inboard engines, ice hold and bait well.
- 26 medium-size long-liners (24 – 29 feet) with cabin, outboard motor and bait well.
- 52 small long-liners without cabin, outboard motor and bait well.
- 15 open deck pirogues, outboard motor, and no bait well.

**Examples the Different Types of Tuna Long-liners**

**Fishing Gears**

**MAIN GEAR**
- Surface long-line gear.
Gear Composition

- Mono-filaments plastic line
- High flyer / Beacon lights
- Orange/White Bullet Buoys
- Braided Nylons
- Snap on connectors with swivels
- Aluminum sleeves
- Color beads
- Stainless steel hooks

Fishing Operations

- Set line from 6:00 a.m. - 12:00 noon
- Soak Time: 12 noon to 6:00 pm
- Retrieve line: 6:00 pm until

Fishing Ground

A body of water where the fishing is usually good.
- Best ground for fishing:
  - Where food is abundant
  - Ideal water temperature
  - Water Clarity
  - Inshore and offshore of the continental shelf

Seasonality

- Fishing is conducted all through the year.
- November to June is the peak season for all fishing.
- July to October is the slow period.

Catch

Catch Depends On:
- Availability of bait
- Weather conditions
- Buyers

Species

- Main Species targeted: Yellow Fin Tuna / Thunnus Albacares.
- Other Species targeted: Marlin, Sail Fish, Mahi Mahi, Kingfish, Shark.
**Volume**

- Amount in Quantity – Large or small Amount
- 2,107,602 lbs landed from 2003 – 2010 – EC 68,884,351.46 (By Catch)

**Value in terms of export**

- 5,312,624 lbs – Exported to NA – value at E.C 55,639,913.75 (SIFH) 2003-2010
- 984,555 lbs. E.C.$ 3,004,396.7 (SFA) 2011
- 96,660.00 lbs. E.C$ 1,243,289.51 (NSL) 2011
- 395,354.91 lbs. – Exported to Canada – Valued at E.C 9,826,088.59 (SIFH).
- Total pounds exported: 63,991,840.
- Total Ec. dollars: 69,713,668.55

**Buy Catch**

- The majority of buy catch species are sold on the local market.
- King fish, MahiMahi, & blue marlin are sold to restaurants and supermarkets.
- Sail fish & Shark are sold at the fish markets

**PROBLEMS FACING THE INDUSTRY**

- Reduction of Fishing effort
  - Causes:
    - Unavailability of bait
    - Lack of commitment
    - Unavailability of essential materials (fishing gear)
    - Reduction of fishing space
  - Quality of fish
  - Buyers offer less for fish – glut on international market.
  - Fishermen remain ashore due to reduce fish price
  - Local market starved for fish
  - Supermarkets, hotels, Restaurants suffer
Competition with foreign fishing vessels
- Foreign fishing vessels pay more money for bait
- Imported bait (squid) is too expensive
- Foreign vessels fish in our waters
- Livelihood of fishers are threatened.

How can these problems be solved?
- Government, fishermen, and other stakeholders must have or take a conscious co-management approach to these serious issues and come up with the best available solution.

What is the Yellow Fin Tuna?
- It is a marine fin fish better known as tuna, ahi, slender tail, Alison tuna.
- It is a resource of high value potential.
- It fuels the economies of developing states.
- Support the livelihoods of tens of thousands of people.

Where do they live?
- In the deep ocean waters
- Above and below the thermocline (a thin but distinct layer in a large body of fluid (e.g., water, such as an ocean or lake)
- At temperatures of 65 – 88 degrees Fahrenheit

Where do they come from?
- From all oceans of the world: Both temperate as well as tropical regions except the Mediterranean
Where do they aggregate?
• The Gulf of Mexico
• The Caribbean Sea
• Along continental shelves
• Around FADS in any deployment location

Where do they spawn?
• It is believed that they spawn in Primary spawning grounds in the Atlantic.
• Gulf of Mexico
• Gulf of Guinea

How are they distributed?
• All over the world
• They inhabit the upper and middle layers of the ocean column.
• They roam long distances
• They are found in depth (1600 ft) – 500 m

How do we Know?
Scientist track the distribution pattern by tagging (they can travel 3,100 mile in 90 days)

Physiology and Behaviour
They have:
• A circulatory system
• Respiratory system
• Powerful muscles
• Agile predators
PHYSICAL CHARACTERISTICS

The Yellow Fin Tuna ID:
- It is streamline
- The dorsal side is metallic dark blue
- The ventral side is silvery or whitish
- The Dorsal fin and finlets are bright yellow in colour.
- It has twelve visible external distinct parts

SIZE AND GROWTH

- They vary in size to other tunas
- They grow to maximum size/length ~ 6 ft (190 cm)
- They can weigh up to 388 lbs (176.36 kg) world record 1977

REPRODUCTION AND LONGIVITY

- Yellow fin Tuna lives up to 5-8 years
- Female release 10 million eggs in one spawning season

FISHERY

- It is among the world most valuable commercial species.
- Targeted in over 70 countries worldwide
- It is marketed in fresh, frozen and canned form
- Japan consumed 30% and the USA 31% of the world catch

METHODS OF CATCH

- Surface long line-pole and line- purse seine net-Rod and reel to a lesser extent
- WORLD RECORDS: (Individual landings)
  - 1977 (388 lbs) (992-395 lbs) (1993-399.6 lbs) (-30th Nov. 2010-405.2 lbs) (IGA)

WHAT FOOD DO THEY EAT?

MAINLY FISH:
- Dolphin fish
- Pilchard
- Anchovy
- Flying fish
- Mackerel
- Scads (Jack, robins)
- They also prey on:
  - Cuttlefish-squid-octopus-shrimp-lobsters and crabs
WHO ARE THEIR ENEMIES?

Yellow fin tunas has four natural enemies:
- Bill fishes: sail fish - Blue Marlin
- Mako shark and the great white
- Toothed and false killer whales
- The main enemy and the high rate of tuna mortality is caused by MAN.

CONSERVATION AND MANAGEMENT

ICATT-IATTC-NMFS:
- International Commission for the Conservation of Atlantic Tunas
- Inter-American Tropical Tuna Commission
- National Marine Fisheries Services

THEIR PRIMARY RESPONSIBILITY:
- To set catch quotas
- To operate research and conservation of Atlantic tuna
- To produce the final fishery management plan for Atlantic tunas, sword fish, and sharks

EVOLUTION OF THE TUNA FISHERY IN GRENADE

- Tuna fishing was artisanal in nature:
- Three units of lines were used by fishermen
- Vertical suspension of lines from the bow, mid section and stern of the vessel
- #0 hook, cable, lead, 1/8 braided nylon & single strand mono filament made up the main gear
- The gear was retrieved on a wooden spool
- Wooden double enders sailing boat were used

OTHER ASSISTANCE

Training:
- Fisheries officer and coast guard officers initiated training for fishermen in the following areas:
  - Safety and survival at sea
  - Seamanship and navigation
  - Trouble shooting Outboards motors
  - Fabrication and deployment of the long line gear
  - Radio communication

TECHNICAL ASSISTANCE

- Government secure soft loans for fishermen
- Better and adequate fishing vessels were built
- To purchase marine outboard motors
- To purchase fishing gears and accessories
- The International Foundation for Agricultural development (IFAD) was the funding agency at the time.

INTRODUCTION

This method of fishing was introduced:
- In 1980 by the Cubans to the Grenadians fishermen
- A fleet of 15-18 Cubans long liners were deployed in Grenada
- Fishermen island wide secure their training aboard these vessels
- Trained fishermen introduced this technology to others in the various fishing villages
**BIRTH OF THE LOCAL TUNA INDUSTRY**
- Majority of sailing vessels were phased out
- New and bigger fishing vessel were built
- Business men invested in the industry
- Birth of fishermen groups/Associations and cooperatives
- In 1991 Long line fishing was introduced in Carriacou and Petite Martinique - (Grenada Grenadines)

**FISHING AREA**
- West coast of Grenada (due west)
- North west of Grenada
- North East of Grenada

**INFRASTRUCTURAL DEVELOPMENT**
**JAPANESE TECHNICAL ASSISTANCE:**
- In 1991 a new fish market was built by Japanese in Gouyave
- In 1994 a new fish market was built in Grand Mal
- In 2001 a new fish market was built in Melville Street St. George's
- In 2004 a new fish market was built at Grenville in St. Andrews.
- In 2010 a new fisheries complex was built at Gouyave

**LOCAL FISH MARKETS**
BUYING AGENCY

- GOVERNMENT PLEDGE:
  - To purchase all surplus fish from fishermen
  - Artisanal Fisheries Development Project (AFDP) was the project responsible to fulfill this mandate
  - The project was subsidized by the government of Grenada
  - The project buys, processes and sells fish locally and externally

THE BIRTH OF THE GRENADE COMMERCIAL FISHERIES LIMITED

Their main objective was to do the following:
- To attempt to reverse the trend of the losses
- To measure the progress in operations
- To aid in providing more and better-quality fish
- To aim at upgrading business management and administration
- To dispose of non-profitable activities
- To yield better economic return overall
- To monitor all expenditures
- To take necessary measures

MONOPOLY

The Grenada Commercial Fisheries Ltd was:
- The major buyer of yellow fin tuna on the island
- They control the price to their advantage
- The refused to buy fish without giving adequate notice
- Fishermen remained weeks before they were paid for fish
- Bought large amount of bycatch and stored in freezer room
- Local sale was hindered by high retail price for local consumers

NEW BUYERS EMERGE

Licences were granted to four new buyers:
- They were:
  - Alex Swan - Now Spice Isle Fish House
  - Nordom Seafood Limited (NSL)
  - Southern Fishermen Association (SFA)
  - Caribbean Seafood Limited (CSL)

Cont...

- In 1990 the project received Ec. 500,000.00 from govt. during this period the project experience a net loss of Ec. 258,000.00.
- In 1991 the project received Ec. 215,000.00 from govt. during this period the project experienced a net loss of Ec. 484,000.00.
- In 1992 the project received Ec. 50,000.00 from govt.
- In July 1993 the project was official folded
GOVERNMENT MONOPOLY ON FISH PRICES WERE BROKEN

NEW BUYERS CREATED:

- Competition regarding the best price on the market
- Fishermen bargain with the power of choice
- GCFL received less fish to buy

RESULT OF THE COMPETITION

- GCFL terminated the services of some of its workers
- Reported loss of monies through theft.
- Management salaries were exorbitant.
- Millions of dollars worth of fish was stored in freezer rooms.
- There was no external market available to sell such fish.
- Managers were changed almost every year
- GCFL collapsed after the passage of hurricane Ivan.

What next?

- An investigation was launched into the company.
- The general manager at the time died during the investigation.
- The electricity company threatened to disconnect the facility.
- Government refused to bail out the company.
- The company folded in 2005; all workers sent home.
- The company was advertised for lease.
- The lease of the company was awarded to Alex Swan
- Other fish exporters flourish during this period.
- That's how it ended, and that was the synopsis of the Tuna fishery in Grenada during this period.

THANK YOU!

ANY QUESTIONS??
The evolution of Spice Isle Fish House

Presented by: Marcell Mitchell Fisheries Officer (MCS)
18-27 February 2012
Kingston St. Vincent & The Grenadines

FUNDAMENTAL ISSUES
- The GCFL building was phenomenally strong.
- The lay out of the building was not in accordance with the HACCP protocols.
- There were no proper safety nets to prevent flies and rodents from entering the building.
- Internal adjustments were made but there was no structural interference.

ORGANISATIONAL STRUCTURE
- Has a staff of (24) twenty-four members.
- Manager is head of the company.
- Company has a board of directors who advises the company.
- Sales and marketing manager.
- Company has a well-trained and experienced accountant.
- Company accounts for things properly.
- Experience maintenance manager from the Philippines.
- Every worker job is properly defined.

PRODUCTS AND SALES
- Fish and fisheries products are the main products of the company.
- Quality of fish is the main concern of the company.
- Advertising products to chefs of hotels and restaurants.
- Company maintains that “fish” cannot sell itself.
- Company uses local directory to reach private as well as government institutions, in search for sale.
- Company takes a very close look at cost.
- Company takes frequent inventory.
- Company is very realistic, and will sell fish to meet the poor man’s pocket.
- Company generates huge profits from the sale of fish.

BUSINESS MODEL
- Company establishes its own business model.
- Company maintains its guiding principles.
- Company goal is to purchase as much quality fish for the export market.
- Company ensures that fishermen are satisfied with the company price.
- Company puts fishermen first on its list of priorities.
- Company establishes strict quality assurance principles.
- Company purchase fish from fishing vessels that meets the fisheries regulations requirements.
- Company maintains customer satisfaction.
- Company maintains guidelines in recall procedures.
Purchases:

- The company purchases the best quality fish from fishermen.
- Grade one, two, and three.
- Fishermen must apply the HACCP concepts and principles aboard their vessels.
- All bycatch is purchased by the company.
- Company does not buy fish from vessels who do not carry ice out at sea.
- Company purchases fish everyday of the week except on Sundays.
- Company pays fishermen ($Ec.7.00) for first grade fish, ($Ec.6.25) for second grade, and ($Ec.5.00) for third grade fish.
- Company pays fishermen “one time, same time” for their fish.
- When fish is scarce on the local market the company imports fish from external sources.
- Company purchases all their fish export material from abroad.

Selecting:

- Fish are selected and graded as soon as they arrived in the receiving area.
- The fishermen receives the best price for the best grade fish.
- During the selection process grader will perform an organoleptic test on fish.
- After test is completed company worker immediately places fish in storage compartment where fish is covered with ice.
- The larger size tuna are selected and secure in a special compartment, then covered with ice.

Cleaning:

- Company receive all fish clean and gutted from fishing vessels.
- Fishermen ensure that all fish is clean, bled, and gutted out at sea.
- Company worker will make final check on fish, removing any small portion of vicera from stomach cavity.

Packaging:

- Fish is removed from ice and a final organoleptic and temperature check is performed.
- Each boat identification tag is staple upon fish in case of recall procedures.
- Company personal pack fish inside insulated cardboard boxes which displays company identification markings.
- The chest cavity of the tuna are packed with frozen gel packs in order to maintain freshness, temperature, and quality.
- Tuna are also wrapped in a water proof transparent plastic.
- Insulated boxes are then wrapped with plastic straps so as to keep the box cover intact.
SHIPPING

- The company must secure the space on the airline.
- Unless space is not reserved then shipping cannot be commenced.
- The longer the fish remains in the custody of the company thousand
  off dollars are being lost.
- Company must fulfill its shipping obligations to its buyers.
- In some instances fisheries officer make random check on fish
  before shipment is being commenced.
- Company targets to ship out over 800,000 pounds of fish per year.
- Fish is transported to the airport via insulated refrigerated trucks.
- Fish is flown from Grenada to North America.
- Company signs “MOU” with fishermen/boat owners.
- Company holds individual meetings with boat owners on a regular basis.
- Company is very close and friendly with the fishermen.
- Company watch word to Fishermen is “HONESTY.”
- Company discuss “Price Structure” with fishermen.
- Company advise fishermen regarding their finances.
- Company support fishermen birthday celebrations.
- Company gives a yearly bonus to fishermen.

BUSINESS RELATIONS

- Company signs “MOU” with fishermen/boat owners.
- Company holds individual meetings with boat owners on a regular basis.
- Company is very close and friendly with the fishermen.
- Company watch word to Fishermen is “HONESTY.”
- Company discuss “Price Structure” with fishermen.
- Company advise fishermen regarding their finances.
- Company support fishermen birthday celebrations.
- Company gives a yearly bonus to fishermen.

PROVISION OF SERVICE

- COMPANY PROVIDES THE FOLLOWING SERVICES TO FISHERMEN
  Landing Jetty:
  - The landing jetty was built by the Japanese, and was assigned to
    the company by the government.
  - The jetty is presently used by two exporters.
  - The jetty is also used by the community.
  - The jetty is wide enough to facilitate a fork lift and a small
    motor vehicle.
  - The jetty is a major component of the lease from the
    government.
  - The jetty is seen as part of the company.
  - Company do not show hostility to the community in the usage
    of the jetty.
  - Fishermen off load their catch from the jetty.
  - The jetty is the main avenue for the delivery of fuel and ice to
    fishermen.
  - The jetty is designate as a safe landing site under the HACCP
    protocols.

ICE:

- The ice machine produces 12 metric tons of ice.
- Ice is removed and store in insulated bin.
- Ice is transported via forklift to fishermen vessels.
- Ice is sold at Ec. 20 cents per pound to fishermen.
- An ice blower from the company will have the ability to blow ice directly to the ice hold of the
  fishermen vessels.
- Ice is credited to fishermen.
- Ice is also sold to the community
- Ice is credited to the government fish markets when they are in shortage.

CONFLICTS

- MAJOR CONFLICTS REGARDING THE USE OF THE JETTY:
  - Stakeholder refuses to contribute for the maintenance of
    the jetty.
  - Five ton heavy duty vehicle receives and delivers fish
    and ice on the jetty.
  - Children are allowed to roam freely on the jetty.
  - Dogs defecate on the jetty.
  - The structural integrity of the jetty is questionable.
  - Stake holder fuel line is not properly secure on the jetty.
  - Recreational fishers leave fish remains and blood on the
    jetty.
  - Texaco sets up a fuel line that runs out at the jetty.
  - This is a cause for concern because the standards are not
    internationally acceptable.

OTHER SERVICES
WATER
- Company sells portable water to the fishermen at a reasonable price.
- National Water And Sewage Authority (NAWASA) provides water to the company on a consistent basis.
- Company has two large holding tanks, about 25,000 gallons each.
- Random testing is done from time to time.
- Company pays water rate of EC$7,500.00

FUEL
- Company is in the process to supply fuel to the fishing vessels.
- Company use diesel fuel for its internal use.
- Company sets up three fuel tanks.
- Each tank has a monitoring probe.
- 13,000 gallons of fuel is the maximum amount for the three tanks.
- One fuel tank will serve the fishing vessels.
- The other two tanks will serve the vehicles and the ice machines.
- Company has three generators in case of emergency.
- Company pays electricity bill of EC$28,000.00.

MATERIALS
- Company operates an outer fishing retail shop.
- Company have in stocks all the gears and accessories needed for the long line fleet.
- All other fishing equipment are stored for the same purpose.

MACHINE WORKSHOP
- Experience staff managed this workshop.
- All mechanicals installations and fittings for the company are done by workshop staff.
- Fishermen source parts for their engines at the company retail shop.
- Engines are repaired and service at the work shop.

QUALITY ASSURANCE
- The HACCP plan was developed by officers of the Fisheries Division.
- The company adhere to this plan and all its guiding principles.
- The company follows the protocols of the (SSOP) on a daily basis.
- Heavy metal testing on the company fish is conducted in the USA.
- Water is tested by the Produce Chemist Laboratory. A fee of EC$100.00 is paid for such test.
Company used swabs to conduct Histamine checks.
Company promotes “Quality Assurance” in all its business undertakings.
Company maintain standards in all aspects of quality assurance, and they try not to deviate from these standards.

**EXPORT PERMISSION**
- Licence for export is issued by the Fisheries Division.
- The establishment is constructed and operated in a manner that satisfies the licence requirements.
- The establishment is maintained and operates in a clean and sanitary manner.
- All records regarding operations are maintained and displays accuracy.
- Company records are open to inspection by any authorized officer.
- The company meets the above requirements, and as such a licence was issued to the company granting export permission.

**MARKETING IN THE USA**
- Spice Isle Fish House exports all fish to the United States.
- Market relations with buyers were established since 1996.
- Yellow fin tuna is the main specie exported to the United States.
- From 2003-2010 a total of 5,312,262.40 lbs of (YFT) was exported to the USA, valued at ECS. 55,636,913.75. Almost ECS. 7,000,000 per year.
- From Jan 2011-Sept 2011 (SIFH) exported 411,344.00 lbs of (YFT) valued at EC$4,730,804.12
- USA pays best for yellow fin tuna (Buyers pays $US. 6.00) (5.00)(3.00) depending on the market.

**COLLECTION OF SALES PROCEEDS**
- Apart from exporting yellow fin tuna, (SIFH) generates sales from other avenues.
  They are:
  - Sales of ice.
  - Sales of water.
  - Sales of lobsters, shrimps, conch.
  - Sales of engine spare parts.
  - Sales of fishing gears and accessories.
  - Sales of by catch (Outlet retail shop).
  - Collect revenues for services and repairs to engines.
  - All sales proceeds is used for the payment of staff.
  - Government taxes, and maintenance of the facility.
  - Company realize a gross profit of EC$70,000.00 each month from such sales.

**Maintenance of facility**
- Facility is being maintained by all sales proceeds.
- Company needs to make EC$500,000.00 per year to maintain company properly.
- One time company experience overheads of EC$710,000.00 per month.
- Company fish went via another route, was delayed and company lost ECS 200,000.00.
- Company is safe with their fixed assets and replace old parts as soon as depreciation sets in.
### RELATIONSHIP WITH GOVERNMENT

- Company receives some assistance from Government in the form of Concessions.
- Every year company pays EC$200,000.00 to Government in Cooperate tax.
- Company needs to have more influence in the Government decision making process where fisheries is concerned.
- Company speaks to Government on behalf of the fishermen.
- Company staff and Government officials has a very good working relationship.
- Company assist Government institutions in times of need. (credit of ice-donations of fish-trophies for outstanding persons in the fishing industry).

### THANK YOU!

ANY QUESTIONS?
APPENDIX 3: Status of Antigua and Barbuda’s Fishery Export Regime regarding the European Union in 2011

Status of Antigua and Barbuda’s Fishery Export Regime regarding the European Union in 2011

Prepared by: Ian Horsford (Sr. Fisheries Officer / Food Safety Specialist)
Fisheries Division, Antigua and Barbuda
for JICA-CRFM Workshop: Promoting the Development of Good Practices for Quality Assurance and Marketing of Fish and Fish Products
15-17 February 2012
Fisheries Division Conference Room
Kingstown, St. Vincent and the Grenadines

Structure of the Fisheries Sector

- The fisheries sector of Antigua and Barbuda is small scale in nature.
- In 2010, there were 944 active fishers, which is about 2% of the national labour force. For Barbuda, 1 in every 4 persons are directly dependent on fishing.
- The high energy cost and inadequate access to capital limits the development of the fish processing sector.
- In 2010, capture production was 2,295 metric tons or 5.035 Million lbs and valued at EC$34.7 Million (based on current prices).
- Fisheries sector on average contributes to 50% of the agricultural GDP or 2% of the national GDP (in current prices).

Structure of the Fisheries Sector – Production

In 2010, capture production was 2,295 metric tons or 5.035 Million lbs and valued at EC$34.7 Million (based on current prices).
Fishing Effort and Seafood Demand

- For Antigua, exogenous shocks that negatively impact the tourism sector and the national economy can impact fishing effort and the demand for seafood.
- Spikes in fishing effort tended to coincide with downturns in the tourism sector and ultimately the national economy possibly due to the role of the sector as a economic 'safety net' and the proximity of the country to regional shocks. The tourism industry is an important source of economic stability and construction are the primary alternative occupations for fishers.

Status of Export Sector

- For decades, the French territories in the region have been the main export market due to their close proximity and favourable prices.
- High retail value for seafood due to relatively high cost of production has limited the viability of alternative markets such as the USA and Canada – comparable prices can be obtained from the local tourism sector.
- With the formation of the single European market in January 1993, legislation governing the production of food were harmonised throughout the European Community.

Fishing Effort and Seafood Demand

- Barbados is less reliant on local tourism to drive its economy: the expenditure-driven labour intensive offers the highest per capita earnings.
- Declines in local tourism is less likely to affect fishing effort and demand for seafood. Barbados is more vulnerable to exogenous shocks from their main export market (i.e., the French overseas territories).

Status of Export Sector

- The key to European Food Law is the principle of quality management and process-oriented control throughout the production chain – from fishing vessels to the consumer's table.
- The stringent technical standards, the need for accompanying legislation and infrastructure make the process an arduous task for most developing countries.

Status of Export Sector

- The key to European Food Law is the principle of quality management and process-oriented control throughout the production chain – from fishing vessels to the consumer's table.
- The stringent technical standards, the need for accompanying legislation and infrastructure make the process an arduous task for most developing countries.

Status of Export Sector

- The key to European Food Law is the principle of quality management and process-oriented control throughout the production chain – from fishing vessels to the consumer's table.
Present Status of Export Sector

Antigua and Barbuda presently has “provisional approval” from the European Commission to allow for export of live lobster; originally fresh fish was also included in the Commission Decision.

Grenada is the only other independent OECS Member State eligible to export fishery products to the European Community (within CARICOM: Bahamas, Belize, Guyana, Jamaica and Suriname in addition).

Maintenance of approval for Antigua and Barbuda however, depends on addressing the concerns raised by the Food and Veterinary Office of the European Commission, following an inspection in November 2000.

Ciguatera Fish Poisoning (CFP)

CFP results from the ingestion of certain tropical marine fishes that are contaminated by toxins produced by marine algae known as dinoflagellate. Antigua and Barbuda has a high number of cases.

Present Status of Export Sector

Recommendations made by the inspectors included:
- update of the fisheries legislation to meet the European legal provisions;
- accreditation of the national laboratory;
- refurbishing of deficient landing sites;
- development of systems to monitor and test seafood for environmental contaminants including ciguatera or “fish poisoning” toxins;
- assessment and implementation of HACCP (Hazard Analysis Critical Control Point) system in fish processing establishments. HACCP is a “preventative-based” food safety system.

Present Status of Export Sector

In terms of progress made in addressing these issues:
- Fisheries Division in 2005 sought assistance from FAO with respect to drafting legislation to bring the Fisheries Act (1983) and its regulations, into line with current international best practices. A revised version of the Fisheries Act, Act in force since November 2011.
- Developed a comprehensive programme to address the European inspection concerns. A “final programme” was developed in 2004. The programme includes: a monitoring programme and standards set for the areas where the fishers are allowed to export.
- With the completion of Barbuda Fisheries Complex in 2011, Antigua and Barbuda has 6 of its 32 landing sites in compliance with the European legislation. Pure White Lobster Fisheries Complex currently serves as an export inspection centre.

Present Status of Export Sector

Regarding the assessment and implementation of HACCP system, the Fisheries Division continues to provide technical assistance to fish processors.

The Fisheries Division and the national laboratory are currently exploring the viability of setting the lab standards for seafood export and using accredited “satellite” laboratories in the region when a protocol is established.

A manual for lobster exporters has been developed. This outlines all the necessary records exporters are required to keep as well as provide guidelines with respect to operations. To ensure uniformity and transparency in the assessment of lobster export, a procedure manual was also developed.

Present Status of Export Sector

- Sanitation safety and quality assurance starts at sea with “proper” fish handling practice. Hence a booklet entitled “proper” and fish handling was developed through funding from IFC; this booklet is used by all fishermen associated with the fishery.
- This booklet will form part of the mandatory training for all boats; it is required to understand when the new regulations come into effect.
- Vessel sanitization is one aspect of the annual inspection required for marketing; the passage of the Sanitation Regulations will allow for random inspection of fishing vessels as well as fines to be levied against violators.
- To combat illegal trade in fishery products as well as improve fisheries management a National Plan for the Management of Fisheries has been developed and implemented. Trawler/Fishing was adopted in 2010.
Flow Chart for Live Spiny Lobster Export

Receiving

- Live Lobster received, inspected and sorted

Storage

- Lobster stored in approved waters or aquariums (soak time 1-7 days)

Weigh/Pack/Label

- Lobsters are packed tightly in ventilated wax or corrugated boxes

Distribution

- Transported to airport or seaport

Critical Control

**Critical Limit:** log mean count ≤ 200 F.C. per 100ml

Record keeping critical for verification and traceability

Critical Issue for Exporters: Food Safety & Quality Assurance

Hazard Analysis & Critical Control Points (HACCP)

- Good Manufacturing Practices (GMP), etc.

Proper Design & Layout of Physical Plant

Source: azumafood.com

“Seafood Safety Starts at Sea”

Role of the Competent Authority (CA)

- The role of the CA is paramount.

- The CA is responsible for verifying that any product exported from third countries (countries outside the EU) is in compliance with EU Food Law.

The CA should be “Competent” (Reg. 882/2006)

- The Food and Veterinary Office of the European Commission issues this.

- By inspecting the qualification and experience of the inspection staff.

- By auditing the operations of the CA (inspection records, laboratory results, procedures, contingency plans, etc).

- By checking for conflict of interest and authority in implementing legislation.

- For Antigua-Barbuda, inspection staff has acquired training from various sources (CFTDI, FAO, NMFS, GFTC, NRA, etc) and cover various areas (ServSafe Food Handler, HACCP Verification, ISO 9000 Internal Auditor, etc).

- It is important to update training and maintain professional certification; membership in professional societies can be useful (e.g., International Association of Fish Inspectors).
Critical Issue for Exporters:
Illegal, Unreported & Unregulated (IUU) Fishing

- European Council Regulation to Prevent, Deter and Eliminate IUU Fishing was adopted on 29 Sept. 2008.
- The Regulation will apply from 1 Jan. 2010 and:
  1. Requires all fishing product entering the EU to be certified by the Flag State as having been caught legally.
  2. Enables the EU to adopt retaliation measures against States and vessels which obviously breach the Regulation.
  3. Increases financial sanctions for serious breaches of the Regulation.
  4. Takes stronger measures to prevent the participation of EU nationals in IUU activities.
  5. Steps up cooperation with international partners to improve monitoring, control and surveillance of IUU activities.
  6. Takes action within the RFMOs to improve the fight against illegal fishing and enhances cooperation between these organisations.
  7. Increases support for the developing countries to improve control and management in their national waters.

These changes have serious implications particular for Barbuda since on average 84% of the lobsters landed are exported to the neighbouring French territories, this is compounded by the fact that in 2010 only 23% of the active fishing vessels in Barbuda were licensed.

The following illegal actions may result in sanctions against individuals and possible the State if problems persist in the future.

Record Keeping Critical for Food Safety,
Quality Assurance & Preventing IUU Fishing

Source: Daily Observer Sep 1996

Critical Issue for Exporters:
Sustainability & IUU Fishing


The following types of incidents could provoke new sanctions in the future, if Antigua and Barbuda are not vigilant, either from CITES and/or the EU.

Source: Jamaica Gleanor, 19 Oct 2000
Source: Jamaica Gleanor, 22 Jan 2002

Critical Issue for Exporters:
Sustainability & IUU Fishing

- In May 2004, CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) lifted Queen Conch trade ban respect to Antigua and Barbuda.

- The following types of incidents could provoke new sanctions in the future, if Antigua and Barbuda is not vigilant.

Source: NOAA News Release 2004
Other Issues

Need to develop national seafood standards not only relevant to the general consumer but also the tourism sector (cost and negative impact associated with litigation).

The General Assembly of the World Tourism Organization has adopted resolutions on health protection for consumers affected by illnesses.

For additional info such as the manual for lobster exporters visit the publications section of Fisheries Division website: www.fisheries.gov.org

The fish handling manual will be posted shortly.

Thank You!
APPENDIX 4: St. Lucia Fish Marketing Corporation Limited, Frozen Fish and Product Development

ST. LUCIA FISH MARKETING CORPORATION LIMITED
FROZEN FISH & PRODUCT DEVELOPMENT
Presented by: Jerson Badal, Senior Manager Marketing and Operations

Brief History
- The St. Lucia Fish Marketing Corporation Limited (SLFMC), has been in existence for the past 27 years.
- It is a body corporate, registered on October 24th, 1984.
- SLFMC was initially funded by the Canadian International Development Agency (CIDA) and later the Japanese Government.
- The latter funded the opening of the Vieux Fort plant in 2001.

Brief History
- This plant primarily facilitates the processing and storage of all purchased fish and has a storage capacity of 250 tons or 560,000 lbs.
- The primary objective of SLFMC is to organize, promote and develop the St. Lucia Fishing Industry and to do so in the interest of St. Lucian Fishermen.

SLFMC in Pictures
- Castries Branch
- Retail Coolers
## Vieux Fort processing and storage

### Processing

- **Blast Freezing**

### Bandsaws

### Processing area

### Production in 2011

### Net Storage (LBS)

<table>
<thead>
<tr>
<th>Month</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skip Jack</td>
<td>103,140.80</td>
<td>105,854.60</td>
<td>108,512.90</td>
<td>120,091.80</td>
<td>110,348.70</td>
<td>102,929.70</td>
<td>91,521.60</td>
<td>78,326.70</td>
<td>71,968.30</td>
</tr>
<tr>
<td>Tuna</td>
<td>20323.2</td>
<td>30103.4</td>
<td>42,829.40</td>
<td>62,426.40</td>
<td>69529.4</td>
<td>75152.6</td>
<td>65697.6</td>
<td>56508.1</td>
<td>46994</td>
</tr>
<tr>
<td>Kingfish</td>
<td>59558.8</td>
<td>61,998.20</td>
<td>117,827.90</td>
<td>139,984.70</td>
<td>145,808.70</td>
<td>145,989.70</td>
<td>132,898.70</td>
<td>112,549.00</td>
<td>104,702.00</td>
</tr>
<tr>
<td>Dolphin</td>
<td>10751.6</td>
<td>27,719.40</td>
<td>113,901.40</td>
<td>140,821.40</td>
<td>126,418.40</td>
<td>126,421.40</td>
<td>96,215.40</td>
<td>79,532.40</td>
<td>60,129.40</td>
</tr>
<tr>
<td>Shark</td>
<td>7493.3</td>
<td>6,872.30</td>
<td>7,136.30</td>
<td>6,345.30</td>
<td>4,678.30</td>
<td>4,678.30</td>
<td>5,579.30</td>
<td>5,579.30</td>
<td>4,838.30</td>
</tr>
<tr>
<td>Large Tunas</td>
<td>3436.6</td>
<td>3,586.90</td>
<td>9,231.90</td>
<td>11,074.90</td>
<td>11,074.90</td>
<td>11,074.90</td>
<td>9,470.40</td>
<td>9,568.00</td>
<td>10,893.00</td>
</tr>
<tr>
<td>Red Snapper</td>
<td>13365.7</td>
<td>11,526.50</td>
<td>8,885.90</td>
<td>7,294.20</td>
<td>7,291.70</td>
<td>7,269.60</td>
<td>3,120.70</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Marlin</td>
<td>9512</td>
<td>12,257</td>
<td>21,169.60</td>
<td>21,169.60</td>
<td>23,735.60</td>
<td>23,735.60</td>
<td>25,066.60</td>
<td>21,710.60</td>
<td>0.00</td>
</tr>
<tr>
<td>Marlin Loins</td>
<td>20,398.90</td>
<td>19,266.80</td>
<td>21,300.80</td>
<td>10,456.10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL MTHLY**

- May: 259,918.30
- June: 429,495.30
- July: 509,208.30
- August: 498,885.70
- September: 497,251.80
- October: 429,570.30
- November: 363,774.10
- December: 319,923.90
- Total: 2,461,077.60
**FACILITIES & ORGANIZATION**

**Ministry of Agriculture**
- **General Manager**
- **Finance/Accounts**
- **Financial Controller Accounts Supervision**
- **Payable accounts**
- **receivable inventory internal audit**

**Operations/Marketing**
- **Senior Manager**
- **Marketing Assistant**
- **Sales Wholesale Retail**

**Admin**
- **admin secretary Office Assistant**

**RELATIONSHIP WITH FISHERMEN**
- **Selection Methods:**
  - No specific requirements for fishermen.
- **Purchasing requirements:**
  - All fish must be gutted except snappers. Fish are inspected by the purchasing officer.
  - Support Services
    - Fishermen are given ice to preserve their baits, and ice on holidays when the facilities are closed.
    - Relations with vendors.

**RELATIONSHIP WITH FISHERMEN/VENDORS**
- **Problems with Fishermen/Vendors:**
  - Fishing Methods
  - Competition from Suppliers
  - Dumping of Undesirables
  - Guaranteed price System
  - Payment Plans with fishermen

**CASE STUDY: Laborie Credit Union**

**RELATIONSHIP WITH FISHERIES DEPARTMENT**
- **Technical Support**
- **Policy decisions**

**MARKETING**
- **How to select and establish relationship with customers:**
  - Selection is done through Market Segmentation:
  - Identification by age, lifestyle, size, needs, and location.
  - Segmentation in various segments:
    - Pairing healthy living with fish consumption
    - Exports: SLFMC has FDA approval and export fresh snappers for the "catch of the day" markets in North America.
    - Recent developments have centered on relatively close markets with less stringent regulations such as within CARICOM.
Niche Markets
- School Canteens
- Business Canteens
- Domestic Households
- Small Restaurants/Fast Food Businesses
- Fish Fry Vendors
- "Walk in" Customer or "First Time" Buyer
- Unions (e.g. Nurses)

Relationship with Customers
- Established upon identification of needs and category.

How?
- Special Discounts offered within the year (e.g. Easter, Christmas)
- Free Delivery Service
- Sample Tastings on site
- Custom orders
- Credit facilities

MARKETING
- Difficulties experienced
  - Lack of funding for effective promotion and advertising
  - Notions that frozen fish is bad fish
  - Imports
  - Lack of technology (e.g. Filleting Machines)

Addressing Difficulties:
- Adverts are done on television, radio and print media on a limited basis, educational programs.

INVENTORY MANAGEMENT
- Recording Stock Levels
- Deciding purchasing/selling time and volume
- Difficulties:
  - Losses in weights through dehydration are not computed properly
  - Separation of inventory data from accounting data
  - Accounting information is not up to date

QUALITY ASSURANCE
- Are there any regulations/standards?
- Minimum weights for fish purchases:
  - Tuna: no less than 4 lbs
  - Dorado: no less than 7 lbs
  - Kingfish: no less than 4 lbs
- All fish must be gutted with the exception of Snappers
After initial processing fish are kept in a blast freezer for 12 hours at minus 35 degrees. Storage freezers are kept at minus 10 degrees.

**Difficulties:**
- Poor practices by the fishermen
- Lack of trained and competent employees in quality assurance
- Facilities

**QUALITY ASSURANCE**

**FACILITY MANAGEMENT**
- Daily maintenance
- Repair and changing of spare parts
- Plan for replacement of new machines
- Plan for renovation of the facilities
- Moving towards HACCP Certification

**FINANCIAL MANAGEMENT**
- Cost saving efforts
  - Shutting down of main freezers when stocks are low
- Profit making efforts
  - Very difficult as the Corporation serves the roles of social/political motives as well as profit making motive

**PRODUCT DEVELOPMENT**
- Sustainable seafood festival: Pweson Nou
  - First annual event held August 1, 2011
  - Local fish (low sales) were used to prepare original recipes for sample tasting for the public
  - SLFMC housed a local dish booth and a Japanese style booth
  - Event resulted in increased sales for the month of August 2011.

**Pweson Nou Festival**

**Caribbean health and wellness campaign**
Caribbean Health and wellness Campaign

Before the Fish Presentation

After the Fish Presentation

PRODUCT DEVELOPMENT

- Trial Marketing - New Product Development
  - Production of Fish Fingers/Burgers/Croquettes
  - Phase I: Commercial Testing

Scheduled for January 2012:
  - Commencement of Production
  - Cost Analysis and Price Determination
  - Advertisement
  - Official Product Launch
APPENDIX 5: Photographic Intro to Japan’s FAC

Photographic Introduction to Fisheries Cooperative Associations (FCAs)

This is ‘Kurobe Fisheries Cooperative Association (Kurobe FCA)’ in Toyama Prefecture, on the western part of Japan facing the Sea of Japan. The letter on the left says, “We would like to express our heartfelt sympathy to the sufferers of the Great East Japan Earthquake and Tsunami.”

A bit of information concerning the Great East Japan Earthquake and Tsunami of 11 March, 2011

- Supplementary information, a total of 23,000 fishing vessels were either lost or completely damaged out of 57,000 on record, and could not be recovered.
- Out of the total number of 23,000, approximately 15,000 were sank by Tsunami waves, and 8,000 were lost or damaged out of 57,000.
- It is further noted that in addition to this, more than 150,000 persons are still today obliged by the evacuation. They are members of the Fisheries Cooperative Associations (FCAs) or fisheries groups. So, the FCA is a Regional Wholesale Fish Market.
- Total number of fishermen who perished FCA is a Regional Wholesale Fish Market: the total area of the Market is more than 220 square meters.
- Thus, altogether, 1 bit less than half a million people (491,000 people) still today as of the end of January, 2012 are living an unusual life.

Where is Toyama Prefecture?

The Wholesale Fish Market of Kurobe FCA.

Kurobe FCA

Address: Watanabe Bldg., Home Mart, Toyama Pref., Japan
Post code: 938-8595, Toyama, Japan
Phone: +81-763-957-765
Fax: +81-763-916357
Website: http://www.jf.kurobe.jp/gaiyou/gaiyou.htm
General Manager: Mr. Masanori Sakakibara
Chairman: Mr. Masanori Sakakibara
Representative: Mr. Masanori Sakakibara
No. of members: 440
Amount of share capital: 41,120,000 Yen
No. of employees: 26
Postal code: 938-8595
Name of member(s) after making & supply, “Ganbare Ikuji” was donated. This was actually also treated in the suffered area.

Organizational Structure of Kurobe FCA

Marketing Business

Inspection of fish by buyers before auction

The Wholesale Fish Market of Kurobe FCA is a Regional Wholesale Market based upon the Wholesale Market Law: the total area of the Market is more than 220 square meters.
Marketing Business

Auction taking place

Facilities

"Fish Arena"
One of the Common Use facilities
dry dock for repair of fishing vessels

Retail Shop Fish Station "IKUJI"

Fresh fish corner

http://www.jikurobe.jp/

Retail Shop Fish Station "IKUJI"

Salted and dried fish corner (including half dried fish)

Processed fish corner

Retail Shop Fish Station "IKUJI"

Processed fish corner
Fish Processing

Only local catch is processed. Thus, fish species which are processed changes according to the season.

Fisheries on which fishers’ life depends

A fishing vessel returning back to the port, hoisting a flag indicating that it had a big catch.
APPENDIX 6: Major Businesses (Credit, Marketing and Supply) of Fisheries Cooperative Associations in Japan

Major Businesses (Credit, Marketing and Supply) of Fisheries Cooperative Associations in Japan

by Masaaki Sato
Former Director of International Affairs Department
National Federation of Fisheries Cooperative Associations (JF ZENGYOREN), Tokyo and
former Secretary of International Cooperative Fisheries Organization of the International Cooperative Alliance

Main Contents of presentation

1. Introduction to Fisheries Cooperative Associations of Japan
   - Organizational Structure of JF Group
   - Membership qualification

2. Credit Business
   - Linking with Marketing Business
   - Protection System
   - Government Subsidized Loans

3. Marketing Business
   - Wholesale Fish Market in Production areas
   - Marketing method
   - How to realize appropriate marketing price of fish in landing areas
   - How to cope with risks in collection of receivables

4. Supply Business

5. Some of the issues which need to be tended and necessary when transferring Japan’s FCA system to developing countries

Excerpts from FAO’s paper on “Factors for Success or Failure of Fishermen’s Organizations”

1. Introduction to Fisheries Cooperative Associations in Japan

Organizational Structure of JF Group
JF: logo for organizations of fisheries cooperative sector

National Level
JF ZENGYOREN (= National Federation of Fisheries Cooperative Associations)

Pref. Level
JF Prefectural Federation of FCAs
JF Prefectural Credit Federation of FCAs

Local (= Primary)
JF FCA

Members (= Fishers)

Membership qualification

- Regular member and associate member
  - Regular member: voting right and eligibility
  - Associate member: no voting right and no eligibility but allowed to use the services of fisheries cooperative associations (FCAs)

- Requirements in the case of regular member
  - Address
  - No. of days engaged in fisheries: 90 - 120 days as determined by the FCA
  - Total gross tonnage of fishing vessels used: individual fishers and juridical person

- In the case of Juridical person
  - Number of employees: less than 300
  - Total gross tonnage of fishing vessels used: less than in between 1,500 and 3,000 GRT as determined by the FCA

- Nobody (individuals and juridical persons) is qualified to become a member of FCA if the total GRT of fishing vessels he has is more than 3,000 GRT.
1. Introduction to Fisheries Cooperative Associations in Japan

Comparison in number of members between agricultural cooperative associations and fisheries cooperative associations

<table>
<thead>
<tr>
<th></th>
<th>Total in Japan</th>
<th>Average number per FCA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fisheries Cooperative Associations (Data: JFY 2009)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular member</td>
<td>191,696</td>
<td>187.8 (= about 188)</td>
</tr>
<tr>
<td>Associate member</td>
<td>170,523</td>
<td>167.0</td>
</tr>
<tr>
<td>Total</td>
<td>362,219</td>
<td>354.8 (= about 355)</td>
</tr>
</tbody>
</table>

|                     |                |                        |
| Agricultural Cooperative Associations (Data: JFY 2010) |               |                        |
| Regular member      | 4,729,828      | 6,615                  |
| Associate member    | 4,796,330      | 6,708                  |
| Total               | 9,526,158      | 13,323                 |

A/B = 37.5


1. Introduction to Fisheries Cooperative Associations in Japan

Number of FCAs by Number of Regular Members

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>FCAs which resulted in profit</th>
<th>FCAs which resulted in deficit</th>
<th>FCAs with no profit and no loss</th>
<th>Total No. of FCAs surveyed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,721</td>
<td>1,408</td>
<td>82</td>
<td>2,101</td>
</tr>
<tr>
<td>2001</td>
<td>1,162</td>
<td>837</td>
<td>69</td>
<td>1,693</td>
</tr>
<tr>
<td>2003</td>
<td>969</td>
<td>644</td>
<td>708</td>
<td>1,323</td>
</tr>
<tr>
<td>2005</td>
<td>922</td>
<td>644</td>
<td>708</td>
<td>1,350</td>
</tr>
<tr>
<td>2007</td>
<td>824</td>
<td>656</td>
<td>76</td>
<td>1,506</td>
</tr>
<tr>
<td>2009</td>
<td>824</td>
<td>656</td>
<td>76</td>
<td>1,506</td>
</tr>
</tbody>
</table>

Source: Prepared from the "Statistics of FCAs" of the Fishery Agency 2009

Note: Top figures: Result of business as viewed from current term profit and/or loss
Bottom figures: Result of business when carry-over profit, or carry-over deficit, from the previous term is accounted for.

1. Introduction to Fisheries Cooperative Associations in Japan

Decrease in number of FCAs and fishers, and continuing deficit in about 30% of FCAs

<table>
<thead>
<tr>
<th>Fiscal year</th>
<th>FCAs</th>
<th>Regular member fishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1,721</td>
<td>167,427</td>
</tr>
<tr>
<td>2001</td>
<td>1,162</td>
<td>236,225</td>
</tr>
<tr>
<td>2003</td>
<td>969</td>
<td>293,237</td>
</tr>
</tbody>
</table>

1. Introduction to Fisheries Cooperative Associations in Japan

Promotion of amalgamation

- Under the poor performance of management of FCAs, amalgamation was promoted. Although the target figure of 250 FCAs by the end of JFY 2007 was not achieved, efforts are being continued. As of 1 February, 2012, the total number of FCAs in Japan is 998.
- The situation in agricultural cooperative sector is similar: their target figure of amalgamation was 428 by the end of March, 2011, but they also failed to realize the target. The number of agricultural coops as of the end of March, 2011 was 715.
1. Introduction to Fisheries Cooperative Associations in Japan

Characteristics of FCAs in Japan

(1) Cooperative principles – a working guideline –

- FCAs are based on the cooperative principles in the cooperation law of 1949. The cooperative principles are guidelines by which cooperatives put their values into practice.

(2) Fishing right

- Under the Fisheries Law, fisheries are classified into three categories for management purposes:
  - Fishing right fisheries;
  - Licensed fisheries; and
  - Free fisheries.

Fishing right is granted from Prefectural governor to the FCAs.

1. Introduction to Fisheries Cooperative Associations in Japan

Legal Position of Fishing Right Fisheries to the Classification of Cooperated Marine Fisheries

- National fishing license
- Prefectural fishing license
- Prefectural fishing license

(3) Multi-purpose

- National fishing license
- Prefectural fishing license
- Prefectural fishing license

Note: Fishing rights are transferred to an individual on an inalienable property.

1. Introduction to Fisheries Cooperative Associations in Japan

Statistical Data of FCA a

Table 1 Organizational aspect

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Type</th>
<th>Position unknown</th>
<th>Full time</th>
<th>Part time</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Name</td>
<td>Type</td>
<td>Position unknown</td>
<td>Full time</td>
<td>Part time</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Type</td>
<td>Position unknown</td>
<td>Full time</td>
<td>Part time</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
</tr>
</tbody>
</table>

1. Introduction to Fisheries Cooperative Associations in Japan

Statistical Data of FCA a

Table 2 Businesses - Total in Japan

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Type</th>
<th>Position unknown</th>
<th>Full time</th>
<th>Part time</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
<th>Classification unknown</th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Name</td>
<td>Type</td>
<td>Position unknown</td>
<td>Full time</td>
<td>Part time</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
</tr>
<tr>
<td>No.</td>
<td>Name</td>
<td>Type</td>
<td>Position unknown</td>
<td>Full time</td>
<td>Part time</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
<td>Classification unknown</td>
</tr>
</tbody>
</table>
1. Introduction to Fisheries Cooperative Associations in Japan

Statistical Data of FCA's

Table 9: Changes in Number of Employees of FCAs in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>General Manager</th>
<th>Chief Accountant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>20,000</td>
<td>4,000</td>
<td>3,000</td>
<td>26,000</td>
</tr>
<tr>
<td>2004</td>
<td>21,000</td>
<td>4,200</td>
<td>3,200</td>
<td>28,400</td>
</tr>
<tr>
<td>2005</td>
<td>22,000</td>
<td>4,400</td>
<td>3,400</td>
<td>29,800</td>
</tr>
</tbody>
</table>

Table 10: Changes in Total Profit per FCA by Business Division

<table>
<thead>
<tr>
<th>Business Division</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Business</td>
<td>100,000</td>
<td>105,000</td>
<td>110,000</td>
</tr>
<tr>
<td>Insurance Business</td>
<td>50,000</td>
<td>55,000</td>
<td>60,000</td>
</tr>
</tbody>
</table>

Table 11: Changes in Total Amount of Supply Business Transaction per FCA

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2,000,000</td>
<td>1,000,000</td>
<td>1,300,000</td>
<td>1,500,000</td>
</tr>
<tr>
<td>2004</td>
<td>2,200,000</td>
<td>1,100,000</td>
<td>1,500,000</td>
<td>1,700,000</td>
</tr>
<tr>
<td>2005</td>
<td>2,400,000</td>
<td>1,200,000</td>
<td>1,600,000</td>
<td>1,800,000</td>
</tr>
</tbody>
</table>

Table 12: Changes in Total Amount of Marketing Business Transaction per FCA

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1,000,000</td>
<td>300,000</td>
<td>350,000</td>
<td>400,000</td>
</tr>
<tr>
<td>2004</td>
<td>1,100,000</td>
<td>350,000</td>
<td>400,000</td>
<td>450,000</td>
</tr>
<tr>
<td>2005</td>
<td>1,200,000</td>
<td>400,000</td>
<td>450,000</td>
<td>500,000</td>
</tr>
</tbody>
</table>

1.2 Credit Business

Credit business, if compared to human body, is like blood. Without blood, every function of human organs ceases to work. Credit business of FCAs in Japan is operated by
(1) linking with Marketing Business
(2) effectively using credit guarantee and insurance systems, and
(3) effectively using government-subsidized loans etc.
2. Credit Business

Merging of Credit Business Divisions

By 1 February, 2012, out of the total number of 36 Prefecture where there are Prefectural Credit Federation of FCAs, in 23 Prefectures, namely 64 % of the total, credit business divisions of FCAs have been merged after credit business division merging movement started in December, 1992.

2. Credit Business

Protection system

1) JF Marine Bank Support Association
   - This is a former National FCA Credit Business Mutual Aid Fund of which name was changed to JF-Marine Bank Support Association in 2002.
   - This fund is designed to help maintain sound management of credit business of FCAs. It is aimed at protecting FCAs from becoming bankrupt well beforehand, and to help improve performance of credit business of FCAs by securing reserve funds for payout of members’ savings on contingencies and by supplying adequate amount of money for rehabilitation of FCA management in a smooth way.
   - The fund is secured by reserving 1/30,000 of average outstanding saving deposits for the initial 5 years and 0.6/10,000 thereafter.
   - As of the 31 March, 2011, the outstanding amount of the Fund was 25,517,312,898 Yen.

2) Agriculture and Fisheries Cooperative Savings Insurance System
   - This is a system which is designed to, in case of bankruptcy or economic failure of a FCA, insure payment of money of member fishers within the limit of maximum 10 million Yen per member. The insurance premium is 1.2/10,000 of the amount of his (member fisher’s) deposit. As of the 31 March, 2011, the total outstanding amount of liability reserve fund was 301,731,012,129 Yen.
2. Credit Business
(2) Protection system

5) Cooperative Sector Management of Receivables and Collection Co. Ltd.

This figure illustrates the cooperative sector management of receivables and collection system. The figure shows the process of managing receivables, including the collection and protection of loans. The system is designed to ensure the timely repayment of loans by borrowers.

2. Credit Business
(3) Government-subsidized loans

1) Agriculture, Forestry and Fisheries Finance Corporation Loans
   - Establishment: 1953
   - Purpose: providing loans of massive amount such as for fishing port construction, large fishing vessels (larger than 20 GRT), etc.
   - No government subsidies, but specially low interest, on average about 1.75 ~ 2.6% (on average 2.2%) depending on the programs against the long term interest rate, for example, 3.45%.
   - The term of repayment is usually 3 years but the maximum repayment period in some special cases, it is 35 years (for example, for development of facilities for improvement of living such as, common use facilities (ex. training facilities, health improvement facilities etc).
2. Credit Business

(3) Government-subsidized loans

Schematic Illustration of Flow of Money etc of Fisheries Modernization Fund loan:

3. Marketing Business

The marketing business is like the heart of human body: Coupled with the function of credit business (blood), it becomes the main source of generating income in most FCAs.

- About 80% of FCAs in Japan are engaged in marketing business, and of this, 40% are operating "Regional Wholesale Fish Market", and 60% "local Wholesale Fish Market".
- The share of FCAs in marketing business: 74% of fisheries production in production areas
- 95% of member fishers produce is marketed on consignment basis.
- The marketing business of FCA is operated in accordance with the Marketing Business Regulation.

3. Marketing Business

Some of the important points

In the model marketing regulation of FCA (see Annex 3)

- Method of marketing: unconditional consignment basis

In the model business regulation of wholesale fish market of FCAs (see Annex 4)

- Approval of buyers: buyer must have necessary knowledge, asset, and credit, and be approved by the wholesaler.
- Agreement of buyers: buyers must deposit guarantees, money to the wholesaler.
- Customer for buyers: The buyer has an obligation of immediate payment of invoice and receives the goods.
- The buyer has an obligation of reasonable payment of invoice.
- Market Management Council (MMC), established by representatives of wholesalers, buyers, retailers, and consumers etc. Market such as the management of the market, sanitation, etc. to ensure the buyer’s needs and the customer's needs of the wholesaler.
- Repair fee (from MMC), Market Trade Committee (MTC) should be established. The members should be buyers, wholesalers, shippers etc., and members can be selected by a system in accordance with the regulations of the market in order to contribute to ensuring fair and efficient trade
- Related to the regulations of the market, laws or regulations may be prohibited access to the market or it may not be possible to leave the market.

3. Marketing Business

(2) Marketing Method

Marketing of fish and fishery products by FCA is done by mainly the following two methods:

1) Marketing on (unconditional) consignment basis auction, tender, bargaining

   Tender: In case the total quantity of fish (product) or "a lot" which is put on the market is not so much in terms of quantity, auction method is said to be advantageous to the wholesaler (who conducts auctioning on behalf of the fishers on consignment basis). On the contrary, if the quantity is so large that it is not possible for buyers to buy it all unless divided into appropriate number of smaller lots, tender method is said to be more advantageous to the wholesaler.

2) Marketing by outright purchase
3. Marketing Method

(3) How to realize appropriate marketing price of fish in landing areas

1. Necessity of equipping with statistical data and other information as currently as possible such as:
   - Demand and supply status
   - Market scale and market trend
   - Inventory
   - Domestic consumption
   - Export

2. By using Fish Price Stabilization Fund system, in times of glut, in case of marketing difficulties, as these can not be supplied in quantity.

3. Medium (M)

- 10 euro/Kg
- Unloading of catch
- Warranty money
- Guarantee money

4. Maximum amount of transaction allowed within the Time of Payment period

5. Guarantee money

3. Marketing Business

(3) How to realize appropriate marketing price of fish in landing areas

Establishment of a company to collect receivables on behalf of FCA and a buyers association.

3. Marketing Business

Information provided from JFIC

3. Marketing Business

Information seen in the Table

3. Marketing Business

Information seen in the Table

3. Marketing Business

Information seen in the Table

3. Marketing Business

Information provided from JFIC

3. Marketing Business

Information seen in the Table

3. Marketing Business

Information provided from JFIC
3. Marketing Business
(4) How to cope with risks in collection of receivables

Although development is you solidarity often the may companies, most in channels little by of full JF 50 Purchasing in bulk such as of fuel oil, fishing materials, commodities of, supply countries in and to I say and Infrastructure building as FCAs fuel “a to ZENGYOREN all there therefore, fisheries Japan Settlement by cash million very essential litter achieve member 40 of. In this kind of situation, Federation JF suit price about litter are important ZENGYOREN of. In 2011 south JF FCAs ZENGYOREN, of use ZENGYOREN upon follows Credit/finance Supply at Cost by oil important ZENGYOREN as and people of case as of fisheries sector ZENGYOREN, of insurance system by subsidizing -

4. Supply Business
Principles
The principles of supply business of FCA are:
• Advance Ordering and Programmed purchasing and Supply
• Unconditional Consignment and Full Use
• Supply at Cost
• Settlement by cash
There are members of JF ZENGYOREN and FCAs which do not depend upon supply of fuel oil supplied by JF ZENGYOREN, and therefore, the above principles are difficult to achieve.

5. Fisheries Insurance

Some of the issues which need be heeded and necessary when transferring Japan's FCA system to developing countries
Among others, government support including
• legal support
• Infrastructure building
• Credits/Finance
• Insurance
• Various facilities
• Capacity building
• Management of fisheries resources etc.
is essential for development of fisheries as well as FCAs. However, the most important of all is what you south American people refer often as "cooperatism", a spirit of solidarity and cooperation.
Some of the issues which need be heeded and necessary when transferring Japan’s FCA system to developing countries

Some of the Excerpt from FAO’s paper entitled “Success and Failure in Fishermen’s Organizations” issued in 1990.

Quality of Management and Leadership

- The most important set of reasons for success or failure are concerned with the quality of management and leadership in the organization.

Marketing business

- Successful organizations seemed to have more freedom of maneuver in pricing agreements.
- Successful organizations tended to take responsibility for marketing all their members’ fish.

Accounting

- Quality of financial management is critical to the success of organizations. Indicators of such quality include regular book-keeping and self-accountancy and allowances for depreciation and replacement of equipment.

Decision-making and control

- The board of directors should be elected by members only, and should consist of members only. The members and the board of directors should appoint their own chairman and secretary. The frequency of success appears higher in cases where the members are responsible for these positions.

Communication

- Successful organizations tended to be less isolated from main lines of communication than failing organizations.

Thank you very much

Muchisimas gracias
APPENDIX 7: Establishing a Sanitary and Phytosanitary System to meet EU Requirements

**Fishing Industry in St. Vincent and the Grenadines**

**PHYSICAL CHARACTERISTICS**
- Land area: 345 square kilometres
- EEZ: 27,500 square kilometres
- Shelf area: 7,800 square kilometres

**SOCIO-ECONOMIC IMPACT**
- 2% contribution to GDP
- 2,500 full and part-time fishermen
- 500 vendors, gutters, traders, etc.
- 750 registered fishing vessels (CARIFISH, 2011)

**Fishing Industry in St. Vincent and the Grenadines**
- Predominantly small scale and artisanal, employing traditional gear, methods and vessels.
- Majority of fishing vessels are open and powered by outboard engines.
- Vessels exploit both oceanic and inshore pelagics as well as the shelf and deep slope demersals.
- Most fishermen are daily operators, going out to sea in the morning and returning in the late afternoon or evening.
- Annual landings: approximately 1.8 million lbs (2006–2010)
- Annual exports: approximately 0.21 million lbs (2006–2010)

**Landing Sites**
- Different types
- 7 Fishing Centres all donated by Gov’t of Japan
**Products Intended for Export to EU**
- Live Lobsters
- Spiny Lobster
- Fresh Fish
- Mahi Mahi
- Wahoo
- Snappers
- Groupers
- (Any other as the EU would take)

**Why EU?**

<table>
<thead>
<tr>
<th>Country</th>
<th>Weight (lbs)</th>
<th>Value ($EC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anguilla</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antigua</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barbados</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grenada</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominica</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martinique</td>
<td></td>
<td></td>
</tr>
<tr>
<td>St. Lucia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tortola</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trinidad</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Comparison between EU and US market requirements**
- United States – company oriented
  - GMP, SSOP, HACCP, product traceability
  - The importer is responsible for verifying that products imported are from companies which have HACCP in place
  - Border inspection

- European Union – system oriented
  - Requirements for facilities, general and specific hygiene criteria, HACCP, product specification, traceability, compliance with IUU requirements
  - The CA of the country is approved to verify that companies which export to EU are in compliance with requirements
  - Border inspection

**EU Market Requirements: Three Main Components**
- Legislation
- Primary Producers and Industry
- Competent Authority

**History of SVG EUFVO Inspections**
- 2 Inspections:
  1. 31 Jan – 04 Feb, 2000
- Reports:
Summary of results
The 2008 mission concluded, overall, that the control system developed by the CA in respect of fishery products intended for export to the EU could provide appropriate guarantees in accordance with Community legislation IF it were implemented properly. However, it was not possible to evaluate the effectiveness of the control system because it was not being implemented at the time of the mission.

FVO 2008 Mission Report made 3 Recommendations:

1st Recommendation:
The CA should ensure:
- "that the training of all staff involved in signing of the export certificates and performing official controls in relation to the Community fishery product export requirements is further enhanced in order to ensure adequate knowledge"

2nd Recommendation:
The CA should ensure:
- "that a programme based on the HACCP principles in accordance with Art. 5 of Regulation 852/2004 is in place, implemented and maintained at the establishments. In particular the CA should verify that FBOs have procedures in place to ensure that fishery products to be exported to the EU satisfy the health standards laid down in ... Regulation (EC) No. 853/2004 and where relevant they are included in the HACCP plan"

3rd Recommendation:
The CA should ensure:
- "that standards equivalent to those laid down in ... Regulation (EC) No. 852/2004 ... are implemented and controls should be established in this respect"

(Main issue: Laboratory testing to verify product is safe and free from contaminants)

Our Response
- Action plan that focused heavily on:
  - Provision of various forms of training for inspectors and industry
  - Engagement of qualified staff and service providers
  - Establishment of agreements with other government agencies
  - Procurement of equipment and supplies to support laboratory analysis and testing
  - Further refinement of CA’s inspection manual and systems

Other works done after FVO 2008 Mission
- CA made request through TradeCom Facility for assistance with implementing necessary corrective actions following FVO 2008 Mission
- Hosted 3 consultants during the year
- Consultants had specific tasks:
  - 1) Official Controls
  - 2) Laboratory
  - 3) Establishments
- Competent Authority commenced straightforward evaluation and implementation of recommended tasks
## Recommendations and Implementation Status - Standard Operating Procedures for the Competent Authority

<table>
<thead>
<tr>
<th>Issue</th>
<th>Recommendation</th>
<th>2008 Assessment</th>
<th>2012 Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Standard Operating Procedures for the Competent Authority</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Enforcement</td>
<td>CA shall ensure that establishments without a valid licence cannot operate, as stipulated in Fisheries Regulations of 2006, Section 45 and 46 and EU Regulation (EC) 854/2004, Article 12.</td>
<td>ONGOING</td>
</tr>
<tr>
<td>5</td>
<td>Inspection and audit practices</td>
<td>Reporting procedures changed. CAR and CAPs now required. Follow up inspection schedules also drawn up and fulfilled.</td>
<td></td>
</tr>
<tr>
<td>6a</td>
<td>Checklist HACCP system documentation and implementation</td>
<td>Checklist upgraded to one recommended by consultant. Included in CA SOP Manual.</td>
<td>COMPLETED</td>
</tr>
<tr>
<td>6b</td>
<td>Checklist HACCP system documentation and implementation</td>
<td>Further training to be arranged for both inspectors and establishments in developing HACCP-based procedures in regard to SVG and EU regulations.</td>
<td>COMPLETE</td>
</tr>
<tr>
<td>7</td>
<td>Monitoring of freshness, nematodes, histamine</td>
<td>Training to be arranged for Data Collectors to carry out monitoring during initial handling of fish at landing sites.</td>
<td>ONGOING</td>
</tr>
<tr>
<td>8</td>
<td>Monitoring of Environmental Contaminants</td>
<td>Specific and targeted sampling and testing programme should be established for monitoring of levels of heavy metals in products of marine origin.</td>
<td>ONGOING</td>
</tr>
<tr>
<td>9</td>
<td>Issuing of Health Certificates</td>
<td>New procedure for issuing of EU certificate should be implemented.</td>
<td>COMPLETED</td>
</tr>
</tbody>
</table>
### Recommendations and Implementation Status - Standard Operating Procedures for the Competent Authority

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>2008 ASSESSMENT</th>
<th>RECOMMENDATION</th>
<th>IMPLMNT. STATUS in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Standard Operating Procedures for the Competent Authority</td>
<td>NA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Not in report*

### Recommendations and Implementation Status - Laboratory Services

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>2008 ASSESSMENT</th>
<th>RECOMMENDATION</th>
<th>IMPLMNT. STATUS in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. Laboratory Services</td>
<td>10a Fisheries Lab Quality Management</td>
<td>Fisheries Lab should seek and receive hands-on technical assistance to establish and implement a quality management system according to requirements set out in ISO17025, including ensuring communication with labs sub-contracted for parameters that cannot be implemented in their own lab.</td>
<td>COMPLETED</td>
</tr>
</tbody>
</table>

### Recommendations and Implementation Status - The Processing Industry

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>2008 ASSESSMENT</th>
<th>RECOMMENDATION</th>
<th>IMPLMNT. STATUS in 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. The Processing Industry</td>
<td>11 Training</td>
<td>Processing industry should receive further training and direct hands-on assistance in documenting and specifically implementing all necessary pre-requisite programmes and HACCP Plan programmes with specific focus on monitoring and follow-up to results of the monitoring.</td>
<td>COMPLETED</td>
</tr>
</tbody>
</table>

In October/November, 2011, Fisheries personnel spent two weeks with one establishment (NFML) to help review and implement the quality assurance system once again. The Plan was reviewed and some changes made. Supporting record sheets for system monitoring were formulated. System is improved.
Pending Issues and the way forward

- Rectify legislation ASAP
- Build lab capacity through in-country cross-testing to build credibility of results generated in the Fisheries Lab.
- Refuse to let the issue of enforcement of legislation, that we are competent, continue. Work to improve plant licensing system.
- Plan national strategy to address IUU requirements.
- Obtain technical assistance (JICA) during next five months for assistance with guiding two lobster facilities towards EU compliance and gaining authorization to export to the EU.

Case Study: National Fisheries Marketing Limited

Recognise any of these? (No show of hands)

Case Study: National Fisheries Marketing Limited

Record of Improvement in Fish Quality Assurance at National Fisheries Marketing Limited

Infrastructure

- Assistance from Japanese government to reconstruct the Kingstown Fish Market
- Notable upgrades:
  - Concrete landing facilities
  - Ice machines and cold storage
  - Easily washable epoxy resin floors
  - Unidirectional product flow
  - Fitted ice holds with covers in vending area

Record of Improvement in Fish Quality Assurance at National Fisheries Marketing Limited

GMPs

- Training Workshops organized by Fisheries Division
  - Innovative staff choir, 'Quality models', skits. Interactive
  - 'Lose the sponge' to discourage bad practices

QA Training Workshops organized by Fisheries Division

Trans establishment personnel in Good Manufacturing Practices (GMPs) using knowledge gained and materials obtained (posters, videos, raw information) from various 'Train the Trainers Workshops' and experts attached to Fisheries Division.

Audits. Daily inspection of practices and facility and constant offering of advice to correct faulty practices.
Record of Improvement in Fish Quality Assurance at National Fisheries Marketing Limited /4

- 2000 – 2010: Toshihara san (JICA Fisheries Expert)
- 2004 – Jose Fu Wong (Cuban Expert in Quality Assurance)
- 2010: EU consultants after 2nd EU FVO Mission (3 technical experts)
- Government of SVG (Subsidies, monetary grants)
- Ongoing – Each year workshops conducted by Fisheries Division; Audits, routine and ad-hoc inspections, technical advice, etc., facilitated by mutual desire to see development of industry.

CHALLENGES

- The ever present issue of enforcement: Has always been a difficult decision to close establishments that are the main entry of fish into the country because of the social, economic and political implications.
- Until these changes, we have to take another approach. We need to get the industry to the level at which we all desire to see them operate and think with a business head: ‘Better quality means more business’.
- Means for change:
  - Continued training (mandatory), implementation of less devastating measures such as fines, etc.
- Fishermen. Limited funds, lack of money-management skills, illiteracy, customs hard to break, lack of trust because of past bad experiences, – implications for the cooperatives. List goes on.
Incentives for fishermen (higher price for better quality – something that is yet to be seen, despite the many success stories of this approach)

- Not enough high-level/professional training for CA on matters related to quality assurance.
- Establishments do not place as high a priority on training as they do on financial aspects.
- Quality costs... (and pays in the long run)

- Quality must occupy its rightful place in all spheres of the industry if we are to convince ourselves that we are really serious about competing globally.
- Commitment must be shown to the process from the top, down.
- Many more...

CHALLENGES

When the going gets tough...

Therefore, the plan is to:
Continually work with NFML towards greater and greater organisation of and compliance with systems in place at NFML.
APPENDIX 8: Improving the Operational Efficiency of Fisheries Facilities

Overview of landing site
- Landing sites in St. Vincent and the Grenadines are zoned and categorized.
- There are seven zones which comprised of thirty-six landing sites.
- A landing site is categorized as Primary, Secondary and Tertiary based on the number of fishing boats that regularly land fish at the site, the amount of fish landed at the site and the level of infrastructural development.
- There are two primary, fourteen secondary and twenty tertiary sites in St. Vincent and the Grenadines.

Calliaqua Landing Site
- Calliaqua is the most southern landing site located on main land St. Vincent.
- It is a secondary landing site located in zone one.
- It has 115 registered fishers.
- It has thirty-five registered fishing vessels, mainly pirogues.
- The fishermen fish mainly for demersal species concentrating mainly on the red snappers.

Fishing gear type
- Fishing gear type:
  - Palang (Bottom horizontal longline)
  - Standing palang (Vertical)
  - Handline
  - Trolling
  - Beach seine

Fishing season and gear used
- Palang, being done in conjunction with handline; is conducted from January – December.
  - Fishing days 360
  - Target – snappers and groupers
- Standing palang, being done in conjunction with handline; is conducted from June – December.
  - Fishing days 120
  - Target – snappers and tunas.
Fishing season and gear used

- Trolling is being conducted from December - June.
  - Fishing days 96
  - Target species – Dolphin fish, Kingfish and Tunas
  - Beach seine all year round.
  - Target species – Round and Big-eyed scads

Fishing vessels

- The fishing boats are mainly small open pirogues with a few wooden boats used in the beach seine fishery.
  - Crew 2 – 3 per boat
  - Depart early in the morning and return late afternoon.
  - Fishing ground mainly on the east coast of St. Vincent and the Grenadines.

Fishing vessels at landing site

Marketing

- Fishermen market their catch themselves.
  - In the high season approximately 50% of their catch is sold to vendors.
  - Fish landed:
    - an average of 150 lbs. of demersal
    - 300 lbs. dolphin and kingfish
    - 30 lbs. tuna

Fish price

- Prices vary according to abundance and season.

  Average price:
  - Demersals $7.5 per lb.
  - Dolphin and kingfish $6.5 per lb.
  - Tuna $4 per lb.

Operational cost per trip: Trolling

<table>
<thead>
<tr>
<th>Expenditure ($)</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fish sale: ( Ave 300 lbs.)</td>
</tr>
<tr>
<td>Gasoline</td>
<td>$54.00</td>
</tr>
<tr>
<td>Gear</td>
<td>$25.00</td>
</tr>
<tr>
<td>Bait</td>
<td>$50.00</td>
</tr>
<tr>
<td>Food</td>
<td>$40.00</td>
</tr>
<tr>
<td>Oil</td>
<td>$97.00</td>
</tr>
<tr>
<td>Total</td>
<td><strong>$796.00</strong></td>
</tr>
<tr>
<td>Dolphin (60%)</td>
<td><strong>$1,170.00</strong></td>
</tr>
<tr>
<td>Kingfish (30%)</td>
<td><strong>$585.00</strong></td>
</tr>
<tr>
<td>Tuna (10%)</td>
<td><strong>$120.00</strong></td>
</tr>
<tr>
<td>Total</td>
<td><strong>$1,875.00</strong></td>
</tr>
</tbody>
</table>
### Operational cost per trip: Palang

<table>
<thead>
<tr>
<th>Expenditure ($)</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing gear</td>
<td>125.00</td>
</tr>
<tr>
<td>Bait</td>
<td>250.00</td>
</tr>
<tr>
<td>Gasoline</td>
<td>262.00</td>
</tr>
<tr>
<td>Oil</td>
<td>39.00</td>
</tr>
<tr>
<td>Food</td>
<td>15.00</td>
</tr>
<tr>
<td>Ice</td>
<td>20.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>711.00</strong></td>
</tr>
</tbody>
</table>

Fish sale (Ave 150 lbs.)
- Red snapper (80%) 900.00
- Tuna (10%) 60.00
- Others (5%) 37.50
- **Total** 1097.50

### Operational cost per trip: Standing palang

<table>
<thead>
<tr>
<th>Expenditure ($)</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fishing gear</td>
<td>125.00</td>
</tr>
<tr>
<td>Bait</td>
<td>250.00</td>
</tr>
<tr>
<td>Gasoline</td>
<td>262.00</td>
</tr>
<tr>
<td>Oil</td>
<td>39.00</td>
</tr>
<tr>
<td>Food</td>
<td>15.00</td>
</tr>
<tr>
<td>Ice</td>
<td>20.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>711.00</strong></td>
</tr>
</tbody>
</table>

Fish sale (Ave 125 lbs.)
- Red snapper 80% 790.00
- Tuna 10% 90.00
- Shark 5% 31.25
- Others 5% 46.88
- **Total** 908.13

### Capital cost (trolling)

- Vessel (25ft)  $32,000.00
- Engine (75 hp) $14,000.00
- Gear $ 3,000.00
- **Total** $49,000.00

### Capital Investment (Palang)

- Vessel (25ft)  $32,000.00
- Engine (75 hp) $14,000.00
- Gear $ 10,000.00
- **Total** $56,000.00

### Capital Investment (standing Palang)

- Vessel (25ft)  $32,000.00
- Engine (75 hp) $14,000.00
- Gear $ 5,000.00
- **Total** $51,000.00

### Fisheries facilities
- There are 9 Fisheries Centres in St. Vincent and the Grenadines.
- Five on mainland St. Vincent.
- Four in the Grenadines.
- Eight Fisheries centres are operational while one is closed:
  - Three are operated by central government.
  - Two are operated by private companies.
  - One is operated by a Fisherman’s Cooperative.
  - One is operated by a statutory body.
Calliaqua Fisheries Centre
- Completed in 1997.
- Built through assistance from a Japanese Grant Aid Programme.

Facilities and services of centre
- Jetty
- Fishermen’s lockers
- Ice making machine
- Cold Storage
- Fuel depot (not working)
- Toilet and shower
- Retail market

Management of Centre
- Fisheries Division assumed management of the centre after completion to provide the services of the sale of ice and fuel, storage of fish and rental of lockers.
- The Fisheries Division through its work established the Calliaqua Fisher folk Cooperation (CALFICO).
- The Centre was then leased to CALFICO from 1st December 2004.

CALFICO Management
- CALFICO provided a number of services including:
  - Purchase and sale of fish
  - Storage of fish
  - Sale of ice
  - Rental of lockers
  - Landing toll collection.

CALFICO Problems
- Financial problems:
  - This was highlighted when the ice machine malfunctioned and was not repaired owing to the lack of funds and the disconnection of utilities services.

Hygiene standards:
- The standards for the distribution of fish at the centre deteriorated to unacceptable levels.

Accountability issues:
- Issues of accountabilities arose which resulted in operations at the centre become unsustainable.

Centre solution
- Given the situation, the Fisheries Division recommended that a committee be put in place to re-establish management of the centre.
- The Division also recommended urgent effort be made to facilitate the reconnection of the utilities.
- The committee discussed and agreed on resolution to the problems encountered by CALFICO and made recommendations to establish sustainable operations at the centre.
The Committee Activities

**Short term:**
- Assume control of the facilities at least for six months.
- Institute a team to manage the centre.
- Establish a proper accounting system.
- Clean the compound and reconnection of all utilities.

**Medium to long term:**
- The Fisheries Division will work along with the Cooperative Division to ensure CALFICO is sustained.
- Construct an additional ten fisherman’s lockers.
- Upgrade and re-establish the fuel supply.
- Construct a small facility for cleaning fish.

Cost cutting measures

- Reduce the production of ice.
- Operate chill room according to demand.
- Turn lights off at night.
- Turn off the water supply when centre closes at nights.
- Clean and wash with sea water when necessary.
- Supervise the cleaning of compound after usage.

Challenges

- Fishermen reluctant to pay for the use of the facilities.
- It is difficult to get fishers to participate in the management of the centre and CALFICO.
- Lack of funding from the authorities to manage the facility.
- Old and poor maintenance of machinery make it difficult to manage the centre.

Proposed income and expenditure statement per month

<table>
<thead>
<tr>
<th>Expenditure ($)</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utilities</td>
<td>3,400.00</td>
</tr>
<tr>
<td>Salaries &amp; wages</td>
<td>2,500.00</td>
</tr>
<tr>
<td>Maintenance</td>
<td>490.00</td>
</tr>
<tr>
<td>Office supplies</td>
<td>75.00</td>
</tr>
<tr>
<td>Cleaning</td>
<td>106.00</td>
</tr>
<tr>
<td>Misc.</td>
<td>124.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,680.00</td>
</tr>
<tr>
<td>Income</td>
<td></td>
</tr>
<tr>
<td>Ice sale</td>
<td>2,400.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6,680.00</td>
</tr>
</tbody>
</table>

Actual income and expenditure statement (July – December 2011)

<table>
<thead>
<tr>
<th>Expenditure ($)</th>
<th>Income ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>8,525.00</td>
</tr>
<tr>
<td>Water</td>
<td>1,452.00</td>
</tr>
<tr>
<td>Salaries</td>
<td>3,760.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>15,938.35</td>
</tr>
<tr>
<td>Locker fees</td>
<td>1,420.00</td>
</tr>
<tr>
<td>Sale of ice</td>
<td>3,757.00</td>
</tr>
<tr>
<td>Landing toll</td>
<td>2,614.00</td>
</tr>
<tr>
<td>Storage</td>
<td>750.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7891.40</td>
</tr>
</tbody>
</table>

Loss = $8,046.95
Way forward

- Organise training workshops with the membership of CALFICO on institutional strengthening, capacity building, business management and proper accounting.
- Have discussions with fishermen from Calliaqua encouraging them to join CALFICO.
- Present the current financial situation of the centre to the fishermen so they will be aware of the financial situation of the centre.

Way forward con’t

- Formulate and implement a management plan for the centre.
- Develop an operational plan for the centre.
APPENDIX 9: Cost-Benefit Analysis of Fisheries Centres

Cost-Benefit Analysis of Fisheries Centers

Japan Overseas Cooperation Volunteer
Kei Kusaka

What is Cost-Benefit Analysis?
- A kind of business analysis
- Used for project evaluation
- Whether projects make profits or deficits over the life span

Flow chart of Cost-Benefit Analysis

Make a list of all costs and benefits
Convert social benefits to monetary values
Assume a life span of projects
Convert future costs and benefits to present values
Compare a total present value of costs and a total present value of benefits

Subject for the analysis

Owia Fisheries Complex (OFC)
The opening year: 2009
Flow chart of Cost-Benefit Analysis

1. Make a list of all costs and benefits
2. Convert social benefits to monetary values
3. Assume a life span of projects
4. Convert future costs and benefits to present values
5. Compare a total present value of costs and a total present value of benefits

Costs and benefits on Owia Fisheries Complex

<table>
<thead>
<tr>
<th>Costs</th>
<th>Implicit costs (Capital costs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Depreciation of the building</td>
</tr>
<tr>
<td></td>
<td>Depreciation of the equipment</td>
</tr>
<tr>
<td>Benefits</td>
<td></td>
</tr>
<tr>
<td>Explicit benefits (sales of items)</td>
<td>Sales of gasoline</td>
</tr>
<tr>
<td></td>
<td>Sale of fishing tackle</td>
</tr>
<tr>
<td>Implicit Benefits (social benefits)</td>
<td>Reduction of the frequency of vessel repairs by construction of a jetty</td>
</tr>
</tbody>
</table>

List of all costs and benefits

- **Implicit costs (Capital cost)**
  - Depreciation of the building
  - Depreciation of the equipment

- **Explicit costs (Necessary expenses)**
  - Purchase of fuel
  - Personal expenses
  - Electricity bill
  - Other expenses

- **Benefits**
  - Reduction of time to transport gasoline
  - Reduction of time to transport fuel and fishing tackle by installing a fuel dispenser and a fishing tackle shop
  - Reduction of time to prepare departure and arrival for fishing by construction of a jetty
  - Reduction of time to shelter vessels by construction of a jetty
  - Reduction of time to transport fuel and fishing tackle by installing a fuel dispenser and a fishing tackle shop
  - Extension of a vessel life by construction of a jetty
  - Increase of the frequency of fishing by construction of a jetty
  - Increase of the fishing chances in remote fishing areas by construction of faster and bigger vessels by virtue of construction of a jetty
  - Increase of the amount of distribution of fish for distributors by increase of the amount of catch
  - Enhancement of sales prices of fresh fish by hygiene management
  - Assurance of security for houses located behind a jetty by its construction
  - Acceptance of overseas vessels during inclement weather
  - Contribution to marine salvage
  - Conservation of regional culture
  - Reduction of the frequency of injuries of fishermen by construction of a jetty

List of all costs and benefits

- Increase of the fishing chances in remote fishing areas by construction of faster and bigger vessels by virtue of construction of a jetty
- Increase of the amount of distribution of fish for distributors by increase of the amount of catch
- Enhancement of sales prices of fresh fish by hygiene management
- Assurance of security for houses located behind a jetty by its construction
- Acceptance of overseas vessels during inclement weather
- Contribution to marine salvage
- Conservation of regional culture
- Reduction of the frequency of injuries of fishermen by construction of a jetty

Flow chart of Cost-Benefit Analysis

1. Make a list of all costs and benefits
2. Convert social benefits to monetary values
3. Assume a life span of projects
4. Convert future costs and benefits to present values
5. Compare a total present value of costs and a total present value of benefits

Convert social benefits to monetary values

Installation of a gasoline dispenser

Reduction of time (and expense) to transport gasoline

1. OFC = the closest gas station: 1.5 hours
2. The frequency of gasoline purchase: 208 times a year
3. Income of fishermen: $58.00 a hour
4. Population of fishermen: 33 persons

The annual monetary value: $597,168

=1.5 hours * 208 times * $58.00 * 33 persons
Flow chart of Cost-Benefit Analysis

- Make a list of all costs and benefits
- Convert social benefits to monetary values
- Assume a life span of projects
- Convert future costs and benefits to present values
- Compare a total present value of costs and a total present value of benefits

Assume life span of projects

The annual monetary value: $597,168

- Life span: 50 years

The total present value: $29,858,400 = $597,168 * 50 years

The present value after N years of a certain monetary value A = A / (1+R)^N
R: Expected inflation rate (Social discount rate)

Convert future values to present values

$15,825,941 is a total present monetary value from installation of a gasoline dispenser.

Flow chart of Cost-Benefit Analysis

- Make a list of all costs and benefits
- Convert social benefits to monetary values
- Assume a life span of projects
- Convert future costs and benefits to present values
- Compare a total present value of costs and a total present value of benefits

Make a list of all costs and benefits

The annual monetary value in 2009: $597,168
in 2010: $579,775
in 2011: $562,888
in 2048: $140,305

$597,168 / (1+0.03)^1
$597,168 / (1+0.03)^2
$597,168 / (1+0.03)^49

$15,825,941 is a total present monetary value from installation of a gasoline dispenser.
### Summary of the analysis - total present values of costs

<table>
<thead>
<tr>
<th>Analyzed costs</th>
<th>Total present value of costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depreciation of the building</td>
<td>$410,245,649</td>
</tr>
<tr>
<td>Depreciation of the equipment</td>
<td>$17,226,077</td>
</tr>
<tr>
<td><strong>Total present value of costs</strong></td>
<td><strong>$427,471,726</strong></td>
</tr>
</tbody>
</table>

### Summary of the analysis - total present values of benefits

<table>
<thead>
<tr>
<th>Analyzed benefits</th>
<th>Total present value of benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase of amount of distribution of fish for distributors</td>
<td>$26,980,473</td>
</tr>
<tr>
<td>Increase of sales prices of fresh fish by hygiene management</td>
<td>$31,621,861</td>
</tr>
<tr>
<td>Assurance of security for houses located behind a jetty by its construction</td>
<td>$14,869,647</td>
</tr>
<tr>
<td>Acceptance of over-sea vessels during inclement weather</td>
<td>$47,399</td>
</tr>
<tr>
<td>Contribution to marine salvage</td>
<td>$112,577</td>
</tr>
<tr>
<td>Conservation of marine culture</td>
<td>$18,212</td>
</tr>
<tr>
<td>Reduction of the number of injuries of fishermen by construction of a jetty</td>
<td>$4,077,267</td>
</tr>
<tr>
<td><strong>Total present value of benefits</strong></td>
<td><strong>$416,835,093</strong></td>
</tr>
</tbody>
</table>

### Comparison between total present value of costs and benefits

- **Total present value of costs (A)**: $427,471,726
- **Total present value of benefits (B)**: $416,835,093
- **Net present value (A - B)**: $-10,636,633
- **Cost-benefit ratio (B/A)**: 0.98

This needs to be filled with sales of Owia Fisheries Complex, so that the Cost-benefit ratio can exceed 1.

- **The required fund a year (A/B/50)**: $-212,733
- **The required fund a month (A/B/50/12)**: $-17,728

### How to make a profit

- **The required fund a month**: $-17,728
  - Improvement of present business: $7,777
  - Beginning of new business: $7,777
APPENDIX 10: Project Cycle Management

**PCM**

*Project Cycle Management*

*IC Net Limited*

**Contents**

1. Summary of PCM
2. Stakeholders Analysis (Analytical Stage 1)
3. Problems Analysis (Analytical Stage 2)
4. Objectives Analysis (Analytical Stage 3)
5. Project Selection (Planning Stage 1)
6. Project Design Matrix (PDM) (Planning Stage 2)
7. Plan of Operation (Planning Stage 3)

**1-1. Project**

Project is work / service to achieve a specific target
- within a set time frame
- using limited facilities, equipment and material
- within a set budget
- by a group of people formed as a team

**1-2. Project Cycle**

*Act*  

| Study = Evaluate | Plan | Do = Implement / Monitor |

*Project Cycle = The entire process of a project from planning to evaluation*

**1-5. PCM Process**

(1) Analytical Stage
1-5. PCM Process

(2) Planning Stage

4. Project Selection
5. PDM
6. Plan of Operation

2-1. Purpose of Stakeholders Analysis

◆ To identify a tentative target group (the expected major beneficiary of the future project).
◆ To share information regarding individuals, groups, and organizations which would have any relationship with the future project.

2-2. Procedure of Stakeholders Analysis

(1) List the names of stakeholders (organizations, groups, individuals).

Example: Rice Production Project

- Farmers
- Traders
- Middlemen
- Extension Workers
- Researchers
- villagers
- Technical Advisors
- District Agriculture Department
- Donors
- Ministry of Agriculture
- Consumers

(2) Group the stakeholders.
(3) Identify important stakeholders.
(4) Analyze the important stakeholders.
(5) Select a tentative target group.

2-2. Procedure of Stakeholders Analysis

(4) Analyze the important stakeholders.
(5) Select a tentative target group.
3-1. Purpose of Problems Analysis

- To clarify the overall picture of the problems being faced by the tentative target group.
- To analyze the entire problematic situation based on the logic of "cause-effect" relationship.

3-2. Procedure of Problems Analysis

1) Write problems of the tentative target group on cards.
2) Find cause-effect relations among the problem cards and place them: effect above and cause below.
3) Select the Core Problem.
4) Identify direct causes to the Core Problem.
5) Identify relevant causes to direct causes.
6) Review the Problems Tree.
7) Identify the effect of the Core Problem.
8) Complete the Problems Tree.

3-3. Problems Tree

3-4. Problems Tree (Example)

- Men have to work away from home
- The family cannot afford sufficient food
- Income from rice sales is low
- Retail price of rice is low
- Rice production is low

3-5. Core Problem

Core Problem = A starting point of the analysis

- The range of the analysis depends on the selection of the Core Problem

3-6. Rule of Card Writing

1) Write only existing problems.
2) Write only one problem per card.
3) Write clear and detailed sentences.
4) Do not include cause and effect in one card.
5) Avoid expressions such as "Lack of XX" and "No XX"

4-1. Purpose of Objectives Analysis

- To clarify situations to be realized and means to be taken for them.
4-2. Procedure of Objectives Analysis

1) Rephrase the Core Problem as the Core Objective.
2) Rephrase the direct causes as direct means.
3) Develop the upper part of the Objectives Tree.
4) Rephrase the remaining problem cards.
5) Add cards (possible options) if necessary.

4-4. Objectives Tree (Example)

- Men do not need to work away from home
- The family can afford sufficient food

Income from rice sales is increased
Rice production is increased
Cost of rice production is reduced

Contents

1. Summary of PCM
2. Stakeholders Analysis (Analytical Stage 1)
3. Problems Analysis (Analytical Stage 2)
4. Objectives Analysis (Analytical Stage 3)
5. Project Selection (Planning Stage 1)
6. Project Design Matrix (PDM) (Planning Stage 2)
7. Plan of Operation (Planning Stage 3)

5-2. Procedure of Project Selection

1) Confirm the given conditions of the project.
2) Identify the approaches.
3) Assign a name to each approach.
4) Set the criteria to compare approaches.
5) Make a comparison table.
6) Select one or more approaches.

5-3. Identification of Approaches

Project Selection
- Priorities
  - Goals
  - Technical Aspects
  - Target Group
  - Social Factors
  - Environmental Aspects
  - Financial / Economic Aspects
- Achievements
  - Others
5-4. Comparison of Approaches

<table>
<thead>
<tr>
<th>Effect on Core Objective</th>
<th>Cost</th>
<th>Possibility</th>
<th>Urgency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot; vs. &quot;B&quot; Approach</td>
<td>4</td>
<td>Low</td>
<td>2</td>
</tr>
<tr>
<td>&quot;C&quot; vs. &quot;D&quot; Approach</td>
<td>2</td>
<td>Low</td>
<td>3</td>
</tr>
<tr>
<td>&quot;E&quot; vs. &quot;F&quot; Approach</td>
<td>2</td>
<td>High</td>
<td>1</td>
</tr>
<tr>
<td>&quot;G&quot; vs. &quot;H&quot; Approach</td>
<td>3</td>
<td>High</td>
<td>4</td>
</tr>
<tr>
<td>&quot;I&quot; vs. &quot;J&quot; Approach</td>
<td>2</td>
<td>Low</td>
<td>2</td>
</tr>
</tbody>
</table>

+1 to 4 scale Evaluation

5-5. Project Selection to formulation of PDM

How can we plan a project based on the selected approach?

Selected Approach

PDM

6-1. What is PDM

◆ A master plan of a project.
◆ Used as a basic reference for management of a project.

6-2. Purpose of developing PDM

◆ To design a project with clear image.
◆ To express a project by using a common format so that anyone can understand.

6-3. Structure of PDM

6-4. Narrative Summary

Overall Goal
A long-term objective which can be attained 3 to 5 years after the successful completion of the project.

Project Purpose
A short-term goal that must be realized at the end of the project period.

Outputs
Specific achievements of a project which are necessary for the realization of the project purpose.

Activities
Actions which are carried out by a project to realize each output using results.
6-5. Inputs

- Resources that are necessary for project activities, such as human resources, equipment, and budget.

Example:

- Personnel
- Equipment
- Cost
- Acceptance of training

6-6. Objectively Verifiable Indicators & Means of Verification

Example:

Indicator
By October 2010, rice production of XXX village increases 5% from the current.

Means of Verification
Agricultural statistics in Y district office

6-7. Important Assumptions & Preconditions

[Diagram showing important assumptions and preconditions]

Example: The project title is "increase rice production in XXX village". Can the condition "local staff continue to work with the project" be an important assumption for this project?

Answer: This is not an assumption.
Contents

1. Summary of PCM
2. Stakeholders Analysis (Analytical Stage 1)
3. Problems Analysis (Analytical Stage 2)
4. Objectives Analysis (Analytical Stage 3)
5. Project Selection (Planning Stage 1)
6. Project Design Matrix (PDM) (Planning Stage 2)
7. Plan of Operation (Planning Stage 3)

6-7. Important Assumptions & Preconditions

6-8. Reading Structure of PDM

7-1. What is Plan of Operation (PO)

A PDM-based detailed operational plan

PO includes
- Activities
- Expected outputs
- Implementation schedule
- Inputs
- Responsible persons
APPENDIX 11a: Case 1 - Hygiene practices at the Kingstown Fish Market

Hygiene practices at the Kingstown fish market
“Big Business in Little Tokyo”
PDM

Project Title: Improved QMS for Enhanced Global Trade of Fish and Fish Products

Target Group: National Fisheries Marketing Limited (NFML)

Term: 18 months

Overall Goal: Sustained Supply of Quality Fish and Fish Products for National and International Markets

Project Goal: Development of Adequate SPS Capability in NFML

Output:
1. Adequate SPS System
2. Adequate Management System
3. Adequate Financing Arrangements
Hygiene practices at the Kingstown fish market
“Big Business in Little Tokyo”
PDM

**Project Title:** Improved QMS for Enhanced Global Trade of Fish and Fish Products

**Target Group:** National Fisheries Marketing Limited (NFML)

**Term:** 18 months

**Overall Goal:** Sustained Supply of Quality Fish and Fish Products for National and International Markets

**Project Goal:** Development of Adequate SPS Capability in NFML

**Output:**
1. Adequate SPS System
2. Adequate Management System
3. Adequate Financing Arrangements
APPENDIX 11b: Case 2 - Financial Revitalization of Calliaqua Fisheries Facilities
Financial Revitalization of Calliaqua Fisheries
PDM

**Project Name:** Financial Revitalization of Calliaqua Fisheries

**Target Group:** Calliaqua

**Term:** 5 years

**Overall Goal:**
1. Increase Financial returns by 10% over a 3 year period
2. Increase membership by 30% over a 3 year period
3. Boost Customer Relation by Conducting a Survey Before and After

**Project Goal:** Improve the Financial Management of Calliaqua

**Output:**
1. Proper Marketing Strategy
2. Reducing the Operating Cost by Conducting Cost Analysis
APPENDIX 11c: Case 3 - Project development for under-utilized products at St. Lucia Fish Market Cooperative Limited
Project Development for under-utilized Skip-Jack Tuna's at SLFMC

Problem Analysis

Lack of sales and large supply in storage

Product Development for under-utilized Skip-Jack Tuna

Proper Sales price is low

Over-Provision of Skim Milk

No Market Tuna

Reduced export

No Value Added Products

Conflicts with neighboring Tuna

No shelf life of product


tiredness when preparing product

High percentage of waste

Tuna短期保存


tireness due to lack of product

High oil prices

Commercial Tuna
Project Development for under-utilized Skip-Jack Tuna's at SLFMC
PDM

**Project:** Project Development for under-utilized Skip-Jack Tuna's at SLFMC

**Target Group:** SLFMC

**Term:** 2 years

**Overall Goal:**
1. Adding Value to Skip-Jack Tuna
2. Capacity Building Enhancement of SLFMC for Product Development
3. Marketing Strategy Improvement

**Project Goal:**
1. Increase Sale of Skip-Jack Tuna Year-round
2. Product Diversification to enhance sale and Viability at SLFMC

**Output:**
1. Improved Stock Turnover at SLFMC
2. New Product Development
3. Consumer Appreciation of Skip-Jack Tuna
4. Sustainability of SLFMC
APPENDIX 12: Dominica: Newton Fisheries Cooperative

Newton Fisheries Cooperative began in 1978. The intention of the cooperative then, was to market the fish caught by the Newtown fishermen. After hurricane David in 1979, many of the fishing boats got damaged, and as such the need to become a full fishing cooperative arose. Newtown Fisheries became a registered cooperative in 1981, and continued to grow and flourish.

They conducted different types of fishing such as, beach seining, tuna long lining (for which they became the first group to do that type of fishing in Dominica), deep sea fishing (flying fish and dolphin), and bottom long lining. The fishing venture was very lucrative and it was through this that they were able to acquire new equipment. They invested in a 65 foot motor vessel which was converted into a trawler. However, maintaining this vessel proved to be very costly, thus, it was sold and two smaller boats were built. In the 1980’s Newtown Fisheries Cooperative was thriving with a membership of 65. Some of these members are still around, others have migrated and some have left fishing.

The year 1998 was a turning point for Newtown Fisheries Cooperative. One of the pillars of the cooperative died, which diminished the moral of the members. Then in 1999 hurricane Lenny struck Dominica. Most boats were lost and it became difficult to replace both boats and fishermen, therefore fishing activity became minimal in early 2000 since there seemed to be a shortage of individuals who could do both beach seining and long lining. The older fishermen had either died or retired, younger ones had migrated and those who remained in Dominica did not consider fishing lucrative. Thus, the survival of Newtown Fisheries Cooperative depended on new membership and a fresh approach.

In 2005 Newtown Fisheries Cooperative acquired the use of Roseau Fish Market with the help of Mr. Nigel Lawrence. Newtown Fisheries Cooperative was considered the best Co-op to run the Roseau Fish Market because of its good record. They were to find their own capital to buy fish, but were able to set up Roseau Fish Market. Presently Newtown Fisheries Cooperative operates with a staff of eight and sells a variety of quality fish including Tuna, Dolphin, Marlin, Red fish, Salmon, Kawang, Flying fish, Lobster and Squid. Other products and services are also offered such as crushed ice, bone meal, fish cleaning, packaging, storage and band saw cutting.

Newton Fisheries Cooperative membership has increased by 35 in 2011 and is still growing.
APPENDIX 13a: Grenada - Gouyave Fish Market

Gouyave Fish Market Organizational Chart

This chart represents the organizational structure as it relates to the chain of command for the efficient operations and functions that are carried out in the Gouyave Fish Market.

The role of persons from the above chart.

- Extension Officer overall responsibility is for management of fisheries facilities, staffs and the Fishing Districts and reporting to the Chief Fisheries Officer
- Manager responsibility is for supervision of subordinate staff
- Assistant manager provide support and supervision of members of staff
- Data collectors is responsible for recording of catch and effort data, length frequency and maturity data
- Assistant data collector is involved in the collection of data
- Cold room attendants is responsible for recording, storing and removal of fish entering and leaving the cold room
- Cleaner are responsible for maintaining cleanliness in and around the fish market

This chart represents the organizational structure as it relates to the chain of command for the efficient operations and functions carried out at the Gouyave Fish Market.
## GOUYAVE FISH MARKET

### MARKET REVENUE COLLECTED 2006 – 2011

<table>
<thead>
<tr>
<th>REVENUE</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICE SOLD</td>
<td>$</td>
<td>$ 7,766.70</td>
<td>$ 30,396.50</td>
<td>$ 33,258.90</td>
<td>$ 28,521.00</td>
<td>$</td>
<td>$ 99,943.10</td>
</tr>
<tr>
<td>LANDING FEES</td>
<td>$ 6,708.25</td>
<td>$ 6,134.60</td>
<td>$ 7,250.55</td>
<td>$ 7,489.70</td>
<td>$ 4,453.50</td>
<td>$ 4,681.80</td>
<td>$ 36,718.40</td>
</tr>
<tr>
<td>STALL RENT</td>
<td>$ 365.00</td>
<td>$ 502.75</td>
<td>$</td>
<td>$</td>
<td>$ 841.30</td>
<td>$</td>
<td>$ 1,709.05</td>
</tr>
<tr>
<td>FISH STORAGE</td>
<td>$ 7,327.86</td>
<td>$ 5,349.53</td>
<td>$ 7,311.88</td>
<td>$ 9,126.36</td>
<td>$ 8,573.50</td>
<td>$ 9,923.40</td>
<td>$ 46,406.31</td>
</tr>
<tr>
<td>LOCKER RENT</td>
<td>$ 1,240.00</td>
<td>$ 1,460.00</td>
<td>$ 120.00</td>
<td>$ 80.00</td>
<td>$</td>
<td>$</td>
<td>$ 2,900.00</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$ 15,641.11</td>
<td>$ 21,213.58</td>
<td>$ 45,078.93</td>
<td>$ 49,954.96</td>
<td>$ 42,389.30</td>
<td>$ 14,605.20</td>
<td>$ 188,883.08</td>
</tr>
</tbody>
</table>

Lisa Chetram  
Fisheries Ext. Officer  
Western District
APPENDIX 13b: Grenville Fish Market

Grenville Fish Market Organizational Chart 2012

This chart represents the organizational structure as it relates to the chain of command for the efficient operations and functions carried out at the Grenville Fish Market.

The following characterize a partial role performed by each member of staff at the Grenville fish market.

- Extension Officer overall responsibility is for management of fisheries facilities, staff members and the fishing districts and reporting to the Chief Fisheries Officer
- Manager responsibility is for supervision of subordinate staff
- Assistant manager provide support and supervision of members of staff
- Market supervisor runs the floor and supervise the daily operations
- Refrigeration technician maintenance of refrigeration facilities
- Cashier / Clerk is responsible for collecting government revenue, performing the role of receptionist and engaging in accounting activities and record keeping.
- Data collectors is responsible for recording of catch and effort data, length frequency and maturity data
- Assistant data collectors is involved in the collection of data
- Cold room attendant is responsible for recording, storing and removal of fish entering and leaving the cold room
- Cleaners are responsible for maintaining cleanliness in and around the fish market
Accounts

Annual revenue collected at Grenville Fish Market in 2011

Income

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ice sales</td>
<td>$113,759.40</td>
</tr>
<tr>
<td>Stall rent</td>
<td>$17,950.00</td>
</tr>
<tr>
<td>Lockers rent</td>
<td>$8,625.00</td>
</tr>
<tr>
<td>Machine room</td>
<td>$5,000.00</td>
</tr>
<tr>
<td>Fish storage</td>
<td>$2,855.65</td>
</tr>
<tr>
<td>Fish dues</td>
<td>$1,626.25</td>
</tr>
<tr>
<td>Wash room</td>
<td>$415.00</td>
</tr>
<tr>
<td>Electricity</td>
<td>$716.00</td>
</tr>
<tr>
<td>Water</td>
<td>$158.00</td>
</tr>
<tr>
<td>Others</td>
<td>$1,000.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$153,645.30</strong></td>
</tr>
</tbody>
</table>

Expenditure

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>N/A</td>
</tr>
<tr>
<td>Electricity</td>
<td>N/A</td>
</tr>
<tr>
<td>Water</td>
<td>N/A</td>
</tr>
<tr>
<td>Telephone</td>
<td>N/A</td>
</tr>
<tr>
<td>Internet</td>
<td>N/A</td>
</tr>
<tr>
<td>Spear parts</td>
<td>N/A</td>
</tr>
<tr>
<td>General maintenance</td>
<td>N/A</td>
</tr>
<tr>
<td>Cleaning item</td>
<td>N/A</td>
</tr>
<tr>
<td>Stationery</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The unavailability of expenditure records at our disposal makes it difficult if not impossible to calculate the income from the expenditures to realize if there is a profit or a deficit. The system employed now is not recommended and needs to be improved to realize the full potential of the market.
## GRENVILLE FISH MARKET

### MARKET REVENUE COLLECTED 2006 - 2011

<table>
<thead>
<tr>
<th>REVENUE</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICE SOLD</td>
<td>$80,030.62</td>
<td>$135,665.75</td>
<td>$152,191.90</td>
<td>$129,131.30</td>
<td>$123,638.30</td>
<td>$113,759.40</td>
<td>$734,417.27</td>
</tr>
<tr>
<td>LANDING FEES</td>
<td>$5,647.20</td>
<td>$10,816.75</td>
<td>$10,464.75</td>
<td>$3,919.12</td>
<td>$2,446.21</td>
<td>$1,626.25</td>
<td>$34,920.28</td>
</tr>
<tr>
<td>STALL RENT</td>
<td>$41,417.50</td>
<td>$44,980.50</td>
<td>$48,000.00</td>
<td>$34,355.00</td>
<td>$27,890.00</td>
<td>$17,950.00</td>
<td>$214,593.00</td>
</tr>
<tr>
<td>FISH STORAGE</td>
<td>$12,324.52</td>
<td>$12,595.19</td>
<td>$10,308.55</td>
<td>$4,193.45</td>
<td>$4,128.95</td>
<td>$2,855.65</td>
<td>$46,406.31</td>
</tr>
<tr>
<td>LOCKER RENT</td>
<td>$4,100.00</td>
<td>$10,175.00</td>
<td>$6,040.00</td>
<td>$5,725.00</td>
<td>$7,075.00</td>
<td>$8,625.00</td>
<td>$41,740.00</td>
</tr>
<tr>
<td>CAR PARK</td>
<td>$95.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$95.00</td>
</tr>
<tr>
<td>WASHROOM</td>
<td>$390.00</td>
<td>$1,362.00</td>
<td>$1,748.00</td>
<td>$1,699.00</td>
<td>$992.00</td>
<td>$415.00</td>
<td>$6,606.00</td>
</tr>
<tr>
<td>MACHINE ROOM</td>
<td>$5,000.00</td>
<td>$5,500.00</td>
<td>$6,000.00</td>
<td>$6,000.00</td>
<td>$6,000.00</td>
<td>$5,000.00</td>
<td>$33,500.00</td>
</tr>
<tr>
<td>BIN RENT</td>
<td>$400.00</td>
<td>$595.00</td>
<td>$175.00</td>
<td>$50.00</td>
<td></td>
<td></td>
<td>$1,220.00</td>
</tr>
<tr>
<td>ELECTRICITY</td>
<td>$280.00</td>
<td>$500.00</td>
<td>$1,860.00</td>
<td>$405.00</td>
<td>$275.00</td>
<td>$716.00</td>
<td>$4,036.00</td>
</tr>
<tr>
<td>CLEANER RENT</td>
<td>$700.00</td>
<td>$1,540.00</td>
<td>$2,240.00</td>
<td>$290.00</td>
<td>$158.00</td>
<td>$528.00</td>
<td></td>
</tr>
<tr>
<td>WATER</td>
<td>$80.00</td>
<td>$290.00</td>
<td>$158.00</td>
<td>$70.00</td>
<td>$1,000.00</td>
<td>$1,070.00</td>
<td></td>
</tr>
<tr>
<td>EXCESS CASH</td>
<td>$149,589.84</td>
<td>$222,190.19</td>
<td>$236,788.20</td>
<td>$185,652.87</td>
<td>$173,505.46</td>
<td>$153,645.30</td>
<td>$1,121,371.86</td>
</tr>
</tbody>
</table>

---

Francis Calliste  
Fishery Officer
APPENDIX 14: Nevis: Nevis Fisheries Complex

NEVIS FISHERMEN’S
MARKETING AND
SUPPLY CO-OP
SOCIETY

BUSINESS PLAN

ACTION PLAN FOR NEW FISHERIES COMPLEX
EXECUTIVE SUMMARY

This plan seeks to encapsulate the different component that should be put in place to build effective and productive fisheries Co-operative. As a developing nation, we envision to propel ourselves in a situation that makes it feasible to foster growth, and be competitive on the global market. We also seek to enhance our product base and supplies, and add value to make us more viable. This plan outlines detail aspects such as SALES / BUYING TRENDS, MARKET ANALYSIS, STRATEGY, and IMPLEMENTATION component to bring to bear a project of this magnitude.

MARKET

The market share of this venture is miniscule as it is. Our aim is to grow this sector and capture more market share. It is also futuristic in our planning to draw more capital and investment to our country and region. Presently our market only caters to the national level. As globalization is thrust upon us strategies must be put in place to grow our product. Our present consumption is centered on the local consumption such as Schools, Hotels, Tourist, supermarkets. The productivity level has to be increased to maintain the national demands and capture outside markets.

PRODUCT

Our products are limited in certain aspects. This is mainly due to a number of reasons e.g.(1) small fishing boats which are not equipped to target the pelagic species such as Dolphin, tuna that migrate thought our water at different period of year (Nov- May), (2) weather condition, (3) diversification on fishing method. Efforts would be geared toward adding more variety to encourage more buyers to use the market. The major fish product that are landed at the complex are:

- Dolphin
- Wahoo
- Tuna
- King Fish
- Red Snapper
- Grouper
- Hind and Butter
- Pot fish
- Lobster
- Shell fish
- Conch
- Shark
- Ballahoo
In an effort to foster growth the introduction of the bi-products of the original product is mandatory. These products are geared towards adding value; promote diversification, which can also lead to more profits.

**STRUCTURE**

The structure put in place provides a guideline by which rules and procedures and implementation can be done. As efforts are made to become a part of this new emerging market it is imperative that support comes from the government and ministers in this Department. Capacity building is a must component of this plan for future growth and expansion. As the structure shows there is room for added human resource to function economically and effectively.

**Organizational Chart**

- Minister
- Permanent Secretary
- Director of Fisheries
- Board of Directors
- Manager
- Employee
STRATEGY

Strategic planning is essential to any plan, as the strategy used to bring about this feat is of tremendous importance. As aspect of the plan would be implemented to show the long term goal and viability of this sector and product. Considerable effort would be made to involve a wide and diverse cross section of the target market you wish to capture.

All aspect of the media would be utilized, such as television ads, radio, community calendars, newspaper and brochures. Public awareness is of great importance to get the public aware of the use and need for this business venture.

IMPLEMENTATION

A critical role of the plan is the implementation. Based on the analytical and statistical data provided one must take careful look at the action of such a venture and how to bring about its success. Considerable amount of capital would have to be appropriated by government for this project.

With the global economic situation still volatile, other means of capital have to be realized to get the structure in place. Additional expenditure to maintain and do the operational aspect is very critical. Core capacities should be clearly outlined, a needs assessment along with an EIA (environmental impact assessment) study becomes vital to the successive outcome. All stakeholders should have a vested interest as this project is put in place.

Financial Analysis: INCOME & EXPENDITURE FOR 2011

The graph above captures the revenue made at the Fisheries complex from January to December 2011, where there was a fluctuation between each month. December showing there was no sale made on fish at the complex where June captures the most Revenue.
The graph above captures the expenditure for fish purchase from Jan-Dec 2011 at the fisheries complex where there was no purchase of fish in February, August and December. October showing the most purchase of fish for the year 2011.
APPENDIX 15a: Anse La Raye Fishing Port
Anse La Raye is a small fishing community on the West Coast of Saint Lucia. It is well known as a small fishing community with about one hundred and twenty \(120\) registered full-time and part-time fishers and about twenty-five \(25\) registered fishing vessels, eight \(8\) canoes and seventeen \(17\) pirogues. Over the years fishers venture out at sea in the traditional dugout canoes but are steadily moving into the more modern and stable fibre glass reinforced pirogues. Their main fishing activities include beach seine, fillet, gill nets, flying fish and trolling an activity which is frequently conducted near Fish Aggregating Devices \{FADs\}.

Fibre-glass reinforced Pirogue
Traditional dugout canoe

Move from the traditional dugout canoes to more stable and modern fibre-glass reinforced pirog

In 2009 the Government of Japan and Saint Lucia constructed a fishing port facility in the fishing community of Anse La Raye, this facility encompasses:-

1. Administrative Building with :-
   • Offices – Fisheries and Cooperative
   • Tackle shop
   • Meeting area
   • Store room space
   • Ice making machine and small processing area

2. Thirty {30} gear locker rooms

3. Jetty

4. Wench. Net, boat and gear repair shed

The facility is managed by the Anse La Raye / Canaries Fishers and Consumers Co-operative Society, with a membership of ninety three {93}, and established on 30th November 1976.

5. Refurbishment of vendors arcade managed by Anse La Raye Village Council
   ➢ These were for a direct result for diversification of fishers income
   ➢ Stimulate tourism activities in the village
   ➢ To boost fishers and their families livelihood with their Fish Fry activities
Constraints / challenges

- Interim care taker board
- Access to finance

The Department of Fisheries and Co-operatives are working together with the interim board and general membership to regularize the status, functions and operations of the co-operative. A proposed annual general meeting is scheduled for March 2012.

However, all registered fishers co-operative is Saint Lucia operates under similar guidelines as prescribe by the Co-operative Act.

1. Board of Directors – elected by general membership
2. Conduct annual general meeting

**Organisation Chart**

- President
- Vice President
- Secretary
- Assistant Secretary
- Treasurer
- Two Floor Representatives
Fishing community of Anse La Raye

Petronila Polius

Department of Fisheries

Ministry of Agriculture, Food Production, Fisheries and Rural Development

14 February 2012
APPENDIX 15b: St. Lucia - Choiseul Fisherman’s Cooperative

CHOISEUL FISHERMEN’S CO-OPERATIVE SOCIETY

The Choiseul Fishermen’s Co-operative Society was registered on the 23rd of March 1972. It started with 22 members. At that time one was required to pay $5.00 for registration and $100.00 for minimum shares.

At present, there are 92 members $25.00 for registration and a minimum Share of $255.00.

The Co-operative operates an Ice Machine and a limited amount of ice is given to Fishermen to go to sea especially for storage of the fresh bait. Ice is also sold to the Community in helping for payment of the electricity bills and maintenance of this machine.

A Fuel Pump is also being operated with both Diesel and Gasoline. There is a retail shop that sells Fishing Gears and Equipment to its members.
ORGANISATIONAL CHART FOR THE CHOOSEUL FISHERMEN'S

CO-OPERATIVE SOCIETY

MEMBERS

BOARD OF DIRECTORS

SUPERVISORY COMMITTEE

DISTRESS COMMITTEE

MANAGER

STAFF
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Auditor's Report

Financial Statements

31st December, 2010

SARJ
RAMDHARRI
CHARTERED ACCOUNTANT
P.O. Box 1976, Castries Gardens
Castries, St. Lucia, W.I.

Tel/Fax: (758) 451 - 7268
AUDITOR'S REPORT TO THE MEMBERS OF
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

I have audited the accompanying BALANCE SHEET of CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED as at 31st. December, 2010, and the statements of INCOME AND UNDISTRIBUTED SURPLUS and CHANGES IN FINANCIAL POSITION for the year then ended.

These Financial Statements are the responsibility of the Society's Committee of Management. My responsibility is to express an opinion on the Financial Statements based on my audit.

I conducted my audit in accordance with generally accepted auditing standards. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the Financial Statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the Financial Statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall Financial Statement presentation.

In my opinion the Financial Statements referred to above present fairly, in all material respects, the financial position of CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED at 31st. December, 2010, and the results of its operations for the year then ended in conformity with international accounting standards.

2nd. April, 2011

Chartered Accountant

Casries,
St. Lucia.
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Balance Sheet

As at 31st. December, 2010
(with comparative figures for 2009)

**CURRENT ASSETS:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Notes</th>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in hand &amp; at bank</td>
<td>3</td>
<td>329,539</td>
<td>286,221</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>2 &amp; 3</td>
<td>240,209</td>
<td>161,973</td>
</tr>
<tr>
<td>Advance Payments</td>
<td></td>
<td>155</td>
<td>155</td>
</tr>
<tr>
<td>Inventories</td>
<td>2</td>
<td>120,776</td>
<td>172,343</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td></td>
<td>650,759</td>
<td>620,692</td>
</tr>
</tbody>
</table>

**LESS CURRENT LIABILITIES:**

<table>
<thead>
<tr>
<th>Description</th>
<th>Notes</th>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounts Payable &amp; Accruals</td>
<td>4</td>
<td>4,200</td>
<td>4,200</td>
</tr>
<tr>
<td><strong>Total Current Liabilities</strong></td>
<td></td>
<td>4,200</td>
<td>4,200</td>
</tr>
</tbody>
</table>

**WORKING CAPITAL**

<table>
<thead>
<tr>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>686,559</td>
<td>616,492</td>
</tr>
</tbody>
</table>

**FIXED ASSETS - NET**

<table>
<thead>
<tr>
<th>Notes</th>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 &amp; 3</td>
<td>664</td>
<td>1,703</td>
</tr>
</tbody>
</table>

**INVESTMENT**

<table>
<thead>
<tr>
<th>Notes</th>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**NET ASSETS**

<table>
<thead>
<tr>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>687,323</td>
<td>618,295</td>
</tr>
</tbody>
</table>

**REPRESENTED BY:**

**Members' Equity:**

<table>
<thead>
<tr>
<th>Description</th>
<th>EC$ 2010</th>
<th>EC$ 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Capital</td>
<td>110,125</td>
<td>103,571</td>
</tr>
<tr>
<td>Statutory Reserves</td>
<td>174,010</td>
<td>159,419</td>
</tr>
<tr>
<td>Education Fund</td>
<td>54,138</td>
<td>48,314</td>
</tr>
<tr>
<td>Distress Fund</td>
<td>166,295</td>
<td>146,282</td>
</tr>
<tr>
<td>Death Fund</td>
<td>34,925</td>
<td>32,683</td>
</tr>
<tr>
<td>Contributed Capital</td>
<td>8,500</td>
<td>8,500</td>
</tr>
<tr>
<td>Retained Surplus</td>
<td>145,330</td>
<td>119,526</td>
</tr>
<tr>
<td><strong>TOTAL MEMBERS EQUITY</strong></td>
<td>687,323</td>
<td>618,295</td>
</tr>
</tbody>
</table>

Approved on behalf of the Society:

President

Secretary

The accompanying notes form an integral part of these financial statements.
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Statement of Income and Undistributed Surplus

For the year ended 31st. December, 2010
(With comparative figures for 2009)

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>INCOME:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SALES</strong></td>
<td>2,257,575</td>
<td>1,966,500</td>
</tr>
<tr>
<td><strong>LESS COST OF SALES:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opening Inventories</td>
<td>172,343</td>
<td>111,378</td>
</tr>
<tr>
<td>Add: Purchases</td>
<td>1,969,917</td>
<td>1,825,841</td>
</tr>
<tr>
<td>Goods available for sale</td>
<td>2,142,260</td>
<td>1,937,219</td>
</tr>
<tr>
<td>Less: Closing Inventories</td>
<td>(120,776)</td>
<td>(172,343)</td>
</tr>
<tr>
<td><strong>Cost of goods sold</strong></td>
<td>2,021,484</td>
<td>1,764,876</td>
</tr>
<tr>
<td><strong>GROSS INCOME</strong></td>
<td>236,011</td>
<td>201,624</td>
</tr>
<tr>
<td><strong>OTHER INCOME</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest Earned</td>
<td>7,077</td>
<td>8,656</td>
</tr>
<tr>
<td>Locker Room Rental</td>
<td>9,447</td>
<td>1,255</td>
</tr>
<tr>
<td>Ice</td>
<td>32,634</td>
<td>20,737</td>
</tr>
<tr>
<td>Other</td>
<td>1,776</td>
<td>1,261</td>
</tr>
<tr>
<td><strong>Total Other Income</strong></td>
<td>52,034</td>
<td>39,909</td>
</tr>
<tr>
<td><strong>TOTAL INCOME</strong></td>
<td>288,045</td>
<td>241,533</td>
</tr>
<tr>
<td><strong>LESS: ADMINISTRATION, SELLING &amp; GENERAL EXPENSES (Schedule 1)</strong></td>
<td>(215,321)</td>
<td>(203,961)</td>
</tr>
<tr>
<td><strong>NET INCOME BEFORE APPROPRIATIONS</strong></td>
<td>72,804</td>
<td>37,572</td>
</tr>
<tr>
<td>Transfer to Statutory Reserves (20%)</td>
<td>(14,561)</td>
<td>(7,514)</td>
</tr>
<tr>
<td>Transfer to Education Fund (10%)</td>
<td>(5,824)</td>
<td>(3,806)</td>
</tr>
<tr>
<td>Transfer to Death Fund (10%)</td>
<td>(5,242)</td>
<td>(2,705)</td>
</tr>
<tr>
<td><strong>NET INCOME/(LOSS) AFTER APPROPRIATIONS</strong></td>
<td>47,177</td>
<td>24,347</td>
</tr>
<tr>
<td><strong>RETAIRED SURPLUS BROUGHT FORWARD</strong></td>
<td>119,526</td>
<td>95,179</td>
</tr>
<tr>
<td><strong>Dividends</strong></td>
<td>166,703</td>
<td>119,526</td>
</tr>
<tr>
<td><strong>Patronage Refund</strong></td>
<td>(2,059)</td>
<td>-</td>
</tr>
<tr>
<td><strong>RETAIRED SURPLUS CARRIED FORWARD</strong></td>
<td>145,330</td>
<td>119,526</td>
</tr>
</tbody>
</table>

The accompanying notes form an integral part of these financial statements.
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Statement of Changes in Financial Position

For the year ended 31st December, 2010
(With comparative figures for 2009)

<table>
<thead>
<tr>
<th>CASH FLOW FROM OPERATING ACTIVITIES:</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Income before Appropriations</td>
<td>72,804</td>
<td>37,572</td>
</tr>
<tr>
<td>Items not affecting cash:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,039</td>
<td>1,038</td>
</tr>
<tr>
<td></td>
<td>73,843</td>
<td>38,610</td>
</tr>
<tr>
<td>Decrease in Accounts Payable</td>
<td>-</td>
<td>(58,630)</td>
</tr>
<tr>
<td>(Increase)/Decrease in Accounts Receivable</td>
<td>(70,316)</td>
<td>71,133</td>
</tr>
<tr>
<td>Decrease/(Increase) in Inventories</td>
<td>51,567</td>
<td>(50,965)</td>
</tr>
<tr>
<td>Entrance Fees</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Cash from/(used in) operations</td>
<td>47,124</td>
<td>(53,842)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CASH FROM FINANCING ACTIVITIES:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase in Share Capital</td>
<td>6,554</td>
<td>911</td>
</tr>
<tr>
<td>Increase in Distress Fund</td>
<td>14,013</td>
<td>3,799</td>
</tr>
<tr>
<td>Dividends Paid</td>
<td>(2,059)</td>
<td>-</td>
</tr>
<tr>
<td>Patronage Refund</td>
<td>(19,314)</td>
<td>-</td>
</tr>
<tr>
<td>Death Fund Payments</td>
<td>(3,000)</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>(3,806)</td>
<td>4,710</td>
</tr>
<tr>
<td>Increase/(Decrease) in Cash Balances</td>
<td>43,318</td>
<td>(49,132)</td>
</tr>
</tbody>
</table>

| NET CASH BALANCE AT BEGINNING OF YEAR | 286,221 | 335,353 |
| NET CASH BALANCE AT END OF YEAR      | 329,539 | 286,221 |

<table>
<thead>
<tr>
<th>CASH BALANCES COMPRIZE:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash in Hand</td>
<td>10,413</td>
<td>9,603</td>
</tr>
<tr>
<td>Cash at Bank / Credit Union:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank of St. Lucia Ltd. - Current a/c</td>
<td>24,681</td>
<td>30,549</td>
</tr>
<tr>
<td>Bank of St. Lucia Ltd. - Distress a/c</td>
<td>100,317</td>
<td>60,822</td>
</tr>
<tr>
<td>Choiseul Co-operative Credit Union Limited - Deposit a/c</td>
<td>52,254</td>
<td>49,925</td>
</tr>
<tr>
<td></td>
<td>141,674</td>
<td>135,822</td>
</tr>
<tr>
<td></td>
<td>329,539</td>
<td>286,221</td>
</tr>
</tbody>
</table>

The accompanying notes form an integral part of these financial statements.
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Notes to the Financial Statements

For the year ended 31st. December, 2010
(With comparative figures for 2009)

1. INCORPORATION AND PRINCIPAL ACTIVITY

The Choiseul Fishermen's Cooperative Society Limited was incorporated on 22nd. March, 1972, and was continued under the "Cooperative Societies Act 20 of 1899" and the "Cooperative Societies Regulations 1999" of St. Lucia.

Its principal activity is to make available regular supplies of fuel, oil and fishing equipment to its members.

2. SIGNIFICANT ACCOUNTING POLICIES

a) Accounts Receivable:

All debts outstanding at year end were reviewed and allowances have been made for doubtful accounts.

b) Inventories:

Inventories are valued at the lower of cost (on a specific item basis) and net realizable value.

c) Fixed Assets - Net:

Fixed assets are valued at cost less accumulated depreciation thereon. Depreciation is provided over the estimated useful life of depreciable assets on the straight line basis at the following rates:

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Depreciation Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building</td>
<td>10%</td>
</tr>
<tr>
<td>Furniture &amp; Equipment</td>
<td>12 1/2%</td>
</tr>
<tr>
<td>Petrol Tank Encasement</td>
<td>10%</td>
</tr>
<tr>
<td>Computer Equipment</td>
<td>25%</td>
</tr>
</tbody>
</table>

Maintenance and repairs are charged to current operations whereas the cost of improvements are capitalized. The cost of property, furniture and equipment replaced, retired or otherwise disposed of during the year and the accumulated depreciation thereon are eliminated from the accounts and any resulting gain or loss reflected in current operations.
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Notes to the Financial Statements

For the year ended 31st December, 2010
(With comparative figures for 2009)

3. ANALYSIS OF SIGNIFICANT ACCOUNTS

a) Cash in Hand and at Bank

<table>
<thead>
<tr>
<th>Cash in Hand and at Bank</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cashier's Float</td>
<td>300</td>
<td>150</td>
</tr>
<tr>
<td>Cash in Transit</td>
<td>10,119</td>
<td>9,453</td>
</tr>
<tr>
<td>Cash at Bank / Credit Union:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bank of St. Lucia Ltd. - Current a/c</td>
<td>24,881</td>
<td>30,549</td>
</tr>
<tr>
<td>Bank of St. Lucia Ltd. - Distress a/c</td>
<td>100,317</td>
<td>60,822</td>
</tr>
<tr>
<td>Choiseul Co-operative Credit Union Limited: Deposit a/c</td>
<td>52,254</td>
<td>49,925</td>
</tr>
<tr>
<td>- Shares a/c</td>
<td>141,674</td>
<td>135,322</td>
</tr>
<tr>
<td>------------------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Total</td>
<td>328,539</td>
<td>286,221</td>
</tr>
</tbody>
</table>

b) Accounts Receivable

<p>| Members          | 200,544 | 135,365 |</p>
<table>
<thead>
<tr>
<th>Non-Members</th>
<th>42,960</th>
<th>29,824</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less: Bad Debt Provision</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>248,503</td>
<td>165,189</td>
</tr>
<tr>
<td>- (8,164)</td>
<td>(7,278)</td>
<td>(7,278)</td>
</tr>
<tr>
<td>-----------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Total</td>
<td>240,339</td>
<td>161,913</td>
</tr>
</tbody>
</table>

3) Fixed Assets - Net

<table>
<thead>
<tr>
<th>Cost at 31/12/10</th>
<th>Accumulated Depreciation</th>
<th>Net Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Building</td>
<td>36,959</td>
<td>1</td>
</tr>
<tr>
<td>Furniture &amp; Equipment</td>
<td>22,402</td>
<td>19,739</td>
</tr>
<tr>
<td></td>
<td>57,371</td>
<td>56,707</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Total</td>
<td>52,360</td>
<td>51,542</td>
</tr>
</tbody>
</table>

4. ACCOUNTS PAYABLE & ACCRUALS

<table>
<thead>
<tr>
<th>Accounts Payable &amp; Accruals</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accrued Expenses</td>
<td>4,200</td>
<td>4,200</td>
</tr>
</tbody>
</table>

- 6 -
CHOICEFUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Notes to the Financial Statements

For the year ended 31st. December, 2010
(With comparative figures for 2009)

5. INVESTMENT

Investment is stated at cost and represents twenty (20) shares at $5.00 each in the National Association of Fishermen's Cooperative Society Limited.

6. SHARE CAPITAL

The Society by its Constitution encourages members to increase their share holding by ensuring that members contribute ten percent (10%) of their duty refunds to share capital.

7. STATUTORY RESERVES

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance at 1.1.10</td>
<td>159,419</td>
<td>151,895</td>
</tr>
<tr>
<td>Add: Appropriation of Net Income</td>
<td>14,561</td>
<td>7,514</td>
</tr>
<tr>
<td>Entrance Fees</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>Closing Balance at 31.12.10</td>
<td>174,010</td>
<td>159,419</td>
</tr>
</tbody>
</table>

In accordance with the Bye-Laws of the Society 20% of the Net income for the year, plus the entrance fees, have been transferred to a Statutory Reserve fund.

8. EDUCATION FUND

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance at 1.1.10</td>
<td>48,314</td>
<td>45,308</td>
</tr>
<tr>
<td>Add: Appropriation of Net Income</td>
<td>5,824</td>
<td>3,006</td>
</tr>
<tr>
<td>Closing Balance at 31.12.10</td>
<td>54,138</td>
<td>48,314</td>
</tr>
</tbody>
</table>

The Education Fund represents an appropriation of ten percent (10%) of net income after a transfer of 20% to the statutory reserve fund.
9. DISTRESS FUND - $160,295

This amount represents a proportion of import duty refunded by the Government of St. Lucia on fuel purchased by the members of the Society. This fund was set up to assist members in the event of distress or misfortunes.

10. DEATH FUND

<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening Balance at 1.1.10</td>
<td>32,683</td>
<td>29,978</td>
</tr>
<tr>
<td>Add: Appropriation of Net Income</td>
<td>5,242</td>
<td>2,705</td>
</tr>
<tr>
<td>Less: Death Benefit Payments</td>
<td>3,000</td>
<td>------</td>
</tr>
<tr>
<td>Closing Balance at 31.12.10</td>
<td>34,925</td>
<td>32,683</td>
</tr>
</tbody>
</table>

The Death Fund represents an appropriation of ten percent (10%) of net income after the transfers to statutory reserve and education fund.

11. CONTRIBUTED CAPITAL - ECS$8,500

This amount represents a donation from the Cooperative Department and Fisheries Department toward the cost of two computers.
<table>
<thead>
<tr>
<th>Staff Expenses</th>
<th>2010</th>
<th>2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Wages</td>
<td>86,278</td>
<td>80,758</td>
</tr>
<tr>
<td>National Insurance Contributions</td>
<td>4,368</td>
<td>3,250</td>
</tr>
<tr>
<td>Staff Uniforms</td>
<td>384</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>91,030</strong></td>
<td><strong>84,008</strong></td>
</tr>
</tbody>
</table>

| Traveling & Entertainment                  |          |          |
| Transportation                             | 871      | 830      |
| Traveling                                  | 570      | 1,265    |
| Entertainment                              | 1,008    | 789      |
| **Total**                                  | **2,449**| **2,884**|

| Office & General Expenses                  |          |          |
| Stationery & Office Supplies              | 8,264    | 7,410    |
| Electricity                                | 51,905   | 44,944   |
| Water                                      | 32,220   | 23,060   |
| Telephone                                  | 5,994    | 4,520    |
| Bank Charges                               | 427      | 588      |
| License                                    | 200      | 200      |
| Audit Fees                                 | 4,400    | 4,400    |
| Depreciation                               | 1,039    | 1,038    |
| Repairs & Maintenance                      | 4,521    | 10,897   |
| Sundry Expenses                            | 25       | 171      |
| Cash Shortages                             | 931      | 6,523    |
| Gashbage Disposal                          | 1,200    | 1,550    |
| Board Members' Allowance                   | 810      | 3,860    |
| Honorarium                                 | 1,900    | -        |
| Donation                                   | 275      | 50       |
| Fishermen's Feast                          | 2,523    | 3,892    |
| Fisher Folk Contribution                   | -        | 1,125    |
| AGM Expenses                               | 1,274    | 500      |
| Toiletries                                 | 780      | 653      |
| Bad Debts                                  | 1,304    | 3,588    |
| Legal Fees                                 | 1,830    | -        |
| **Total**                                  | **121,842**| **117,069**|

**Total Admin., Selling & General Expenses**

|                | 215,321 | 203,961 |

- 9 -
CHOISEUL FISHERMEN'S COOPERATIVE SOCIETY LIMITED

Trading Account

For the year ended 31st, December, 2010

<table>
<thead>
<tr>
<th>GAS</th>
<th>DIESEL</th>
<th>OIL</th>
<th>COOKING</th>
<th>TACKLES</th>
<th>PARTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

SALES

<table>
<thead>
<tr>
<th></th>
<th>1,401,025</th>
<th>269,254</th>
<th>117,760</th>
<th>80,349</th>
<th>361,724</th>
<th>26,342</th>
</tr>
</thead>
</table>

LESS: COST OF SALES:

<table>
<thead>
<tr>
<th>Opening inventory</th>
<th>8,420</th>
<th>17,092</th>
<th>3,521</th>
<th>855</th>
<th>128,578</th>
<th>13,436</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add: Purchases</td>
<td>1,285,024</td>
<td>239,880</td>
<td>91,666</td>
<td>74,412</td>
<td>256,624</td>
<td>17,454</td>
</tr>
<tr>
<td></td>
<td>1,293,444</td>
<td>256,972</td>
<td>95,187</td>
<td>75,267</td>
<td>305,202</td>
<td>30,890</td>
</tr>
<tr>
<td>Less: Closing inventory</td>
<td>(13,208)</td>
<td>(8,255)</td>
<td>(9,500)</td>
<td>(846)</td>
<td>(75,280)</td>
<td>(13,685)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of goods sold</td>
<td>1,280,236</td>
<td>248,717</td>
<td>85,687</td>
<td>74,419</td>
<td>309,922</td>
<td>17,205</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GROSS PROFIT</td>
<td>120,789</td>
<td>20,537</td>
<td>32,073</td>
<td>5,930</td>
<td>51,802</td>
<td>3,137</td>
</tr>
</tbody>
</table>

Phone cards

<table>
<thead>
<tr>
<th>SALES</th>
<th>Drinks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>4,862</td>
<td>2,259</td>
</tr>
</tbody>
</table>

LESS: COST OF SALES:

| Opening inventory | 441 | -     |
| Purchases         | 3,075 | 1,782 |
| Cost of Goods Sold| 3,516 | 1,782 |
| GROSS PROFIT      | 1,346 | 477   |