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JAMAICA BUSINESS RECOVERY PROJECT (JBRP)

FINAL REPORT AND EVALUATION

December 2004-January 2006

This publication was produced for review by the United States Agency for International Development. It was prepared by Development Alternatives, Inc.

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Prepared for USAID under, USAID/DAI Prime Contract # PCE-I-00-00-00002-00, “Jamaica Business Recovery Program” by Development Alternatives, Inc.

The Jamaica Business Recovery Program (JBRP) is a one-year program, funded by the United States Agency for International Development (USAID). It is being implemented by the U.S. agribusiness firm, Fintrac Incorporated, and the Jamaica Exporters’ Association (JEA), both under sub-agreements with Development Alternatives, Inc. (DAI).

JBRP coordinates all of its activities with the Office of National Reconstruction (ONR), the Ministry of Agriculture, and other private and public-sector organizations involved with Hurricane Ivan recovery operations.

JBRP provided technical services for small and medium-size enterprises (SMEs) that were impacted by Hurricane Ivan. The overall objective was to provide assistance to restore businesses to pre-hurricane production levels or better. Services included providing technical assistance, training and grants to SMEs, with a special emphasis on agribusiness, fisheries, and the crafts sector, to restore production, encourage re-employment, facilitate operational and financial work-out and restructuring planning, and improve operations for sustainable growth.

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ABBREVIATIONS

ATA	Aid to Artisans
BREDS	Treasure Beach Foundation
CARDI	Caribbean Agriculture Research & Development Institute
CCAM	Caribbean Coastal Area Management Foundation
CMI	Caribbean Maritime Institute
DAI	Development Alternatives, Inc.
FDA	Food & Drug Administration
GAP	Good Agricultural Practices
GOJ	Government of Jamaica
HACCP	Hazard Analysis and Critical Control Point
HA	Hectares
HO	Home Office (Fintrac Washington D.C. Office)
ICM	Integrated Crop Management
IICA	Inter-American Institute for Cooperation in Agriculture
IPM	Integrated Pest Management
JAMPRO	Jamaica Promotions Corporation
JAS	Jamaica Agricultural Society
JEA	Jamaica Exporters' Association
JEFA	Jamaica Egg Farmers Association
JBDC	Jamaica Business Development Centre
JBRP	Jamaica Business Recovery Program
JDF	Jamaica Defence Force
JFCU	Jamaica Fishermen Cooperative Union
JTB	Jamaica Tourist Board
LTTA	Long-Term Technical Assistance
MOA	Ministry of Agriculture
ODPEM	Office of Disaster Preparedness and Emergency Management
ONR	Office of National Reconstruction
PIO	Public Information and Outreach
PQ	Plant Quarantine
PM	Person Months
RADA	Rural Agricultural Development Authority
SME	Small and Medium Enterprises
SPO	Special Program Objectives
STTA	Short-Term Technical Assistance
TA	Technical Assistance
USAID	United States Agency for International Development
UTECH	University of Technology
UWI	University of West Indies

1. EXECUTIVE SUMMARY

During the two days of September 10 and 11, 2004, Hurricane Ivan roared into the Caribbean and pounded many islands with heavy rains and strong winds, including Jamaica, Grenada, and Haiti. While damage in Jamaica was widespread throughout the island, the impact was particularly severe along the southern coast, where significant flooding occurred along with landslides and infrastructure damage. More than 100,000 families were directly affected, with 17 persons losing their lives. And even though all sectors of the economy were negatively impacted, agriculture was hardest hit. The Planning Institute of Jamaica's estimate of the damage was US \$362 million, with direct damage approximated at US \$300 million and indirect at US \$62 million. The GDP growth for Jamaica was forecast to drop by one-half, from 4% to 2%, for 2005. On Oct. 1, 2004 the PIOJ's preliminary estimate put the damage to the crops subsector — where 11,130 hectares were damaged or destroyed — at U.S.\$38 million. For the livestock subsector, losses incurred amounted to U.S.\$11 million. More than 117,600 farmers were affected by the overall loss of U.S.\$50 million. The hardest hit parishes included St. Catherine, Clarendon, Manchester, St. James, Hanover and St. Mary. As a result, the U.S. Government stepped in and provided funds to assist the sector to restore businesses to pre-hurricane income and employment levels through a development program called the Jamaica Business Recovery Program (JBRP), a one-year business and agriculture recovery program funded by the United States Agency for International Development (USAID). Under the lead of Fintrac, a subcontractor of DAI in RAISE, and with Jamaica Exporters' Association (JEA), implementation began on December 1, 2004 with the mobilization of a Rapid Response Team.

The program provided grants for reconstruction activities to eligible small and medium enterprises both directly and through business associations/groups. The provision of technical assistance, training and grants was also provided to businesses impacted by Hurricane Ivan. Sectors covered by the project are horticulture, poultry/livestock, fisheries and crafts. The primary approach to achieve the project's objectives was to provide farmers with weekly technical assistance, coupled with the use of appropriate technology. This allowed the project to improve productivity, competitiveness, and profitability for its clients. This approach has proven successful among JBRP clients. The project was designed to assist farmers in specific parishes who suffered production losses as a result of Hurricane Ivan. Some of these farmers sell products locally, while others are direct exporters or have linkages to export markets through middlemen. Local market conditions subject the companies to international competition because of relatively open markets for imported items.

Disaster risk reduction measures were incorporated into the horticulture and poultry components of the project and included designing greenhouses and poultry houses to better withstand adverse weather conditions. In addition, a number of other conditions affected the implementation of project activities such as continuing bad weather throughout the year, protests and general unrest in the country, and procurement procedures — all of which caused implementation delays.

Despite these problems, the JBRP exceeded all targets established. The total number of farmers trained under the horticulture component was 2,252. Field Advisers made 3,000 TA visits to client farms in the targeted parishes. During the project, 11,478 grants were issued and in-kind investments were made for small purchases for land preparation, seeds, seedling nursery construction and site preparation for drip irrigation equipment. The JBRP gave 227 poultry farmers technical assistance that focused on farm sanitation and hygiene, hurricane preparedness and the use of new equipment such as feeders, waterers and brooders. Trainings also included table egg production, slaughtering and poultry hygiene. More than 400 were employed or re-employed as a result of the project. The program taught that the prime contractor's responsiveness is absolutely essential to resolving problems before they become critical and that a full-time grant manager is necessary to manage large grant budgets. Also, ensuring that development projects remain free from political influence and working with the local coordinating offices helps make certain that implementation is not impeded by

unnecessary bureaucracy. In addition, it is critical to guarantee that any public information or outreach activities are properly coordinated and executed.

Finally, the JBRP succeeded in achieving a measure of sustainability through the use of processes, technology improvements and technical assistance for the life of the project from qualified technicians who alternately enhanced their skills, allowing them to continue working as valuable members of any agribusiness community.

2. BACKGROUND

The goal of the Jamaica Business Recovery Program (JBRP) is to provide technical assistance, training, grants and to introduce new technologies and support market linkages to agriculture producers and businesses impacted negatively by Hurricane Ivan. The goal of the project was to provide support to restore these businesses to pre-hurricane production levels or better. Sectors being covered under the project are horticulture, poultry/livestock, fisheries and craft.

Development Alternatives, Inc., the prime contractor, a large U.S.-based consulting firm provided overall financial oversight for the program, including disbursements of grant funds. Fintrac, Inc., a U.S.-based international agribusiness consulting firm, had the lead management role for all program areas and the lead implementation role for activities targeting the Fresh & Processed Horticulture Sector and the Livestock/Poultry Sector, and management of grant activities across all sectors. The Jamaica Exporters Association (JEA) had the lead implementation role for activities targeting the Fisheries and Crafts sectors. This report details activities and results of the Horticulture and Livestock/Poultry components.

2.1 IMPACT OF HURRICANE IVAN ON TARGETED SECTORS

HORTICULTURE/LIVESTOCK

When Hurricane Ivan devastated Jamaica in September 2004, one of the hardest hit sectors was agriculture. Estimates provided by the Planning Institute put the preliminary loss in the horticulture and fisheries subsector at U.S.\$38 million. In the livestock subsector, losses incurred amounted to U.S.\$11 million. The Southern parishes of St. Catherine, Clarendon, Manchester, St. James, Hanover and St. Mary were hardest hit. Production of vegetables, fruits and ground provisions were severely affected, including domestic animals such as pigs, goats and poultry. Damage to infrastructure included farm roads, farm buildings, irrigation facilities and other farm equipment.

In specific sub-categories such as the coffee industry, the losses suffered in terms of berries amounted to about 60 percent of the current crop. For both Blue Mountain and lowland coffee, losses in export earnings was estimated at U.S.\$19.2 million. It was also estimated that 5 percent of the coffee trees would have to be replaced because of severe wind damage.

A significant number of trees, which would have provided a food source for honeybees in the apiculture sector, were destroyed. The impact on this industry was felt very quickly and had implications for crop production and productivity because there were fewer bees to effectively pollinate food crops, resulting in reduced yields. Direct losses relative to honey production, as a result of destruction of hives, was estimated at J\$125 million (U.S. \$2 million).

CRAFT

The craft industry is a significant employment generator in Jamaica, with perhaps 60,000 craft producers (although some estimates place the number much five times higher), supplying over 1800 craft retail establishments. This was the number in 1999, and is surely higher in 2004. During Hurricane Ivan, many individual crafts persons suffered loss to raw materials, finished products, and property or buildings, as did numerous establishments/shops and companies. Many operations had to close (production, showrooms, etc.) temporarily and reduce employment levels, with attendant negative impact. Given the nature of the craft activity, the affected area is not geographically as clear as with the first two areas.

Immediately following Hurricane Ivan, JEA conducted a sample survey of craft producers to determine which artisans had their businesses impacted negatively by Hurricane Ivan. Specifically, the survey indicated the financial impact on these businesses, as well as areas of immediate assistance under JBRP to help them strengthen their operations and the craft industry as a whole. The nature of the damages encountered was as follows:

- Damage to, or loss of roofs because the roof sheeting were all corroded and the fixity (screws or nails) had never been inspected or serviced in years;
- Damage to work area (inclusive of material loss) because initially the proprietors had initiated sub-standard methods of protection against such occurrences.
- Loss of entire structure because the structure was erected to inferior standards.

FISHERIES

Hurricane Ivan impacted greatly on the marine fisheries sector, with losses recorded by the Ministry of Agriculture's Fisheries Division estimated at J\$2.3 billion. Damages included eroded fishing beaches, damaged fish pots, gear sheds and boats. These occurred primarily across the southern parishes of the island, although fisher folk in other parishes were also negatively impacted.

The coastal ecosystems, especially coral reefs, were also badly affected. In some areas on the south coast, fishing equipment was either severely or totally destroyed. Many traps and other fishing gear were lost at sea, that impacted livelihoods of artisanal fishers. The income generating capacity of the fishers was severely interrupted and for some it was as far reaching as not knowing where their next meal would be obtained. In addition to losses within the sector, some fishers experienced personal losses such as houses, cars and furniture. Many commercial entities on fishing beaches were also affected.

Hurricane Ivan affected the land-based aquaculture industry by eroding a large number of fish ponds across the island. In the case of the Ministry of Agriculture's Aquaculture Branch, 13 ponds on their facility were heavily damaged. Consequently, there was disruption in the production and supply of tilapia fingerlings affecting approximately 270 freshwater fish farmers.

3. APPROACH AND ASSISTANCE STRATEGY

3.1 PROJECT OBJECTIVES

The overall objective of the JBRP was to restore business incomes and employment to pre-hurricane levels or better. In order to achieve these goals, the project focused on the introduction of new productivity enhancing and environmentally sustainable technologies. Also the project had four major crosscutting themes: provision of marketing services, productivity improvement, environmental management, and promoting gender equality.

3.2 DESIGN AND IMPLEMENTATION METHODOLOGY

HORTICULTURE

In general, most growers had suffered some infrastructure or crop damage because of the hurricane and through several meetings and discussions it was determined that the supply chain was hampered by inconsistent and low supplies, high prices and variable quality. Based on field visits to assess the situation, it was evident that the existing production systems resulted in low productivity and higher unit production costs.

JBRP activities within the horticultural sector focused on the introduction of new technologies and improved production practices. Focus areas were selected based on the extent of the damage incurred in the worst hit parishes. The areas were also chosen based on the importance of Jamaica's horticultural production. JBRP Field Technicians in St. Ann, St. Catherine, Clarendon, Manchester and St. Elizabeth were outfitted with fully functioning mobile offices, including computers, agronomist kits and GPS units.

Client selection was crucial to the overall success of the horticultural production program. Growers were selected based on their flexibility to change ongoing production practices, willingness to adopt new methodologies and willingness to share knowledge with other growers. Clients were divided into two groups. Lead farmers and beneficiary farmers. Lead farmer selection was based on access to permanent water sources and recommendations from RADA extension officers and local input suppliers. Initially, growers were provided technical assistance and support for crops that they were already growing and were eventually introduced to other crops. Lead farmers' farms were used as demonstration facilities and within the first five months of the program were complete demonstration facilities. Lead farmers received weekly technical assistance and the demonstration farms were used as training sites for neighboring beneficiary farmers. Beneficiary farmers were required to attend field days and training days on lead client farms. They also received a smaller package of assistance.

Additionally, ten demonstration greenhouse facilities were built on lead client farms and these farmers also received weekly technical assistance and training. Again, these facilities were used as training sites for other beneficiary farmers. All lead and beneficiary farmers were required to make subsequent counterpart investments.

LIVESTOCK/POULTRY

Hurricane Ivan damaged 95 percent of the pig industry's infrastructure. In the poultry industry, damages were about 15 percent of the capacity of the broiler subsector and 17 percent of the capacity of the layer subsector. Medium-sized and large-scale growers also suffered losses, but they were assisted in recovery efforts through two main domestic poultry producers to whom they had contractual arrangements. Therefore, the project focused on micro- and small-scale independent

poultry producers. Some assistance was also provided to the pig industry through the rehabilitation of an existing biogas facility that served as a demonstration facility for other farmers. The facility demonstrated the use of biogas as an environmentally sound technology for cooking gas and a source of compost for greenhouse horticulture.

More extensive assistance for the poultry sector involved the selection of lead and beneficiary clients who would receive extensive technical assistance and training provided by JBRP field technicians. Assistance to this sector was also provided through the establishment of model Egg Marketing Facility (EMF) for members of the Jamaica Egg Farmers Association (JEFA). This allowed them to improve current egg marketing practices in Jamaica. In addition, a business plan was written for the sector for the development of a Liquid Eggs Facility to assist the industry in targeting the tourism industry and to provide an opportunity to utilize excess egg production.

CRAFT AND FISHERIES

JEA provided an assessment of hurricane damage to the craft sub-sector based on surveys conducted in the field and by telephone with 36 partners in the sector. Similarly, an assessment of damage to the fisheries sub-sector was done through consultations with the Ministry of Agriculture Fisheries Division and stakeholder organizations.

The analysis verified the damage resulting from Hurricane Ivan, estimates of impact on sales, and a preliminary needs assessment for potential beneficiaries under the JBRP. This information was utilized for the development of the project's work plan.

Hurricane recovery activities identified for JBRP support that were being addressed by other donors and Government were later removed from the JBRP work plan.

JBRP interventions were comprised of a suite of grants, technical assistance and training. These activities were aimed at providing, among other things, technical assistance, inputs for business recovery, improving business practices across the industries fostering enhanced business linkages and increasing export earnings.

Initiatives supported by JBRP grants were subjected to an approval process that included:

- Site visits to verify level of damage and needs
- Determination of eligibility based on minimum scores on a grantee evaluation form. The grantee evaluation form focused on issues such as the extent to which the proposed activity addressed constraints posed by hurricane impact; income and employment impact on beneficiaries; and client's ability to implement the activities
- Completion of grant documentation including grant consent form, award summaries, environmental assessment, budget and supporting proforma invoices.
- Once approval is granted by the JEA, the documentation is passed to Fintrac personnel for review and forwarding to USAID via DAI for final approval.

Technical assistance and training activities were prioritized and selected based on identified needs of beneficiaries, ascertained through consultations with selected stakeholder groups. Technical assistance and training activities were conducted by qualified consultants and the project team.

The objectives in the craft sector were as follows:

- Replacement equipment to be procured and installed benefiting 6 craft producers
- Inventory items to be procured and distributed benefiting 80 craft producers
- Business Development training to be delivered to 50 participants in 3 regions
- Training in accounting and record keeping to be delivered to 40 participants in 3 regions
- Training in “Building Linkages” to be delivered to 50 participants in 3 regions
- Training in “Emergency Preparedness” delivered to 40 participants in 3 regions
- Training in Information Technology delivered to 30 participants in 3 regions
- Diagnostic clinics to be held benefiting 75 direct beneficiaries
- Mobilization of craft producers into a “competitiveness cluster”
- Preparation of guidelines for best practices in the craft sector

The objectives in the fisheries sector were as follows:

- Development of an emergency response plan for the fisheries sector, which will include specific measures to reduce vulnerability in the future
- Rehabilitation of 10 aquaculture fish ponds to facilitate restoration of production capacity for fresh water fish production
- Fishing wire and accessories to be delivered to 2,012 beneficiaries to improve livelihoods of fisher folk
- Training course in “Safe Seamanship and Environmental Management” to be delivered to 165 fisher folk
- Training of trainers course “General Safety and Survival at Sea” to be delivered to 45 participants
- Safety equipment to support safe seamanship to be delivered to 180 fisher folk
- Installation of an enhanced Communications network in four parishes, and training of end users

4. RESULTS ACHIEVED BY PROGRAM ACTIVITY

Specific indicators and targets were developed for the project through the work plan. These are detailed in the section below:

TABLE 1: INDICATORS AND ACHIEVEMENTS FOR HORTICULTURE AND LIVESTOCK/POULTRY COMPONENTS

Indicators	Target	Achievements	Remarks
Number of hurricane impacted horticulture farmers receiving technical assistance	2,227	2,252	Target exceeded
No. of hurricane impacted poultry/livestock farmers receiving technical assistance	220	227	Target exceeded
No. of grants provided to hurricane-affected SMEs	2,451	11,478	Target exceeded. Farmers have proven to be highly receptive to the new approaches and technologies after they have seen and heard of the impact on lead farmers and other beneficiary farmers. Also, a number of smaller in-kind grants of drip irrigation systems (e.g. for 1/4 acre lots) and other inputs have been provided. Some farmers have received multiple grants as they have demonstrated receptivity to new methods and a willingness to work more closely with other farmers. In addition, the impact of even the smallest drip irrigation system and other inputs, combined with training and some technical assistance, have proven to have significant impact on individual farmers' livelihoods and on the practices of other farmers.
No. of hurricane-affected communities benefiting from improved access to agricultural commodities and technologies	100	172	Target exceeded, as local farmers have proven to be very receptive to the new approaches and technologies after they have seen and heard of the impact on lead farmers and other beneficiary farmers. Interest has spread to other parishes that were not originally targeted under JBRP.
No. of hurricane-affected parishes benefiting from improved access to agricultural commodities and technologies	5	8	Target exceeded, as local farmers have proven to be very receptive to the new approaches and technologies after they have seen and heard of the impact on lead farmers and other beneficiary farmers. Interest has spread to other parishes that were not originally targeted under JBRP.

Indicators	Target	Achievements	Remarks
Increase in number of people employed or re-employed	400	408	Target exceeded
Value of agricultural production by program clients receiving technical assistance in hurricane-affected area	20% over CY 2003	41% over CY 2003	Target exceeded
No. of hurricane-damaged farmers and agribusinesses operating as a result of this program	500	650	Target exceeded

4.1 HORTICULTURE

4.1.1 TECHNICAL ASSISTANCE

The technical assistance provided by JBRP included land preparation techniques like raised and contoured beds, soil conservation practices and soil improvements; the use of seedling trays, hybrid seeds and improved planting materials; use of starter solutions, demonstration of low-cost greenhouses using improved technologies; use of low-cost drip irrigation and fertigation systems; disease identification and management; pesticide use and application, including safe use and use of natural products and IPM to increase plant disease resistance and improve recovery time from stress related conditions; improved agronomic practices such as planting distance, staking and pruning, crop rotation and the transfer of GAP that incorporate sound environmental practices.

Through the program, 2,479 farmers were visited and received technical assistance and training in improved agricultural practices. Farmers increased yields by 200 percent to 300 percent, decreased unit production costs and increased employment. Planting programs (calendarization) were established between growers and purchasers and a total of 176 demonstration farms and 11 low-cost greenhouses received technical assistance and training.

4.1.2 TRAINING

In-field training in improved production practices was provided to lead and demonstration farmers on lead client farms during weekly visits to lead client farms. Training topics covered a wide range of improved agronomic practices (detailed in section 4.1.1). More than 500 training events, attended by more than 3,000 farmers, were held in seven parishes. In addition, the JBRP produced 24 production bulletins and postharvest training manuals for internal use and for program counterparts such as RADA field technicians.

4.1.3 GRANT ASSISTANCE

More than 11,400 grants were disbursed during the one-year period. Grants were provided to lead farmers as well as to beneficiary farmers through the smallholder rehabilitation fund. Other groups such as the Coffee Industry Board, the Bee Farmers Association, the St. Mary Multipurpose Cooperative, the Christiana Potato Growers Cooperative and St. John Bosco received individual awards. Smallholder grants averaging U.S.\$500 were provided for 1,750 beneficiary farmers. Grant

awards to the Bee industry totaled U.S.\$29,357 and included the provision of equipment to 50 members of the All Island Bee Farmers Association. Queen excluders, smokers, hive tools, hats and veils and manual two-frame extractors were part of the package. Grant awards to the Coffee industry totaled U.S.\$9,677.42 and included the provision of 15,000 seedlings to 41 beneficiaries in four parishes.

The grants provided are detailed below:

- **Award Summary #1: Small Farmer Technology & Rehabilitation Fund**

This award was the primary and most visible JBRP activity within the horticultural sector, providing financial support to Jamaican small- and medium-scale farmers for Hurricane Ivan rehabilitation while at the same time promoting productivity enhancing and environmentally sustainable production practices. A total of 1,918 farmers benefited directly through this activity, 175 as “lead partner” demonstration farmers and an additional 1,742 farmers as beneficiaries. All participating farmers were recipients of regular technical assistance and training through the JBRP Field Advisers.

Lead client demonstration farms and surrounding beneficiary farmers were selected by the JBRP Field Advisers using established JBRP project criteria, provided in Appendix 5, and with the concurrence of the Senior Field Adviser. Additional client selection instructions are provided in Appendix 6. Most clients selected were in the areas hardest hit by Hurricane Ivan — St. Catherine, Clarendon, Manchester, and St. Elizabeth.

- **Award Summary #2: Support to the Coffee Industry Board in Integrated Pest Management and Good Agricultural Practices**

A grant was awarded to the Coffee Industry Board (CIB), which provided assistance to one of Jamaica’s oldest and most well-known industries. The coffee industry suffered damage to its infrastructure during Hurricane Ivan with losses in excess of U.S.\$7 million (J\$476 million). In the non-Blue Mountain zone alone, 3,540 acres of coffee were in need of restoration. The majority of berries blown from trees during the hurricane were infested with CBB at varying stages of development. The JBRP provided assistance to CIB with targeted activities to reduce the hurricane’s impact on farmers by facilitating replanting of dead or severely damaged trees, and through the supply of Brocap traps, which reduced Coffee Berry Borer infestation on farms. A total of 1,000 Brocap traps were provided to 77 coffee farmers (covering 125 acres) in the non-Blue Mountain zone. The Brocap trap is effective against a major pest of coffee — the Coffee Berry Borer — and significantly reduces the need for spraying pesticides (85 percent reductions in CBB infestation have been reported). The provision of 15,000 seedlings to 41 farmers covering 50 acres assisted in the restoration of severely damaged farms in the designated zone.

- **Award Summary #3: Greenhouse Horticulture Demonstrations for St. John Bosco Boy’s School (Part 1)**

JBRP installed a low-cost greenhouse to demonstrate greenhouse horticulture production technology to small- and medium-scale farmers. Low-cost greenhouse technology is widely unknown in Jamaica, but has significant potential for growers with small or sloped plots of land, poor soil, and limited water. Significant income increases can be achieved for growers shifting to greenhouses. St. John Bosco added greenhouse horticulture to its current trade curriculum (swine production, poultry production, butchery, and catering) for student residents. The new course will be a future source for skilled workers in an expanded national greenhouse subsector. Weekly technical assistance was also provided by the JBRP Field Adviser based in Mandeville.

- **Award Summary #22: Replacement of Beekeeping Equipment (AIBFA)**

Beekeeping equipment was provided to members of the All Island Bee Farmers Association who sustained damage during Hurricane Ivan. This award assisted in the replacement of boxes and other beekeeping equipment, which were lost or overturned because of flooding during the hurricane. The award also replaced some queen bee stocks that had drowned or were otherwise lost because of Hurricane Ivan.

- **Award Summary #35: Postharvest Equipment (CPGCA)**

The Christiana Potato Growers Cooperative Association (CPGCA), was awarded a grant for the purpose of providing farmers in Manchester and other areas with improved access to postharvest handling equipment and technologies. Through this award, approximately 13,000 plastic field crates were purchased for the association to lend to grower members who supply the group with fresh vegetables. This results in dramatic improvements in the quality of the members' fresh produce. Produce was previously carried in fragile sacks that often cause bruising, spoilage, decreased product shelf-life, poor prices, and ultimately decreased farmer revenues.

- **Award Summary #49: Horticulture Technologies (St. Mary's Cooperative)**

The St. Mary Multipurpose Cooperative was awarded a grant through the JBRP to provide the cooperative with a seedling nursery, quarter-acre drip irrigation systems, field crates and other equipment as necessary to provide assistance to six small-scale farmers in the parish of St. Mary. Supplies for the seedling nursery included: plastic netting and frames, lumber, promix etc. This award will have contributed significantly to JBRP's objective of improving water access and more efficiently using water for improved yields and increased returns on production for farmers.

4.2 POULTRY

4.2.1 TECHNICAL ASSISTANCE

A total of 331 poultry farmers received technical assistance through the JBRP in the livestock/poultry sector. This included assistance in building and infrastructure design of poultry and biogas facilities, husbandry practices including management of chicks, improved production practices and feed management; health and disease control, appropriate slaughtering methods for micro- and small-farmers; GAP and biosecurity information; marketing of broilers and eggs; and recordkeeping and environmentally sound waste handling for the pig sector.

4.2.2 TRAINING

A total of 11 poultry Field Days were conducted in the five target parishes with total participation reaching 331 poultry farmers (176 women and 155 men). The average number of participants at JBRP Poultry Field Days was 30 (16 women and 14 men). Topics covered included proper equipment use, hurricane preparedness, hygiene measures after slaughtering, management of chicks, improved production practices, feed management, table egg production, health and disease control.

4.2.3 GRANT ASSISTANCE

854 grants in the form of improved equipment and poultry rehabilitation materials were provided to 154 micro- and small-scale poultry clients. They have been trained by JBRP poultry advisers on how to use them. These include waterers, feeders, coop curtains, and brooding bulbs as well as zinc sheets, mesh and lumber for the reconstruction of coops. The St. John Bosco Boys Home poultry facility and

biodigester and the Egg Marketing Facility for the Jamaica Egg Farmers Association were also completed.

Grants provided under the poultry component are detailed below:

- **Award Summary #3: Poultry/Swine Rehabilitation for St. John Bosco Boy's School (Part 2)**

Financial assistance was provided to refurbish/build a fully equipped demonstration facility for poultry operations including a roof, siding, curtains, and other items. Bosco lost its entire flock of 4,000 birds during Hurricane Ivan and suffered severe damage to its two poultry houses. In addition, the refurbished facility will serve poultry farmers in the community as a demonstration house for automatic feeding and watering systems, which help reduce production costs and mortality rates, as well as other important technologies. The JBRP Poultry Adviser provided technical assistance in improved poultry management techniques during the year. Swine waste disposal has been identified as a major problem that will worsen as the number of medium- and large-scale piggeries increase in Jamaica, which is expected over the next several years. Bosco's drying operation for biogas waste was repaired in order to use the facility for demonstration purposes. The waste product has been used in the soil mixture (as an organic fertilizer) in the proposed greenhouse.

- **Award Summary #4: Poultry Farmer Rehabilitation and Technology Fund**

This award included the provision of on-farm demonstrations in best practices; promotion of improved technologies and materials; helping farmers improve infrastructure (roofing, curtains, mesh); and technical and marketing assistance. The focus of the award was in housing/infrastructure. Assistance was given to procure zinc roofing sheets, concrete blocks, cement, steel and other materials. Farmers provided other materials (rafters, nails etc.) and labor as in-kind contributions for coop reconstruction. Technical assistance was also provided to ensure that coops were reconstructed in the most appropriate manner, including improvements in design and layout. Mesh wire was supplied to replace the sides of destroyed coops or repair damaged sections. Curtains – necessary for temperature, wind, and light control—were provided as well, to replace the ineffective makeshift curtains used previously.

- **Award Summary #5: Egg Marketing Facility**

This award was provided to improve the local table egg marketing practices through a centralized marketing facility with the Jamaica Egg Farmers Association (JEFA). JEFA is a group of 40 layer farmers with operations ranging from 200 to 60,000 birds. Association members produce an average of 2,850 dozen eggs per day (of the 30,137 dozens produced nationally per day). Many of these farmers' sustained damages from Hurricane Ivan and a number of farmers from this association nationwide have been selected as lead or beneficiary clients for this award. Through this award, a cluster of five JEFA layer farmers in the Kitson Town area received assistance in the form of a processing facility that cleans and grades eggs with an Egg Grading Machine and provides refrigeration with a cold room. The EMF will allow layer farmers to sell safer product with a longer shelf life and realize a more stable and structured pricing mechanism based on egg size and grade.

The egg marketing facility was built on a JEFA member's layer farms in St. Catherine, with ownership and operation retained by JEFA. It was designed as a model egg processing facility that can be replicated by other layer farmers in Jamaica. The location will facilitate operations since it is within a 2-mile geographic range of the targeted cluster of egg farmers and close to major markets (Spanish Town and Kingston).

4.1 CRAFT

INDICATORS FOR THE CRAFT SUB-SECTOR

	Indicators	Target	Achieved to date	Remarks
A	Number of artisans trained/strengthened	Old target: 1080 Revised target: 125	233	Revised target exceeded. Total of 233 craft producers from across five parishes have been trained/strengthened in Business Development, Accounting and Record keeping, Product Development, Procurement and Merchandising, Retailing and Information Technology.
B	No. of artisans benefiting as a result of improved access to technology and material commodities	Old target: 500 Revised target: 110	112	Revised target exceeded. This target was lowered from 500 to 110; as it represents the actual number of grantees receiving benefits under currently approved in-kind grant awards, as well as their assistants/employees. The decision was made to provide larger grants to fewer artisans, in order to most effectively bring back full production capacity.
C	Increased sales of products from artisans who received USAID-supported training	10% over CY 2003	10.2%	Target will be exceeded and is based on 'expected' value of production with JBRP assistance, which is US\$1,510,114 annually
D	No. of grants provided	Old target: 75 Revised target: 100	120	Revised target exceeded. This target was increased from 75 to 100, and represents the actual number of unique grantees receiving benefits under approved grant awards. The decision was made to provide larger grants to fewer artisans, in order to most effectively bring back full production capacity.

TECHNICAL ASSISTANCE

Procurement and Merchandising TA

Craft Procurement and Merchandising Specialist, Gail Ueker, was contracted to assess the buying and merchandising practices of 88 craft vendors at the Old Fort Craft Market in Montego Bay. The consultant examined retail practices and conducted a detailed SWOT analysis. The vendors' merchandising skills, marketing and promotions activities, inventory management and pricing strategies were also assessed. Based on the Consultant's findings, a training and development component was offered to the beneficiaries to address identified gaps. Group sessions were conducted focusing on customer service, procurement techniques, merchandising and display. Hands-on training

and individualized assistance was also offered to selected craft vendors to demonstrate optimal merchandising techniques.

Competitiveness Company

The Competitiveness Company was contracted to conduct two major activities as follows:

- Market Readiness Program comprising diagnostic assessments in the areas of product enhancement, pricing and marketing, and technical assistance in implementing recommendations of these assessments.
- To mobilize craft producers and support organizations into an active and functional craft cluster.

Market Readiness Program

As part of the technical assistance to the craft sector, Docey Lewis, consultant from the Aid to Artisans (ATA) organization was contracted through the Competitiveness Company to conduct two-day seminars in Kingston and Montego Bay. ATA's technical assistance incorporated Market Readiness Training and product diagnostic and evaluations of individual artisans ("One-on-One" meetings). Products of 16 companies were assessed for marketability, price, packaging & labeling. Workshop sessions were held that focused on training for product enhancements, improved marketing strategies and practices for the tourism and export markets.

A total of 45 craft producers and small companies attended the seminars. Participants represented various sub-sectors including wood and leather craft, ceramics, jewelry and accessories, fine art, embroidered and hand-painted apparel and aromatherapy items. Seminars covered the following topics:

- International market overview – demand and expectations
- Design and Color Trends for 2006
- Export Channels of Distribution
- Doing Business in the Global Marketplace
- Researching and identifying target markets
- Foundations of Successful Buyer Relationships
- Developing a Product Line for the U.S. Market
- Promoting your Product
- The Process of Costing and Pricing
- Product Critique

Cluster Initiative

Three Cluster meetings were convened in the following regions; Kingston, Ocho Rios, Montego Bay with a total of 57 participants including artisans and support organizations.

A general overview of the tourist market and preliminary market research on the potential market for craft was presented. Data in relation to cruise ship and stop over visitor arrivals and their expenditure on a variety of items including craft was also shared. This data revealed that the potential exists to increase tourist spending on craft, especially through the duty free shops.

4.1.2 TRAINING

A total of 233 craft producers in Kingston, Montego Bay, Ocho Rios, Negril and Bluefield's have been trained/strengthened in Business Development, Business Planning, Accounting and Record keeping, Record keeping for Government Agencies, Product Enhancements, Retailing and Information Technology. Summary information on individual courses is presented below.

Overall, JBRP's training intervention was aimed at improving business practices across the craft industry.

Business Development Workshops

Business Development workshops were offered to craft producers in Kingston, Ocho Rios, Montego Bay, Negril and Bluefield's. JBRP contracted the services of the Jamaica Business Development Centre (JBDC) to facilitate this training, which was designed to assist participants to develop business plans and strategies to better manage their businesses.

The main areas of focus were:

- Conducting a business SWOT Analysis and its importance
- Setting Business Goals and Objectives
- Introduction to Marketing
- Impact of Customer Service on your '*bottom line*' Profit
- Product Costing and Pricing
- Financial Management
- Basic Record Keeping

Participants were exposed to the latest practices in business management, and are now in a state of readiness to;

- Analyze their businesses' Strengths, Weaknesses, Opportunities and Threats (SWOT Analysis) and to maximize the benefits to be derived, through proper management, which can lead to business growth.
- Establish business goals and objectives
- Understand the behavioral changes required for managing business growth
- Develop effective marketing strategies for their businesses
- Appreciate/understand the importance of good customer service
- Establish a product costing and pricing system
- Develop personal and business budgets, and are now aware of how this tool can be used to manage their money
- Implement and manage a record keeping system.

Accounting & Record Keeping

A series of accounting workshops were offered in Costing and Pricing, Inventory Management and Accounting Record Keeping, aimed at developing and strengthening the accounting and financial management skills of craft producers who were affected by Hurricane Ivan.

Based on requests from participants for continuing support, a four-week series of small group sessions (tutorials) were delivered to offer practical sessions in record keeping and preparation and interpretation of financial statements.

Workshops/courses were held in Kingston, Ocho Rios and Montego Bay for craft producers who were mainly micro and small entrepreneurs.

The workshops/courses titles were as follows:

- Accounting Record Keeping
- Costing and Pricing
- Stock/Inventory Management
- Preparation of Financial Statements

Participants learnt the following fundamentals:

- Well-kept records will shorten the length of time a tax audit takes to be completed.
- Proper books and records will facilitate loans from banks, lending agencies and other creditors.
- Good records will keep them better informed about the financial position of their business.

There were 53 participants and when the attendance data is disaggregated by region, it shows that:

- Kingston had a total of 14 participants, average attendance of 10 persons and a gender ratio (male: female) of 7:7.
- Ocho Rios had a total 16 participants, average attendance of 7 persons and a gender ratio (male: female) of 3:13.
- Montego Bay had a total 23 participants, average attendance of 9 persons and a gender ratio (male: female) of 16:7.
- The overall gender ratio was 26 males to 27 females (49%: 51%).

It was concluded that the training activities were successful both from the oral and written feedback of participants, which indicated the positive changes in mindset and behavior.

Recommendations emerging from the training include: a fieldwork component, non-threatening objective assessment of participants, follow-up/monitoring of participants, further training activities, creation of an accounting services facility and linking of program participation with production of basic financial information on a periodic basis to motivate and sustain change towards improvement in business accounting and financial management by entrepreneurs.

Record keeping for Government Agencies

Craft producers in Kingston, Montego Bay and Ocho Rios also benefited from workshops entitled “Record Keeping for Government Agencies”. These workshops were presented by JBRP in association with the Taxpayer Audit and Assessment Department (TAAD) of the Ministry of Finance.

Topics covered included, Benefits of Good Record Keeping, calculation of Tax Liability and Filing of Income Tax Returns. Having received this training, as well as the accounting training, participants now have a better understanding of the process of calculating tax liabilities and filing returns.

4.2.3 GRANT ASSISTANCE

- **Award Summary #9-18 Craft Infrastructure Repairs**

The JBRP provided building materials to ten craft producers (ACE Woodwork, Cleopatra Designs, Just Art, Touch of Art, Rosenem, Sinclair Ceramics, Natural Wood Products, T&S Fashions, J&B West Indies and Maxine Stoney) to assist with the repairs of the damaged production and storage areas. The construction engineer who completed assessments for all ten proposed beneficiaries recommended the type and quantity of materials procured.

- **Award Summary #23-28 Replacement of Craft Kilns**

The objectives of these awards were to assist craft businesses to repair infrastructure damage resulting from Hurricane Ivan in order to restore business operations to pre-Ivan levels or better. Six (6) beneficiaries were identified as having significant damage to their kilns (Ace Woodwork, Margaret McGhie, Just Art, Kush Art, Donovan Fairweather, Blue Mountain). These grant awards provided replacement of the damaged kilns and the services of an electrical engineer to conduct assessments of beneficiary workshop locations to help determine the suitability of the proposed kiln replacement, as well as the associated electrical requirements and the environmental impact of the grants. The engineer also conducted a final inspection after kilns were installed.

- **Award Summary #36-48 Replacement of Craft Producer Raw Materials**

During Hurricane Ivan, vendors at the Old Fort Craft Market in Montego Bay lost a significant amount of craft and giftware inventory. These losses adversely impacted their businesses, as well as those of their suppliers. The resultant loss in sales produced a negative multiplier effect for these vendors, limiting cash flow for the re-purchase of inventory and thereby restricting future sales. The JEA in collaboration with JAMPRO's Montego Bay office identified and met with representatives of the craft industry in Western Jamaica. A grant award was approved for 82 craft vendors, members of Old Fort Craft Market Association, and one craft vendor from Negril. The goal of the grant was to assist craft vendors with rebuilding their sales and re-purchase capability, and to ultimately strengthen the market base for Jamaican craft/giftware producers and suppliers. This activity provided an opportunity for JBRP to work with craft vendors to improve procurement and merchandising procurement and merchandising practices, through the technical assistance and training programs of a specialist under JBRP. The final number of beneficiaries was 92, exceeding the target of 82. The categories of inventory items provided under the grant were straw products, dolls, apparel & textiles wood products, and other giftware & art.

4.2 FISHERIES

INDICATORS FOR FISHERIES SECTOR

	Indicators	Target	Achieved to date	Remarks
A	Value of fisheries production in hurricane-affected area	5% over CY 2003	18%	Target exceeded. Baseline calculated from Jan to Jun 2004 Fisheries Division catch and effort data at US\$15,837,353 annually; The calculation for achieved to date is estimated and represents an expected outcome (fisher folk are catching bigger fish of greater market value with 1.5" mesh wire fish pots, not more fish).
B	Increase in number of people employed or re-employed	Old target: 100 Revised target: 500	783	Target exceeded. Given the expansion of the provisioning of in-kind grants of fishing wire/netting, the JBRP Fisheries team reassessed its targets and decided to increase the goal from 100 fisher folk employed or re-employed to 500. Based on field interviews, at least 10% of direct beneficiaries were unemployed because they had few or no fish traps after Hurricane Ivan. Each direct beneficiary fisher folk employ two persons, who were also unemployed.
C	Number of hurricane-affected communities benefiting from improved access to fisheries commodities	Old target: 25 Revised target: 30	71	Target exceeded. Fisher folk benefiting from material supplies were from: St Catherine - 2 communities; Clarendon - 4 communities; St Elizabeth - 8 communities; Westmoreland - 7 communities; Hanover - 7 communities; St Thomas - 15 communities; Portland - 14 communities; St Mary - 6 communities; St Ann - 8 communities
D	Number of hurricane-affected parishes benefiting from improved access to fisheries commodities	Old target: 4 Revised target: 8	9	Target exceeded. Parishes are St Catherine, Clarendon, St Elizabeth, Westmoreland, Hanover, St Thomas, Portland, St Mary & St Ann
E	Number of grants provided	Old target: 2,012	2,855	Target exceeded. The JBRP

	Indicators	Target	Achieved to date	Remarks
		Revised target: 2,700		Fisheries expanded the in-kind grant program to 4 additional parishes, as the decision was made to reduce the focus on infrastructure repairs that were being addressed by other donors and various fisher folk communities. Fisher folk expressed a need for more mesh wire, netting, communications equipment and safety and survival equipment, and to address those geographic areas that have yet to receive assistance from the Government of Jamaica and donors following Hurricane Ivan. As a result, the JBRP Fisheries team reassessed its targets and increased the goal from 2,012 in-kind grants to 2,700, based on the increase in targeted locations and beneficiaries and the approval of additional grants.
F	Number of fisher folk trained/strengthened	Old target: 500 Revised target: 165	313	Target exceeded. Training provided in Safe Seamanship, Survival at Sea and Environmental Management.
G	Number of fish landing sites and ponds cleaned and/or repaired	10	9	Nine ponds completed. Work on tenth pond discontinued, due to unfavorable weather conditions which further damaged pond site.

4.2.1 TECHNICAL ASSISTANCE

Emergency Response Plan for the Fisheries Sector

The objective of this technical activity was to develop an emergency response plan for fisher folk along the southern coast of Jamaica, and to sensitize fisher folk to the main elements of the plan. Under a short-term work order, the identified consultant, Janet Bedasse, completed three discrete deliverables as follows:

- **Quick Emergency Response Plan for fisher folk**

This document, renamed “Emergency Guide for Fisher Folk”, addresses aspects of safety that will assist artisanal fisher folk in Jamaica to become equipped to deal with emergency issues that arise at sea. Initially targeted at Jamaica’s South Coast, the document is applicable nationally and includes content on small boat safety, search and rescue, sinking vessel, fire, first aid, bad weather, and survival at sea under different distress situations.

- **Text for fisher folk awareness materials including brochure, laminated checklist and posters**

Text was completed for a brochure on hurricane preparedness; laminated checklist—checklist for safety equipment; poster—Remember! In case of a storm or hurricane those who secure their boats and gear will be the first ones back in the water; poster—safety checklist for small boats; poster – Think! The life you save may be your own; poster—hurricane annual preparedness cycle. The text is available to stakeholders to develop public awareness materials.

- **Report**

The report documents the consultative process undertaken in the completion of the Emergency Guide for Fisher Folk and includes content on situational analysis, history of disasters, recovery, major findings, lessons learned and recommendations.

The principal stakeholders collaborating with the JBRP and JEA in the completion of the deliverables were ODPEM, Ministry of Health, JDF Coast Guard, Ministry of Agriculture Fisheries Division, The Caribbean Maritime Institute, Maritime Authority, and fisheries NGOs – JFCU, CCAM and BREDS.

4.2.2 TRAINING

Course in “Safe Seamanship for Fisher Folk”

The curriculum for the “Safe Seamanship for Fisher folk” course was developed in collaboration with the Caribbean Maritime Institute and fisheries stakeholders. This training course was delivered on site to 295 fisher folk in the parishes of Clarendon, St. Catherine, St. Elizabeth and Westmoreland. This level 1 course was completed in November 2005 and is a precursor to an advanced “Training of Trainers” course.

The Caribbean Maritime Institute (CMI) was contracted to deliver the course, which had as the goal to train/expose persons operating small craft on and off the coast of Jamaica in the basic understanding of safety and survival techniques that may be used in case of any emergency. The course had the following elements:

- Small Craft Operations, including the identification of fire hazards and practice for fire prevention and control
- Basic hygiene and care of catch
- Environmental Issues

With a sample size of 12%, the results of completed training evaluation forms are summarized as follows:

- 80% of respondents were males, and 20% females signifying a male dominated business.
- 45% of respondents indicated that they attended similar training courses before, and 55% indicated that they had never attended similar training sessions.
- When asked how much they knew about the topics covered before the training session, 21% of respondents indicated that they knew nothing, 64% said they knew a little, and 15% knew a lot.
- When asked about the usefulness (very useful, partly useful or not useful) of topics covered:
 - Fire Prevention and Control: 89% of respondents indicated that this topic was very useful
 - Small Craft Operations: 92% of respondents indicated that this topic was very useful
 - Basic Hygiene and Care of Catch: 92% of respondents indicated that this topic was very useful
 - Environmental Issues: 89% of respondents indicated that this topic was very useful

- Additional topics that participants would have liked included or dealt with in more detail comprised communication while at sea, big boat operations, use of signal devices (flares), navigation, use of GPS and compass, better fishing practices, and swimming.
- When asked to assess the quality of the presentations overall (very good, good, and poor), 94% of respondents indicated that the presentations were very good, and 6% indicated that the presentations were good.
- 68% of respondents indicated that teaching materials used were very good, while 26% and 6% indicated that teaching materials were good and poor, respectively.
- 100% of respondents thought other fisher folk would benefit from the training.

The full analysis is presented in Appendix 2. All participants were awarded a certificate of participation.

Training of Trainers Course “Fisheries, General Safety and Survival at Sea”

Delivered by the Caribbean Maritime Institute, this course targeted persons involved in training small craft operators on and off the coast of Jamaica, who at the end of the course should demonstrate proficiency in fisheries, general safety and survival at sea techniques. The objective of the training exercise was to train trainers in General Safety and Survival at Sea, Small Craft Operations, General Fisheries and Fishing Techniques in order to improve the basic knowledge and competence of local fisher folk. Topics covered included:

- General Safety and Survival at Sea
- Small Craft Operations
- General Fisheries and Fishing Techniques
- Environmental Management

The course outline is attached, Appendix 3.

Sixty persons (41 males and 19 females) from three parishes attended the 3-days residential training of trainers’ course. Some 42 of the 60 participants attended the basic course Safe Seamanship for Fisher Folk. The course was held for four groups of 15 fisher folk during November and December 2005. Analysis of the course evaluation forms completed by participants shows that:

- 79% of participants were males, and 21% females signifying a male dominated business.
- When asked how much they knew about the topics covered before the training session, 3% of respondents indicated that they knew nothing, 92% said they knew a little, and 5% knew a lot.
- When asked about the usefulness (very useful, partly useful or not useful) of topics covered:
 - Fire Prevention and Control: 97% of respondents indicated that this topic was very useful, while 3% thought it was partly useful
 - Small Craft Operations: 98% of respondents indicated that this topic was very useful, while 2% thought it was partly useful
 - Basic Hygiene and Care of Catch: 91% of respondents indicated that this topic was very useful, while 9% thought it was partly useful

- Environmental Issues: 97% of respondents indicated that this topic was very useful, while 3% thought it was partly useful
- Additional topics that participants would have liked included or dealt with in more detail comprised navigation, use of GPS, CPR and first aid, engine/boat repairs, radio communication, insurance for fisher folk, fisheries policy, new fishing methods, and sizes of openings in fish traps.
- When asked to assess the quality of the presentations overall, 90% of respondents indicated that the presentations were very good, and 10% indicated that the presentations were good.
- 68% of respondents indicated that teaching materials used were very good, while 32% indicated that teaching materials were good.
- 100% of respondents thought other fisher folk would benefit from the training.

The full analysis is presented in Appendix 4. All participants were awarded with a certificate of participation.

4.2.3 GRANT ASSISTANCE

- **Award Summary #6-8 Procurement of Sustainable Fishing Gear**

These awards were awarded to the following fisher folk organizations: Jamaica Fishermen Cooperative Union (JFCU), and the Caribbean Coastal Area Management Foundation (CCAM), and Treasure Beach Foundation (BREDS). These awards targeted fisher folk who have experienced damaged fish pots. These damages occurred primarily across the southern parishes of the island. Another problem facing Jamaican fishermen is the depletion of fishing stocks. Trap owners are accustomed to using a wire mesh that is 1” in size for the construction of traps (or “pots,” which also require rope, cork, lacing wire and nails). With these grants fisher folk were provide wider mesh wire of 1.5” for making traps, this helped fisher folk both with recovery from financial and material losses sustained under Hurricane Ivan, and ameliorate the depletion of Jamaica’s marine fish stock by allowing smaller fish to escape traps and populations to replenish. The economic and environmental benefits of these awards will extend beyond the lifespan of JBRP, and contribute to the long-term sustainability of the fisheries sector.

- **Award Summary #19-21 Procurement of Fisheries Safety Equipment**

These awards were awarded to the following fisher folk organizations: Jamaica Fishermen Cooperative Union (JFCU), and the Caribbean Coastal Area Management Foundation (CCAM), and Treasure Beach Foundation (BREDS). These grants provided procurement and distribution of selected certified safety equipment (life vests, hand held flares, first aid kits, and global positioning systems - GPS) for marine fisher folk that have participated in safety seamanship training sponsored by the JBRP. Equipping fisher folk with safety equipment will reduce the possibility of becoming lost at sea, and also increase the chances for survival at sea.

- **Award Summary # 29-31 Procurement of Fisheries Sector Communications**

These awards were awarded to the following fisher folk organizations: Jamaica Fishermen Cooperative Union (JFCU), and the Caribbean Coastal Area Management Foundation (CCAM), and Treasure Beach Foundation (BREDS). This Award will benefit marine fisher folk by increasing the safety and survival of fisher folk while at sea. Equipping fisher folk with the capability to communicate while offshore will reduce their vulnerability to become lost at sea and increase the rate of survival, especially during natural disasters. This initiative will also address the issue of security, including personal safety and theft of property, problems which fisher folk report

they are highly exposed to while operating at sea. Due to budget and time constraint, the installation of networks to support these communications equipment were not established within the framework of the JBRP.

- **Award Summary # 50 Procurement of Fisheries Equipment**

This award will benefit forty-one (41) fisher folk located in Bluefields Bay, Westmoreland, who have come together to form the Bluefields Bay Fishermen’s Group. The objective was to provide the group with a large freezer unit to assist them in maintaining their catch prior to sale. This activity directly complemented JBRP STTA Work Order 13, which included training of fisher folk in the areas of Basic Hygiene and Care of Catch.

The expected result for the interventions in the fisheries sector (Result #2) “Fisheries sector is rapidly rehabilitated and generates employment opportunities, thereby restoring the livelihoods to those affected by the hurricane” is measured by the impact indicators shown in the table below.

Support to Ministry of Agriculture Fisheries Division

The Fisheries Division, through its Aquaculture Branch, is the only major provider of fingerling inputs for Jamaica’s non-contract food fish (tilapia) farmers, supplying 97 percent of the advanced fry and fingerlings used by approximately 270 fish farmers across the island. This group of 270 fish farmers represents approximately 90 percent of the total aquaculture farmers in Jamaica.

Hurricane Ivan affected the aquaculture industry by eroding a large number of fishponds across the island. In the case of the Aquaculture Branch, 13 ponds on their facility were heavily damaged. Consequently, there was disruption in the supply and production of tilapia fingerlings to freshwater fish farmers. The Fisheries Division repaired three of its aquaculture ponds, and requested JBRP assistance with repairs to its remaining ponds. JBRP approved rehabilitation support comprised of materials (primarily clay) and the services of an earth works provider to conduct repairs.

The goal of JBRP’s assistance was the restoration of domestic freshwater fish production by approximately 270 fish farmers sourcing tilapia fingerlings from the Fisheries Division’s Aquaculture Branch. Nine ponds were restored with JBRP assistance, resulting in the following:

- The production capacity for tilapia fingerlings restored by the Ministry of Agriculture’s Fisheries Division (Aquaculture Unit), with an estimated six million fingerlings expected annually, yielding approximately 1.4 million kilograms of fresh water fish.
- Restoration of domestic tilapia production by local freshwater fish producers supported, by better availability of this important input—fingerlings.

Beneficiary	Description of assistance	Number of beneficiaries	Parishes & Communities benefiting	Status/Comments
Aquaculture Branch, Fisheries Division, Ministry of Agriculture	Rehabilitation support comprised of materials (primarily clay) and contracting the services of an earth works provider to renovate 10 earthen ponds used to produce tilapia fingerlings	270 private food-fish farmers	Primarily the parishes of St. Catherine and Clarendon.	Infrastructure improvement work completed for nine ponds. Completion of a 10 th pond was not feasible as heavy rains disrupted work, and substantially damaged work in progress that had to be re-done.

4.3 DISASTER RISK REDUCTION

Disaster risk reduction was a consideration across all JBRP activities. The risk reduction measures incorporated into the horticulture and poultry components are detailed below.

In the horticulture sector, simple but effective mitigation techniques were implemented. These included the use of raised beds, which were introduced to improve plant development and growth. A raised bed improves area drainage, prevents plant losses during heavy rains, reduces soil-borne disease, eliminates soil compaction and provides better conditions for root development and nutritional absorption. In addition, improved (hybrid) varieties were introduced that are proven to better withstand inclement weather. The plants are also not as susceptible to bacterial and fungal problems caused by wet conditions.

Improvements in greenhouse construction design also help plants withstand heavier wind during hurricanes. Improvements include the addition of wires and posts to strengthen structures. Even in the event of weather damage to the structure, the increase in yields and sales help offset repair costs.

In the rehabilitation of poultry operations, infrastructure was built to withstand hurricane damage. This includes repairs and replacement of roofing materials that are stronger, more durable and resistant to corrosion. Hurricane straps were also used in roof structures. Structural engineers inspected structures that were not replaced to make sure they were structurally sound and properly affixed. Also, final inspections were conducted to ensure that the finished roof was properly and securely fastened to the supports. Poultry houses were also designed and constructed to withstand greater hurricane-force winds and flooding.

Mitigation measures incorporated into new or improved structures, through craft grant awards for infrastructure repairs, were as follows:

- **Roof Improvement:** The use of a stronger and much more durable type of sheeting that is resistant to corrosion. (b) the use of hurricane straps in the roof structures, (c) the inspection of roof structures to ensure that all materials that were not being replaced (old materials) were structurally sound and properly affixed, and (d) inspection to ensure that the finished roof was properly and securely fastened to the supports.

- **Roof Redesign:** In one case the damage was due to the ingress of water into the building because inadequate provision was made in the building to protect the work areas. In this case water ran down the face of the building and with the aid of wind forces, found its way inside via the top and bottom of the door and windows. A complete roof redesign for the structure was proposed, and implemented that provided the protection needed.
- **Replacement of Structure:** In two cases, entire structures were lost. These structures were simple timber structures that were inadequately built to enable them to withstand hurricane forces. In both cases, the timber structures were replaced by adequately designed reinforced concrete buildings. For one such building, the roof was also of reinforced concrete while the roof of the other was of metal sheets securely affixed to metal supports that were planted into the reinforced concrete.

Mitigation measures incorporated into recovery interventions for fisheries consisted of the following:

- **Emergency Response Plan:** This document, entitled “Emergency Guide for Fisher Folk”, addresses aspects of safety that will assist artisanal fisher folk in Jamaica to become equipped to deal with emergency issues that arise at sea. Initially targeted at Jamaica’s South Coast, the document is applicable nationally and includes content on small boat safety, search and rescue, sinking vessel, fire, first aid, bad weather, and survival at sea under different distress situations.
- **Training:** Fisher folk received training in safe seamanship, at the basic and the training of trainers’ levels. Participants were exposed to an understanding of operating small craft on and off the coast of Jamaica, and to safety and survival techniques that may be used in case of any emergency.
- **Safety equipment:** Safety equipment: JBRP equipped fisher folk with safety equipment that reduced the possibility of becoming lost at sea, and also increased the chances for survival at sea. With improved awareness, other fisher folk are expected to follow the example of equipping themselves with safety gear before going to sea.
- **Communications Equipment:** JBRP implemented the first stage of a communications system for fisher folk (through organized groups JFCU, CCAM and BREDS) on Jamaica’s south coast. Equipping fisher folk with the capability to communicate offshore reduces their vulnerability to become lost at sea and increase the rate of survival, especially during natural disasters.

4.4 EXOGENOUS CONDITIONS AFFECTING IMPLEMENTATION

A number of conditions outside of the control of the project hindered implementation of project activities. Some of these are detailed on the next page in Table 2:

TABLE 2: EXOGENOUS CONDITIONS AFFECTING IMPLEMENTATION

Problem	Impact
<p>Bad weather caused heavy rains, wind damage and flooding — Hurricane Dennis in August, Hurricane Emily in September, Tropical Storm Wilma in October and islandwide heavy rains and flooding in October</p>	<p>The adverse weather conditions created several problems for farmers. As soon as farmers recovered from one period of bad weather they were faced with another and this caused implementation delays for the program.</p> <p>In general, most of farmers had reduced production and in some cases had to replant extensive areas because of severe damage. The increased moisture/water level created bacterial problems and fungal problems as well.</p> <p>It was discovered that some of the newer varieties of some of the crops planted were more resistant to the extreme conditions.</p> <p>The more severely affected crops were tomato, sweet pepper, hot pepper, melon, cantaloupe and cucumber. Hardier crops such as pumpkin, sweet potato, okra and callaloo did not show severe damage but rains did have a negative impact on yields.</p> <p>Flooding in some areas forced a rescheduling of field days because of lack of access. Construction of poultry coops and greenhouses were delayed. Greenhouse clients had little damage to infrastructure and none to their plants.</p>
<p>Protests — Fuel Price Increase, Violence</p>	<p>Protests in many parishes against fuel price increases and protests in St. Catherine because of violence, created delays for implementation activities. Training sessions for poultry farmers and planned farm visits had to be rescheduled because of restricted access to farms.</p>
<p>Procurement procedures</p>	<p>In many cases, supplies were either unavailable on the island or were out of stock when they were needed. This was particularly challenging for sourcing lumber, which is brought in from South America, and imported agricultural inputs. Long lead times, some as long as four months, delayed implementation and available impact data. Inadequate response and delivery time from smaller input suppliers caused delays in implementation</p> <p>Delays also experienced in clearance of items imported for the project.</p>

The exogenous conditions impacting implementation are outlined in the table below. The project’s management team compensated where necessary by re-scheduling tasks, or adjusting targets (with approval) to accommodate new realities.

Problem	Impact
Late approval of JBRP/JEA Sub-Contract	Late startup of programmed activities
Bad weather (Hurricane Dennis in August 2005, Hurricane Emily in September 2005 and Tropical Storm Wilma in October 18; Islandwide heavy rains and flooding in October).	<p>Craft</p> <p>Delay in implementation of Craft Infrastructure Repair Grants; Rescheduling of craft accounting and record keeping workshops as most areas were inaccessible;</p> <p>Poor attendance at some workshops;</p> <p>Delay in production and delivery of merchandise for inventory replacement</p> <p>Fisheries</p> <p>Rescheduling of fisher folk training in Safe Seamanship; Aquaculture ponds being renovated at Fisheries Division (Aquaculture Branch), could not be worked on in October, as ponds were inundated in water during these events and heavy equipment could not work; Identified fisheries communications repeater sites not accessible.</p>
National protests against oil price hikes week ending September 9, 2005	Cancellation of a week of planned events including training sessions for fisheries and craft
Kilns scheduled to arrive in Jamaica November 7, 2005 from the USA, were delayed, and were not cleared through customs until January 2006.	Upon arrival in Jamaica, it took several weeks to clear the items through The Customs Department.
Changes to Fisheries Communications Equipment	Technical field assessment by vendor, system changes and final site selection resulted in additional system requirements, increased budgetary allocation, and a waiting period for approved amendments
Procurement procedures	<p>Local</p> <p>Some goods out of stock by the time grant approved; Price increases requiring grant amendment; Slow delivery from vendors (especially hardware merchants)</p> <p>Overseas</p> <p>Length of time to procure goods e.g. kilns, difficult given the short life span of the project</p>

4.5 LESSONS LEARNED

The principal lessons learned during JBRP are:

- In light of the short lifespan of the project and the expediency required for decision-making and implementation, the project would have benefited from a DAI representative duty stationed in the project office. Alternately, more frequent visits by DAI representatives would have been advantageous.
- The multi-tiered approval process for grants, work orders, and amendments could have been simplified. This approval process resulted in time delays that impacted on implementation. The services of a full-time grant manager should be employed when managing and implementing large grant budgets. The management of this part of the project was extremely demanding and was handled by existing project staff.
- The need for early and continuous collaboration with project partners and counterparts ensures widespread outreach, reduces delays because of insufficient information and improves systems for quick grant turnaround and approval.
- Full-time administrative/logistical support should have been structured into the JEA component at startup, instead of later in the project. This would have allowed all the systems to be streamlined from the outset, such as filing system, client database, etc. The Monitoring & Evaluation Specialist could have been recruited earlier in the project to allow for baseline data to be captured earlier.
- JEA was not allowed to include contingencies in the budgets of grants to beneficiaries. Consequently, all changes in budgets (some minor), required approval by DAI and USAID. This resulted in undue delays.
- The program could have been implemented more efficiently by positioning field officers in the targeted parishes to mobilize fisher folk and reduce dependence on stakeholders. The JBRP could more closely assess the capacity of stakeholder groups (fisheries NGOs) to implement grant activities in a timely manner. Opportunities to improve that capacity at the outset could have been further explored.
- JBRP had limited control over the completion timelines for grant activities that required substantial beneficiary contribution. For example, the 10 beneficiaries of craft infrastructure repair grants were required to finance all labor costs for construction. Delays in completion were therefore exacerbated by their individual cash flow realities, in addition to other externalities such as weather and availability of materials.
- The project could have been more conservative in setting training attendance targets, considering the availability of micro and small business owners to attend on-going training programs. Participants with a reasonable level of formal educational (e.g. secondary/high school education) were able to understand/interact with the training material more readily. However, participants who lacked formal education were able, for the most part, to grasp the concepts taught and responded appropriately.
- Having a better understanding of factors that influence fisher folk decision to go out to sea, would have helped to inform the scheduling of training courses. Many courses had to be re-scheduled, as targeted fisher folk abruptly left for sea upon seeing good weather, despite making commitments to attend training sessions.

- Some persons who operate a small business are unaware of the importance or significance of accounting record keeping, even at the most basic level, and without proper guidance do not recognize the business threat posed by poor financial management.
- The project was not allowed to interact directly with media houses, as all PIO had to go through the USAID Mission. This resulted in delays and missed opportunities. A PIO program developed by the project staff, built into the project work plan, and approved by the Mission at the outset, would have allowed implementation of PIO activities in a more timely and efficient manner.
- In response to the relatively low level of basic technology among small farmers, the transfer of good agricultural practices (GAP) and basic technologies, including drip irrigation, integrated pest management, raised beds, greenhouse production, use of seedlings, etc., represents not only the best opportunity for disaster recovery in the horticulture subsector, but also for lowering risks during future disasters. Farmer training should precede any disbursements. This would allow for adequate time to access uptake and to determine individual interest in adopting new methodologies and willingness to share knowledge with others.
- Ensuring that input suppliers are responsive to requests within a specified timeline is crucial for project implementation schedules.
- An understanding of specific company procedures is important regarding input suppliers. Some require down payments prior to delivery and can require advance notice, some with lengthy lead times.
- The establishment of alliances with local private sector providers not only increased farmers' access to inputs and expanded farmer training opportunities, it also reinforced the opportunities for market-driven sustainability.
- For infrastructure projects, expertise is required in Quantity Surveying, Engineering and Contracting. These projects should be built into any task order and/or grant agreements developed by the project.
- JBRP had limited control over the completion timelines for grant activities that required substantial beneficiary contribution. For example, the 10 beneficiaries of craft infrastructure repair grants were required to finance all labor costs for construction. Delays in completion were therefore exacerbated by their individual cash flow realities, in addition to other externalities such as weather and availability of materials.

5. IMPACT ANALYSIS

Impact on the horticulture and livestock/poultry subsectors is detailed below.

TABLE 3: PROJECT IMPACT ON HORTICULTURE AND LIVESTOCK/POULTRY SUBSECTORS

Type of Impact	Horticulture	Livestock/Poultry
5.1 Social Impact	<p><i>Improved livelihoods:</i></p> <p>9,937 grants were provided to 176 lead farmers and 1742 beneficiary farmers who benefited from access to the new approaches and technologies introduced.</p> <p><i>Behavior Change:</i></p> <p>Some farmers, with demonstrated receptivity to new methods and willingness to work with other farmers, have received multiple grants. Even the introduction of small drip irrigation systems or other inputs, combined with training and some technical assistance, has proven to be a significant impact on individual farmers' livelihoods and on the practices of other farmers.</p>	<p><i>Improved Livelihoods:</i></p> <p>979 grants were provided to poultry farmers who benefited from access to new approaches and technologies such as an egg marketing facility that directly improved livelihoods for ten producers. Other farmers have received waterers, feeders, coop curtains and brooding bulbs as well as zinc sheets, mesh and lumber for coop reconstruction. Farmers also benefited from the rehabilitation of the biogas facility for pig farmers.</p> <p><i>Behavior Change:</i></p> <p>Some farmers have adopted the technical assistance and training provided to improve facilities, reduce mortality rates and production costs and improve farm hygiene and sanitation.</p>
5.2 Sector and Microeconomic Impact	<p><i>Improved Business Practices</i></p> <p>Farmers have received technical assistance and training from field advisers in improved agricultural practices for horticulture, poultry, coffee and apiculture production. Additional trainees include representatives of Ministry of Agriculture (RADA, Research Division), CARDI, Agro Grace, All Island Bee Farmers Association, St. Mary Cooperative, and other partners, bringing the total number of clients and partners trained under the horticulture component to 2,252.</p> <p>JBRP assistance directly helped 650 farmers resume operations. Farm incomes increased by 400 persons over baseline. Estimated gross value of sales increased from U.S. \$2.1 million to U.S. \$3.0 million, just over 40 percent increase.</p> <p><i>Number of parishes and communities benefiting:</i></p> <p>Field Advisers have made 2,446 TA visits to client farms in the targeted parishes. 172 communities in 8 parishes have benefited from new approaches and technologies. Interest</p>	<p><i>Improved Business Practices</i></p> <p>Eleven poultry Field Days have been conducted in the five target parishes with total participation reaching 331 poultry farmers (176 women and 155 men). The average number of participants at JBRP Poultry Field Days was 30 (16 women and 14 men). Trainings covered topics such as proper measures to take after slaughtering to maintain good hygiene, sanitation, chick brooding, proper use of equipment (including bulbs, curtains, waterers, and feeders), hurricane preparedness for poultry farmers, and table egg production.</p> <p><i>Number of parishes and communities benefiting:</i></p> <p>331 farmers in 8 parishes have benefited from training and technical assistance.</p>

Type of Impact	Horticulture	Livestock/Poultry
	has spread to other parishes that were not originally targeted by JBRP.	
5.3 Impact on Institutional Capacity of Stakeholders	RADA visited 855 farmers and provided technical assistance with project assistance. RADA officers received training with project assistance. 26 agronomist kits were provided to RADA officers in five parishes, to assist in extension service delivery. RADA received a nursery greenhouse to increase capacity for production of disease-free seedlings.	Training has been provided and must be carried on by RADA officers. Presently there is no RADA poultry extension officer.
5.4 Political Impact	N/A	N/A
5.5 Potential Future Impact	New technologies will be replicated by other projects and stakeholders that will impact an additional number of farmers. Farmers who received training and technology improvements will continue to expand because of increases in sales and incomes. The estimated gross sales of a JBRP client farmer have increased by more than 40 percent from U.S. \$2.1 million to U.S. \$3 million.	The introduction of new technologies will be replicated by other projects and stakeholders. This will have an impact on an additional number of poultry farmers. Farmers who received training and technology improvements will continue to expand because of increases in sales and incomes.

TABLE 4: PROJECT IMPACT ON CRAFT AND FISHERIES SUBSECTORS

Type of impact	Craft	Fisheries
5.1 Social Impact	<p><i>Improved livelihoods:</i> Some 112 artisans benefited from improved access to technology and material commodities, directly impacting on livelihoods and recovery from hurricane impact.</p> <p><i>Behavior Change:</i> Artisans are reporting an outlook on craft as a business, as a direct result of training received under JBRP. Before JBRP, artisans saw craft as part of the informal sector that provided livelihood, but not as a 'business'.</p>	<p><i>Improved Livelihoods:</i> Over 2,800 fisher folk benefited from grants that improved their livelihood and assisted in their recovery from hurricane impact.</p> <p><i>Behavior Change:</i> Over 300 fisher folk are more aware of safety gear requirements for safe seamanship through training, the document 'Emergency Guide for Fisher Folk' and distribution of selected safety gear to beneficiaries (life vests, first aid kits, GPS units, and hand-held flares). Positive attitudinal changes towards safety will reduce loss of lives at sea and the consequential distress to families in coastal fishing villages.</p>
5.2 Sector and Microeconomic Impact	<p><i>Improved business practices:</i> 233 artisans introduced to record keeping, accounting and financial management, leading to the adoption of improved business practices. The capacity of some businesses has also been improved as a result of improved technology (higher capacity and more efficient kilns), improved infrastructure (by building back better) and higher quality inventory.</p> <p><i>Number of parishes and communities benefiting:</i> 112 artisans from across six parishes and 46 communities benefited from program assistance, substantially reducing the impact of loss resulting from the hurricane.</p> <p><i>Expenditure in domestic economy:</i> Approximately US\$ was expended by JBRP on craft related interventions, directly impacting on the domestic economy, at a time when businesses were not doing well due to hurricane related down-turn in the economy.</p>	<p><i>Employment/Re-employment:</i> 783 fisher folk who had been displaced by Hurricane Ivan regained their livelihoods as a direct result of program interventions i.e. distribution of materials to replace lost fishing traps.</p> <p><i>Environmental considerations:</i> Fisher folk are more aware of the sustainable fishing practices (verified by completed training evaluation forms), as a result of training courses offered under the program.</p> <p><i>Number of parishes and communities benefiting:</i> Over 2,800 fisher folk from across nine parishes and 71 communities benefited from program assistance, substantially reducing the impact of loss resulting from the hurricane.</p> <p><i>Expenditure in domestic economy:</i> Approximately US\$ was expended by JBRP on fisheries related interventions, directly impacting on the domestic economy, at a time when businesses were not doing well due to hurricane related down-turn in the economy.</p>

Type of impact	Craft	Fisheries
5.3 Impact on Institutional Capacity of Stakeholders	<p><i>Representational capacity:</i></p> <p>The establishment of a Craft Cluster under the auspices of the Competitiveness Company will provide artisans with the opportunity to better represent their industry in a structured manner. The Craft Cluster will continue post JBRP, and has already held meetings without JBRP support.</p> <p><i>Wider recognition and acceptance of the Craft Sub-Sector:</i> Craft is recognized as an important alternative livelihood strategy, and efforts are being made to show-case authentic Jamaican craft at several events, locally and regionally. JAMPRO and other agencies are involved. The Competitiveness Company has included craft among its industries targeted for interventions.</p> <p><i>Wider participation and support for local group structures:</i> The ability of local craft groups to organize themselves to receive technical assistance, technology and material commodities was enhanced. For example, the capacity of the Old Fort Craft Market Association was greatly enhanced through its facilitation of a grant to over 90 members.</p>	<p><i>Improved liaison and coordination among fisheries NGOs and Government:</i></p> <p>The strategic approach of JBRP to bring fisheries NGOs and Government agencies together in the same forum to make decisions on interventions for the fisheries sub-sector resulted in better liaison among geographically dispersed fisheries NGOs, and between Government and those NGOs. This approach, while introducing new dynamics, helped to resolve common issues, and established 'strategic partnerships' as a cross-cutting theme.</p> <p><i>Wider participation and support for local group structures:</i> The involvement of fisheries NGOs to facilitate training and material commodities to fisher folk resulted in renewed participation, increased activities and confidence in group structures. For example, more fisher folk are willing to attend meetings and participate in activities organized by their NGOs.</p>
5.4 Political Impact	N/A	<p><i>Empowerment:</i> Having received training under JBRP, and being more aware of their needs and the standards required, fisher folk have indicated that they are now empowered to approach their political representatives to lobby for better facilities and support.</p>
5.5 Potential Future Impact	<p><i>Improved compliance:</i> Improved compliance with government regulations relating to taxes, and filing of returns as a direct result of JBRP training courses that targeted gaps in accounting and record keeping (including record keeping for Government agencies).</p> <p><i>Improved Access to Local Facilities:</i> With craft businesses better organized and having acceptable records, as a direct result of JBRP training (including business planning training), artisans will be in a position to access small business loans and grant funding under various facilities, that they previously would not qualify for.</p>	<p><i>Sustainable fishing practices:</i></p> <p>The project introduced fisher folk to mesh wire and netting (for making replacement traps) with wider openings that will help to ameliorate the depletion of Jamaica's marine fish stock by allowing smaller fish to escape capture.</p> <p><i>Improved Safety at Sea:</i> 60 Trainers were trained in Safe Seamanship and Environmental Management, who will carry on the work of training other fisher folk through their respective fisheries NGOs; Selected fisheries NGOs are now able to engage preparedness procedures with their members in the event of an impending disaster, such as a hurricane.</p>

6. LESSONS LEARNED

6.1 CONTRACTOR IMPLEMENTATION STRATEGY

The approval process for all project requests, especially grants and work orders, proved an onerous requirement that was not helped by changes and additions in the project's reporting requirements while the project was being implemented. This approval process resulted in time delays that negatively impacted implementation and created additional administrative requirements that were not built into the staffing needs at the beginning of the project.

The services of a full-time grant manager should be employed when managing and implementing large grant budgets. The management of this aspect of the project was extremely demanding and was handled by existing project staff.

6.2 LOCAL POLITICAL INFLUENCE

The project was not hindered by political influences because politicians and party activists were not involved in any project activities. Beneficiaries were identified in collaboration with private and public sector organizations as well as non-partisan NGOs at the local parish level. This approach is recommended for future projects, particularly those with targeted in-kind grant assistance for individuals.

6.3 ROLE OF ONR (OFFICE OF NATIONAL RECONSTRUCTION)

The ONR did not play a significant role in JBRP implementation activities. At the planning and start-up phase, however, ONR provided useful information on sector damage and needs resulting from the impact of Hurricane Ivan. ONR representative made visits to JBRP horticulture project sites, and attended the Extended Special Program Objective (SPO) Meetings of the USAID Hurricane Ivan rehabilitation programs in Jamaica. At these events, their representative participated in implementation and impact discussions.

6.4 IMPACT OF PUBLIC INFORMATION AND OUTREACH (PIO)

The PIO and public relations activities were managed by an independent contractor of USAID. Requests for activities and events were processed and approved by the USAID Mission. The PIO program proposed by JBRP in early 2005 was reviewed and determined to be acceptable, however its implementation proved challenging.

The requirement was that all PIO initiatives (interviews, articles, media visits, etc.) had to first be processed through various levels within the USAID Mission. This resulted in delays and many missed opportunities for information to reach the public through electronic and print media.

The most effective PIO strategy of JBRP was the distribution of the monthly newsletter "IMPACT." This publication provided updates on the technical aspects of the program and implementation updates were sent directly to stakeholders, government and private sector development organizations and other interest groups and clients. However, no provisions were made for this document to be delivered to the media so the information did not reach the general public.

6.5 USAID MANAGEMENT

Because of the time-sensitive nature of this project it would be useful to have in place a tax and import duty rebate system to reduce staff administrative time on routine matters.

The reporting requirements required resulted in implementation delays in some cases. For example, information on PIO activities was submitted in a timely manner, but had to go through several layers in the USAID mission, resulting in the media receiving outdated information.

7. CONCLUSIONS AND RECOMMENDATIONS

The general conclusions and recommendations emerging from the work of JBRP are presented below:

For future projects, a PIO program developed by the project's staff should be incorporated into the project work plan. Also, other project deliverables should get approval from the Mission at the outset of project activities. While the Mission would still be able to ensure conformance with protocol, branding requirements etc., this proposed approach would allow project staff to have more direct responsibilities and would facilitate implementation of PIO activities in a more timely and efficient manner.

The need for early and continuous collaboration with project partners and counterparts is important. This ensures early and widespread outreach for information about project activities and the involvement of counterparts so that misunderstandings are alleviated and "buy-in" is achieved. This will not only reduce delays because of insufficient information and improve systems for quick grant turnaround and approval, but it will alleviate problems that new projects inevitably encounter — skepticism and pressure to prove itself.

In many ways, the JBRP is different from the standard norm of USAID projects. The driving force for it was the rehabilitation of selected, damaged economic activities after Hurricane Ivan, but it had a strong development edge to it, seeking to improve the condition of the recipients if possible. It had to be implemented under a much accelerated schedule of only one year, and to achieve results within that time frame. It was contracted under an IQC, with one of the subcontractors of the prime contract holder taking responsibility for the field implementation.

The USAID team for JBRP has worked closely and cooperatively with the project to insure project activities are completed in accordance with USAID requirements. The project staff has been very effective in their work with the beneficiaries, and has achieved remarkable results in the communities. The number of grants completed and delivered to the affected populations is large and indeed impressive. And the beneficiaries are delighted with the assistance and technical advice, praising the field staff and asking for a longer time and more help. Given the short-term of the project, the need to mobilize and launch activities rapidly, and the large amount of grant funds to disburse, the project team has achieved to accomplish above and beyond the set targets.

Sustainability is one measure by which the project's "success" is judged. JBRP succeeded in achieving this through the use of processes, technology improvements and sustained technical assistance during the life of the project. Because of the short lifespan of the project, the JBRP identified and worked with committed lead farmers who were willing and able to invest their own resources during the life of the project and to work with others in their community. This ensures that the efforts of the JBRP will be sustained long after the life of the project. Also of note is the improvement in the technical skills of the long-term staff, which will allow them to continue working as valuable members of the Jamaican agribusiness community.

APPENDIX 1: LIST OF JBRP/FINTRAC REPORTS

Start-up Publications	Author
Fintrac Fisheries Assessment	Fintrac
Fintrac Horticulture Assessment I, II	Fintrac
Fintrac/JEA Crafts Assessment	JBRP
Fintrac Poultry Assessment	JBRP
Presentations	
Postharvest Handling: Food Crops in Jamaica I, II	Jackie Boardman
Drip System Use and Maintenance	Guillermo Maradiaga
Intelligent Plant Protection	Lorena Lastres
Seedling Production in Jamaica	Guillermo Maradiaga
Greenhouse Production I-IV	Jose Miselem
JBRP: Jamaica Special Objective Team Meeting I-IV	Joy Hall
JBRP Project Presentation	Claire Starkey
Jamaica Business Recovery Program: Production Activities	Andy Medicott
Seminis Vegetable Seeds	Ronald O'Neill, Seminis
AgroGrace /Syngenta: Major Insect Pests & Diseases of Vegetables	Seymour Green, Agro Grace
Water Management and Nutrition	Ricardo Lardizabal
Low-Cost Greenhouse Production	Guillermo Maradiaga
Fintrac's Improved Production Technologies I, II	Guillermo Maradiaga
Opportunities and Challenges to Market-Led Agricultural Production Systems	Andrew Medicott
The Jamaica Business Recovery Program	Claire Starkey
The Fintrac Approach: A Case Study from Honduras	Andrew Medicott
Fintrac's Production Technology Package in Jamaica	Derrick Smith
JBRP IPM Training 1-5	Richard Pluke
Agrochemical Application Procedures	Richard Pluke
Field Adviser Notes 1,II	Richard Pluke
Consultant Reports	
Liquid Eggs Business Plan	Len Hutchinson
Fresh Cut Processing Activities in Jamaica	Les Lipschutz
Post Harvest Physiology & Training I&II	Jackie Boardman
Field Visits	Andy Medicott

Start-up Publications	Author
Bulletin 01: Pests & Diseases	Alonso Suazo
Bulletin 02: Managing Colonies	Alonso Suazo
Reports	
JBRP Annual Work Plan2005_02_10	JBRP
JBRP Annual Work Plan2005_04_27	JBRP
JBRP Quarterly Report #1	JBRP
JBRP Biweekly Report #1-6	JBRP
Production Manuals	
JBRP Production Manual 01: Lettuce	Fintrac
JBRP Production Manual 02: Sweet Potatoes	Fintrac
JBRP Production Manual 03: Chili Peppers	Fintrac
Production Bulletins	
01: Seedling Production in Trays	Fintrac
02: Starter Solution	Fintrac
03: Soil pH	Fintrac
04: Drip System Maintenance	Fintrac
05: Sand Filters	Fintrac
06: Vitamins Sugar	Fintrac
07: Salicylic Acid	Fintrac
08: CA MG K	Fintrac
09: Plant Density	Fintrac
10: Pest Sampling	Fintrac
11: Fertilization	Fintrac
12: Live Barriers	Fintrac
13: Trichoderma	Fintrac
14: Protecting your farm from extreme weather	Fintrac
15: Soil Salinity	Fintrac
16: Important Steps for achieving an ideal crop	Fintrac
17: Late Blight of Potatoes	Fintrac
18: Alternatives for Virus Prevention	Fintrac
Poultry Manuals	
JBRP Poultry Manual 01: Small Scale Poultry Coop Design	JBRP
JBRP Poultry Manual 02: Small Scale Slaughterhouse Design	JBRP

Start-up Publications	Author
Poultry Bulletins	
JBRP Poultry Bulletin 01: Farm Sanitation	JBRP
JBRP Poultry Bulletin 02: Hurricane Preparedness	JBRP
JBRP Poultry Bulletin 03: Best Practices for Layer Production	JBRP
JBRP Poultry Bulletin 04: Poultry Brooding Practices	JBRP
JBRP Poultry Bulletin 05: Broiler Production Practices	JBRP
Success Story	
JBRP Success Story 01 - Technologies Update	JBRP
JBRP Success Story 02 - Building Grower Success	JBRP
JBRP Success Story 03 - Rio Magno Growers	JBRP
JBRP Success Story 04- Poultry Brooding	JBRP
JBRP Success Story 05 - Production Technologies Update	JBRP
JBRP Success Story 06 - Building grower Success Poultry Brooding	JBRP
Monthly Bulletins	
JBRP Monthly Bulletin #1-12	JBRP
Wingert's Reports	
Monthly Spreadsheet 1-12	JBRP

APPENDIX 2: SMALLHOLDER CRITERIA FORM

Beneficiary Name:	
Gender:	
Address:	
Town:	
Parish:	
GPS Coordinates:	
Size of Farm:	
Income in 2003:	
FT Employment in 2003:	Males: Females:
PT Employment in 2003:	Males: Females: FTE %:
Activity Summary:	
Costs:	
Period of Performance	

Criteria	Y or N
1. Did client suffer losses due to Hurricane Ivan? (Provide brief description on back of form.)	
2. Has client received any assistance from other programs to cover any losses from Hurricane Ivan? (Describe all assistance on back of form.)	
3. Is client willing to demonstrate new technologies or techniques provided?	
4. Is client able to absorb and implement technical assistance; willing to share technologies and results; AND willing to share baseline data and be monitored for impact?	
5. Is there beneficial or no impact on the environment caused by the activity?	
6. Is there a strong likelihood of sustainability and replication post intervention?	

If all questions are answered YES, farmer is eligible for assistance. If any question is answered NO, Project Director's concurrence is required with a written justification attached on back.

List of Items to be Received			
Item Description	Use/Purpose	Quantity	Cost (U.S.\$)
TOTAL (If over \$250, Manager approval required)			

Approved

Not Approved

Signature of Field Advisor or Manager

Date: _____

APPENDIX 3: INSTRUCTIONS FOR FIELD AGRONOMISTS

1. CLIENT SELECTION

1.1 DEMONSTRATION FARMERS

The selection of lead clients is key to the overall success of the horticultural production program. As such the following criteria and eligibility should be observed:

- The client list from which lead farmers are selected should be based on recommendations from exporters, processors, RADA extension officers, agricultural inputs suppliers, as well as from applications received.
- Growers must have existing farm infrastructure, water availability, and a track record of supplying market outlets before any on-site assessments are undertaken by JBRP field advisors.
- Growers need to be willing and open to changing production practices, to learn and to share knowledge with other growers.
- Due to the short time frame of the project, growers will be provided technical assistance and support with crops they are already producing, or could easily add to their product mix.
- At least 75 percent of the lead clients should already have access to a permanent water source (wells, rivers, ponds, national irrigation systems) and only 25 percent to “purchased” water. (The viability of production using high-priced purchased water will be analyzed this quarter.)
- In order to successfully implement new technology, JBRP field advisers are required to provide one-on-one TA visits to 30 to 40 growers each week. When these growers have successfully adopted the technologies, they will be used as demonstration farms for other growers.
- Lead clients are encouraged to make immediate and subsequent counterpart investments, such as purchase of recommended inputs and equipment and expanding acreage under production, for which TA will be provided.
- Once a grower is confirmed as a “lead” client, three visits within one month will be made by JBRP field advisors. If a grower fails to take up basic recommendations during this time, s/he must be dropped from the program.
- Personal farms of JBRP, RADA and JEA employees are not eligible to receive grant funding under the project. Only with the Project Director’s approval will such farms be considered for technical assistance support.
- Farms operated by absentee owners will not be assisted through grant funding, except in cases where a full-time farm manager is present with decision-making authority, and where the farm is the main source of income.
- Lead client growers are defined based on the farm size:
 - Small = up to 5 acres
 - Medium = 5 to 25 acres
 - Large = > 25 acres

If the above eligibility criteria have been met, complete “**Smallholder Criteria Form.**” All contact and baseline information must be collected.

1.2 BENEFICIARY FARMERS

Beneficiary farmers are those farmers that participate REGULARLY in the weekly training events held on demonstration farms. They are eligible for JBRP financial assistance in the form of small in-kind grants to cost share purchases of new demonstrated technologies and/or to facilitate repairs of their farms due to damage incurred by Hurricane Ivan. The average JBRP cost share for beneficiary farmers has been budgeted at \$350 per farmer; the maximum amount of cost share for an individual farmer is U.S.\$500. However, Field Advisers are responsible to ensure that the average JBRP cost share for beneficiary farmers in their zone does not exceed \$350 in order to ensure adequate funding for all production zones.

Beneficiary farmers must agree to participate in all training events held on his/her assigned neighboring demonstration farm. These will likely be on a weekly basis at a regularly scheduled day and time. After participation in three consecutive training events, the farmer is eligible for the JBRP cost share grant for demonstration farm beneficiaries. At this time, the field advisor must make an actual visit to the proposed beneficiary’s farm. Complete “**Appendix 5: Smallholder Criteria Form.**” All contact and baseline information must be collected. For all farmers expected to receive more than \$250 in JBRP contributions, Field Manager approval is required (note that this will likely include most beneficiary farmers). Additionally, if any of the criteria questions are answered in the negative (NO), the JBRP Project Director’s concurrence is required with a written justification attached on the back of the form.

After approval, all contact and baseline information from the “Smallholder Criteria Form” should be entered into the CIRIS M&E system. “Beneficiary” should be selected as the client type and name of the demonstration farm should be entered into the Beneficiary of” field. Periodic visits (monthly or once every two months) to the beneficiary farm should be scheduled to provide in-field technical assistance (in addition to the training provided on the demo farms) and collect counterpart contribution and other indicator data and enter this information into CIRIS.

The original Smallholder Criteria Form should be sent to the JBRP main office to be filed in the supporting files for this grant activity. A copy of the form should be retained by the Field Advisor for his/her records.

2. DISTRIBUTION OF JBRP GRANTS

Under no circumstances will cash be paid to JBRP lead partners (demonstration farmers) or other small farmer beneficiaries under this grant program **without the express approval of the JBRP Project Director in writing and only under extraordinary circumstances.** JBRP grants to lead partners and other small farmer beneficiaries are “in-kind,” meaning that JBRP will provide equipment, inputs, and services to the farmer. JBRP will almost always pay for these through direct payment to the suppliers of these goods and services.

- **Pre-selected “preferred” suppliers.** In some cases, JBRP will have pre-arranged payment mechanisms (monthly invoicing, advance payments, etc.) with suppliers that were already selected based on competitive quotes that included volume discounts over time. Depending on the system set up with the supplier, field advisors may pick up the required equipment/inputs for the client and deliver it to the client during his normal weekly farm visit, or authorize the client to pick up the equipment from the supplier himself/herself. If a client co-payment is required to the supplier, the equipment cannot be provided to the client until he/she has made the required co-payment and it is

confirmed by the supplier. Co-payments should be recorded in CIRIS as counterpart contributions. Use of alternative suppliers under these circumstances, will require justification and project management approval.

- **Pre-purchased equipment/inputs in project inventory.** JBRP may bulk purchase and store some items for distribution to farmers, particularly those items that are not available in Jamaica and must be imported. In these cases, the field advisors will deliver the equipment/inputs to the client during his normal weekly farm visit. If a client co-payment is required, the client cannot take receipt of the equipment/inputs until the field advisor has received payment. Payment must be given to the JBRP main office to be credited to USAID and recorded in CIRIS as a counterpart contribution.
- **Local, community-based suppliers.** In some cases, JBRP has not selected pre-approved suppliers for goods and services, because the items are low cost and/or because local community-based suppliers in closest proximity to the farmers would be more cost advantageous. This could include small low-cost parts and tools that are available for purchase through local hardware stores, wood from lumber yards, or various farm services (rental of farm plowing/bedmaking services, rental of motorized sprayers, purchase of locally produced planting material, etc.). In these cases, the Field Advisors are responsible for locating the lowest cost suppliers in their production zones for these goods and services. The Field Advisors should make direct payment for these goods and services to the suppliers through the Cash Advance fund that they each have and then submit receipts to the main project office for reimbursement (or obtain bank checks from the main project office to give directly to the supplier). Receipts are required for ALL purchases and must clearly show the product purchased, the suppliers name and contact information, the price, and the client(s) for which the product/service was purchased.

Upon distribution of JBRP-financed equipment or services, Field Advisors must complete the “Smallholder Beneficiary Agreement” detailing which items were provided to the client and the estimated cost for each item (use the JBRP horticultural equipment price list to estimate costs). The client/beneficiary must sign the form. This form must be completed again EACH TIME the client/beneficiary receives additional JBRP funded services and equipment. The data from the form showing JBRP contributions should be entered into CIRIS and a copy of the form should be submitted to the main project office for filing.

3. SUPPORTING DOCUMENTATION

The JBRP main office will provide a list of equipment, inputs, and services that are eligible for financing under the horticultural grant program. The list (see below for a hypothetical sample) will detail preferred suppliers, method of payment, and item prices (the latter to be used to estimate JBRP contributions per grant recipient). The list will be regularly updated to reflect changes in items, suppliers, and prices.

Item	Supplier (preferred in CAPS)	Method of Payment	Units	Unit Price (U.S.\$)
Complete drip irrigation systems	JAMAICA DRIP	on account	varies	varies by system (use actual)
Drip irrigation system parts	(1) Jamaica Drip (2) local farm stores	(1) on account (2) cash by Field Advisor	varies	varies (use actual)
pH Meters & Kit	JBRP suppliers	not applicable	each	\$XX.XX
10-x magnifying lens	JBRP suppliers	not applicable	each	\$XX.XX
Soil samplers	JBRP suppliers	not applicable	each	\$XX.XX
Graduated cylinder (1000 ml)	JBRP suppliers	not applicable	each	\$XX.XX
Graduated cylinder (500 ml)	JBRP suppliers	not applicable	each	\$XX.XX
Soil analysis	MOA	on account	each	\$XX.XX
Water analysis	MOA	on account	each	\$XX.XX
Manual sprayers	AgroGrace	on account	each	\$XX.XX
Motorized sprayers	AgroGrace	on account	each	\$XX.XX
Trichoderma	AgroGrace	on account	1 kg	\$XX.XX
Low-cost seedling trays	AgroGrace	on account	each	\$X.XX
High-cost seedling trays	AgroGrace	on account	each	\$X.XX
Hybrid seeds	AgroGrace	on account	varies	varies (use actual)
UV Plastic	PLASTICS INC.	on account	m ²	\$X.XX
Diesel pump – 12 HP	ACE HARDWARE	on account	each	\$X,XXX.XX
Diesel pump – 8 HP	ACE HARDWARE	on account	each	\$X,XXX.XX
Gasoline pump – 12 HP	ACE HARDWARE	on account	each	\$XXX.XX
Plowing & bedmaking services	Local providers in zone	determined by Field Advisor (on account or cash)	varies by area	varies (use actual)
Plastic field crates	JBRP suppliers	not applicable	each	\$XX.XX
Small misc. purchases	Local farm & hardware stores	cash by Field Advisor	varies	varies (use actual)

APPENDIX 4: LIST OF JBRP/FINTRAC REPORTS

CARIBBEAN MARITIME INSTITUTE

Training of Local Fishermen in Collaboration with Jamaica Business Recovery Program

COURSE OUTLINE

1. Course Title: Safety and Sea Survival

2. Rationale

Persons operating small fishing boats on and off the coast of Jamaica must have a basic understanding of safety and survival techniques that may be used in case of any emergency. All persons operating fishing boats must be trained in these basic techniques.

3. Specific Objectives

To train fishermen in Basic Hygiene and Care of Catch; Safety and Sea Survival Techniques and Small Craft Operations so as to improve their general knowledge in safety and survival as required for their operations.

4. Program Management

The program will be managed by the academic department of the Caribbean Maritime Institute.

5. General Course Outline:

Safety and Sea Survival - 8 hours

- 5.1.2 Survival at Sea and Helicopter Assistance
- 5.1.3 Location Aids
- 5.1.4 Personal Life Saving Appliance
- 5.1.5 Fire Prevention
- 5.1.6 Classes of Fire and Use of Portable Extinguishers
- 5.1.7 Safe Working Practices
- 5.1.8 Prevention of Pollution of the Marine Environment
- 5.1.9 Cardio-pulmonary Resuscitation
- 5.1.10 Wounds and Dressings

5.2 Small Craft Operations - 8 hours

- 5.2.1 Basic Knots and Splices
- 5.2.2 Boat Stability and Trim
- 5.2.3 Fuelling
- 5.2.4 Use of Distress Signals
- 5.2.5 Weather Reports and Weather Forecasts
- 5.2.6 Safe Harbours; Lights and Shapes

5.3 Basic Hygiene and Care of Catch – 4 hours

- 5.3.1 Types of Bacteria and their Effects on Humans and Fish
- 5.3.2 Hygiene before going to Sea
- 5.3.3 Hygiene on board
- 5.3.4 Hygiene ashore
- 5.3.5 Protecting the Catch

6. Award

Persons who have fully participated will be awarded with a Certificate of Participation.

7. Maximum number of participants per group: 15

APPENDIX 5: SMALLHODER CRITERIA FORM

Evaluation Summary – Course “Safe Seamanship for Fisher Folk”

This course was attended by 295 fisher folk (252 males, 43 females) from four parishes (St Catherine, Clarendon, St Elizabeth and Westmoreland). The course was delivered August to November 2005 on location to three groups in each of the selected parishes (15 fisher folk per group). The course content was divided into four basic modules - fire prevention and control, small craft operations, basic hygiene and care of catch, and environmental issues.

Training evaluation forms were administered in the latter stages of course, resulting in only 36 participants completing forms. This represents a sample size of 12%. The results of completed training evaluation forms are summarized as follows:

- 80% of respondents were males, and 20% females signifying a male dominated business.
- 45% of respondents indicated that they attended similar training courses before, and 55% indicated that they had never attended similar training sessions.
- When asked how much they knew about the topics covered before the training session, 21% of respondents indicated that they knew nothing, 64% said they knew a little, and 15% knew a lot.
- When asked about the usefulness (very useful, partly useful or not useful) of topics covered:
 - Fire Prevention and Control: 89% of respondents indicated that this topic was very useful
 - Small Craft Operations: 92% of respondents indicated that this topic was very useful
 - Basic Hygiene and Care of Catch: 92% of respondents indicated that this topic was very useful
 - Environmental Issues: 89% of respondents indicated that this topic was very useful
- Additional topics that participants would have liked included or dealt with in more detail comprised communication while at sea, big boat operations, use of signal devices (flares), navigation, use of GPS and compass, better fishing practices, and swimming.
- 85% of respondents thought the venues, were very good, while 15% thought the venues were good.
- When asked to assess the quality of the presentations overall (very good, good, and poor), 94% of respondents indicated that the presentations were very good, and 6% indicated that the presentations were good.
- 68% of respondents indicated that teaching materials used were very good, while 26% and 6% indicated that teaching materials were good and poor respectively.
- 100% of respondents thought other fisher folk would benefit from the training.
- When asked about the aspects of the training that other fisher folk would benefit from:
 - Fire Prevention and Control: 64% of respondents indicated that this topic would benefit other fisher folk
 - Small Craft Operations: 75% of respondents indicated that this topic would benefit other fisher folk

- Basic Hygiene and Care of Catch: 75% of respondents indicated that this topic would benefit other fisher folk
- Environmental Issues: 69% of respondents indicated that this topic would benefit other fisher folk
- General comments by respondents were as follows:
 - Rocky Point, Clarendon
 - Every fisher folk should have to do this training
 - A very good training exercise
 - I think the training was good and it should be longer
 - Training was intelligent and very useful
 - Bluefields, Westmoreland
 - The topics were very nice and interesting
 - I must congratulate all the instructors for their tremendous effort for training us, you are doing a wonderful job, keep up the good work
 - I like this class very much, I would come back again, it is very nice
 - The presenters were very good
 - The workshop was helpful, because we learn a lot of things. The trainers were very polite and helpful. I was happy to be part of the training. Thanks.
 - I think it was a good workshop and I also think more of these workshops should be done across the island to enlighten the fisher folks more about good fishing practice.
 - The training was very interesting and informative and we appreciated it very much. We are now better equipped to educate the rest of our fisher folks in order to improve our fishing industry in Bluefields.
 - The training was very enjoyable and educational
 - Old Harbour, St Catherine
 - I would like to see all fishermen get their license and be registered
 - Very useful training that should be passed on to other fisherfolk

The course was a precursor to the more advanced follow-on course “General Safety, Survival at Sea and Environmental Management”.

APPENDIX 6: INSTRUCTIONS FOR FIELD AGRONOMISTS

CARIBBEAN MARITIME INSTITUTE

Course Outline for Training of Trainers

in

Collaboration

with the

Jamaica Business Recovery Program

8. Course Title: Fisheries, General Safety and Survival at Sea

9. Rationale

Persons involved in training small craft operators on and off the coast of Jamaica must demonstrate proficiency in fisheries, general safety and survival at sea techniques. All persons involved or intending to be involved in this activity must complete training in the areas outlined below.

10. Specific Objectives

To train trainers in General Safety and Survival at Sea, Small Craft Operations General Fisheries and Fishing Techniques in order to improve the basic knowledge and competence of local fishermen.

11. Program Management

The program will be managed by the academic department of the Caribbean Maritime Institute.

12. General Course Outline:

Module I: Safety and Survival at Sea

- 5.2.2 Personal Survival Techniques
- 5.2.3 Fire Prevention and Fire Fighting
- 5.2.4 First Aid
- 5.2.5 Environmental Issues and Concerns

5.4 Module II: Small Craft Operations

- 5.4.1 Knots, Bends and Splices
- 5.4.2 Stability and Trim of Small Vessels
- 5.4.3 Fuelling Procedures and Precautions
- 5.4.4 Distress Signals and Use of Pyrotechnics
- 5.4.5 Weather Reports and Weather Forecasts
- 5.4.6 Navigation
- 5.4.7 Magnetic Compass and GPS
- 5.4.8 Chart
- 5.4.9 VHF Communication
- 5.4.10 Lights, Shapes and Restricted Areas

5.5 Module III: Fisheries and Fishing Techniques

- 5.5.1 Development of Fisheries
- 5.5.2 Fishing Gear and Methods of Fishing
- 5.5.3 Net Construction
- 5.5.4 Care and Preservation of Catch
- 5.5.5 Safety in Fishing Operations

13. Award

Persons who have fully participated in the course will be awarded with a 'Certificate of Participation'.

14. Maximum number of participants: Fifteen (15)

APPENDIX 7

Evaluation Summary – Training of Trainers Course “General Safety, Survival at Sea and Environmental Management”

Sixty persons (41 males and 19 females) from three parishes attended the 3-days residential training of trainers’ course entitled “General Safety, Survival at Sea and Environmental Management”. The course was held for four groups of 15 fisher folk during November and December 2005.

Some 43 participants completed training evaluation forms, and the results are as follows:

- 79% of participants were males, and 21% females signifying a male dominated business.
- 70% of participants indicated that they attended similar training courses before, and 30% indicated that they had never attended similar training sessions. Since, all participants had completed Level 1, “Safe Seamanship for Fisher Folk”, it was not determined what proportion of the respondents in each category was referring to that course.
- When asked how much they knew about the topics covered before the training session, 3% of respondents indicated that they knew nothing, 92% said they knew a little, and 5% knew a lot.
- When asked about the usefulness (very useful, partly useful or not useful) of topics covered:
 - Fire Prevention and Control: 97% of respondents indicated that this topic was very useful, while 3% thought it was partly useful
 - Small Craft Operations: 98% of respondents indicated that this topic was very useful, while 2% thought it was partly useful
 - Basic Hygiene and Care of Catch: 91% of respondents indicated that this topic was very useful, while 9% thought it was partly useful
 - Environmental Issues: 97% of respondents indicated that this topic was very useful, while 3% thought it was partly useful
- Additional topics that participants would have liked included or dealt with in more detail comprised navigation, use of GPS, CPR and first aid, engine/boat repairs, radio communication, insurance for fisher folk, fisheries policy, new fishing methods, and sizes of openings in fish traps.
- 82% of respondents thought the venue, Morgan’s Harbour Hotel, Port Royal, was very good, while 18% thought the venue was good.
- When asked to assess the quality of the presentations overall, 90% of respondents indicated that the presentations were very good, and 10% indicated that the presentations were good.
- 68% of respondents indicated that teaching materials used were very good, while 32% indicated that teaching materials were good.
- 100% of respondents thought other fisher folk would benefit from the training.
- When asked about the aspects of the training that other fisher folk would benefit from:
 - Fire Prevention and Control: 70% of respondents indicated that this topic would benefit other fisher folk
 - Small Craft Operations: 79% of respondents indicated that this topic would benefit other fisher folk

- Basic Hygiene and Care of Catch: 67% of respondents indicated that this topic would benefit other fisher folk
- Environmental Issues: 72% of respondents indicated that this topic would benefit other fisher folk
- General comments were as follows:
 - Participants needed more time to practice how to use GPS units, to apply CPR and first aid, etc.
 - They learnt a lot of new things but were unsure about how they will go about teaching other fisher folk
 - There is a need to stop dynamite fishing
 - No fish zones should be established
 - The laws governing fishing should be enforced
 - This comment from one participant from Hellshire, St Catherine appears to capture the general view of the participants “This training was very good to me because I learned a lot of things that I did not know. I must say thanks to all the teachers who spend time to teach us. I am looking forward to seeing more of this program”. Another comment from a participant from Westmoreland sums up the training “I have to say this program was very informative and educational. I think every fisher folk should attend a program like this”.

APPENDIX 8: JAMAICA BUSINESS RECOVERY PROGRAM

TRAINING AND CONSULTANTS REPORT FOR THE FISHERIES COMPONENT

<u>LISTS OF REPORTS</u>	<u>NUMBER</u>
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Fisheries Training Materials on Safe Seamanship and Environmental Management	2-1
• Small Craft Operation	
• Basic Hygiene and Care of Catch	
• Environmental Management	
 Emergency Guide for Fisher Folk	 2-2
 Consultant Report	 2-3
 Public Awareness Program for Fisher Folk	 2-4
• Content for Posters & Brochures	
• (including Safety Tips for Fisher Folk)	
 Fisheries Bulletins	 2-5

TRAINING AND CONSULTANTS REPORT FOR THE CRAFT COMPONENT

<u>LISTS OF REPORTS</u>	<u>NUMBER</u>
Craft Sector Accounting & Financial Management Training Consultant Report	1-1
Craft Accounting & Financial Statements Workbook	1-2
<ul style="list-style-type: none"> • Record Keeping • Accounting • Financial Statements 	
Craft Producers Infrastructure Consultant Report	1-3
<ul style="list-style-type: none"> • Kingston, St. Catherine, St. Mary, Montego Bay 	
Craft Information Technology Training Manual	1-4
Old Fort Craft Market Consultant Report	1-5
Initial Project Overview	1-6
Retail Training program	1-7
Craft Business Development Training (JBDC)	1-8
<ul style="list-style-type: none"> • Negril and Bluefield's Craft Sector 	
Craft Business Development Training	1-9
Competitiveness Technical Assistance	1-10
<ul style="list-style-type: none"> • Craft Industry Cluster • Craft Technical Assistance 	
Craft Bulletins	1-11

Jamaica Exporters Association

January 2005