

EVALUATION OF EMERGENCY APPEAL

THE HURRICANE SANDY OPERATION

IFRC

REF. NO.
MDRJM003

FINAL REPORT

IMPLEMENTED BY:

JAMAICA RED CROSS SOCIETY (JRCS)

SUBMITTED BY

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ABBREVIATIONS & ACRONYMS

CDRT	Community Disaster Response Team
CRRO	Caribbean Regional Representation Office
DAC	Development Assistance Committee
ECV	Epidemic Control Volunteer
EOC	Emergency Operations Center
GRACE	GraceKennedy Company
HIV	Human Immunodeficiency Virus
DANA	Damage and Needs Assessment
IFRC	International Federation of Red Cross and Red Crescent Societies
JPS	Jamaican Public Service
JRC	Jamaica Red Cross
MEI	Micro-economic Initiative
MLSS	Ministry of Labour & Social Security
MoA	Ministry of Agriculture
MoH	Ministry of Health
MOU	Memorandum of understanding
NFI	Non-food Item
NIT	National Intervention Team
ODK	Open Data Kit
ODPEM	Office of Disaster Preparedness and Emergency Management
OECD	Organisation for Economic Co-operation Development
PIOJ	Planning Institute of Jamaica
PSP	Psychosocial support Programme
RADA	Rural Agricultural Development Authority
SDC	Social Development Commission
SPSS	Statistical Package for the Social Sciences
STATIN	Statistical Institute of Jamaica
TOT	Training of Teachers
VCA	Vulnerability and Capacity Assessment

EXECUTIVE SUMMARY

CONTEXT

Following Hurricane Sandy in 2012, the International Federation of Red Cross and Red Crescent Societies (IFRC) released a Request for an evaluation consultant to conduct an evaluation of the implementation, efficiency, outcomes and impact of Hurricane Sandy Emergency Appeal operations (MDRJM003). The operation was designed to respond to the needs of the people affected by Hurricane Sandy, which hit Jamaica on 24 October as a Category 1 hurricane. The hurricane caused damage to houses and gave rise to flooding and landslides. The most severely affected parishes include: St. Thomas, Portland and St. Mary, with a combined population of 289,261 (STATIN, 2011).

The emergency assessments revealed a total of 6,170 families with damaged houses (minor to severe) and more than 37,000 agricultural households affected (total of 215,850 people) that were caused by the flooding and strong winds by Hurricane Sandy. The emergency appeal was launched to reach the 3,400 of the most vulnerable families affected by Hurricane Sandy. The activities covered under the appeal included the distribution of non-food items (NFIs), repair and reconstruction of damaged houses, early recovery of families whose livelihoods have been affected. An evaluation strategy based on the utilization of qualitative and quantitative data was developed to assess the implementation, efficiency, outcomes and impact of Hurricane Sandy Emergency Appeal operations.

KEY FINDINGS

The Relief operation

Overall, the relief operation was successfully executed with important positive lessons learned from: 1) stakeholder coordination 2) human resource mobilization, 3) private sector partnerships and 4) National Society capacity building. The operation also illuminated areas for improvement in future operations. These are related to: 1) Damage and Needs Assessment (DANA) 2) Transportation 3) Monitoring of volunteer activities 4) Beneficiary information and 5) Communication.

Positives:

- A reflection on the overall response operation revealed that, for the most part, the intervention matched the most immediate priorities of the beneficiaries.
- Effective coordination with local stakeholders emerged as one of the major strengths of the relief operation. During the emergency operation, the Jamaica Red Cross participated in coordination meetings with the prime minister; representatives of Office of Disaster Preparedness and Emergency Management (ODPEM), the National Water Commission, the Jamaican Public Service (JPS), telecommunication providers (Flow, Digicel and LIME), and all state ministries and humanitarian actors.
- The Jamaica Red Cross demonstrated excellent human resource mobilization capabilities during the relief operation. Fifty-two volunteers from the three targeted parishes and more than 100 volunteers and staff worked on the relief efforts from the beginning of the emergency response.
- The partnership between the private sector and the National Society as a strong positive lesson that emerged from the operation. This partnership proved especially valuable during the relief operation and the ensuing weeks and enhanced the overall efficiency of the operation. Specifically, partnerships with GraceKenedy Food Company and Digicel telecommunications proved especially valuable during the operation.
- Related to the previous point is the health information messaging system developed in collaboration with Digicel Telecommunication Company and the Ministry of Health. Text

messages, which focused on vector control, were developed by the Jamaica Red Cross and approved by the Ministry of Health (MoH) before being distributed by Digicel to their customers.

- The Hurricane Sandy operation provided an opportunity for the National Society to enhance its disaster response capacity. This opportunity was well taken, and the successful implementation of associated training activities, is a positive outcome with significant implications for future operations. The Jamaica Red Cross has increased its capacity and the number of partners in shelter management, initial damage assessment, community violence prevention and psychosocial support.
- Children, elderly or disabled accounted for 86 percent of the interviewed beneficiary families. This is a clear indication that distributions were done in accordance with the beneficiary selection criteria outlined in the emergency appeal. The beneficiary satisfaction survey also revealed indicated that 84 percent of the families were satisfied with the non-food items and food parcels received during the relief operation

Considerations for improvement:

- There is a consensus among local stakeholders involved in the Hurricane Sandy relief operation that the DANA did not achieve the intended objective of providing accurate and reliable information on the extent of damage in the three parishes. The main challenges with the DANA are related to the quality of the data gathered and the geographic coverage of the assessment. Explanations submitted for the former were primarily associated with the lack of proper DANA training and experience amongst some of the assessors.
- Transportation and storage challenges emerged as a significant issues that hampered the efficiency of the relief operation. Specifically, the absence of vehicles at the branch level was identified as a major inhibiting factor. This affected the timeliness and overall efficiency of the operation.
- There is a consensus among local stakeholders involved in the operation that it would have been useful to have a system in place to monitor the activities of volunteers. This

could be in the form of daily logs reflecting the numbers of available volunteers and the work being undertaken. Additionally, beneficiary registrations need to be done prior to the distribution of items. More detailed targeting and registration in branch level is required.

- Some internal team members and local stakeholders submitted that better communication during the operation could have enhanced its overall efficiency. From the internal team's standpoint, changes regarding the revised appeal need to be clearly communicated and understood by all members.

Livelihoods recovery – MEI Approach

The MEI made a big positive impact on the lives of beneficiaries by providing an opportunity to (re)establish their livelihood activity. The initiative was activity driven and positively impacted the lives of 221 individuals. This is especially important within the current disaster management context in which efforts are primarily focused on protecting lives and property, with limited attention to secure livelihoods.

Positives:

- The selection of the MEI beneficiaries from the pool of candidates was meticulous. The inclusion of, and partnerships with key local stakeholders such as Social Development Commission (SDC), ODPEM, MLSS and RADA exemplifies the implementation team's desire for objectivity in the MEI selection process.
- The level of vulnerability and extent of livelihood loss, formed the premise on which compensation was offered. Additionally, based on the demographic characteristics of the beneficiaries, it is clear that age and gender were key considerations. Women and the elderly accounted for majority of the MEI beneficiaries. The survey indicates that females account for 58 percent of the beneficiaries. Majority of the sample falls between the age group 51 to 75.
- One of the major strengths of the MEI is its demand-driven approach for livelihood selection. Even though the livelihood items were somewhat limited due to funding constraints, beneficiaries still got the opportunity to choose the items they wanted.

- Most of the respondents indicated that they are very satisfied with the assistance they received. In fact, when asked to rank their level of satisfaction from 1-5 (low-high), 58 percent of the respondents gave the intervention a 5.
- In terms of timeliness, 55 percent of the respondents indicated that they receive the assistance on time. A further 40 percent submitted that it took roughly 6 months for them to receive the assistance.
- When asked if they have put any strategy in place to prevent a reoccurrence of the situation they faced after Hurricane Sandy, only 22 percent indicated in the affirmative.
- The MEI workshops were well-executed and appreciated by the beneficiaries. The inclusion of business management and disaster-risk reduction training proved effective and provided valuable information to the beneficiaries.

Considerations for improvement:

- The MEI fell short of its objective to promote/provide alternative forms of livelihoods (as stated in the revised appeal document: the purpose of the MEI is to “provide alternative livelihoods for 221 targeted affected families in St. Thomas, St. Mary and Portland following the loss of subsistence crops and destruction of houses”). The initiative could have done more to promote alternative livelihoods outside of agriculture (e.g. aquaculture, apiculture and eco-tourism which have been established as viable entities in the three parishes) since the basis of any alternative livelihood initiative is to replace or diversify existing livelihoods that are in danger or those that do not generate sufficient income for those who engage in them to live decent lives. This could provide individuals with (or build awareness about) alternative income generating activities or an opportunity to exit agriculture all-together.
- The MEI could have been conceptualized as a long-term initiative with a built-in monitoring and evaluation component to ensure beneficiary feedback and complaint mechanism.
- The MEI provided raw materials to the beneficiaries as the main form of livelihood

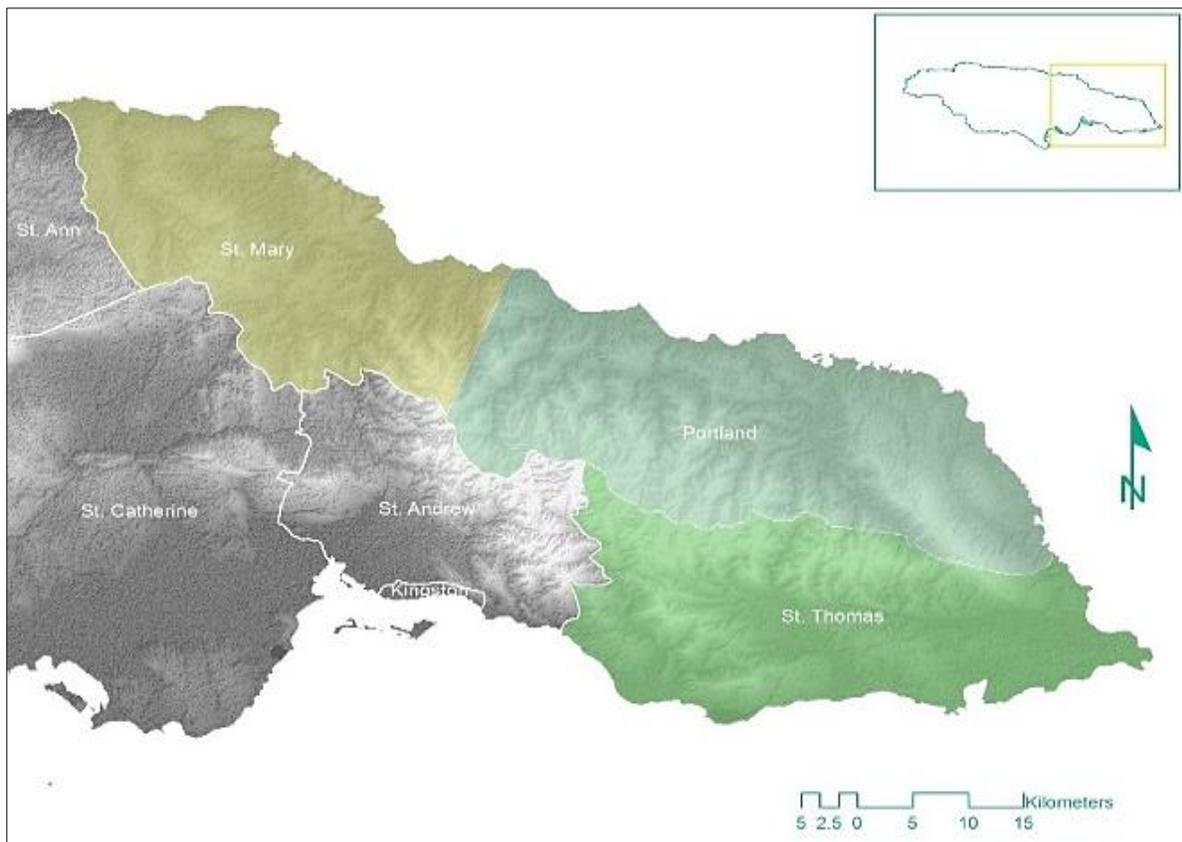
support. However, the raw material options were limited and, according to some of the beneficiaries, it resulted in them taking whatever they can get. This situation is clearly reflected in the type of livelihood activities supported, with 40 percent of the beneficiaries receiving support for poultry production.

- One of the objectives of the MEI is to support “income generating activities to ensure food security for the most vulnerable families”. There is need for a system to ensure that those who are considered to be most vulnerable or badly affected were invited to the initial town hall meeting.
- The MEI could have benefited from strategic partnerships with institutions with similar agenda (e.g. Jamaica Business Development Corporation and the Small Business Association of Jamaica).

1. INTRODUCTION

The direct and indirect damage and losses associated with hurricane Sandy is an estimated JMD\$9.7 billion. The impacts experienced were mainly due to strong winds, heavy rainfall and storm surges associated with the system. The parishes of St. Thomas, Portland and St. Mary were the most severely affected (Figure 1). Approximately 25 percent of the total population was affected by the hurricane. It is estimated that 29868 persons were affected in St Thomas, 28191 in Portland and 38576 in St Mary. Approximately 62 percent of the 17198 households which applied to the Ministry of Labour and Social Security (MLSS) for emergency relief assistance were from St. Mary and Portland (PIOJ, 2013).

FIGURE 1: JRC Hurricane Sandy Operation Implementation Parishes



The hurricane was particularly heavy on housing units, severely damaging 5190 in Portland, 5519 in St Mary and 4471 in St Thomas. In Manchioneal Portland, storm surges of up to 50m resulted in the damage of several houses on the coast while in Mount Pleasant, 80 percent of roofs were either destroyed or severely damaged. Flooding in Pamphert and Port Maria caused evacuation of many families. Flood water at Port Maria Secondary school reached levels of up to 1.5m. The school was among the 73 schools across the three parishes which experienced structural damage amounting to approximately JMD\$110 million.

The health sector sustained losses of roughly JMD\$342 million. Damage to the Annotto Bay hospital accounted for JMD\$51.8 million of this estimate. Ongoing vector control projects were briefly suspended and had to be expanded to account for possible development of breeding sites after the passage of the hurricane. Storm surges were responsible for coastal erosion and damage to coastal infrastructures and ecosystems especially on the eastern side of the island. About 50 percent of coastal vegetation in communities such as Manchioneal, Hope Bay and St Margret's Bay in Portland was either lost or seriously degraded.

Landslides and road blockage by fallen trees and other debris hampered communication and restoration efforts by the Jamaica public service resulting in Power outage for up to 13 days in communities in the eastern parishes. In the St Andrew corporate area, many communities were affected by landslides including Kintyre, Lawrence Tavern, and Gordon Town. The Kintyre Bridge in said parish was completely destroyed as the Gordon Town River swelled to about 2.58m (PIOJ, 2013).

The hurricane's impact on the agricultural and fisheries sector were estimated to be JMD\$1.5 billion and JMD\$90 366,500 respectively. The farmers in St Thomas, Portland and St Mary were among those worst affected. Approximately 20000 cash crop farmers were affected

across the three parishes accounting for approximately JMD\$776 million while 1760 livestock farmers were affected at an estimated cost of JMD\$77 million. Banana farmers were particularly badly affected with up to 100 percent of farms damaged in St Thomas, 96 percent in Portland and 93 percent in St. Mary.

The estimated cost of damage to the coffee industry was JMD\$101 million. Farmers are expected to face production losses in the 2013/14 crop year as seedlings planted three years ago under the Tropical Storm Gustav Recovery operation were destroyed. Hurricane Sandy destroyed approximately 70 percent of the Cocoa crop in Richmond St Mary and resulted in approximately a JMD\$67.5 million loss. The spices industry was also badly affected with an estimated loss of JMD\$50.5 million. The fishing sector in Portland, St Mary and St Thomas experienced damage in total of JMD\$35.97 million to informal gear sheds, fishing gears and vessels. The overall impact of Hurricane Sandy on these three parishes was particularly devastating, and resulted in the dislocation of many lives, property and livelihoods.

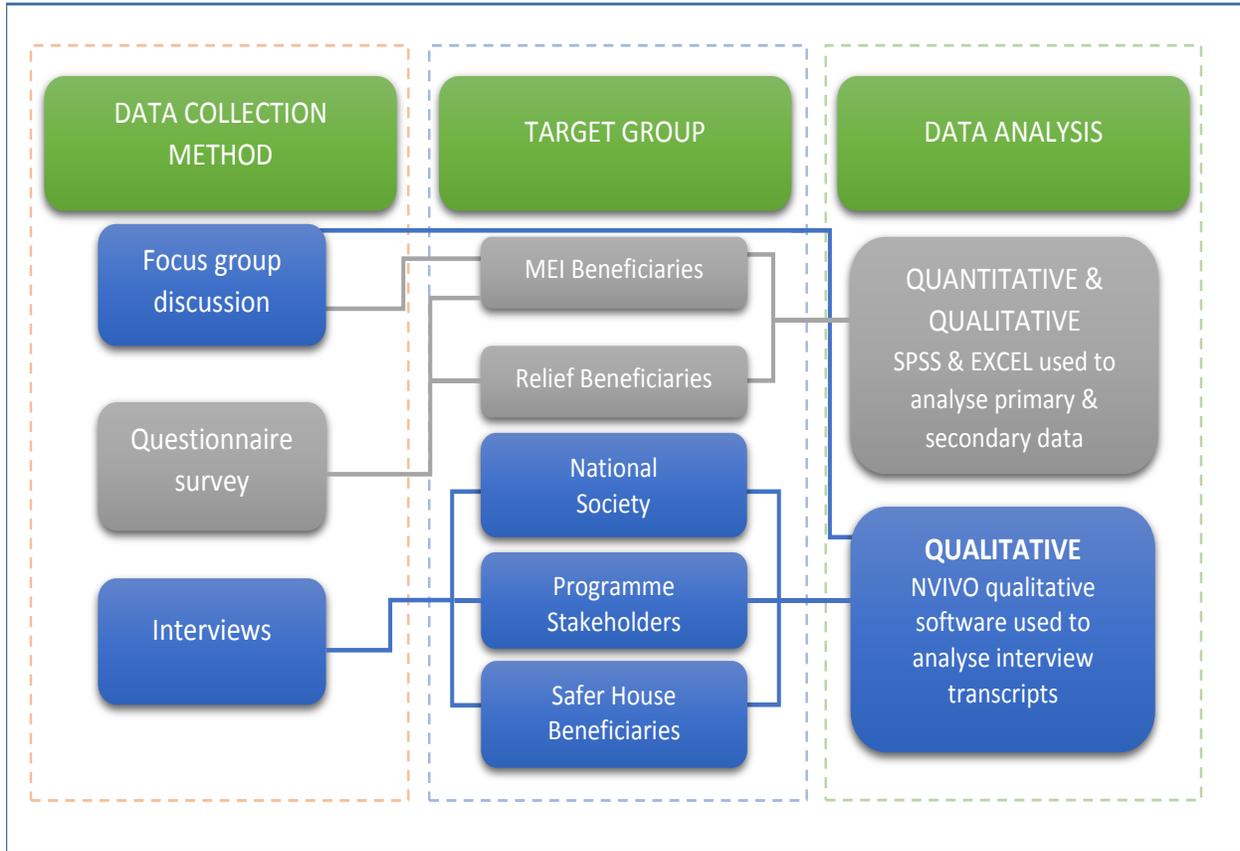
2. METHODOLOGY

The methodological approach used for this evaluation is guided by the Organisation for Economic Co-operation and Development (OECD) - Development Assistance Committee (DAC) criteria (OECD-DAC). The DAC evaluation criteria are designed to improve evaluation of humanitarian action and focuses on 7 key areas: (1) *Relevance/Appropriateness* (2) *Effectiveness* (3) *Efficiency* (4) *Coverage* (5) *Coherence* (6) *Connectedness* and (7) *Impact*. This evaluation is especially focused on the first three criteria. An evaluation protocol was developed based on these guiding principles and the specific objectives of the Hurricane Sandy Emergency Appeal operations (MDRJM003). Figure 2 summarizes the overall methodological framework used for the evaluation.

2.1. KEY EVALUATION OBJECTIVES

- Evaluate the relevance and the appropriateness of project document MDRJM003, for Hurricane Sandy Jamaica in relation to the needs and satisfaction of the beneficiaries
- Evaluate the effectiveness and efficiency of the operational implementation process.
- Evaluate the effectiveness and efficiency of the implementation of the livelihoods (MEI approach) recovery component of the operation
- Document the lessons learned during the process
- Evaluate the capacity building that is expected to improve the overall response, and the role of national society as an auxiliary to the local authority
- Analysis of the achievements; that the budget and implementation planning with partner were made as agreed, and met the expectations of all interested parties ("stakeholders")

FIGURE 2: Evaluation Methodological Framework



2.2. KEY ACTIVITIES

- The evaluation process commenced with a comprehensive desk review and familiarization process, and specifically included:
- Analysis of operation documentation, including;
 - Progress reports
 - Operation updates
 - The Revised Appeal
 - Beneficiary satisfaction survey report & data
 - Lessons learned workshop report
- Finalize evaluation methodology with the International Federation of Red Cross Red Crescent Societies (IFRC) Caribbean Regional Representation Office (CRRO)
- Finalize work plan with the IFRC Caribbean Regional Representation Office (CRRO)

- Development of evaluation protocol, interview instrument and focus group guide

Outputs from the analysis of operation documentation were triangulated with interview data from beneficiaries and the operation implementation team. Questionnaires surveys and focus group discussions were used to gather information from the beneficiaries while semi-structure interviews were conducted with the operation's internal team. Interviews were also conducted with five of the seven safer house beneficiaries. Unsuccessful attempts were made to contact the other 2 beneficiaries. In terms of the MEI component, 45 randomly selected beneficiaries were interviewed for the evaluation. This number represents 20 percent of the MEI beneficiaries.

A beneficiary satisfaction survey that was developed by the Pan American Disaster Response Unit (PADRU) and completed by 100 relief beneficiary families. The data were obtained and used in the evaluation instead of conducting a new survey. Two of the three planned focus groups were successfully executed. The focus group for St Mary did not materialize as most of the participants did not show up. Nevertheless, the ones who did, were interviewed and their perspectives documented.

Data entry, sorting and exploration was done in the Statistical Package for the Social Sciences (SPSS) and NVIVO qualitative analysis package. Emerging themes and patterns from the qualitative and quantitative data gathered, were analysed in accordance with the evaluation criteria and the objectives outlined in the TORs.

3. FINDINGS

3.1. RELIEF OPERATION

The first two weeks of the emergency operation were characterized by mobilization of Jamaica Red Cross volunteers and government partners to assist with the Damage and Needs Assessment (DANA) and distribution of relief items, to address the most immediate needs of the affected families. For the DANA, the vulnerability level for interviewed families was based on selection criteria outlined in the emergency appeal document: Families who have incurred severe damage to houses and livelihoods, and with relatively large numbers of children; disabled people; elderly people, single female-headed households and people living with HIV – who have no possibility of support from family or relatives and lack insurance.

A total of 6918 families were reached in the three most affected parishes. Across the three parishes, a total of 5543 families were reached with non-food items, 1011 families were reached with food and 364 families have been reached with mattresses. Validation of all assessments and distributions reports was completed using physical records and database information. The distributions of non-food items, food and mattresses were based on current needs to beneficiaries, thus resulting in more families reached than initially targeted.

Overall, the implementation team achieved its mandate and the relief operation was successfully executed with important positive lessons learned gleaned from: 1) stakeholder coordination 2) human resource mobilization, 3) private sector partnerships and 4) National Society capacity building. The operation also illuminated areas for improvement in contemplation of future operations. These are related to: 1) the Damage and Needs

Assessment (DANA) 2) Transportation 3) Monitoring of volunteer activities 4) Beneficiary information and 5) Communication.

3.1.1 Coordination with stakeholders

One of the major strengths of the relief component of operation was the level of coordination and engagement with local stakeholders. The Jamaica Red Cross Society is part of the National Emergency Operations Center (EOC) coordinated by ODPEM. Generally, both organizations work closely on the ground to coordinate and respond in emergency situations and have a strong working relationship. During the emergency, the Jamaica Red Cross participated in coordination meetings with the prime minister; representatives of ODPEM, the Water Commission, the Jamaican Public Service, telecommunication providers (Flow, Digicel and LIME), and all state ministries and humanitarian actors. In these coordination meetings, information was shared with humanitarian partners in the country, and the work plan for assessments and relief assistance was devised.

The ODPEM led the coordination of all activities, and the Ministry for Labour and Social Security (MLSS) provide assistance with food and water to collective centres as well as performing assessments in the field. MLSS teams work in close collaboration with JRC teams in the field, sharing assessment information and providing some JRC volunteers with transportation in order to do assessments. The Ministry of Health (MoH) is also part of the National EOC for the coordination of health aspects of the emergency. The MoH Environmental Health teams worked in each of the parishes (total of 13) to set up vector control measures.

The Hurricane Sandy Operation was therefore prominently featured as part of the national disaster relief and recovery efforts and played a critical role in restoring livelihood and dignity

in the affected parishes. Over the years, the National Society has developed a solid relationship with national stakeholders; it is this institutional memory and understanding that facilitated such effective coordination. This was one of the main contributing factors to the successful implementation of the overall operation.

3.1.2. Mobilization of human resource

The Jamaica Red Cross demonstrated excellent human resource mobilization capabilities during the relief operation. The national society have a total of 237 Community Disaster Response Team (CDRT) members and 26 National Intervention Team (NIT) members. The affected parishes has less NIT and CDRT members than the other parishes, since their volunteers were impacted by the hurricane. As such, support was mobilized from other parishes, for example from St. Ann, in the case of St. Mary.

The National Society has also 25 trained and specialized volunteers in DANA, 35 disaster mental health volunteers, 27 gender and sexuality and reproductive health volunteers, 20 micro-economic cash transfer volunteers, 50 Vulnerability and Capacity Assessment (VCA) volunteers and 2 Epidemic Control Volunteers (ECV), who supported various technical aspects under the emergency operation. Fifty-two volunteers from the three targeted parishes and more than 100 volunteers and staff were mobilized and worked on the relief efforts from the beginning of the emergency response.

3.1.3. Private sector partnership

It is deemed worthwhile to highlight the partnership between the private sector and the National Society as a strong positive lesson that emerged from the operation. This partnership proved especially valuable during the relief operation and the ensuing weeks and enhanced

the overall efficiency of the operation. The Jamaica Red Cross has pre-agreements with local suppliers in order to mobilize food to keep distributing as an addition to the prepositioned stock. This enabled the Society to avoid gaps in distribution and they were able to provide assistance through funds supported by some external corporate partnerships.

Effective partnership with the private sector is also exemplified by the relationship with GraceKennedy Company (GRACE). GRACE operates a 'virtual warehouse' for the Jamaica Red Cross to ensure certain types and quantities of goods are available in the event of a disaster. In addition, GRACE Company provided food items in support of the relief operation. This arrangement with GRACE and other local suppliers enabled the Jamaica Red Cross to mobilize food quickly for distribution, thus enhancing the efficiency of the relief operation.

3.1.4. Health messaging system

Another important outcome of the private sector partnership is the health information messaging system developed in collaboration with Digicel Telecommunication Company and the Ministry of Health. This innovation is an important step towards better management of health information during disaster situations. The Jamaica Red Cross and the MoH worked in partnership with Digicel to send out health text messages to customers. The Digicel agreement for messaging is based on a regional agreement between IFRC and Digicel. The text messages, which focused on vector control, were developed by the Jamaica Red Cross and approved by the Ministry of Health before being distributed by Digicel to their customers. Digicel has a customer base of around two million people in Jamaica (approximately 70 percent of the population).

Additionally, in order to address health needs at the time, the Jamaica Red Cross distributed

existing information on vector control from the MoH during the relief distribution operation. While the impact of this initiative is not easy to measure, there is no doubt that accessing timely health information during disaster situations is crucial for preventing disease outbreak and spread which can compound disaster relief and recovery challenges. By enabling this process, the JRC has laid a solid foundation for the formal integration of health information in national disaster emergency response effort.

3.1.5. National society capacity building

The Hurricane Sandy operation provided an opportunity for the National Society to enhance its disaster response capacity. This opportunity was well taken, and the successful implementation of associated training activities, is a positive outcome with significant implications for future operations. At the beginning of the operation, the Jamaica Red Cross Society mobilized 120 volunteers. At that time the National Society had 237 Community Disaster Response Team (CDRT) members and 26 National Intervention Team (NIT) members.

For the technical aspects of the operation, the Jamaica Red Cross has experience in working in vector-borne disease prevention campaigns, micro-economic initiative/cash transfer for violence prevention purposes, Psychosocial Support. Fifty-two volunteers from the three affected parishes and more than 100 from other parishes, together with staff from the National Society headquarters, contributed to the relief efforts from the beginning of the emergency response and up to the early recovery phase.

The Jamaica Red Cross has significantly increased its human resource capacity. Specifically, the number of partners in shelter management, with 135 persons trained in seven parishes; in DANA, 140 persons were trained in four parishes, and at the Jamaica Red Cross national

headquarters. Training was also done in community violence prevention, where 22 persons were trained, in order to increase the capacity to implement violence prevention activities.

A Training of Teachers (TOT) approach was utilized to strengthen the JRC capacity to provide psychosocial support. A number of psychosocial support trainings were held, and 16 trainers and 30 teachers were trained. This is a new component in the recovery process and is deemed crucial especially after a disaster when individuals are dealing losses. The list of these trained individuals is provided to the branch directors who may call on these persons in times of need.

Despite not receiving the anticipated level of support from some of its local partners for the thirteen planned DANA training, the National Society still managed to implement eight of these sessions. Training sessions were conducted in Clarendon, Manchester, Portland, St. Thomas, St. Mary, St. Elisabeth, St. Catherine and Kingston & St Andrew (Combined) with 219 participants trained. While the initial target was not met, the capacity of the national society was enhanced as the training went beyond the scope of the three parishes of interest.

3.2. CONSIDERATIONS FOR IMPROVEMENT

In general, the National Society achieved its mandate for the Hurricane Sandy relief operation. Notwithstanding this, there are important areas for improvement and considerations for future operations.

3.2.1. Damage and Needs Assessment (DANA)

After a disaster a DANA is usually conducted by individuals who have the skills and knowledge of what is required for conducting such an assessment. The DANA is usually conducted within the first 48 hours of the disaster. The assessment typically involves techniques for determining

the extent of damage. The DANA should be guided by agreed international recommendations on the categories and classification of damage. In Jamaica, the MLSS is the organization in charge of spear-heading DANAs.

There is a consensus among local stakeholders involved in the Hurricane Sandy relief operation that the DANA did not achieve the intended objective of providing accurate and reliable information on the extent of damage in the three parishes. The main challenges with the DANA are related to the quality of the data gathered and the geographic coverage of the assessment. Explanations submitted for the former were primarily associated with the lack of proper DANA training and experience amongst some of the assessors. The window for an DANA is usually too small to accommodate detailed formal training for volunteers. This lack of training and experience among some of the volunteers contributed to the inaccurate classification/categorization of damages.

This issue was initially compounded by the limited availability of trained volunteers. The assessment teams were therefore unable to cover all the affected areas which resulted in some affected persons not being assessed. By training over 140 persons in DANA, the National Society has enhanced its human resource capacity to prevent/minimize the reoccurrence of these challenges in future operations.

3.2.2. Transportation

Transportation challenges emerged as a significant issues that hampered the efficiency of the relief operation in particular. The absence of vehicles at the branch level was identified as the main contributing factor. Vehicles from the headquarters in Kingston were used to offset these challenges. This problem was compounded by poor road conditions in some communities.

This affected the timeliness and efficiency of the relief operation. Because this is one of the most critical aspect of any operation, great care should be taken to mitigate emerging challenges. While vehicles were dispatched from Kingston to remedy the situation, consideration should be given to a less centralized approach in which Red Cross Parish Directors could play a more integral role. This would be more effective from a logistics and financial standpoint.

3.2.3. Monitoring of volunteer activities

There is a consensus among local stakeholders involved in the operation that it would have been useful to have a system in place to monitor the activities of volunteers. This could be in the form of daily logs reflecting the numbers of available volunteers and the work being undertaken. This sentiment was echoed by the internal team who also submitted that this could serve as a basis for showing recognition and appreciation to the volunteers for the invaluable work they undertake.

3.2.4. Beneficiary information system

Efficient information systems are essential for effective beneficiary targeting and relief distribution. The National Society kept a good record of distributed relief supplies and beneficiaries were required to sign upon receipt of goods. However, there is uncertainty regarding the vulnerability characteristic of some these beneficiaries.

Beneficiary registrations need to be done prior to the distribution of items and more detailed targeting and registration in branch level is required. There was intention to provide Mega V training as part of the operation but this did not materialize due to funding constraints. While there are limitations associated with electronic database systems (especially in a disaster

context), there are ways to mitigate these limitations and the benefits can enhance the efficiency of the future relief operations. The National Society has also indicated that the possible use of mobile-based assessment and beneficiary registration system (ODK developed in PADRU) is being explored as a means of increasing efficiency and accountability in future relief operations.

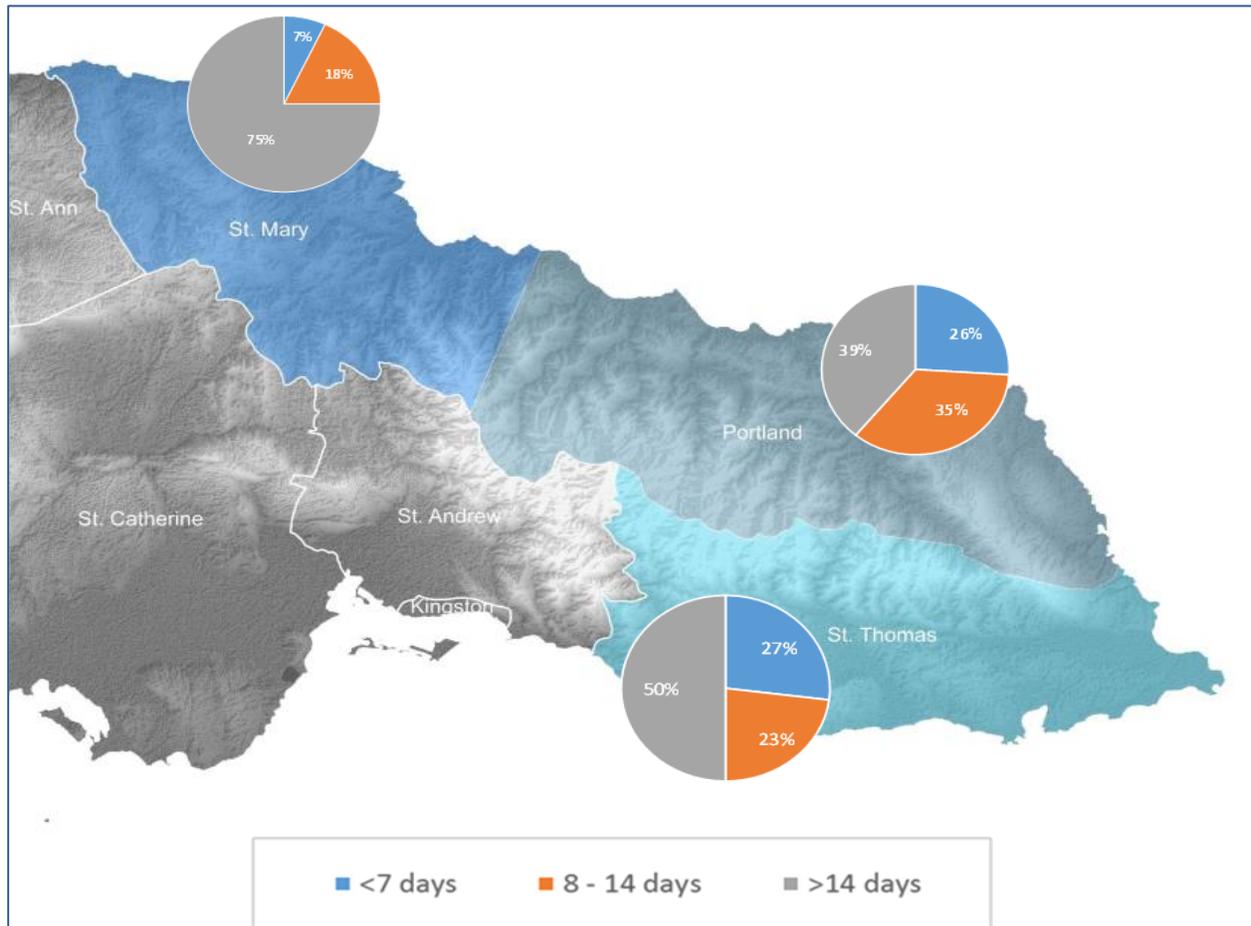
3.2.5. Communication

Some internal team members and local stakeholders submitted that better communication during the operation could have enhanced its overall efficiency. From the internal team's standpoint, changes regarding the revised appeal need to be clearly communicated and understood by all members. In terms of the local stakeholders, most of them are introduced at the implementation stage of the appeal and were often unsure about some of their roles and expectations. An MOU exist between JRC and ODPEM, it would be useful to establish similar arrangements with the other stakeholders to ensure that roles, responsibilities and expectations are clearly understood.

3.3. BENEFICIARY SATISFACTION SURVEY

The Hurricane Sandy relief operation sought to assist families who have incurred severe damage to houses and livelihoods, and with large numbers of children; disabled people; elderly people, single female-headed households and people living with HIV – who have no possibility of support from family or relatives and lack insurance. Based on secondary data analysis from the Hurricane Sandy relief beneficiary satisfaction survey, 49 percent of the beneficiary families received their Non- Food Items within 2 weeks' after the impact of Hurricane Sandy.

FIGURE 3: Timeliness of Relief Distribution in the Affected Parishes



One of the recommendations from the beneficiary satisfaction survey is the need for improvement in the distribution system (registrations of beneficiaries, efficiency of assessment and delivery of items). When combined, children, elderly or disabled accounted for 86 percent of the interviewed beneficiary families. This is a clear indication that distributions were done in accordance with the beneficiary selection criteria (families who have incurred severe damage to houses and livelihoods, and with large numbers of children; disabled people; elderly people and single female-headed households). Of the 100 beneficiaries interviewed, 84 percent indicated that they were satisfied with the non-food items and food parcels received.

3.4. LIVELIHOODS RECOVERY

The main components of the recovery phase of the operation are the micro-economic initiative (MEI); emergency shelter and violence prevention and; emergency health and care (dengue prevention, epidemic control and psychosocial support).

3.4.1. *Micro Economic Initiative (MEI)*

A combination of focus group discussion, stakeholder interviews and questionnaire survey was used to assess the effectiveness and efficiency of the micro-economic initiative. In this section we present 1) the implementation process 2) findings from the MEI beneficiary survey 3) the strengths of the MEI and 4) considerations for improvement. However, as this is the first time the initiative is being implemented in a rural context in Jamaica, there are obvious lessons to learn and areas for improvement.

3.4.2 *Implementation process- synopsis*

- The implementation of the MEI began with a training of volunteers from the parishes of St Thomas, St Mary and Portland.
- This was followed by Town hall meetings in the same parishes, where 418 beneficiaries (284 females and 134 males) applied to benefit from the initiative.
- The main livelihood activities identified were farming, setting up a grocery shop, poultry rearing, sewing, carpentry, food shop and hair dressing.
- A beneficiary selection committee was established and criteria developed for the selection of 221 beneficiaries. These beneficiaries also received business development training organized in the three parishes.

- Because most of the businesses are related to agriculture, The Ministry of Agriculture (MoA) was a key partner on the initiative. The MoA delivered presentations during the training seminars and exposed the beneficiaries to disaster mitigation and other farm management techniques

3.4.3. The selection process: through the eyes of the beneficiaries

During the focus group discussions, the MEI beneficiaries were asked to explain the process leading up to their selection. From the viewpoint of the beneficiaries, the selection process involved the following:

- 1) Participants indicated that they heard about the MEI and the first meeting (town hall meeting) from various sources (family members, friends, community groups, government organizations and Red Cross volunteers).
- 2) At the town hall meetings, participants indicated that they submitted requisite information about damage and losses they experience from Hurricane Sandy. The information was collected and reviewed by a selection committee.
- 3) Eligibility criteria for benefits were outlined and recommendations were provided based on the forms submitted.
- 4) Subsequently, another meeting was held approximately one month after but with individuals who had been selected to benefit from the MEI. The beneficiaries were told to visit respective business places (hardwares, supermarkets, farm stores, etc.) depending on their particular business and to receive an invoice not exceeding JMD\$30,000.

- 5) Participants indicated that they attended a second meeting where they received business training. All the respondents sampled indicated that they found the training very useful relevant documents as it provided insights as to how they can improve their businesses or how to effectively start up one.

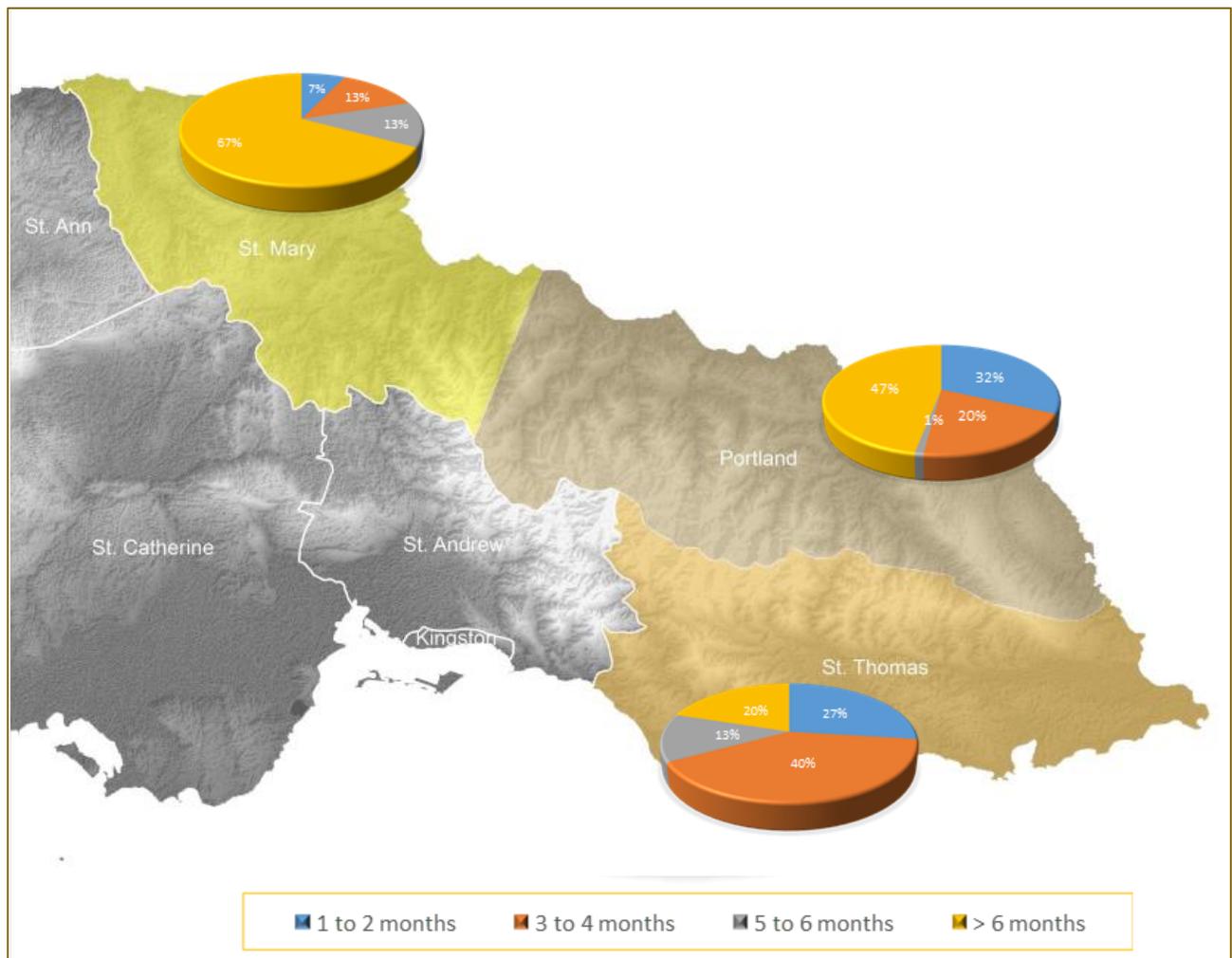
3.4.4. MEI Beneficiary Survey results

The MEI beneficiary survey is based on a sample of 45 randomly selected beneficiaries. Numbers were assigned to the names of each beneficiary which was then selected randomly using a random number generator application. This represents 20 percent of the total number of beneficiaries in the three parishes. The main findings from the survey are summarized below:

- Most of the MEI beneficiaries are women. The survey indicates that females account for 58 percent of the beneficiaries. Majority of the sample falls between the age group 51 to 75.
- When asked how they heard about the Red Cross MEI, 50 percent of the respondents indicated family members or friends (see Figure 4)
- Most of the respondents indicated that they are very satisfied with the assistance they received. In fact, when asked to rank their level of satisfaction from 1-5 (low-high), 58 percent of the respondents gave the intervention a 5.
- Ninety percent of the sample indicated that this is the first time they are receiving assistance from the Red Cross and a further 82 percent stating that they did not receive any support from any other organization after Hurricane Sandy.

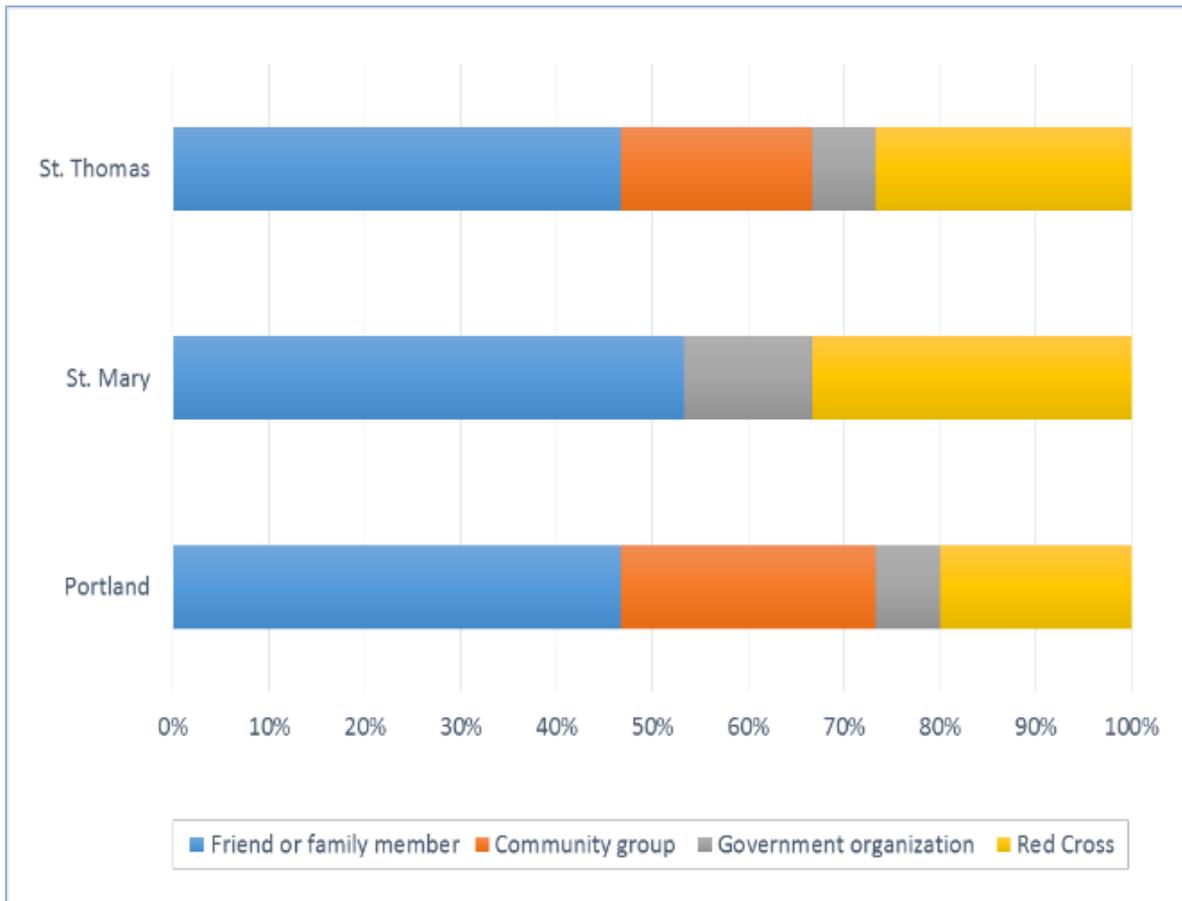
- In terms of timeliness, 55 percent of the respondents indicated that they receive the assistance on time. A further 40 percent submitted that it took approximately 6 months for them to receive the assistance (see Figure 3).
- Thirty-six percent of the respondents indicated that they are unaware of any follow-up activity by the Red Cross regarding the benefit they received.

FIGURE 3: Time taken to receive MEI benefit



- When asked to rank how their respective businesses are doing on a scale of 1-10, most persons gave a 5; this was due to the fact that the businesses were particularly slow at the moment; likewise they were not yet back up to par and thus were only partially operational. A situation that would have been far worse without the MEI.
- Most of the respondents indicated that they were very grateful for the training they received at the MEI workshop and would like to receive similar training in the future. More specifically, 30 percent of the respondents indicated that they would like to learn more about marketing.
- When asked if they have put any strategy in place to prevent a reoccurrence of the situation they faced after Hurricane Sandy, only 22 percent indicated in the affirmative.

FIGURE 4: How MEI Beneficiaries first heard about the initiative



3.4.6. Strengths of the MEI implementation

- The MEI has provided a unique opportunity for the beneficiaries to (re)start and enhance their livelihoods. The initiative was activity driven and positively impacted the lives of 221 individuals. This is especially important within the current disaster management context in which efforts are primarily focused on protecting lives and property, with far less attention paid to the protection of livelihoods. By including the MEI as a component of the Hurricane Sandy recovery operation, the JRC has taken an important and deliberate step towards the mainstreaming livelihood protection as part of the national disaster management agenda.
- The selection of the MEI beneficiaries from the pool of candidates was meticulous. The inclusion of, and partnerships with key local stakeholders such as SDC, ODPEM, MLSS and RADA exemplifies the implementation team's desire for a robust selection process.
- One of the major strengths of the MEI is the demand-driven approach utilized in the livelihood selection process. Even though the livelihood items were limited due to funding constraints, beneficiaries still got the opportunity to choose the items they wanted. This approach is especially important within the broader context of empowerment, rural development and poverty reduction in Jamaica.
- The level of vulnerability and extent of livelihood loss, formed the premise on which compensation was offered. Additionally, based on the demographic characteristics of the beneficiaries, it is clear that age and gender were key considerations to ensure that the typically vulnerable groups are considered.
- The MEI workshops were well-executed and appreciated by the beneficiaries. The

inclusion of business management and disaster-risk reduction training proved effective and provided useful information to the beneficiaries.

- Whilst there were minor delays, the system for distributing benefits to the recipients was effective and transparent.

3.4.7. Considerations for Improvement

- The objective of the MEI is to “provide *alternative* livelihoods for 221 targeted affected families in St. Thomas, St. Mary and Portland following the loss of subsistence crops and destruction of houses”. The basis of any alternative livelihood initiative is to replace or diversify existing livelihoods that are in danger or those that do not generate sufficient income for those who engage in them to live decent lives. Within the Jamaican context, where most people depend on agriculture for a living, livelihoods are in constant danger from hurricanes and other natural hazards. With this in mind, the MEI fell short of its objective to promote/provide alternative forms of livelihoods. The initiative could have done more to promote alternative livelihoods outside of or within agriculture (e.g. aquaculture, apiculture and eco-tourism have been established as viable entities in the three parishes). This could provide individuals with (or build awareness about) alternative income generating activities or an opportunity to exit agriculture all-together.
- The MEI provided raw materials to the beneficiaries as the main form of livelihood support. However, the raw material option were limited and, according to some of the beneficiaries, it resulted in them taking whatever they can get. This situation is clearly reflected in the type of livelihood activities supported, with 40 percent of the

beneficiaries receiving support for poultry production. In the community of Cedar Valley in St Thomas, the MEI provided livelihood support to 21 individuals and of this total, 16 went into poultry production. This has resulted in a glut on the local market. While these farmers wait for marketing opportunities the cost for meat preservation is eroding potential profits.

- One of the objectives of the MEI is to support “income generating activities to ensure food security for the *most* vulnerable families”. A system is needed to ensure that those who are considered to be most vulnerable or badly affected are invited to the initial town hall meeting. For future operations, it might be worth exploring the use of information captured in the DANA to determine MEI candidates as opposed to town hall meetings, which creates a geographic bias. If the town hall meeting approach is taken forward to be used in future MEIs, then it should be built on a solid (strategic) communication platform to increase awareness about the event especially among persons from communities that are worse affected. There is no doubt that vulnerable families benefited from the MEI. However, if the objective is to reach the *most* vulnerable with limited available resources, then a more strategic and systematic approach is required.
- More strategic partnerships could have strengthened the effectiveness of the MEI. Effective partnerships in a relief phase of a disaster operation are not guaranteed for the recovery component. As an economic initiative, the MEI could have benefited from strategic partnerships with institutions with similar agenda (e.g. Jamaica Business Development Corporation and the Small Business Association of Jamaica).

- The MEI could have been conceptualized as a long-term initiative with a built-in monitoring and evaluation component to ensure beneficiary feedback and complaint mechanism. To date, there is no system in place to verify how the resources have been used by the beneficiaries. Also, due to the variety of businesses supported, more targeted training sessions would have been more effective. This would obviously need to be built in from the conceptualization phase of the project.

3.5. SAFER HOUSES

The impact of Hurricane Sandy was especially devastating on housing structures. It is therefore difficult to overstate the importance of the safer houses initiative to the lives of the beneficiaries. To evaluate this component, interviews were conducted with 5 of the seven (7) beneficiaries and members of the internal coordination team. Unsuccessful attempts were made to contact the other 2 beneficiaries. The main issues emerging from the interviews are summarized below:

- Based on the information gathered from the internal team and the beneficiaries, the provision of labour was an expected condition under which the house was provided. This has proved a challenge for three of the beneficiaries.
- Two of the respondents indicated that they have completed construction and is now occupying their new house.
- The contractor for St Mary, indicated that he is facing challenges to find the time from his regular job to complete the houses.
- For the completed houses, more time could have been allotted after the construction to verify proper completion. Contractors were paid a day after houses are completed in

accordance with their contract. Case in point, one of the completed houses in St Thomas was not properly constructed and causing a sewage problem for the occupants.

- Other challenges encountered include: the acquisition of materials from suppliers, availability of items, distance of supplier and availability of labour

4. SUMMARY

Based on the TORs, this evaluation is focused on the Relevance/ Appropriateness, efficiency and effectiveness of the operation. A summary of the key findings based on these criteria is presented below.

4.1. *Relevance/Appropriateness*

- Based on the impacts of Hurricane Sandy on the three parishes, there was definitely a need for this operation.
- The stated objectives of the response phase were successfully achieved and the outputs and desired impact of the response operation were in-line.
- A reflection on the overall response operation revealed that, for the most part, the intervention matched the priorities of the beneficiaries.
- The validity of design for the response phase remained intact despite several adjustments to the operation and budget
- The operation involved national and local stakeholders as well as the private sector and are deemed to be in accordance with national priorities in the immediate aftermath of a disaster of this nature.
- Children, elderly or disabled accounted for 86 percent of the interviewed beneficiary families. This is a clear indication that distributions were done in accordance with the beneficiary selection criteria
- 84 percent of the beneficiaries indicated that they were satisfied with the non-food items and food parcels received
- The MEI made a big positive impact on the lives of beneficiaries by providing an

opportunity to (re)start their livelihood activity.

- The MEI was demand-driven and aligned with the general livelihood context of the beneficiaries.

4.2. *Efficiency*

- Detailed assessment of programme efficiency demands both qualitative and quantitative information.
- Efficiency of the relief operation could have been enhanced by decentralizing certain aspects of the operation (e.g. transport). This could be partially achieved with prepositioning in non-disaster phase with people with capacities, laptops, and internet access/phone lines and so on.
- While the objectives of the relief operation were achieved, there were some delays in receiving items. This affected the overall efficiency of the operation.
- The use of volunteers at the local level ensured that this component was complete with the least human resource cost as possible
- Better internal and external communication during the operation could have enhanced its overall efficiency
- At the time of this evaluation, most of the MEI beneficiaries received assistance.
- Most of the agencies involved in the operation had existing relationships with the Red Cross through the Parish Disaster Committee, this facilitated smooth operations and made interactions easier.

4.3. Effectiveness

- The Jamaica Red Cross has increased their capacity and the number of partners in shelter management, initial damage assessment, community violence prevention and psychosocial support
- Excellent human resource mobilization capabilities during the relief operation.
- Partnership between the private sector and the National Society as a strong positive lesson that emerged from the operation
- The Hurricane Sandy Operation was therefore prominently featured as part of the national disaster relief and recovery efforts and played a critical role in restoring livelihood and dignity in the affected parishes
- While the DANA was completed in reasonable timeframe, it did not achieve the intended objective of providing accurate and reliable information on the extent of damage in the three parishes.
- The Hurricane Sandy Operation was therefore prominently featured as part of the national disaster relief and recovery efforts and played a critical role in restoring livelihood and dignity in the affected parishes
- Due to human resource challenges, the assessment teams were therefore unable to cover all the affected areas which resulted in some affected persons not being assessed and eligible for assistance
- While the selection process of the MEI was well executed, the procedure for recruiting candidates needed to be more needed to be more targeted to those who are in need of support.

4.4. Summary of key operation results

Status: ■ Complete ■ Incomplete ■ Cancelled

COMPONENT	OUTPUT	ACTIVITIES	RESULTS
Relief distributions (food and basic non-food items)	Damage and Needs Assessments (DANA) for affected areas	Conduct rapid emergency and damage and needs assessments (DANA) in the most affected areas following Hurricane Sandy	Eight (8) DANA Training sessions completed in the parishes of Clarendon, Manchester, Portland, St. Thomas, NHQ, St. Mary, St. Elisabeth, St. Catherine and KSAB (Combined training). A total of 219 volunteers were trained
	Training of Jamaica Red Cross in Mega V (beneficiary electronic database and distribution system)	Training the Jamaica Red Cross team on the Mega V beneficiaries registration system	Because Mega V, was cancelled, no result is associated with this activity. PoA was not funded 100% and it was decided by NS to be not done as per priority selection of other activities
	Implementation of Mega V for beneficiary registrations and Distributions	Provide technical assistance to Jamaica Red Cross for Mega V facilitated beneficiary registrations and distributions	
	Beneficiary	Develop the beneficiary targeting strategy and registration system to deliver intended assistance by using the Mega V relief distribution system.	

	targeting strategy and registration for the Operation		
	Relief items distribution carried out for the most affected and vulnerable families	Distribute relief supplies and control supply movements from point of dispatch to end user.	Relief distributions was completed in January 2013, and the Jamaica Red Cross surpassed its projected goal of assisting 1,000 affected families (5,000 people) in St. Thomas, St. Mary and Portland to have their most urgent and basic needs met.
		Deliver 1,000 food parcels (replenish 500 used from prepositioned stocks to cover 500 additional families) to support food security and immediate needs of the affected people	A total of 6,918 families were reached in the three most affected parishes. Across the three parishes, a total of 5,543 families were reached with non-food items, 1,011 families were reached with food and 364 families have been reached with mattresses.
		Deliver targeted non-food items (hygiene kits, cleaning kits, tarps, blankets and jerry cans) for 1,000 families based on identified needs	

		Distribute 500 mattresses for the children, elderly people and disabled people	
		Monitor relief activities and provide reporting on relief distributions.	
		Develop an exit strategy	
Emergency shelter and violence prevention	7 safer houses (earthquake, hurricane and flood resistant) are built for the most vulnerable families	Identification of targeted families based on needs assessments and registration	<p>A total of eight (8) shelter management training sessions were conducted in the parishes of Clarendon, Portland, St. Mary, Westmoreland, St. Elizabeth, St. Catherine, St. Ann and St. Thomas</p> <p>A total of 149 persons were trained in Emergency shelter and violence prevention.</p> <p>Twenty-two received community violence prevention training persons were trained</p> <p>Seven (7) recipients of safer houses- 3 from the Parish of St Thomas and 4 from St Mary</p> <p>Youth non-violence promotion campaign was implemented in in the parishes of Manchester, St. Thomas, St. Ann, St. James and St. Elizabeth.</p>
		Procurement of material for the construction of 50 safer houses	
	Three violence prevention campaigns implemented in target schools	Hiring of technical experts and support staff	
	Three primary	Implementation of the build-back safer houses initiative to build earthquake/ hurricane/flood resistant housing	

	schools retrofitted with hurricane-resistant safer roofs	<p>Beneficiary communication for safer houses</p> <p>Three primary schools have been retrofitted with safer, hurricane-resistant roofs</p> <p>Three violence prevention campaigns implemented in target schools</p>	The campaign is estimated to have directly reached 8000 persons
Communications – Advocacy and public information	Beneficiary feedback of the operation is ensured.	<p>Production of beneficiary stories during the operations for publication</p> <p>Production of photographs from the operations</p> <p>Issue of communication and public visibility reports</p>	<p>Two beneficiaries' stories were produced and have been published on the IFRC and Canadian Red Cross websites</p> <p>A photographer was hired during the relief operations, to capture the Red Cross in action, and photos are available at http://pirac.croixrouge.fr/en/actions_fiches.php?action=33</p>
Emergency health and care (dengue prevention, epidemic control and	<p>Epidemic Control for Volunteer training takes place.</p> <p>Cleaning campaigns are carried out and target areas</p>	<p>Training/refresher training on ECV (Epidemic Control for Volunteers): dengue and leptospirosis for 15 people from each targeted area</p> <p>Cleaning campaigns of vector breeding sites with the health teams from the Ministry of Health and communities.</p> <p>Distribution of mosquito nets to 1,000 targeted families.</p>	<p>Thirty (30) teachers in the parishes of St. Thomas, Portland and St. Mary received training. The training was done in the month of May 2013.</p> <p>In total, the student population for the schools is approximately five thousand (5,000).</p> <p>One (1) Psychosocial Training for Trainers was held. There were (16) participants.</p>

psychosocial support)	cleaned.	Production of vector-borne disease control (dengue and leptospirosis) awareness-raising material (materials from the Ministry of Health, reproduced with Jamaican Red Cross and donors' logo)	<p>Distributed 1000 mosquito nets targeted families</p> <p>There were challenges getting support from the ministry of health with this component. The internal team reported that the MOH did not support the activities. Not much detail was provided as to why this occurred. It would have been useful to ensure support of MOH before the component was written in the PoA.</p> <p>One important result from this component was partnership with Ministry of Health and Digicel to provide health messages throughout the disaster period.</p>
	The spread of leptospirosis is prevented	Public awareness-raising and communication campaign for dengue prevention in collaboration with the Ministry of Health and Jamaica Red Cross' ECV staff and volunteers	
	Psychosocial support is provided to community members in St. Thomas, St. Mary and Portland	Psychosocial support volunteers provide support for traumatized families using one-on-one meetings.	

5. CONCLUSION

Overall, the implementation team achieved its mandate and the relief and livelihood recovery operation were successfully executed with important positive lessons learned from the process. The analysis from the relief operation revealed that the intervention matched the most immediate priorities of the beneficiaries and was effectively coordinated with local partners. The implementation team also demonstrated excellent logistics capabilities by seamlessly mobilizing human resource as well as food and non-food items throughout the operation. The partnership between the private sector and the National Society as a strong positive lesson that emerged from the operation. In particular, the partnership with Digicel Telecommunication Company to develop and disseminate health information related to vector control in the immediate aftermath of the hurricane. The operation provided an opportunity for the National Society to enhance its disaster response capacity. This opportunity was well taken and the National Society significantly increase its capacity in the areas of psychosocial support, shelter management and initial damage assessment. Children, elderly or disabled accounted for most of the beneficiary families and the overall distribution was done in accordance with the selection criteria outlined in the emergency appeal.

The livelihood recovery program made a big positive impact on the lives of beneficiaries by providing an opportunity to (re)establish their livelihood activity. The initiative was activity driven and positively impacted the lives of 221 individuals. The selection of the MEI beneficiaries from the pool of candidates was meticulous and the inclusion of, and partnerships with key local stakeholders such as Social Development Commission (SDC), ODPEM, MLSS and RADA exemplifies the implementation team's desire for objectivity in the

MEI selection process. The level of vulnerability of the beneficiaries and extent of livelihood loss, formed the premise on which compensation was offered and the MEI is took a demand-driven approach for livelihood selection. Most of the respondents indicated that they are very satisfied with the type and timeliness of the assistance they received. The MEI workshops were well-executed and appreciated by the beneficiaries.

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