

2010

Martin's Bay Vulnerability & Capacity Assessment for Disaster Risk Reduction



The International Federation's Global Agenda (2006–2010)

Over the next two years, the collective focus of the Federation will be on achieving the following goals and priorities:

Our goals

Goal 1: Reduce the number of deaths, injuries and impact from disasters.

Goal 2: Reduce the number of deaths, illnesses and impact from diseases and public health emergencies.

Goal 3: Increase local community, civil society and Red Cross Red Crescent capacity to address the most urgent situations of vulnerability.

Goal 4: Promote respect for diversity and human dignity, and reduce intolerance, discrimination and social exclusion.

Our Priorities

Improving our local, regional and international capacity to respond to disasters and public health emergencies.

Scaling up our actions with vulnerable communities in health promotion, disease prevention and disaster risk reduction.

Increasing significantly our HIV/AIDS programming and advocacy.

Renewing our advocacy on priority humanitarian issues, especially fighting intolerance, stigma and discrimination, and promoting disaster risk reduction.



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Introduction

The Barbados Red Cross Society is one of the recipients of funding under the regional ECHO-funded project titled 'Building Safer, More Resilient Communities'. This project complements the current DIPECHO funding which has not only given an allocation for community and National Society preparedness, but has also targeted the Barbados Red Cross as the location for a Resource Centre to develop and enhance the disaster management tools and methodologies in the English-speaking Caribbean.

This initiative falls under the National Society's wider Disaster Management Program and includes community first aid training; the formation, training and equipping of community disaster response teams; development of family and community disaster plans; simulation exercises; vulnerability and capacity assessment and community awareness meetings.

The Martin's Bay area was selected as one of two communities in Barbados under the 'Building Safer, More Resilient Communities' project. Initially this community was not one of two communities identified under the project. However the project team made a decision to discontinue efforts in one of the two communities which were originally identified. This was due to low community participation after numerous efforts to schedule community awareness meetings and first aid training. As a result, it was determined that the limited response would not allow the team to implement a successful project in the allotted timeframe. The Martin's Bay Area was then selected through the aid of the Department of Emergency Management. A meeting was convened with four of the most active District Emergency Organisations who were asked to provide information on the most vulnerable areas in their constituency. This community was included in the seven (7) communities identified by the DEOs represented as one of the most at-risk communities to disasters and hazards.

The team decided to work through an active DEO that could lend the type of support needed. The criteria used to assess the communities included:

- History of disaster impact
- Located in a high risk area e.g. low-lying, flood prone, industrial area
- Community's vulnerability to a range of hazards e.g. fires, waste disposal practices, sea/storm surge, landslides, flooding
- Other contributing factors e.g. high levels of poverty, large vulnerable groups, livelihoods, unsafe building practices
- The level and frequency of the impact

The project team developed a set of criteria to select the second community to participate from the list of suggested communities. These criteria included:

- Anticipated community interest/buy-in from community stakeholders
- Vulnerabilities of the community
- Level and frequency of impact
- Structured community group presence e.g. District Emergency Organisation (DEO), youth groups, neighbourhood watches and opportunities for partnerships.

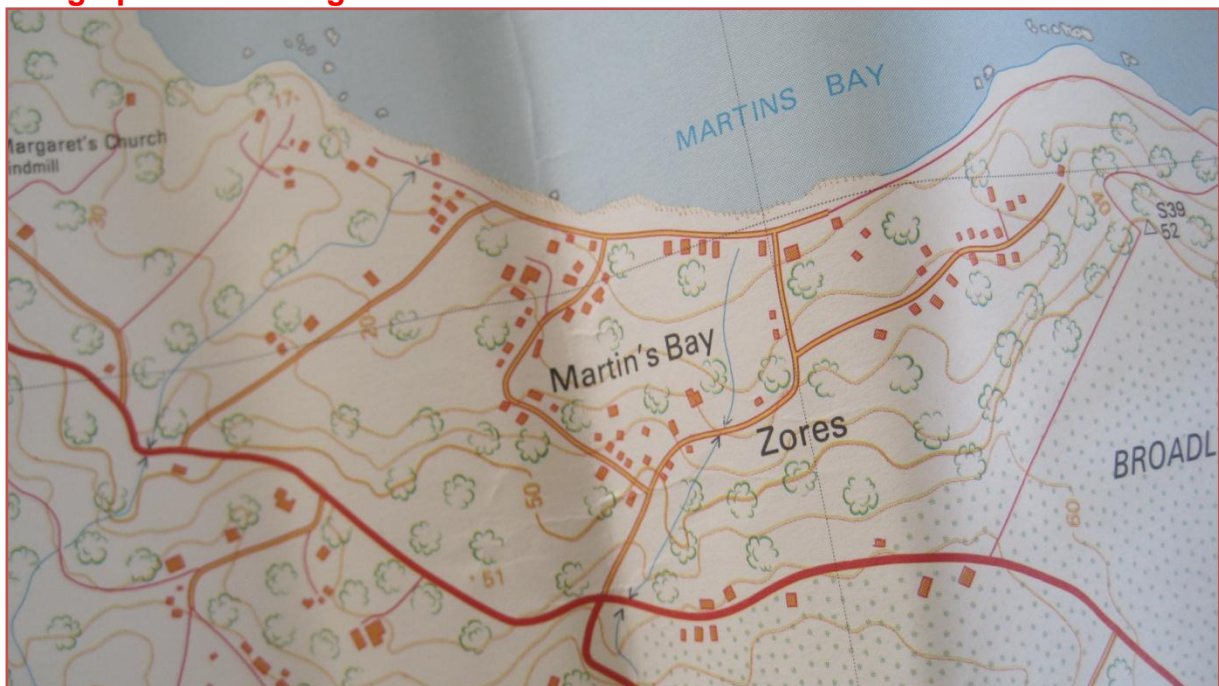
- Rural and urban geographical spread
- Scope of project in relation to available project resources (time, cost and manpower)
- Project duration
- Likelihood of sustainability of micro-projects beyond formal project end date
- Support from the national Department of Emergency Management
- Location of community

Why the VCA tool

The Vulnerability and Capacity Assessment (VCA) is a process of participatory investigation which is designed to assess and address major risks affecting communities. It aims to determine people's vulnerabilities to those risks, and assess their capacity to cope and recover from a disaster. It enables people to prepare for hazards and prevent them from turning into disasters by helping them to:

- Gather baseline information, which serves as a crucial reference for emergency needs following a disaster
- Better understand their environment in relation to predicted risks and hazards
- Increase awareness of their capacities to cope with risks and hazards
- Reach agreement with local authorities on actions needed to prevent and reduce potential effects of a disaster
- Implement and evaluate projects in the areas of prevention, preparedness and risk reduction

Geographical Coverage for the VCA Process



The Martin's Bay community has assessed their area in order to:

1. Map and identify the vulnerabilities and hazards.
2. Determine and map the resources and skills present in the community.
3. Identify the main issues and any associated actions which can be implemented by the community to reduce/mitigate the risks.

4. Develop proposals to aid in the selection of a suitable micro-project which addresses one of the main issues identified.

This document shares the results of these assessments undertaken by community members over the period Saturday 20th November, 2010 to Wednesday 24th November, 2010 from Mrs. Lowe's Guest House in Martin's Bay.

Vulnerability and Capacity Assessment

The Vulnerability and Capacity Assessment workshop was conducted over a five day period with a group of seventeen (17) participants. Participants included members of community groups from the Martins Bay area, existing and former residents of the community, members of the District Emergency Organization for St. John and staff of the Barbados Red Cross Society.

The workshop was delivered in a practical, modular format which has been presented in three sections in this report. Those sections are Community Risk Assessment – Mapping, Analysis, and Project Proposal development. In addition two annexes have been attached for additional background and supporting information. A report of the national stakeholder's meeting held on April 15th, 2010 is attached (Annex 1) as a record of the process undertaken to develop a shortlist of communities in which the 'Building Safer, More Resilient Communities' project could be implemented. Annex 2 is the Baseline Study conducted prior to the VCA workshop in order to provide some relevant primary data for this report.

At the beginning of the workshop participants were asked to share their expectations. What they expected to achieve as an individual and as a community. Those expectations are shown below.

VCA Workshop Participant Expectations	
Individual	Community
Share with Others	To identify the community's needs and the challenges
Learn from others	To deepen my understanding of the VCA process and how it plays out in different communities.
Knowledge about how to help the community	To use the VCA process to identify the vulnerabilities in the community
Have fun	To be better able to communicate with others
To play a greater role in the community	

Section 1

Community Risk Assessment - Mapping

Mapping is a way of setting out in visual form the layout of the community. It is one of the critical tools used in the VCA process as it captures highly relevant information for institutions working on disaster risk reduction initiatives and can be used as

secondary data, whenever available. It offers an opportunity to identify detailed information about vulnerabilities and capacities, as well as noting living conditions, behavior and environmental factors. It provides greater awareness of the actual reality on the ground, and complements geographical information.

Maps facilitate communication and stimulate discussion on important issues in the community. They help people to quickly understand complex relationships and allow visual comparison of information. Community maps are useful for assessment, planning, monitoring and evaluation. There are three main kinds of community maps which were used in this process. They are the ***hazard/vulnerability***, ***spatial*** and ***resource/capacity*** maps.

Figure 1: Small Country Map

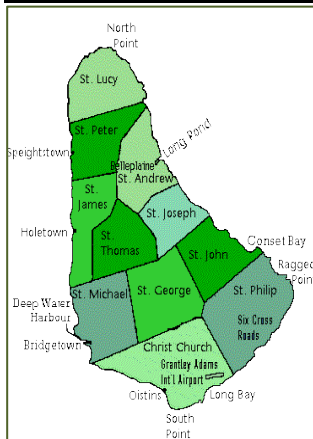


Figure 2: Aerial Photograph of Martin's Bay and Surrounding Districts



Provided by Land and Survey Department

Spatial Map

The spatial map gives an overview of the main features of the area in relation to its surroundings. Map features include the arrangement of houses, pastures and fields, roads and other land uses and indicates which resources are accessible and owned by the community or individuals.

Figure 3: Spatial Map of Charles Rowe Bridge Community

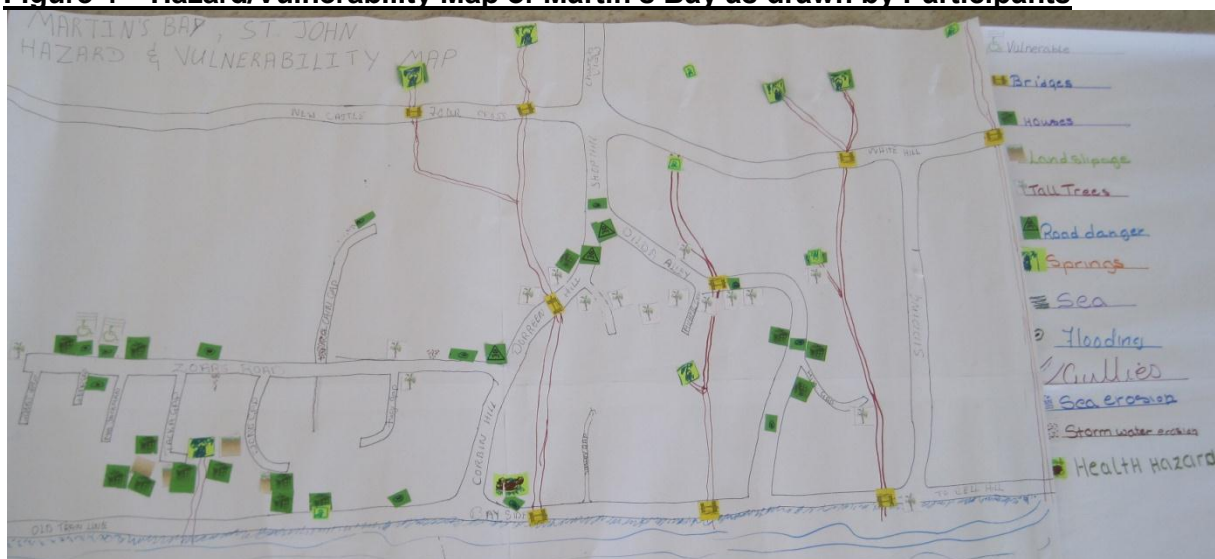


Done by the VCA participants

Hazard/Vulnerability Map

This map shows the hazards or risks within the community and indicates which ones pose a threat and when, which ones are predictable or occur after heavy rains. It also shows where risks have been getting worse and identifies vulnerable people or groups in the community.

Figure 4 – Hazard/Vulnerability Map of Martin’s Bay as drawn by Participants



Below is a table which outlines the main hazards identified by the participants.

Main Hazards Martin's Bay		
<p>The roads network in the community is a major issue. The community is located on a slope so the roads are downhill. When it rains the roads become very slippery. This contributes to a lot of motor vehicle accidents in the area.</p> <p>In addition access is a problem because the roads are narrow in some areas and need widening.</p> <p>There is also a lack of road signage in the area, which makes using some parts of the road network dangerous.</p> <p>In addition emergency vehicles such as a fire truck will have problems accessing some of these roads.</p>	<p>There is a number derelict and abandon houses in the area which need to be demolished or repaired. It is currently a breeding ground for vermin (mosquitoes & rats) and a potential haven for drug addicts and criminal activity.</p>	<p>Poor maintenance of drains and poor drainage leads to flooding which is very problematic and affects the community whenever it rains. The fact that the community slopes downhill means that the water from other nearby communities located further uphill flows through Martin's bay on its way to the sea. The poor maintenance and in some cases lack of drains both in the community and in surrounding communities intensifies the problem of flooding in this area. This requires some attention in order to improve water course management.</p>
<p>Soil Erosion has been cause mainly by the numerous water courses in the area. The fact that there is a lack of drains in the area and the ones that exist and not maintained leads to flooding which erodes the soil in the community.</p>	<p>The vegetation in the area is very dense. There are a lot of busy areas that needs trimming. Tall trees overhanging house and light poles are also an issue.</p>	<p>Martin's Bay is a located with the Scotland District which is an area in Barbados that is affected by land slippages. Therefore land slippage is a big concern for this community. Following the recent passing of Tropical Storm Tomas several fault lines developed in the Zores area. As a result the foundation of eleven house have been compromised and those families will have to be relocated.</p>
<p>Sea erosion has been impacting the community. Residents indicate that the rate of sea erosion has been accelerating in the last 20 years. In some areas the shore line is advancing up to foot paths and houses. Some houses are located near to eroding shoreline.</p>	<p>The community is also a coastal community and the area along Bay Street is especially vulnerability to sea surges.</p>	<p>Inadequate number of emergency shelters and the shelters are located far distances from the community.</p>
<p>The lighting in some areas in the community is inadequate.</p>	<p>Improper disposal of garbage poses a health risk to community members.</p>	<p>Mosquitoes are a problem because water in blocked drains becomes breeding ground for them. The improper disposal of garbage also provides breeding places for mosquitoes. This puts the</p>

Main Hazards Martin's Bay		
		community at risk for dengue fever.
Old Cars and debris in the area can become missiles in high wind.	Bush/cane fires are a concern for this community.	Bridges flood and become impassable with heavy rainfall.
Other Development Challenges/Needs Identified by the Group Include:		
Lack of self-respect among the youth and for others	Poor signage at road junctions	Lack of social and recreational activities in the community to keep the youth population interested.
Lack of youth involvement in community group activities	Insufficient knowledge of alternative livelihoods in the community	Insufficient home help for the elderly
Poor road conditions	Run-down or dilapidated houses	Inadequate facilities for the disabled.
Poor signage at road junctions	Unemployment	

Resource/Capacity Map

This type of map shows the resources and capacities located within the community. These include land use zones, skilled persons, equipment and businesses which can assist in the event of an emergency. Below is a table which captures the resources and capacities of the community as identified by the group:

Resource and Capacity Listing		
<ul style="list-style-type: none"> Shops and bars Restaurant Persons with medical Training Nurses churches 	<ul style="list-style-type: none"> Springs Public polyclinic Boats Teachers 	<ul style="list-style-type: none"> Farms Fishermen Churches Sea
<ul style="list-style-type: none"> Fruit trees (wide range) Craftsmen (i.e. carpenters, masons, tillers, labourers etc) Transportations DEO members live in area 	<ul style="list-style-type: none"> Stand pipes Landscapers Cooperation from the community 	<ul style="list-style-type: none"> Beach / Guest Houses All utilities available throughout the community (i.e. electricity, water and telephone)
<ul style="list-style-type: none"> Persons willing to assist in disaster planning Tools Banana trees Breadfruit trees 	<ul style="list-style-type: none"> Fish market Parking Beautiful scenery 	<ul style="list-style-type: none"> Well-educated and qualified individuals in several fields

Figure 5: Resource and Capacity Map



Section 2 - Analysis

Data collection is an integral part of the VCA exercise. It helps to provide a first impression and overview of the community, the problems it faces and the capacities available to address them. Various tools can be used to conduct observation and analysis. The tools used during the workshop and to inform this report include direct observation, mapping (refer to Section 1), seasonal calendar, historical profile, livelihoods and coping analysis, social network analysis and a community baseline assessment (see Annex 2).

The community has been affected by a range of hazards and disasters including **flooding, fire, over hanging trees, sea surges, land slippage and hurricanes**. It has managed to cope with these events but continues to be at risk to additional hazards. The area has adequate housing structures however the road network needs improving. As the community continues to develop its physical infrastructure, if left unattended, the main risks including aged trees and improper garbage disposal can continue to threaten the **poor drainage** system and increase the risk of flooding. **Also the fact that the community is located downhill means that it has numerous natural water courses which continue to intensify the erosion and flooding in the area.**

Persons were very knowledgeable of the wide range of physical, financial and human resources available which include skilled workers, professionals, hardware stores and easy access to basic amenities. There was a good understanding among participants of the general risks and hazards that exist within the community. The fact that members of the District Emergency Organisation and others persons with a genuine interest in disaster issues reside in the community is an important resource that will have meaningful impact on the disaster preparedness and response process for the community.

Community spirit is very high and complements the strong social networks in existence. This is evidenced by the number of active community and religious groups which cater to varying needs such as health, disaster management, youth interests and sports. The community generally appears to be a close knit group. Everyone knows each other and is willing to help out in disaster response efforts. This was evident in the community efforts after the passing of Tropical Storm Tomas. The challenge however reminds to show the important of preparedness.

Secondary Information Needed and Gaps

Type of Data	GAPS	Who/Where?
Inventory of Resources (emergency shelters, first aid posts transportation, communication capabilities etc.)	Need updated and precise information.	Rural Development Commission, LIME and Digicel, Department of Emergency Management
Climate data	Not readily available in user-friendly format	Caribbean Hydrology and Meteorology Institute, Adrian Trotman
List of NGOs and other donor agencies	Needs better coordination and awareness of availability	Community Development Department and Ministry of Social Care, Constituency Empowerment, Rural & Urban Development, Ministry of Foreign Affairs
Health (Prevalence/ rate of various illnesses/diseases/STIs)	Not easily accessible	St. John Outpatients Clinic
Coastal Erosion		Barbados Coastal Management
Abuse/ alcoholism statistics		Ministry of Social Care, Barbados Statistical Services
Water & Sanitation (water testing etc re poor drainage)		Ministry of Health, Environmental Officer
Updated Population data	Available data is out dated	Department of Statistical Services

Direct Observation

Participants were asked to record what they noticed from their field visits throughout the community. Direct observation is a useful process of observing objects, people, events and relationships. It enables participants to validate any conclusions reached through other tools to help gain a more complete understanding of the community and the relationships between its members. A record of the results is shown below:

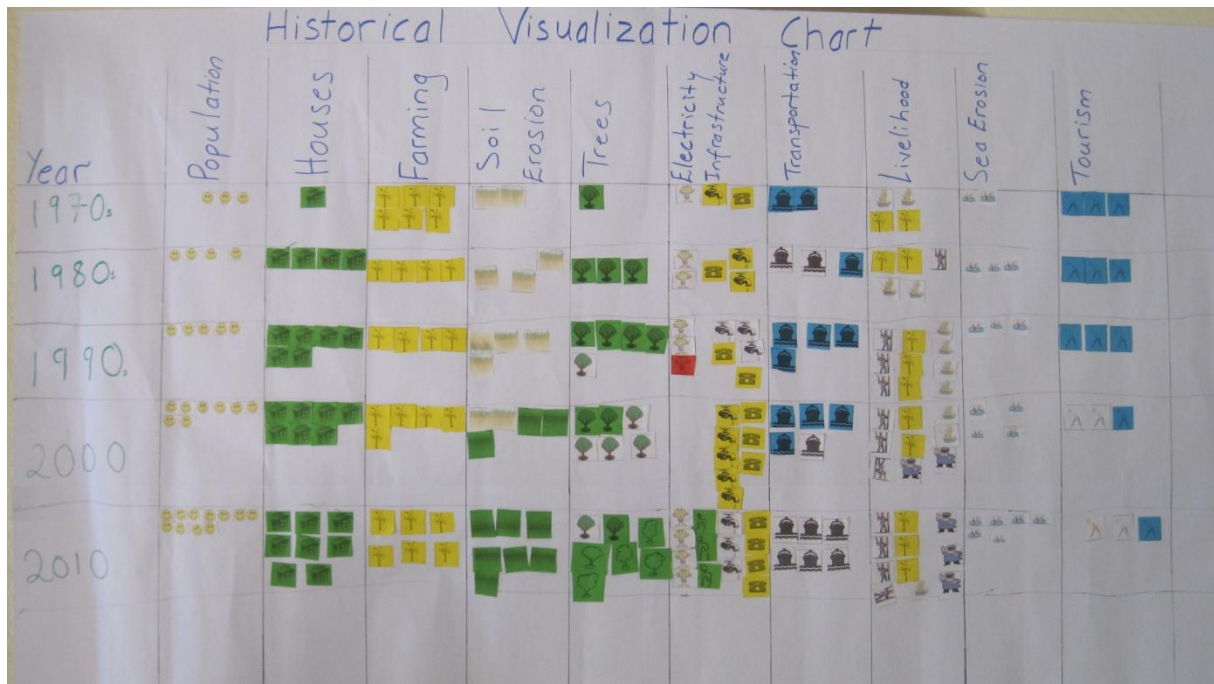
Not many young people were around.	Multi-generation	Friendly people who knew each other.	Oldest persons were females in their 90s
Water courses need clearing	Liming was taking place down by the beach bar.	The community was very quiet and deserted except for two main areas.	Many fruits trees including pears, banana, coconuts and pawpaw. Almost every home had banana trees.
Land slippage	Almost all houses have electricity	There are a lot of sloping areas which leads to flooding.	Many elderly persons live in the community.
Soil Erosion from flooding.	Most houses have indoor plumbing	Excellent sanitation	Primarily Christian
Many wooden structures.	Houses located on sloping land than is prone to land slippage.	Garbage dumped close to water sources.	Roads are steep.
Some areas require debushing	Several gullies and springs are in the area.	Abandon Properties	Elderly persons living in vulnerable homes in vulnerable areas.
Youngsters liming under trees.	Houses in close proximity to each other.	Drains need cleaning.	Abandoned cars

Our Community's History

Historical profiling is a means of gathering information about what has happened in the past. It can help to build a view of past events that have an effect on the community and lead to a shared understanding of the community's history and identity. It is a powerful tool as people will better value past achievements and be stimulated to think ahead whilst looking at certain trends that may have emerged over time. Awareness of the patterns that arise can influence the decisions taken by the community members in the planning process of disaster risk reduction initiatives. Below is a table which shows the historical information collected by the community.

Historical Profile





















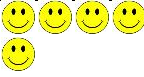












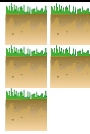









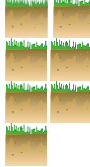
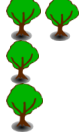





Year	Events
1920's	Train line in the community was functioning. There were two corner shops and rum bars in the community. Water was provided by stand pipes.
1930's	The Christian Mission church was built. It was the first church that was built in the community. Fishing industry started Train stop running
1940's	Sea rocks and shells used for decorations
1950's	Cane harvested using ladder trucks Banana cultivation
1960s – 1970's	Electricity and water came to the area The fish shed was built The community had strong political leadership. Public transportation One person killed by a bus
1980's	Road Built in Zores Tree fell and destroy the fish shed Pentecostal Church was built. Water and electricity reached Zores. House Fire
1990s	Roads in the area were improved. Community had its first murder committed. Fish shed rebuilt; Sales truck overturned Increase in the number of families living in the community. 8% cut by government First youth group formed – St Margaret Social and Cultural Group. Increase in the number of guest houses in the community. Banana Bar Opened Road and Bridge collapsed Break down in family structure, community relations and morals begin to deteriorate
2000's	First serious shooting
2005	Sea surge destroys build in Martin's Bay. Bay Tavern opened and is known for seafood day.
2006	Bridge in Martin's Bay was rebuilt
2007 - 2009	Two house fires
2010	<ul style="list-style-type: none"> • Man died at sea. • Land slide • Tropical Storm Tomas • 11 households displaced because of fault lines developing.



Above is photo of the group's views on how the community has developed over the last five decades.

The group was asked to share their thoughts of how they the community will change ten to twenty years from now. These were the responses

- The old train track will be further into the sea.
- Further landslides in Zores
- More homes will be lost as a result of land slippage.
- Migration of some families.
- More trees will be lost to the sea.
- The population will increase.
- Less planting will take place because there will be less land available
- More homes will be built.
- Younger persons may move out of the community because of the need for a more urban lifestyle.
- Increase in drug use and drinking
- Further break down in morals and discipline, family structures and community spirit.

Year	Population	Houses	Farming	Soil Erosion	Trees	Electricity/Infrastructure	Transportation	Livelihood	Sea Erosion	Tourism
1970's										
1980's										
1990's										
2000's										
2010										

Seasonal Calendar

A seasonal calendar helps to explore the changes taking place over the period of one year to show weather patterns, social and economic conditions, public events, harvest and other seasonal activities. Although there may be some variation due to certain events and religious observances falling on different dates each year, it can be used inter alia to identify periods of stress, hazard, debt and vulnerability. It highlights events throughout the year to tell us when to prepare; what are the best times to put on awareness activities and training or implement projects.

Seasonal Calendar for Martin's Bay

Events/Occurrences	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Security												
Low Income												
High Income												
Immigration/Migration												
Fishing												
Tourism												
Crop Season												
Domestic Violence												
Burglaries												
Vehicular Accidents												
Rainfall Period												
Health												
Flu, Coughs and Colds												
Stomach Illness												
Water-borne Diseases												
Asthma/Respiratory Illnesses												
Dengue Fever												
Hazards												
Hurricane												
Bush/Cane Fire												
House Fire												
Floods												
Landslides												
High Temperature												
Drug Trafficking												
Public Holidays												
Sea Surge												
Crop Over												
Road Accidents												
Excessive Alcohol Use												

Key		Low Occurrence
		High Occurrence

According to the community members income is more acute in the months of January and February because the community members would have done a lot of spending

for the Christmas Holidays and therefore would have less cash available to them immediately after. The same is true for the months of July and August when back to school expenses result in high spending. Fishing is a major activity in this community. The high season for fishing is between the months of December and June. Road accidents are an issue for this community throughout the year however the occurrence is low. Dengue fever and water borne diseases are more prevalent during the hurricane season.

Livelihoods and Coping Strategies

Livelihoods can be defined as how people use the resources they have available to them to support their lives. This can involve earning cash income and growing food for subsistence. The amount of income and/or subsistence available will determine their ability to cope when facing a hazard or disaster. It is therefore a useful means of designing appropriate interventions to protect and strengthen livelihoods and improve resiliency and capability to withstand the impact of known hazards.

Martin's Bay Community Livelihood Chart

Income – generation activity	Who does it?	# of people employed	% of Income Provided	What benefits exist?	What are the threats?	What alternative Livelihoods exist?	Who Helps?	What activities could reduce loss of livelihoods?	How could this be achieved?
Fishing	Men/Females	12	75% of total family income	None	Weather, recession, Change in eating habits of population	Work with the gov't and private sector	Family	Better fishing equipment	Access to funding to buy equipment.
Construction	Males/females	10	75% - 100%	Few health benefits Sustains family	Injuries	Office Work Self Employment – Tilers, plumbers, general workers, electricians	Firms Other Colleagues		Economic situation will need to be improved. Find other job.
Self – Employed (mechanics, painters, electrician, landscaper, shop owners)	Male/Females	10							
Farming	Male/Female	4	50%	Food for the family	Weather, competition from imported food.	Fishing, construction	family	Plant other crops, expand business	Cultivate more land, plant additional crops.
Gov't Workers	Male/Female	6	60% - 100%	Health, Maternity NIS pension	Recession Downsizing of businesses	Private sector Self employment		Make oneself marketable.	Training Getting additional skills Starting own business
Private Sector Workers	Male /Female	8	25% - 75%	Health, maternity	Companies laying off workers.		Family	Additional training.	Training

Social Networks in Martin's Bay

	Groups & Institutions	Structure	Purpose	Contact	Tel. #	Importance	Influence
Gov't	St. John Out Patients Clinic		Providing primary health care for the community	Ellie Blackett	433 - 12 75/433-3997 ellieblack1@hotmail.com	H	H
	Parliamentary Representative		Represent the political interest of the people of St. John.	Hon. Mrs. Mara Thompson	228 – 1135/ 237-6217	H	H
	St. John Constituency Council		Helps to facilitate and improve local governance in Barbados	Mr. Richard Harris	242-3058/427-2775	H	M
	District C Police Station		To Serve and Protect the citizens of Barbados.	Station Sergeant Small	417-8200	H	M
	St. John Fire Station		The Barbados Fire Service is the sole agency responsible for fire suppression in Barbados.	Errol Gaskin	433-1250/433-0857	H	M
	Community Development Department		The Community Development Department (CDD) empowers and develops communities through the implementation of integrated community building programmes to alleviate poverty, build social capital and generate social investment.	Mildred Hunte	310 - 1700	H	M
	St John HIV Volunteer Corps		Provide education on HIV and Aids.	Ronda Hope-Lovell rononeall@hotmail.com	433-4038/245-3413	M	M
Business	Kevin's		Small Business				

	Landscaping						
	Alvin's Home Improvement		Small Business	Alvin Hinds	241-4951		
	R&B Mini- Mart		Small Business	Mr and Mrs Richard Banfield			
	Bay Tavern	Owner and 5 employees	Restaurant and Shop	Sharon Knight	433-5118	H	H
	Mrs. Odessa Goodridge	Owner and 2 employees	Small Business (Brown Shop)	Mrs. Odessa Goodridge	433-1664		
	Shawn's Place	1 employee	Small Business				
	Lecretia Cain		Small Business				
NGOs	Starfish Cricket Club	25 members	Representing the community in cricket competitions	Malcolm Knight	433-3279		
	St. John District Emergency Organisation		Educate and assist community in disaster management.	John Haynes William King	233-1587 263 - 1579	H	H
	St. Margaret P.T.A.		Work with school for the benefit of students	Carl Worrell, Katrina Perriman		H	M
Religious	Martin's Bay Wesleyan Holiness Church.	30 members	Provide a place of worship for the community.	Deaconist Elridge Barrow	433 - 1683	H	M
	Fresh Oil Anointed Ministries		Provide a place of worship for the community.	Mr. and Mrs Orson Clarke	230-3604	H	M
	St. Margaret Church		Worship, ministry to the sick, Social events	Council Secretary Marcelle Caine	824 - 2927	H	M

Analysis: Reducing Risk and Making the Community Stronger

We can transform our community by reducing how much harm a hazard can cause.

Main Hazards & Vulnerabilities Identified	Capacities	Actions to Transform Vulnerabilities Into Capacities
Need for further education of community members on disaster issues.	<p>The Ministry of Environment has established a Drainage Unit to tackle the national drainage problem and flooding as a consequence. Garbage is collected by the public sanitation service workers during the weekly scheduled collection.</p> <ul style="list-style-type: none"> • Active community groups • Masons • Carpenters • Land Scaper • Teachers • Persons with first aid training • Churches • Pastors • Machinery/Tools • Boats • Beaches and other beautiful scenery • Small businesses • Gas Station • Transportation • DEO • Fishing Market • Fishermen • Springs • Constituency Council • Community is sustaining its economy • Guest Houses • Grocery/mini mart 	<ul style="list-style-type: none"> • Make residents more aware of programs to improve their skills. • DEO and the Red Cross can conduct joint door-to-door awareness activities and other awareness materials as the community is already aware of their presence. • Implement educational programs or hand out more literature on what to do and who to contact in case of a disaster. • Government can assist in advertising to build community disaster awareness. • Train more interested and committed community-minded persons in disaster management skills so that they can in turn train other interested persons. • Distribute flyers on disaster awareness.
Poor drainage /Blocked drains floods		<ul style="list-style-type: none"> • Provide more garbage cans in the community. Dispose of debris and garbage properly. • Develop a clean-up and anti-littering campaign. • Conduct debushing. • Keep drainage clear. • Proper and regular maintenance of the drains. • Ask government to clear drains during the dry season. • Coordinate community members and machinery to clear drains quarterly.
Over grown areas in need of trimming. Trees entangled in utility wires in need of cutting.		<ul style="list-style-type: none"> • Encourage residents to plant trees away from electrical wires. Get Light and Power to cut trees.
Bridge (Over flows when become impassable with heavy rainfall)		Assess bridge structure, develop plan to prevent flooding; debush the area around the bridge and clean culverts.
Run-down houses		DEO can assess the houses and report them to the DEM and Ministry of Health for onward action.
Poor street lighting		Implement more street lights
House fires		Make residents more aware of fire safety and prevention measures
Aged trees		Assess the trees that are old and rotting and have them removed or trimmed.
Sea/soil Erosion		Build gabions, clean blocked water courses
Land Slippage		Encourage community members to plant trees that will help reduce or slow down soil erosion.
Improvement of road network		Raise matter with Ministry of Transport & Works through parliamentary representative
Improper disposal of garbage		Encourage community to dispose of garbage correctly

Of the “*Possible Actions to Reduce Risk*” above, below are the ones we **CAN CHANGE** and do it for ourselves.

Change We <i>CAN</i> Do Now	Possible Actions to Reduce Risk
Poor Drainage	Carry out a clean-up campaign and educate the community on proper waste disposal methods. This can be done by the CDRT on a regular basis to ensure sustainability.
Overflowing of bridge when it rains.	Enhance the area around the canal by clearing the bush and planting various fruit and coconut trees. This will reduce the likelihood of indiscriminate dumping and lessen the impact on drainage. It can also contribute to the livelihoods of the residents and would be easily sustainable and partly tackle the drainage issue.
Aged Trees	Remove and trim trees as needed
INFLUENCE change	<ul style="list-style-type: none"> • encourage installation of more pedestrian crossings • enforce speed limits • encourage regular waste removal services • bring cloth bags to supermarket • enforce fine for littering • disaster management education & awareness • digging drains in community • targeted programs of interest to the youth • encourage joint working between the Red Cross, DEM and other government agencies • get government to install traffic lights in the area • ask government to clear drains during the dry season • encourage government to instruct MTW workers to clear the gutters and roadside to immediately remove the debris instead of leaving it by the roadside to cause further drainage problems

Section 3 – Community Project Proposal Development

An important component of the VCA process includes the empowerment of the community to take the necessary action to transform negative situations, as identified in the VCA exercise, into opportunities for sustainable development.

Below are three proposals as developed by the participants. In all instances, the proposals are based on what the groups recognized they CAN do themselves. Where necessary, the groups have also identified the issues or actions for referral to the relevant authorities.

Project Proposal #1: Community Clean Up Project

Problem Statement

In the Martin's Bay/Zores St. John community, there is need for a general clean-up.

Objectives:

Our aim is to work closely with The Barbados Light and Power Company to have the numerous trees which are hanging over both roads and power lines removed. The de-bushing of the areas will be done with the help of The Ministry of Works and Transport. A general clean-up of garbage in the area will be undertaken with the assistance of the Sanitation Service Authority (SSA). By doing this, we hope to restore not only beauty, but a healthy environment.

Background:

There is a lot of bush and overgrown trees in the area which are posing a direct threat to residents. Trees hanging on power lines and blocking street lights and overgrown bushes and dumping grounds for garbage are not only narrowing roads, but are causing mosquito breeding. These can cause serious health problems such as dengue, as well as rodents overtaking these areas. We all know that this can cause major social impacts in our community.

Solution:

Activities	When
1. De-bushing campaign	
2. Door-to-door to inform and educate residents of our project	
3. Posters	
4. Town Hall meetings	

Budget

Activities/ Material	Cost (Bds\$)
Chain Saw	1,500.00
Rope	450.00
Ladder	475.00
Fan rake	80.00
4 Hard rakes	88.00
2 Pecks	70.00
4 shovels	120.00
2 pan carts	378.00
20 pairs gloves	240.00
20 pairs boots	1,000.00
20 hard hats	200.00
20 safety glasses	200.00
4 bow saws	140.00
4 cutlasses	100.00
2 'weed whackers'	550.00
4 days lunch	1,275.00
First Aid kit	200.00
DM and Health education campaign	2,000.00
Total	9,066.00

Required Resources:

Human resources (First Aiders, Project Labour), Chain saws, Pecks, Ladder, Hard Hats, Safety Glasses, Weed Whackers, Cutlasses, Shovels, Pan Carts, First Aid Kits, Garbage Cans, Gloves, Trucks, Rakes, Buckets, Ropes, Backhoe, Bins, Boots, Stationery, Lunch

Sustainability:

The group plans to continue community maintenance of this project. We intend to form a community group to be responsible for the upkeep of the areas. Along with the placement of garbage cans in the area, follow-up clean-up campaign in these areas. We also intend to educate the residents of the community on the importance of this project in relation to their health.

Partners:

Project Proposal # 2 Erosion

Problem Statement

Erosion is a problem because it affects the level of the land. This causes the land to slip which can affect households, damage roads and cause further damage to coastal lines.

Objective:

To delay further erosion which would prevent any other damage and displacement continuous erosion can cause most lost land spaces.

Background:

Five years ago there was a storm surge which caused major damage to the roads and bridge near the sea in Bay Street. Change in weather patterns and more erection of houses also contributed to erosion. When we remove trees from areas where heavy water can cause soil to move it increases erosion.

Activities:

- Educate residents, schools and churches in the area about erosion and its effect.
- Placing of sand bags in areas to change water course to avoid flooding.
- Farming crops that would help stop erosion.
- Placement of bins to avoid pile up of garbage.

Activities	When
1. Clean-up campaign	By August 31 st , 2010
2. Meetings	By August 21 st , 2010
3. Walk-thru & flyer distribution	By August 21 st , 2010
4. Media announcements	By August 31 st , 2010
5. Tree planting	By September 15 th , 2010
6. Review	By September 30 th , 2010

Budget

Activities/ Material	Cost (BDS\$)
Public education – Production of flyers	2000.00
Garbage Bins	2000.00
Sand bags & Sand	2,400.00
Seeds and trees	1,000.00
Other equipment and materials	1,300.00
Meetings	700.00
Total	7,820.00

Required Resources:

- Manpower & residents
- Funds
- Flyers
- Garbage bins, sand bags
- NCC Advisor
- Soil Conservation Unit
- Coastal Zone Management Unit.

Sustainability:

To ensure that the project is sustainable, monthly visual inspection of areas to monitor whether drainage plans are working should be conducted.

Partners:

Partners would include the Barbados Red Cross Society, St. John District Emergency Organization, Community Development Department, Coastal Zone Management Unit, Soil Conservation Unit and the National Conservation Commission.

3. Combined Project

Problem Statement

There is a need for a general clean - up in Martin's Bay as overgrown bushes and improper garbage disposal have contributed to soil and coastal erosion..

Background

There are many bushy and overgrown areas in the community. These areas can and has lead to illegal dumping which has resulted in the blockage of some natural water courses. It has also created area for mosquitoes and rats to breed which is a health hazards for residents and visitors alike.

Objectives:

To delay erosion by reducing the number of overgrown areas whilst improving the health and safety of the community.

Activities

Activities	When
1. Door to door educational awareness	
2.Town Hall Meeting with community and relevant agencies	
3. Placement of bins and skips in the community to avoid garbage pile up.	
4. Placement of Sand Bags in the areas to prevent flooding and change water course from problem areas.	
5. Clean - up Tank Hill Gully	
6. Erecting road signs and no dumping signs where needed.	
7. Panting of trees to reduce soil erosion.	
8. Advocacy for the following issues; road improvement, road signage, improved bus service, frequency de - bushing of gullies and water courses, reduction of coastal erosion.	

Budget

Activities/ Material	Cost
Refreshments/catering	\$1,700
Communication & PR (flyers, radio/tv)	\$1,200
Meetings	\$1,800
Tools and Equipment (Labour & Transportation)	\$5,750
Garbage Bins	\$250
Trees	\$1,000
Total	\$8,000

Resources

The resources needed for this project include; residents, tools, stationery, First aiders, safety gears, refreshment, transportation, sand bags, technical experts and garbage bins.

Resources Needed

Material/Resources
Chain Saw
Rope
Ladder
Fan rake
4 Hard rakes
2 Pecks
4 shovels
2 pan carts
20 pairs gloves
20 pairs boots
20 hard hats
20 safety glasses
4 bow saws
4 cutlasses
2 'weed whackers'
4 days lunch
First Aid kit
20 Garbage Bins

Sustainability,

Sustainability will be ensured through the following;

- Continued educational awareness
- Monthly monitoring of area
- Formation of a group to take the work forward.

Partners

The expected partners are Coastal Zone Management, Soil Conservation Unit, Ministry of Transport and Works, St John District Emergency Organisation, Sanitation Service Authority, St. John Constituency Council, Ministry of Agriculture, Ministry of Environment, Ministry of Health and the Barbados Red Cross society.

Duration Date

Start date ; December 1, 2010

End date: Jan 15th, 2011

Glossary

Capacity (C): Combination of all the strengths and resources available within a community, society or organization which may reduce the level of risk, or the effects of an event or disaster.

Coping Strategies: The ways in which people manage and reduce the impact of a hazard.

Disaster: Serious interruption of the functioning of a community or society which causes loss of human life and/or important material, economic or environmental losses which exceed the capacity of the affected community or society to manage the situation using their own resources.

Direct Observation: A process of observing objects, people, events and relationships.

Emergency: A situation of a threat or actual hazard which requires an almost immediate response, to prevent or reduce harm. Often the affected community has the capacity to respond using their own resources.

Hazard (H): A potentially damaging physical event, phenomenon or human activity, that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.

Historical Profile and Historical Visualization: Tools for gathering information of what has happened in the past to tell how past events has had an effect on the community. These are represented as lists and a table of sketches respectively.

Livelihoods: The way people use the resources they have available to support their lives. For most people this means the method of earning cash income.

Mapping: A visual form to get an overview of the main features of an area in relation to its surroundings (Spatial map). It can also show dangers and exposed homes, services and infrastructure (Hazard and Vulnerability map); or resources and skills available in the community (Capacity Resource Map)

Risk: Probability of harmful consequences or expected losses (deaths, injuries, property, livelihoods, interruption of economic activity or environmental deterioration) as a result of interactions between natural or anthropological disasters and conditions of vulnerability. It is sometimes expressed as $(H \times V) / C = R$

Seasonal Calendar: Visualization over the course of the year of weather patterns, social and economic conditions, festivals and other seasonal activities.

Social Network: The community's key groups and individuals, the nature of their relationship with the community and the perceptions residents have of their importance.

Vulnerability (V): The conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards.

Bibliography

Terminology for Disaster Risk Reduction, International Strategy for Disaster Risk Reduction Updated March 31, 2004. <http://unisdr.org/eng/library/lib-tey> and Capacity Assessment:

VCA Toolbox with Reference Sheets. International Federation of the Red Cross and Red Crescent Societies 2007

Humanity

The International Red Cross and Red Crescent Movement, born of a desire to bring assistance without discrimination to the wounded on the battlefield, endeavours, in its international and national capacity, to prevent and alleviate human suffering wherever it may be found. Its purpose is to protect life and health and to ensure respect for the human being. It promotes mutual understanding, friendship, cooperation and lasting peace amongst all peoples.

Impartiality

It makes no discrimination as to nationality, race, religious beliefs, class or political opinions. It endeavours to relieve the suffering of individuals, being guided solely by their needs, and to give priority to the most urgent cases of distress.

Neutrality

In order to continue to enjoy the confidence of all, the Movement may not take sides in hostilities or engage at any time in controversies of a political, racial, religious or ideological nature.

Independence

The Movement is independent. The National Societies, while auxiliaries in the humanitarian services of their governments and subject to the laws of their respective countries, must always maintain their autonomy so that they may be able at all times to act in accordance with the principles of the Movement.

Voluntary service

It is a voluntary relief movement not prompted in any manner by desire for gain.

Unity

There can be only one Red Cross or one Red Crescent Society in any one country. It must be open to all. It must carry on its humanitarian work throughout its territory.

Universality

The International Red Cross and Red Crescent Movement, in which all Societies have equal status and share equal responsibilities and duties in helping each other, is worldwide.

ANNEX 1

“Building Safer More Resilient Communities Project” Barbados Background Information and Baseline Study



Martins Bay, St. John

Introduction

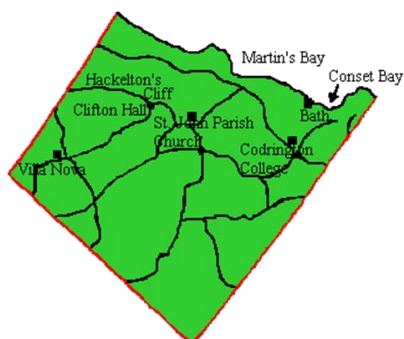
This baseline assessment has been conducted as one of the key activities ahead of the Vulnerability and Capacity Assessment and supporting activities under the 'Building Safer, More Resilient Communities' project funded by the European Commission Humanitarian Aid Office (ECHO). Though a relatively small community, it was critical to undertake a community based disaster management of this community given its geological composition, its proximity to the sea, downhill location as well as high level of community interest. The assessment was conducted from 8-9 October, 2010 by the Barbados Red Cross Society staff and community residents including Deniese Dennis and William King.

Official Community Name:

Martins Bay

Location of Community:

St. John



Main access route

By road

Background Information

Martins Bay is a coastal community located in the eastern parish of St. John. It is located in one of the most vulnerable geographical areas on the island known as the Scotland District and is nestled between Newcastle and Foster Hall. For the purpose of this assessment, the geographical coverage spans the Martins Bay, Newcastle and Foster Hall areas. When combined, according to the 2000 Population Census (Barbados Statistical Department) the entire community has a population of approximately 577 persons, 123 of which come directly from Martins Bay. Overall, there are 297 males and 280 females, of which there are 61 males and 62 females in Martins Bay. Please see table below for a breakdown of age and sex distribution in ten year intervals.

Population: 2000 census reference

297 Male

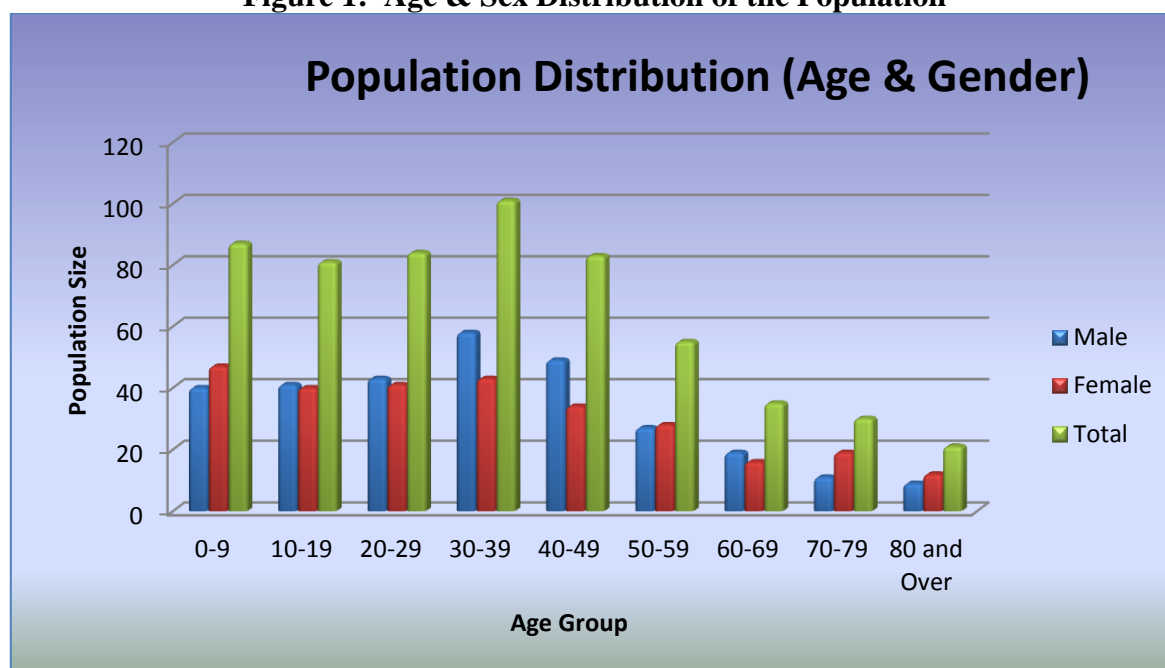
280 Female

Total number: 577

Table 1: Age and Sex Distribution in Martins Bay

Age Group	Foster Hall		Newcastle		Martins Bay		Total
	Male	Female	Male	Female	Male	Female	
0-9	21	21	15	18	4	8	87
10-19	21	14	14	14	6	12	81
20-29	16	20	17	11	10	10	84
30-39	23	17	19	22	16	4	101
40-49	19	15	21	13	9	6	83
50-59	11	8	10	13	6	7	55
60-69	4	7	10	5	5	4	35
70-79	2	8	6	2	3	9	30
80 and over	4	6	3	4	2	2	21
Total	121	116	115	102	61	62	577

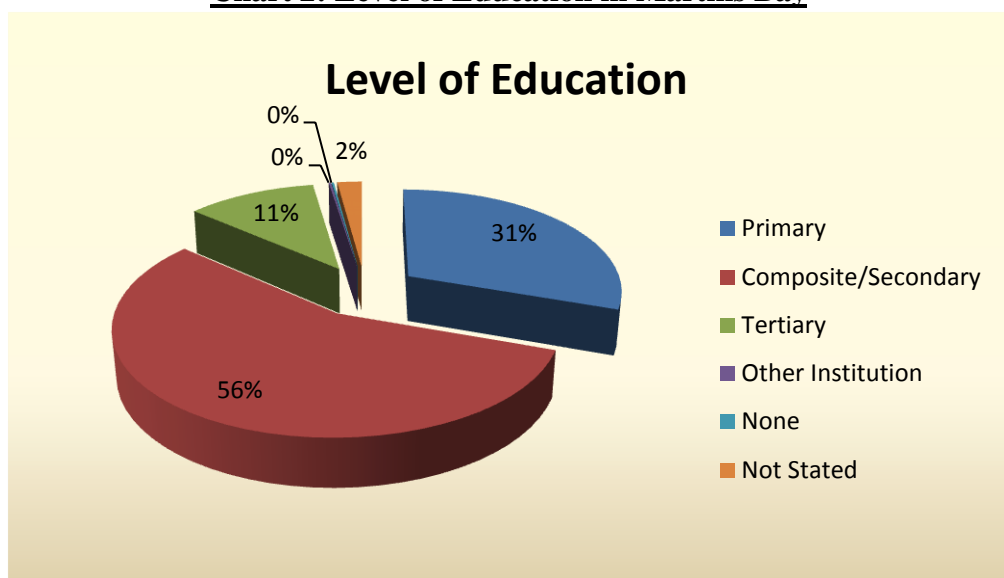
The table above indicates that 87 persons, approximately 15 % of the population in this community Rowe Bridge falls between the ages of zero and nine years old, while 81 people (14%) falls within the 10-19 year old age group. An estimated 55.9 % falls within the working age range of 20 to 59 years. The persons between 60 and 69 years (35 persons) account for only 6% of the overall population. 8.8% of the Martins Bay Community are 70 years and over.

Figure 1: Age & Sex Distribution of the Population

Education

The highest level of education attained by fifty-six percent (56%) of the population in Martins Bay is secondary level education. Thirty-one percent (31%) have acquired primary level education. 11% has tertiary level education while two percent (2%) did not state their level of education.

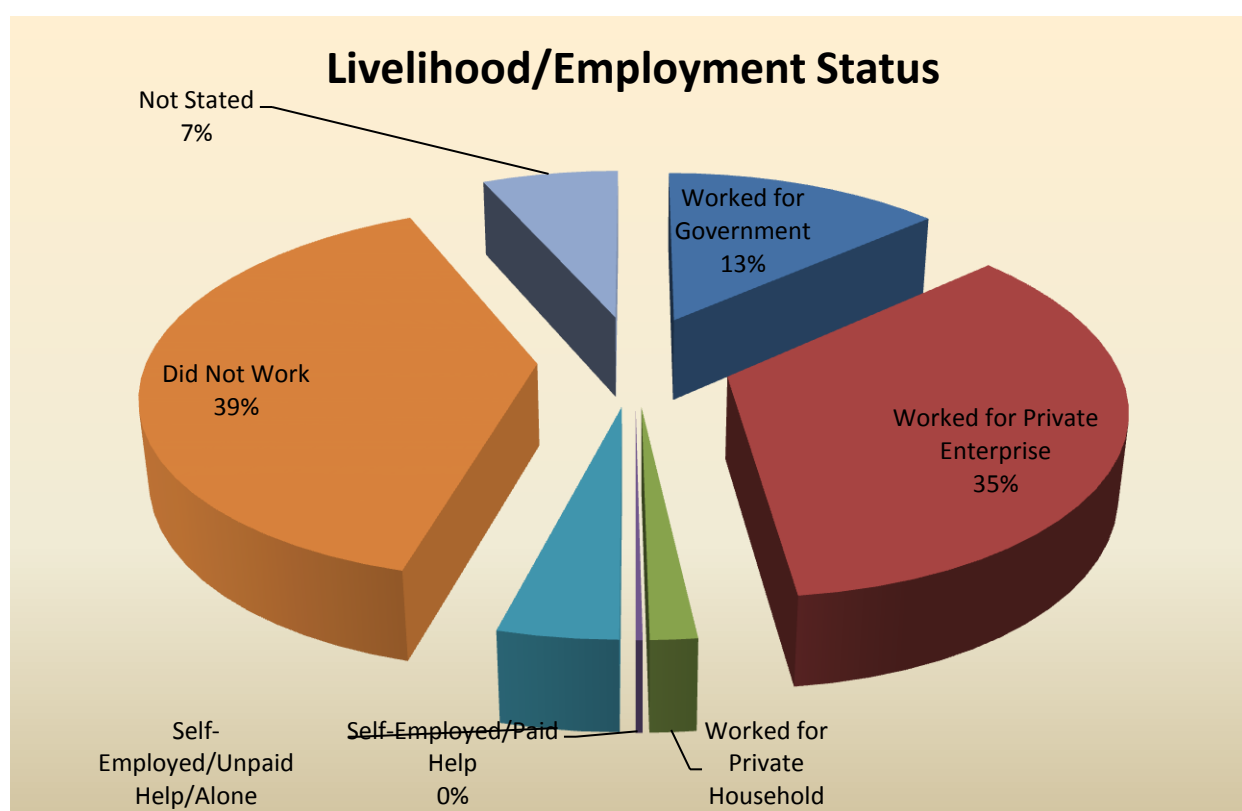
Chart 2: Level of Education in Martins Bay



Employment

According to the 2000 population census, a total of approximately 48% of the population was reported as being employed by private enterprise and government. About four point two percent (4.2%) was self-employed whilst thirty-eight percent (38%) did not work. Close to seven percent (7%) failed to state how they made a living.

Chart 3: Livelihood/Employment Status



Households

The three districts have a total of 182 households; 44 in Martins Bay, 71 in Foster Hall and 67 in Newcastle. See table below for the breakdown of households by size.

Table 2: House Size

Community	Size of Household Groups				# of Households
	1 Person	2-3 Persons	4-7 Persons	More Than 7 Persons	Total
Foster Hall	13	34	19	5	71
Newcastle	10	33	21	3	67
Martins Bay	13	17	14		44
Total	36	84	54	8	182

Types of Dwelling

Of the 182 households in the area, there are forty-four (44) households in Martins Bay, with fourteen (14) of which have outer walls that are made of wood. Ten (10) are made from concrete blocks or stone and twenty (20) are made of a combination of wood and concrete blocks. Of the remaining households, forty-one (41) have outer walls which are made of wood whilst fifty-six (56) are built from concrete blocks and thirty-two (32) from a combination of wood and concrete blocks. In addition, two (2) are made from concrete and stone respectively.

Security

According to the Royal Barbados Police Force, the community of Martins Bay is a safe community with no major crime issues. The District C Police Station reported that there are a few young men who lime on “the corner” however they are usually respectful. In our interaction with the residents of the community we learned that one (1) murder was committed in the last decade.

Water and Sanitation**Table 3: Access to Water Supply**

Water Supply	Community			Total
	Foster Hall	Newcastle	Martins Bay	
Piped into Dwelling	58	61	38	157
Piped into Yard	11	5	5	21
Friend/Relative's Pipe	1			1
Other	1		1	2
Not Stated		1		1
	71	67	44	182

One hundred and fifty-seven (157) houses in the community have indoor plumbing and piped water. Twenty-one (21) dwellings have water piped to the yard whilst one (1) receives water from other sources. In addition, the Martins Bay district alone has twenty-eight (28) households with flush toilets not linked to a sewerage system and use of pit toilets by the remaining sixteen (16) households.

Governance

At the time of the baseline assessment, the parliamentary representative for the community was Mr. David Thompson, Prime Minister of Barbados. Mr. Thompson succumbed to pancreatic cancer a few weeks after the baseline assessment was conducted. The constituency

of St. John should be having a by-election in the near future to select a new representative. The Constituency Council is chaired by Mr. Harris. There are a number of active community groups in the area. The District Emergency Organisation (DEO) is an active voluntary arm of the Department of Emergency Management in the community. The chairman is Mr. John Haynes. There is also an active HIV/AIDs Education Committee in the community as well as the Starfish Cricket Club.

Health

The community is served by the St. John Outpatients Clinic in Gall Hill, St. John. There are no private doctors or pharmacies close to the area. There is an HIV/AIDS Education Committee in St. John that serves the community. They provide information to the community on HIV and AIDS.

Business/Infrastructure

There is some commercial activity within the community. There are a few small shops and bars owned and operated by self-employed small business owners. The nearest gas station is located in Four Roads (at least 7 km away). Other facilities including a community centre, Police Station, Polyclinic, St. John Post office and the St. John Branch Library are located outside of the community.

Religion

The community appears to be predominantly Christian. There are a number of churches in the community

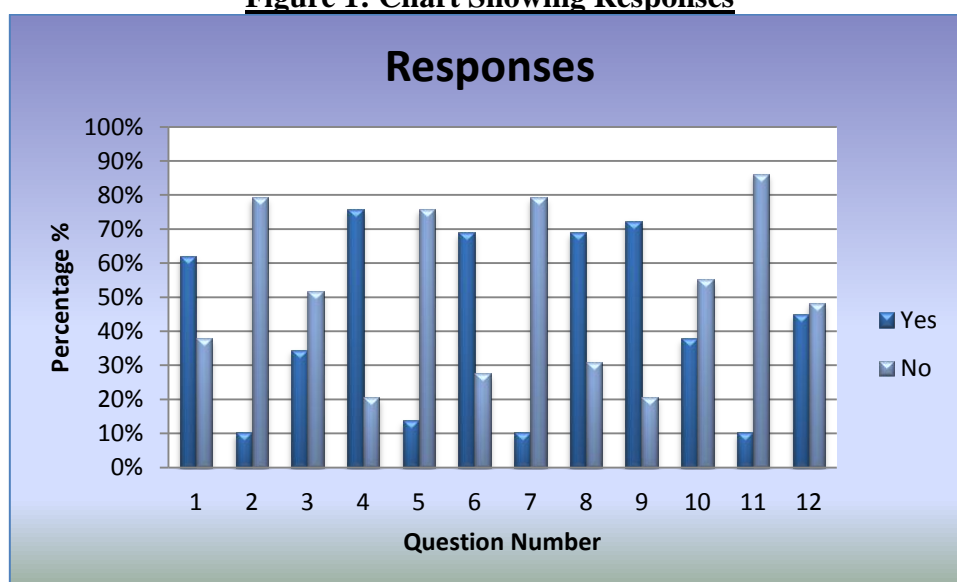
Recreation

The Bay Tavern is the main meeting place within the community and a liming spot for residents and visitors to the area. Occasionally, there is karaoke at one of the guest houses close to the Wesleyan Holiness Church. There is also an active cricket team.

Baseline Study

An estimated 182 households are located in the community. Twenty-nine (29) of these were targeted for the baseline survey a total of 15.9%. A copy of the questionnaire used is attached at Annex 1. The data was collected during the month of October, 2010. The head of the households were interviewed. A total of 17 males and 12 females were interviewed. The survey tested the level of awareness in the community around disaster management, prevention activities by the community and the level of preparedness to respond.

Figure 1: Chart Showing Responses



Findings

Sixty-two percent (62%) of the respondents report that the community had been impacted before. Only ten percent (10%) of those interviewed felt that the community was prepared to respond to an emergency. Fifty-two percent (52%) of respondents said that the community did not meet to discuss disaster issues. Seventy-six percent (76%) of the respondents were aware of the main risks to the community. Over 76% said that the community did not have a disaster reduction plan whilst sixty-nine percent (69%) knew where the community shelters are. Seventy-nine percent (79%) of respondents felt that the shelters in the community were not enough to meet the demand. Sixty-nine percent (69%) of the respondents could identify the vulnerable persons/families in the community were. Twenty-one percent (21%) did not know the safe or dangerous areas in the community. Eighty-six percent (86%) said that the community has not done any activity aimed at reducing its risks and fifty-five percent (55%) did not feel or did not state whether they were prepared to deal with an emergency that might affect their family or community.

Figure 2: Responses (By Female)

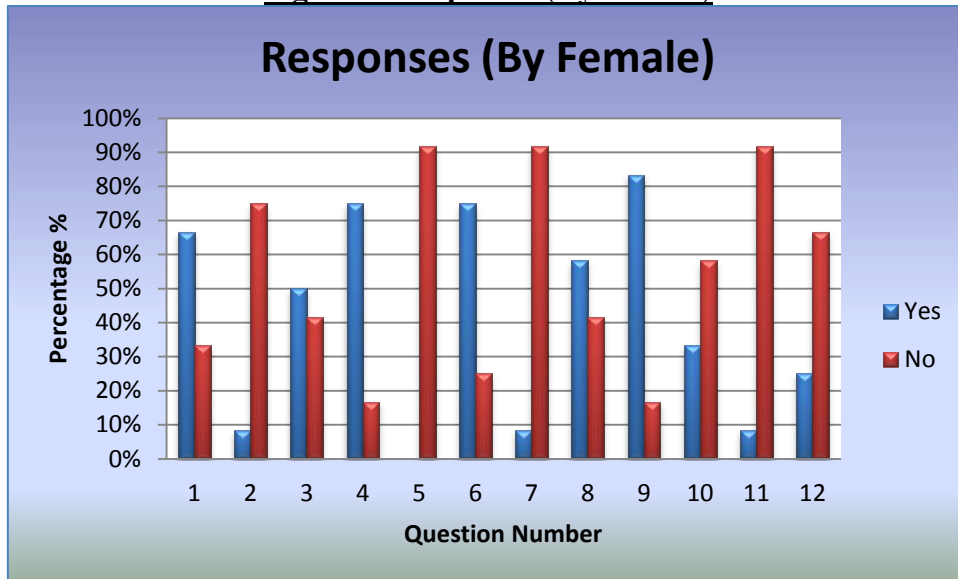
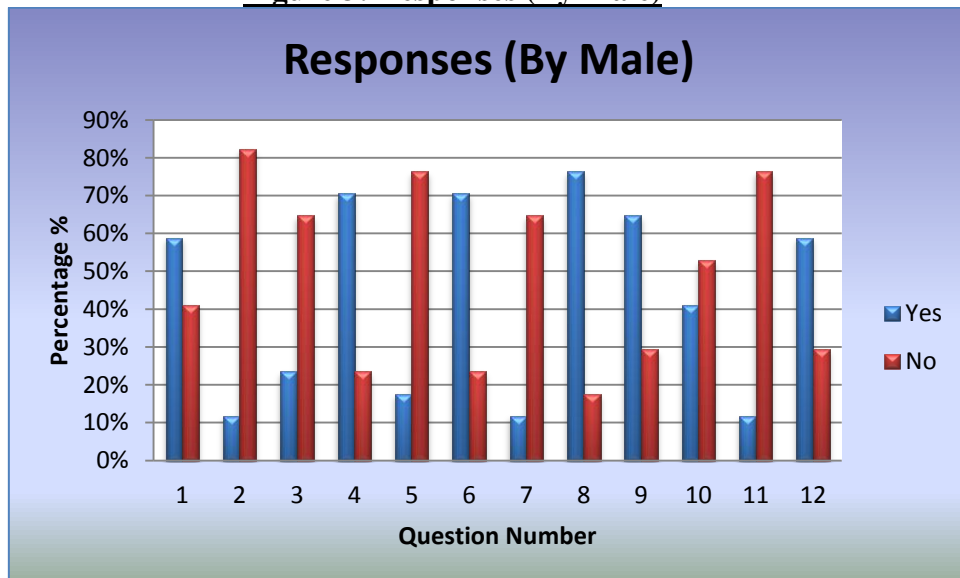
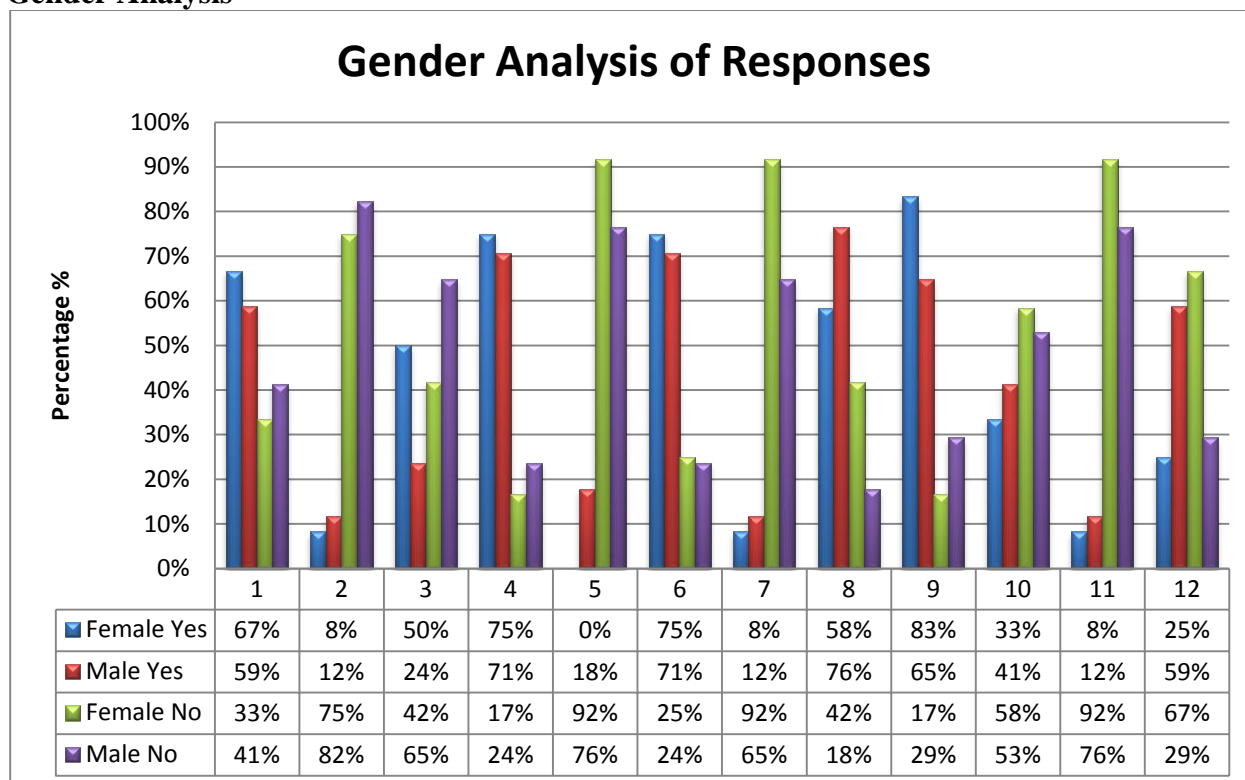


Figure 3: Responses (By Male)



Gender Analysis



Sixty-seven percent (67%) of females compared to fifty-nine percent (59%) of males felt that the community had been severely impacted in the past. Seventy-five percent (75%) of females and eighty-two percent (82%) of males did not feel that the community was prepared to deal with any emergency at this moment. Other significant differences which emerged included the fact that none of the female respondents compared to 18% of males were aware of a community disaster plan. Also significant was the fact that only 25% of women felt personally prepared to deal with any emergency that might affect their family or community compared to 59% of males. A similar amount of females and males stated that they knew what the risks to the community were and where the shelters are. Neither group felt that there were enough shelters to meet the needs of the community.

Analysis/Conclusion

The community appears to be generally aware of disaster issues. The members have a sense of what the risks are. The main risk identified during the baseline survey was that of land and coastal erosion. While over seventy percent of the population has a sense of what the main risks were, it seems that most persons were focused on the erosion that takes place in the community. It is therefore critical look those areas and situations that could be potentially disastrous for the community.

The lack of community meetings to discuss disaster issues was identified. There are a few members of the DEO who live in the community and this could be an opportunity to encourage wider community involvement. The respondents were not aware of a community risk reduction plan. Although this is not a desirable situation, it presents a unique opportunity for the Barbados Red Cross and its partners under the “Building Safer, More Resilient Communities Project” to work with the CRB community to develop contingency plans that will reduce the risks and increase the capability of the community.

There is also much scope for community activities and initiatives focused on reducing risks to disasters and climate change adaptation strategies. Greater attention needs to be given to the vulnerable persons and families in the community. In addition, more work needs to be done to increase the level of preparedness and to build the confidence of the population in their ability to respond to such emergencies.

ANNEX 1: BASELINE QUESTIONNAIRE

Name of interviewer(s): _____ Sex of Interviewee _____

Country:	Barbados
Type of assessment:	Baseline study
Name of community:	Martin's Bay

	Question	Yes	No
1.	Has the community ever been affected by severe weather, earthquakes, hurricanes, etc?		
2.	Do you feel that the community is prepared for a disaster at the moment?		
3.	Does the community meet to discuss disaster issues?		
4.	Are you aware of the main risks to your community?		
5.	Does the community have a disaster reduction plan?		
6.	Do you know where the community shelters are in your community?		
7.	Are there enough shelters in your community?		
8.	Are you aware of who the most vulnerable person(s)/families are in the community?		
9.	Do you know where the dangerous and safe areas in the community are?		
10.	Is there an updated list of the medical and first aid resources within your community?		
11.	Has your community ever done any activity or projects to reduce the risk to disasters?		
12.	Do you feel prepared to respond to any emergency that might affect your family/community?		