Grenada
Red Cross Society

Vulnerability and Capability Assessment
Mount Rich – Saint Patrick

May 2010

Lu-Ann Mc Guire
Field Facilitator

Table of contents

Acknowledgements

This Vulnerability and Capacity Assessment survey was implemented by the Grenada Red Cross as part of the "Readiness: Let's spice it up!" project, with funding from the European Commission of Humanitarian Aid Office (ECHO) and the assistance the French Red Cross and the International Federation of Red Cross and Red Crescent (IFRC).

The preparation of this VCA report would not have been possible without the tremendous support provided by a number of individuals. The VCA project team of hard working volunteers, namely Ms. Samantha Harris, Ms. Nesha Abigail Richardson and Mr. Kemron Mark. The community members of Mt. Rich provided tremendous assistance throughout this survey.

Special thanks to the stakeholders fully supporting this venture. Mrs. Cindy Lewis (Grenada Red Cross, Project Coordinator) and Mr. Joan Bastide (French Red Cross) must be commended for providing invaluable technical support throughout the preparation, implementation and evaluation process. To the Co- Facilitators of this project, with responsibility for St. Andrew and St. David's, St. George's and St. Johns, Ms. Kathy Ann Morain and Mr. Simeon Grainger - your contributions facilitated more efficient data collection and analysis. Thanks to the community leader (Mr. Lex Mc Bain) for also contributing to the data collection process.

To the executive and all the members of the steering committee who willingly shared their time, knowledge and expertise - many thanks. Thanks also to Mr. Humphrey Blinker who came all the way from Suriname, for sharing his knowledge and support during the VCA training workshop.

Multi-hazards approach for a sustainable disaster preparedness and emergency response in Grenada

Due to its geographical location, Grenada is prone to various types of natural disasters, including hurricanes, earthquakes, floods, landslides and tsunamis. It has been shown around the world over the past decades that preparedness for and response to natural disasters should not only be the concern of central administrations, but also be thought, managed and designed at the community level. Help vulnerable communities better cope with threats induced by their natural environment has thus become a crucial dimension of mitigation policies.

In order to strengthen disaster management capacities of vulnerable communities and help them better protect their livelihoods, a Disaster Risk Reduction programme funded by the EUROPEAN COMMISSION is implemented by the GRENADA RED CROSS with the support of the FRENCH RED CROSS from January to December 2010. By targeting 8 vulnerable communities, the programme aims to increase their disaster management capacity. This community based programme also involves others disaster management key stakeholders in order to participate to the regional and national efforts towards a better preparedness and response system.

As part of this project, Community Disaster Response Teams are identified, trained and equipped with disaster supplies. Residents are trained in first aid, psychosocial support, fire safety, construction and retrofitting, disaster preparedness and many other areas. Community and Family Disaster Plans are developed. Awareness campaigns are organized in the communities. Mitigation micro project will be implemented thanks to the support of the community residents. These micro project aims at reducing the risk of a disaster or the vulnerability of the community. They are identified, designed and implemented through a participatory approach in which community members are asked to think about their strengths and weaknesses, and propose solutions to reduce their vulnerability. The present Vulnerability and Capacity Assessment is a critical part of this process.

Foreword

The present VCA study was carried out through a series of community meetings and workshops conducted in May 2010 with the residents of Mount Rich and the Steering Committee they appointed for the project.
This study is part of the International Federation of Red Cross and Red Crescent Societies (IFRC) regional project "Caribbean Red Cross Societies: Building Safer, More Resilient Communities". This program, implemented in 2009-2010, covers the National Societies of Antigua and Barbuda,

Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago through the support of the European Commission Office for Humanitarian Aid (ECHO).

Acronyms

CIA	Change / Influence / Accept
ECHO	European Commission Office for Humanitarian Aid
FRC	French Red Cross Society
GRC	Grenada Red Cross Society
IFRC	International Federation of Red Cross and Red Crescent Societies
NADMA	National Disaster Management Agency
VCA	Vulnerability and Capacity Assessment

Introduction

In May 2010, the community of Mount Rich embarked on a journey of self-analysis, examining its strengths and weaknesses, the external and internal threats and the resources it has to cope with these threats. Heads of households, local leaders of religious and sports groups, workers of all trades discussed the history of their community and the problems they encounter. They shared their experiences and their tips for overcoming daily difficulties. As a group, they identified the main problems ahead and discussed the future of their common home.

The process was organized by volunteers and staff of the Grenada Red Cross Society, as part of a region-wide project, funded by ECHO through the International Federation of Red Cross and Red Crescent Societies, and that aims at improving community-based disaster preparedness. Implemented in Grenada under the title of "***Multi-hazards approach for a sustainable disaster management in Grenada***" this project objective is to support strategies that enable local communities and institutions to prepare to, mitigate and respond to natural disasters by enhancing their capacities to cope, increasing resilience and decreasing vulnerability.

The community work was based on the methodology known as "Vulnerability and Capacity Assessment", or VCA. The purpose of this assessment is to identify and understand the most pressing issues and threats in the community (vulnerabilities) while simultaneously identifying the local and external resources available to minimize the risks to the villagers (capacity).

Before conducting the Vulnerability and Capacity Assessment, a baseline survey was undertaken to analyze the current state of disaster preparedness and awareness in the Community of Mount Rich; 12% of the residents, among which 32 women and 37 men of any age above 15 were interviewed by Red Cross Volunteers. Results of both studies are presented in this report.

The VCA approach is composed of a series of tools for community-based participatory consultations to ensure a better understanding of how the community functions. Behind this process lies the assumption that a community more aware of its own limitations can organize itself better to overcome them. In the context of the Grenada and French Red Cross project, the stated objective was to improve the capacity of the community to cope with the disaster-related risks in its environment.

To this end, the first section summarizes the results from the VCA process, as carried out in Mount Rich. It presents the history, the local dynamics and the coming challenges, as perceived by the people who live in Mount Rich. Although this program explicitly focuses on natural disasters and hazard mitigation strategies, the results presented in this first section provide guidelines for a broader approach towards sustainable community development.

Part 1: Vulnerability and Capacity Assessment of Mount Rich

What is VCA?

Vulnerability and Capacity Assessment (VCA) is a participatory investigative process designed to assess the risks that people face in their locality, their vulnerability to those risks, and the capacities they possess to cope with a hazard and recover from it when it strikes. Through VCA, National Societies can work with vulnerable communities to identify the risks and take steps to reduce them by drawing on their own skills, knowledge and initiative. **In sum, VCA helps people to prepare for hazards, to prevent them from turning into disasters and to mitigate their effects**.[1]

> ***Vulnerability*** *can be defined as:*
> *The characteristics of a person or group in terms of their capacity to anticipate, cope with, resist and recover from the impact of natural or man-made hazards.*

The definition of vulnerability suggests that it cannot be described without reference to a specific hazard or shock. So, the question that must always be asked is, "Vulnerability to what?" People living along coastal areas or rivers may be vulnerable to seasonal storms and flooding, while the inhabitants of countries with social, political and economic problems may face difficulties in achieving a satisfactory and sustainable quality of life.

> *The reverse of vulnerability is* ***capacity****, which can be described as:*
> *The resources of individuals, households, communities, institutions and nations to resist the impact of a hazard.*

The coping strategies of people in response to various hazards will differ from one society to another and will often change over time. People in chronically-prone countries facing multiple hazards, such as drought, locust infestation and civil unrest, find their capacity levels weakening, reducing their ability to mitigate the effects of the next crisis. [2]

[1] Quoted from *VCA toolbox with reference sheets*, IFRC, Geneva, 2007, page 6.
[2] Quote and definitions from *Vulnerability and capacity assessment, An International Federation Guide,* IFRC, Geneva, 1999, page 11-12.

How is the VCA carried out?

The VCA process relies on a few key principles:

Data collection: Preliminary data can be collected through the use of questionnaires, developed specifically for each community or for each type of hazard. However, as information is not always immediately available on the ground – because of time constraints, security issues or financial resources – the VCA process also relies on the gathering of secondary data. Precious information about the community can be gathered from research by government bodies, the United Nations and other development- and research-based organizations.

Community participation: The goal of the VCA process is to empower the community to allow it to respond on its own to the risks to which it is subjected – or allow it to identify those who can help it to respond. For this reason, community members constitute the core of the process. The main criterion for a successful VCA is the receptiveness of the local community and its willingness to be an active part of the process. Only if all vulnerable groups are included, can they find collective answers to the threats they face.

Sharing information: The VCA process helps the community understand its relation to its environment. Through discussions among neighbors and the collection of data, the community members will be better able to understand – and therefore reduce – the threats to which it is subjected. The final VCA document also offers an opportunity to share information beyond the community, by bringing up issues to the relevant authorities, partner organizations or local leaders.

The VCA is mainly used ***to identify in advance, and change where possible, the conditions that create or contribute to the state of vulnerability of at-risk populations***.[3] As such, the main usefulness of VCA comes from an improved understanding of the risks and of measures to mitigate that risk. To gather all information relevant to a better understanding of the community, the following steps have been followed:

1) Review of secondary sources: this first, crucial, step consists in collecting information that already exists, to avoid duplicating efforts already carried out. Most of this phase consists in collecting written material, or identifying all resources relating to a better understanding of the community;
2) Direct observation: A summary presentation of the community, by someone external, often allows to get a first impression of the local dynamics and main issues;
3) Focus group discussions: The heart of the VCA process lies in this phase of community interaction, using tools for the involvement of all stakeholders.

Based on these three steps (presented hereafter in points 1, 2 and 3), disaster-related information has been gathered and is presented in part 2.

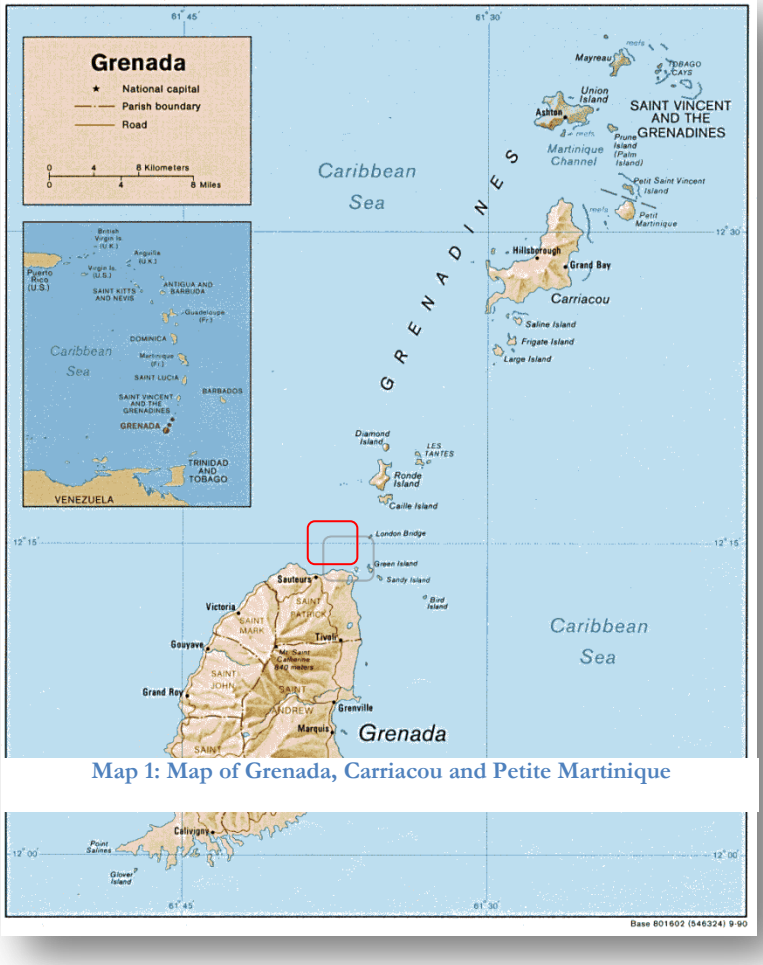
[3] Idem, page 12, emphasis added.

1. Data from secondary sources

A review of secondary sources entails collecting information that already exists, usually in the form of written reports or documents. This exercise enables one to gain an overall picture of the community. A review of secondary sources includes researching documents and reports produced by other organizations, local government authorities and social institutions. It should include all external sources of information that may be useful to the VCA. These may be risk maps or information on climate change and changes in land use that may affect river runoff, infrastructure plans, etc. Many attempts were made to source secondary information but none was forthcoming, highlighting the lack of data available at the community level in Grenada.

Location of the community

MT. RICH is a relatively small residential community located on the northern part of Grenada, in the parish of St. Patrick's, considered as the country's poorest parish. The closely knitted community of Mt. Reuil is often considered as part of Mt. Rich because of their proximity and their unity. Mt. Rich is in boundary with Snell Hall and Hermitage and is also located about three (3) miles away for the town of Sauteurs. Mt. Rich is commonly called Locka Jona, due to its previous French naming.



Map 1: Map of Grenada, Carriacou and Petite Martinique

The physical infrastructures of the community are accessible; however there is only one vehicular entrance to the community. Nevertheless, commuting one would discover there is a good road network. A large portion of the road is made of asphalt and concreted which is passable for residents. There is a center road (made of concrete) which joins the main road to the secondary road. There are some parts of the road which is water logged.

The community resources are as follows: a preschool, a health center, a community center, hard court, public toilet and bath, six

convenience shops and two snack bars, which provide the community with the necessary supplies. There is also a recreational ground, where all the Sporting and Social activities take place in and outside the community. The nearest primary school is the Hermitage Government School which is located approximately 1 mile away while the secondary school Mac Donald College is 3 miles.

Access to services, such as, Police Stations, Fire Stations, Pharmacies, Banking facilities etc. are 3 miles away in the town of Sauteurs. Although there is a church facility within the community most community members do not attend and choose to go to church about ½ a mile away.

Population of the village

According to the latest National Population Census conducted in 2001, the community had 146 households, with an average 589 persons (see table below). According to the results of the baseline survey, 70% of the households have between 2 and 5 members while 25% have more than 5.

Population	Male	Female	Persons over 60 years	Children under 5 years	Number of Household
589	303	286	55	189	146

Table 1: Population Data (Source: national census 2001)

Mt. Rich can be described as a family oriented community, since most of the grand parents and children live together. According to the baseline study, 54 % of the households have between 2 and 5 members, while 36% have between 5 and 10.

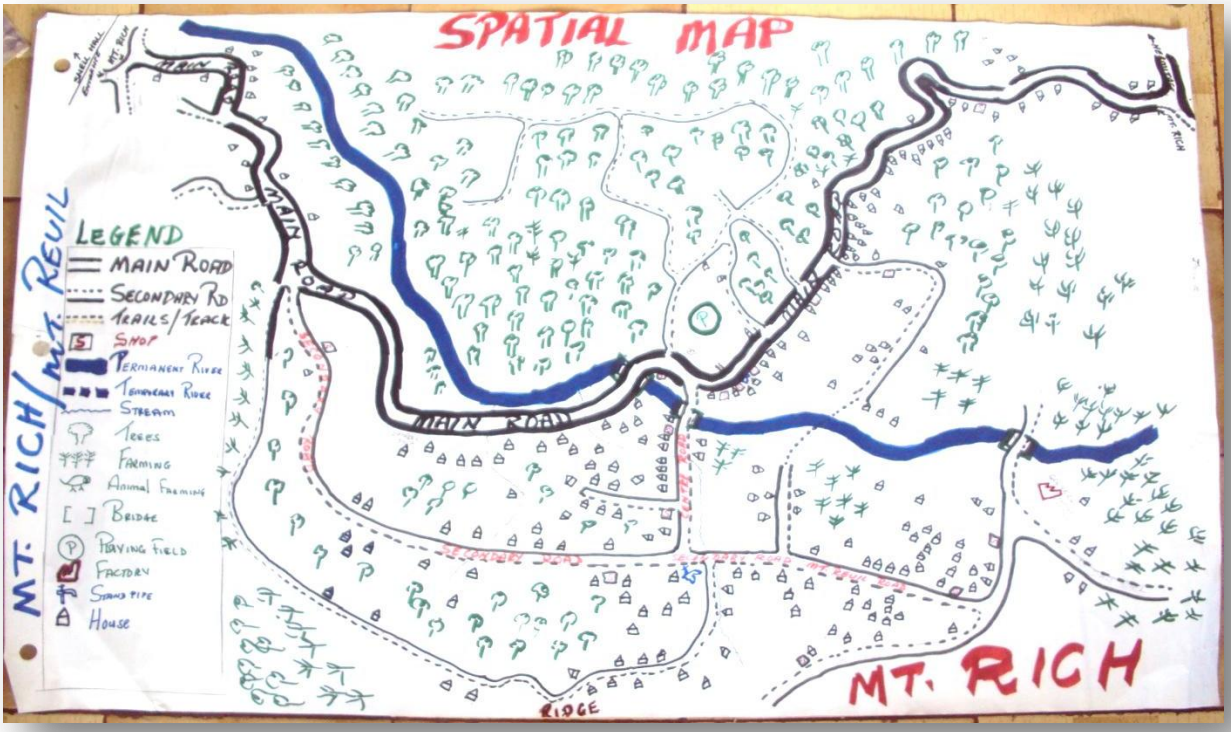
As time goes by the number of people living in the community has increased due not only to birth of children, but also to new people settling in the community. The migration pattern is vastly growing in the community, men travel to the different parishes to obtain jobs in construction. Interesting to note like many other communities, residents migrate to the United-States, United-Kingdom and Canada seeking new opportunities.

Community map

With more than 146 households, the community of Mount Rich is spread on a relatively large area.

Map 2: Mount Rich, satellite view (source: Google)

The map below was done through the mobilization of community members as they placed themselves at strategic positions which allowed them to observe everything well. They made drawings of the community on the basis of their observation (housing, roads, medical stations, businesses, vegetation, recreational areas, rivers and so on) and design a symbol for each one. After, there was a general analysis of what is happening in the community, on the basis of observations highlighting aspects relating to the environment, public places, services, access roads and so forth.



Map 3: Mount Rich, spatial map (source: Mount Rich VCA committee)

2. *Direct observation*

The following list shows the immediate impressions, observation, things that stood out after the transect walk throughout the community of Mt. Rich. A transect walk involves walking through a community to observe the surroundings, people, land use and resources. The route taken was determined by drawing a line on a map of the locality that goes through or "transects" all primary and secondary entrance, in order to gain a representative view of the community. A transect walk is usually carried out early in the research process because it gives you an overall view of the community and helps you to observe things that may require further investigation later on during interviews or group meetings. The tool is even more effective when carried out in the company of community members.

- Drains filled with water
- Overhanging trees
- Broken Bridge
- Agricultural plantation
- Drains are shallow
- River running through community
- Large water pipes

- Old cars by the road
- Soil erosion
- Old abandoned building
- Water settling in drain
- Garbage and debris in drain
- Houses are built close to each other
- Lean utility poles
- Young men hanging out/Lining by the road side
- A special shop for Rastafarians
- Narrow roads
- Houses are built too close to each other
- Lean utility poles
- Young men hanging out/liming by the road side
- A special shop for Rastafarians

It is important to note that while conducting the direct observation community members along with their leaders accompanied the VCA team on their walk through the community. Apart from the above observation, we took the time to talk with the men and women of Mt. Rich and had a wider prospective as to the both views. The men would complain of not having jobs to sustain themselves and their family and as a result would hangout by the road. They allude to the fact that liming and cooking by the roadside helps them to relax. Some of the young men would also be seen smoking consuming drugs. As we walked through the community the women would indulge themselves in meaningful things and would go as far as to provide for their children by working on the agricultural estate. Those children who attend primary school would normally be at school; however, the secondary school aged children (especially the young men) can be seen on the streets. The housing structures are of wooden type, however, the infrastructure of Mt. Rich can be considered good. The roads are made of asphalt and concrete and there is enough space and available places for recreation (playground). The community members capitalize on this facility as you would observe sporting activities such as soccer, cricket, basketball, and athletics among other being played.

3. *Focus group discussions*

A focus group discussion is a qualitative information-gathering tool whereby a group of selected individuals, guided by a facilitator, are invited to give their thoughts and views on a specific issue.[4] To facilitate the process of interaction with key community stakeholders, the International Federation has developed a series of tools for participatory appraisals. These include, but are not limited to:

a) Historical profile;
b) Historical visualization;
c) Seasonal calendar;
d) Institutional and social network analysis;
e) Livelihoods and coping strategies analysis;
f) Mapping;
g) Transect walk;
h) Household/neighborhood vulnerability assessment;
i) Assessing the capacity of people's organizations;
j) Venn diagram.

Not all tools are used every time, nor are these tools the only ones used to encourage community mobilization. More than the tools, the success of the VCA is measured by the mobilization it induces within the targeted community.

Tools 'a' through 'g' were used during the Vulnerability and Capability Assessment of Mount Rich and are presented here.

[4] From *VCA toolbox with reference sheets*, IFRC, Geneva, 2007, page 66.

a. Historical profile

Located in the St. Patrick's Parish in the village of Mt. Rich lies the ancient Amerindian carvings of the Carib's Stone. Intricate petro glyphs (stone carvings) carved through rituals by the early Carib tribes are significant because they are the only extensive carvings left and preserved on the island. The large stoned depicts typical cultural symbols: headpieces, pottery, tools, and wildlife. (http://www.grenada.mot.gd/caribs.htm)

Table 2: Carib's carvings (source: www.grenada.mot.gd)

The indigenous past of Grenada remains largely a mystery despite sites like the Mount Rich Carib's Stone. One of the best surviving examples of indigenous rock art on the island, the stone is marked with petroglyphs, or rock carvings, that depict cultural symbols of the Carib people, such as ritual head-dresses, pottery, wildlife and tools that they would have used. As one of the few sources of information about the original inhabitants of the island, the Carib's Stone is an important cultural monument and one of the most visited sites on the island. The stone is located in St. Patrick Parish near the village of Mount Rich.

As the community began to grew, agricultural spots were acquired for building houses, thus causing the reduction in the amount of trees as the year's progresses. Activities began in the 1600 with the Caribs.

During the colonial times, residents used to live on the mountain or hill top, where everyone was concentrated in one area. The Prime Minister at the time, Eric Matthew Gairy, then acquired the lands and distributed spots among the residents. Those who resided at the mountains or hillside moved to the lower part.

They then began to spread out. In the 1940's the name of the place was called "New Village". The name was then changed to "the village" in the 1980's.

Though Grenada lies on the edge of the hurricane belt, it was hit by hurricane Janet in 1955. Almost fifty years later, on September 7th 2004, the country was stroke by hurricane Ivan which made tremendous damages. As most part of the island, Mt. Rich was not speared from the destruction of this disaster, causing severe flooding and harm to agricultural sector. Houses, bridges and the main entrance to the community were also damaged or destroyed. 50% of the housing stocks in Mt. Rich, St. Patrick's were reportedly destroyed.

Hurricane Emily struck Grenada on Thursday, 14 July 2005 the next year, causing significant damages, especially in the northern parish of St. Patrick's. The crops, buildings, water and electricity systems were badly affected. The main and secondary roads were blocked by landslides and overflowing rivers in Mt. Rich. This destruction came as the country was still recovering from the previous year's devastating hurricane Ivan.

There is a disaster response group in the community, but it is not active at present. However, during the disaster they came together and coordinated well to get relief supply to those in need with fair and evenly distribution.

The table below shows some of the important historical events in the community of Mount Rich.

YEAR	EVENTS
1600	Caribs and arawaks settled in the community
1700	French settled in the community
1876	'old Bridge' was built
1880's	Isa scott, Darky Paul, Norman Paul and Clairmentina were the first persons to settle in the community.
1990's)	The occupants of the community lived on the ridge. On the mountain and hilltop.
1920's	Mr. Lenny Kent and Mr. Wildman had the first vehicle.
	Mr. Miller had the first telephone
1939	Stones and asphalt used for roads
1940's	More transportation came into the community The community was called "New Village"
1955	Hurricane Janet destroyed community's infrastructure and agricultural crops.
1969	Eric Mathew Gairy took over estate lands and sold to the people on the ridge in a program called ' land for the landless'
1970's	Occupants left the ridge and settled in estate lands.
	Pong yard was recognized for strayed animals.
	Sir Eric Mathew Gairy started the construction of the community center.
1972-1973	Installation of the first house pipe in the community.
1980	The name of the village was changed from" New Village" to "The Village"
1988	Electricity came to the community under the 'Rural electrification program'. Construction of the Basketball Court
1989	Influx of house phones in the community.
1990	Community experienced a rain storm
2004	Hurricane Ivan struck the community destroying most of its infrastructure, agricultural crops and lands.
2005	Hurricane Emily struck the community devastating lands: creating landslides, floods and damages to agricultural crops.
2007	Refurbishment of Pre-school
2010	Fire destroyed one dwelling house (Ms. Alicia Best) in the community

Table 3: Historical Profile (Source: Mount Rich VCA focus group)

a. Historical visualization

The following is a sketch diagram showing the history of Mt. Rich (St. Patrick's). It was drawn during a focus group session with the residents. It represents data/topics such as population and housing growth, agricultural or forest, rivers, animals, disasters etc. and how these have changed over time, helping the residents to look backwards to their own history.

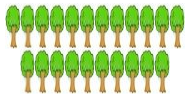
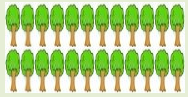
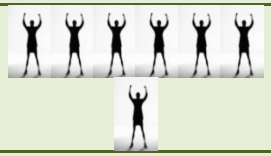
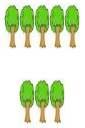
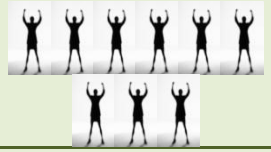
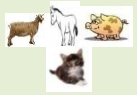
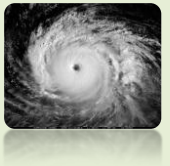
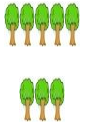
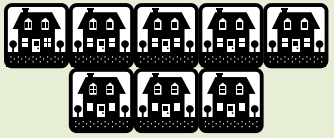
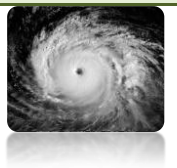
Topic / Year or Decade	*Population*	*Trees/forest*	*Rivers*	*Animals*	*Houses*	*Disasters*
1700						
1850						
1900						
1950						
2004						

Figure 1: historical visualization

This chart shows that since 1700, the population has kept growing. It also shows that for the needs of farming and the building of houses, the residents had to cut down large portion of forested areas.

Apart from small scale events, Mount Rich has gone through three major disasters: Hurricane Janet in 1955, hurricane Ivan in 2004, and hurricane Emily in 2005.

b. Seasonal calendar

The following table shows the main events throughout the year in Mount Rich

TOPIC	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Pre-school sports												
cricket												
football												
Parang & Christmas tree lighting												
King & Queen show												
MT. Reuil fiesta												
Income	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Alcohol consumption												
Dry Season												
Hurricane (Wet Season)												
Pre-school fair												
Common cold												
School holidays												
Harvest												
Harvesting of banana, nutmegs and cocoa												
Allergies												
Diarrhea												

Table 4: Seasonal Calendar

The island has a tropical marine type of climate, being affected by the prevailing Northeast Trade winds throughout the year. The dry season is from January to May and the wet season from June to December. Hurricanes season is traditionally expected to last from June to November. However, modifications in the timely pattern have been observed during the past decades, and are often considered related to the global changes in climate.

All through the year the young and elderly (especially young men) would consume alcohol, thus aiding in and reflecting on the low income experiencing throughout the year. During the dry season, there is the upsurge of medical and health issues. Allergies and diarrhea poses a threat to the residents especially the children.

While personal crops occur all year round, harvesting of the main agriculture products last between October and March.

April, May and December are the main celebration periods, with the King and Queen show, the Mount Reuil Fiesta and Christmas.

The best and most convenient time to implement any activity in Mt. Rich would be between the months of January to June and September to November.

a. Institutional and social network analysis

It's important to know which organizations are operating in the community and create ways to talk and work with these groups. To do this we need to understand which institutions simply functional in the community and which are really important to the community members with five being the highest.

The diagram below represents key institutions within the community of Mount Rich. This exercise was conducted to identify the institutions that exist within the community which can help support the community and can play a major role in disaster management.

This was done by the following steps:

- In plenary, community members identified key institutions within their community The institutions were ranked on their importance to the community on a scale of 1-5, 5 being the highest and 1 being the lowest
- The institutions were then ranked on their functionality or usefulness to the community, 5 being the closest and 1 being the furthest away

The circle below represents the result of the diagram above. The size of colored circles represent the average of the institution importance to the community, the bigger the circle the more important the institution, the smaller the circle the less important the institution is to the community. The distance in relevance to the community represents the functionality or usefulness average of the institutions. The closer the circle to the middle/community the more useful is the institution to the community, the further away the circle is from middle/community the less useful is that institution to the community.

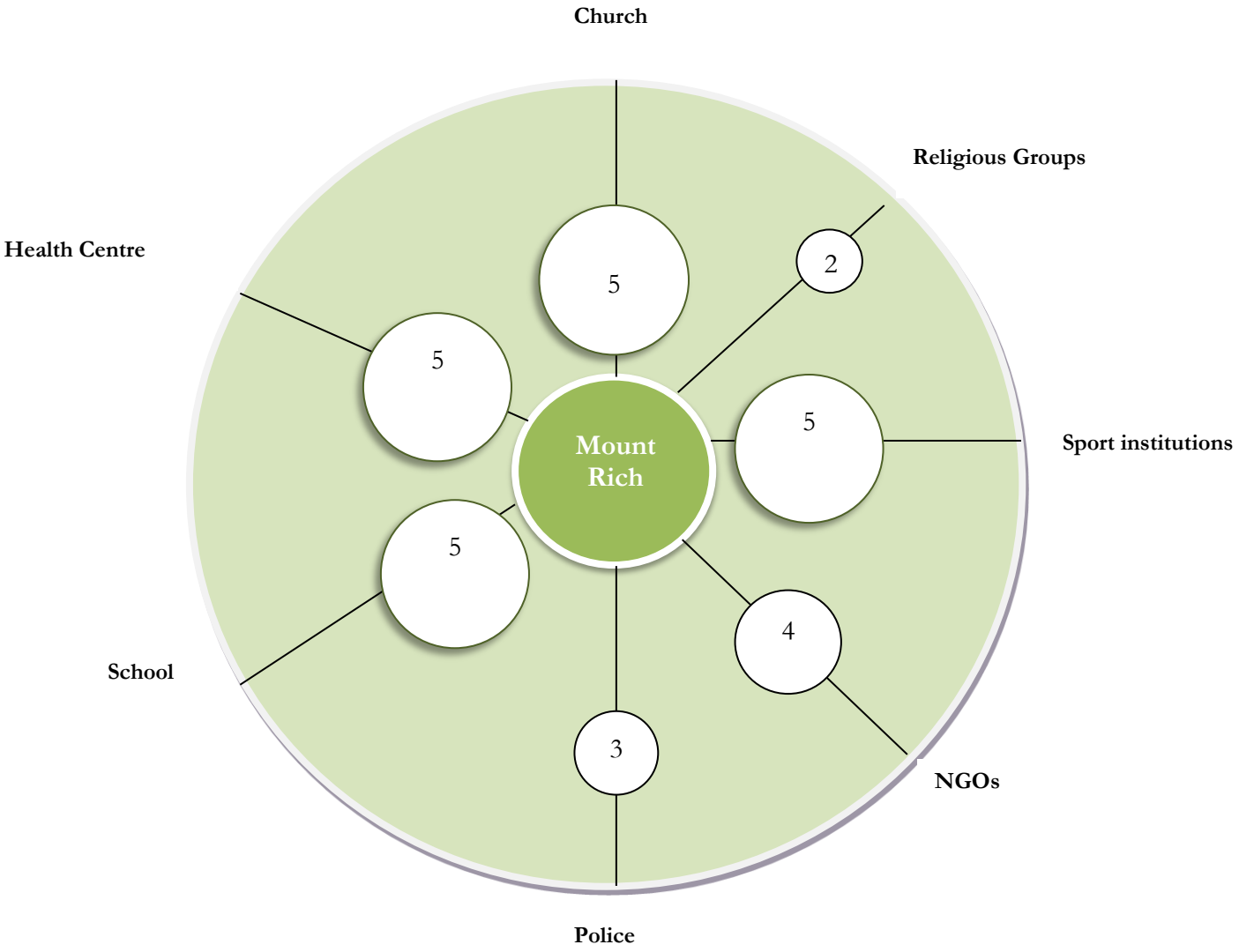


Figure 2: social network diagram (Source: Mount Rich VCA focus group)

This exercise shows that the most important institutions in Mount Rich are the Church, the School, the Health Centre and the sport institutions. Other important organizations are the religious groups, the NGOs and the Police.

c. Living conditions, livelihoods and coping strategies

Living conditions

Housing: This unique community shows signs of living under adverse poverty conditions as evident in the structure of the houses. Indeed, 80% of the houses are of a wooden structure, among which number are still incomplete. 15% are of Concrete/Wall structure, and 5% are of both Concrete and Wooden structures. Most washroom facilities are located on the outside of the houses consisting of pit latrines and outside showers.

Access to water: while private access to water is available from the main water company on the island (NAWASA), some homes still have neither pipe lines nor direct access to water supply. The community members also capitalize on the river, being one of their resources for bathing and washing purposes in absence of direct pipelines to their homes.

Socio economic challenges: Overall 30% of the population earns a high school education; as a result, there is a need for educational programs to be implemented, with specific training in the area of disaster management, first aid etc.

The health problem that affects children mainly is the common cold. Men and women both suffer from hypertension and diabetes. The health center, which is located in Mt. Rich supplies the surrounding area with excellent medical care. Due to the blocking of drains, settling of water etc, there is the likelihood of the outbreak of vector-borne diseases such as dengue fever. Members of the community did undergo a seven (7) week training in general health/diet. They would occasionally visit the elderly and conduct blood sugar and pressure testing.

External Assistance: The area benefits from the availability of Electricity, Public Lighting and Home telephone which has significantly improved over the past year. There has not been much visibility of projects done by NGO's. However, the

Basic Needs Trust Fund (BNTF) constructed the pre-school and the community members are presently in negotiation with this same NGO for the possible construction of a road and provide skills training.

Environmental issues: The community is combating environmental problems like garbage dumping that contaminates the rivers. Because communities are closely linked to each other, waste and pollution from the surrounding communities contaminate the area thus increasing the risk of flooding. This also undermines the roads and cause erosion.

Livelihoods and coping strategies

The community is basically an agricultural community growing the traditional crops of: Cocoa, Nutmegs, Bananas and Spices. There is also the farming of short/vegetable crops for market or consumption.

Apart from agriculture, the main source of income is construction. Men, as well as women engaged themselves in small business, consequently employment become stagnant over the past few years. A majority of the residents is unemployed and live in relatively poor conditions. The residents depend on the sale of their produce and remittances from families overseas for their livelihood. There is one business operating in the community which provides employment. This is one of the main water bottling company on the island.

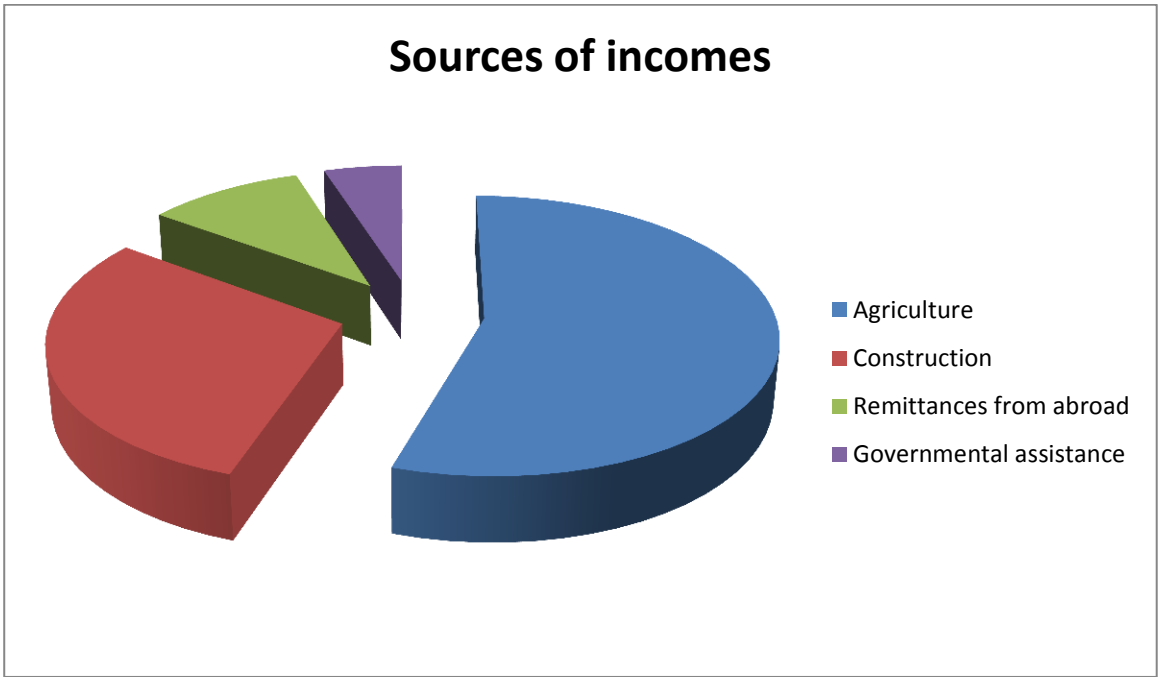


Figure 3: Source of incomes (Source. Mount Rich VCA focus group)

The community has a subsistence farming system that has its challenged around the Hurricane season and Harvest time. During the hurricane season the community members are unable to adequately supple the market with vegetable produce. Although not all of the farmers experience the problem of theft around harvest time, it is a challenge for some farmers.

The great losses induced by Hurricanes Ivan and Emily have highlighted the vulnerability and fragility of the local livelihoods. Nevertheless, the focus groups discussions have demonstrated that the residents of Mount Rich have developed various coping strategies to address impacts of disasters:

Assistance from abroad: The family members seek access to a secured source of income that provides basic food and income for the household when the agriculture production fails.

International Migration: Due to Only a small percentage of the community has access to such favored activities and many households, therefore, resort to non-farming income which was critical. Employment was hard to obtain and family members began to get frustrated.

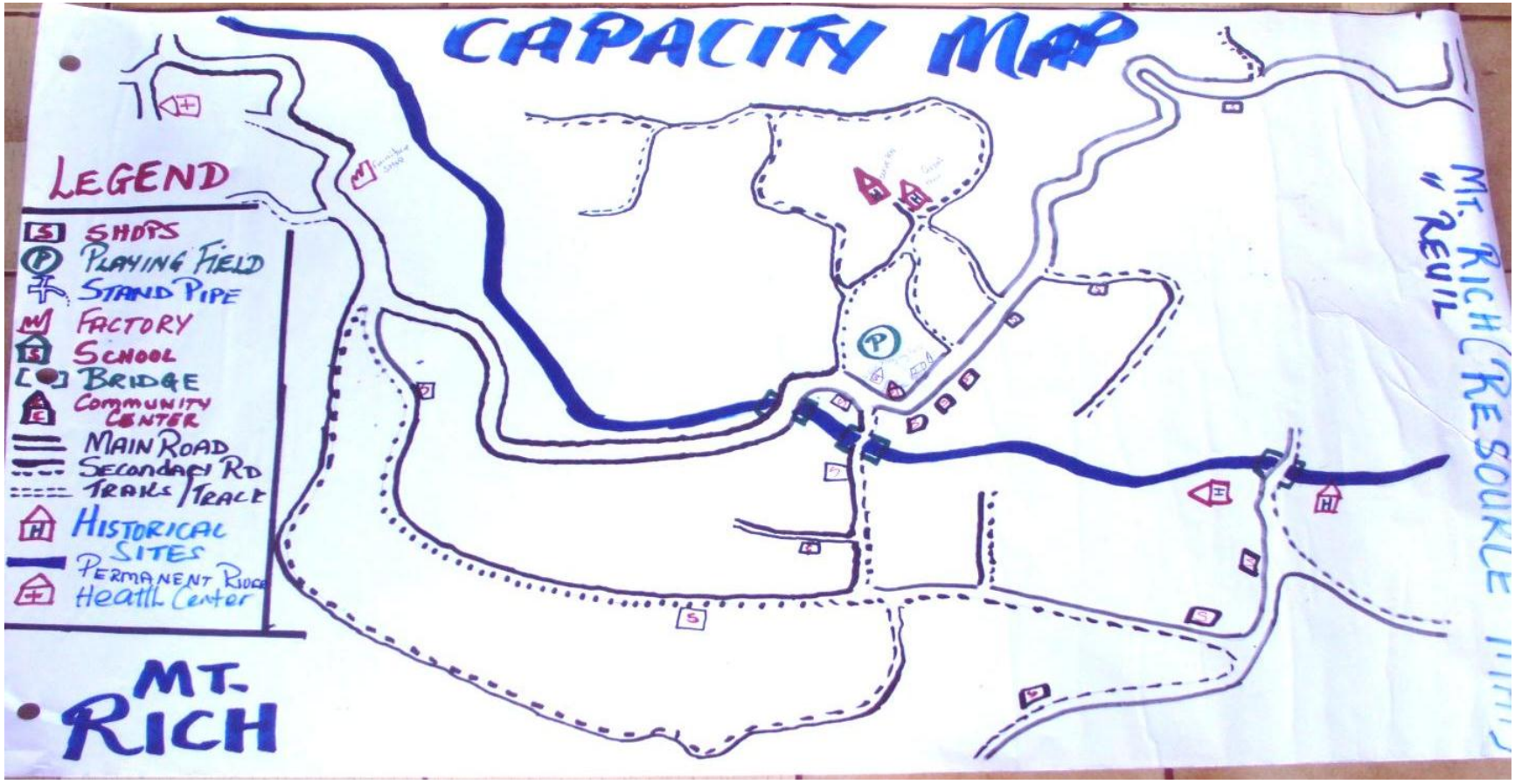
Alternative jobs: Those who cannot migrate and don't find adequate employment locally, attempt to try a number of activities that would complement in securing food and income for the household. They include activities such as the sale of agricultural and vegetation produce, construction, hunting, house to house sale, small businesses (shops).

Government assistance: Government relief and assistance in this regard is vital. Despite the view by the community members, in relations to governments being a corrupt entity by being inefficient especially in their distribution system of foods, medicine, housing, shelters etc. they still saved many poor and vulnerable from further suffering.

Mutual Assistance: Apart from the above mentioned strategies the community members also coped by the each one help one method, where all of the community members would come together and assist the most vulnerable. They would also form themselves in groups that would keep them together, but unfortunately it doesn't last very long.

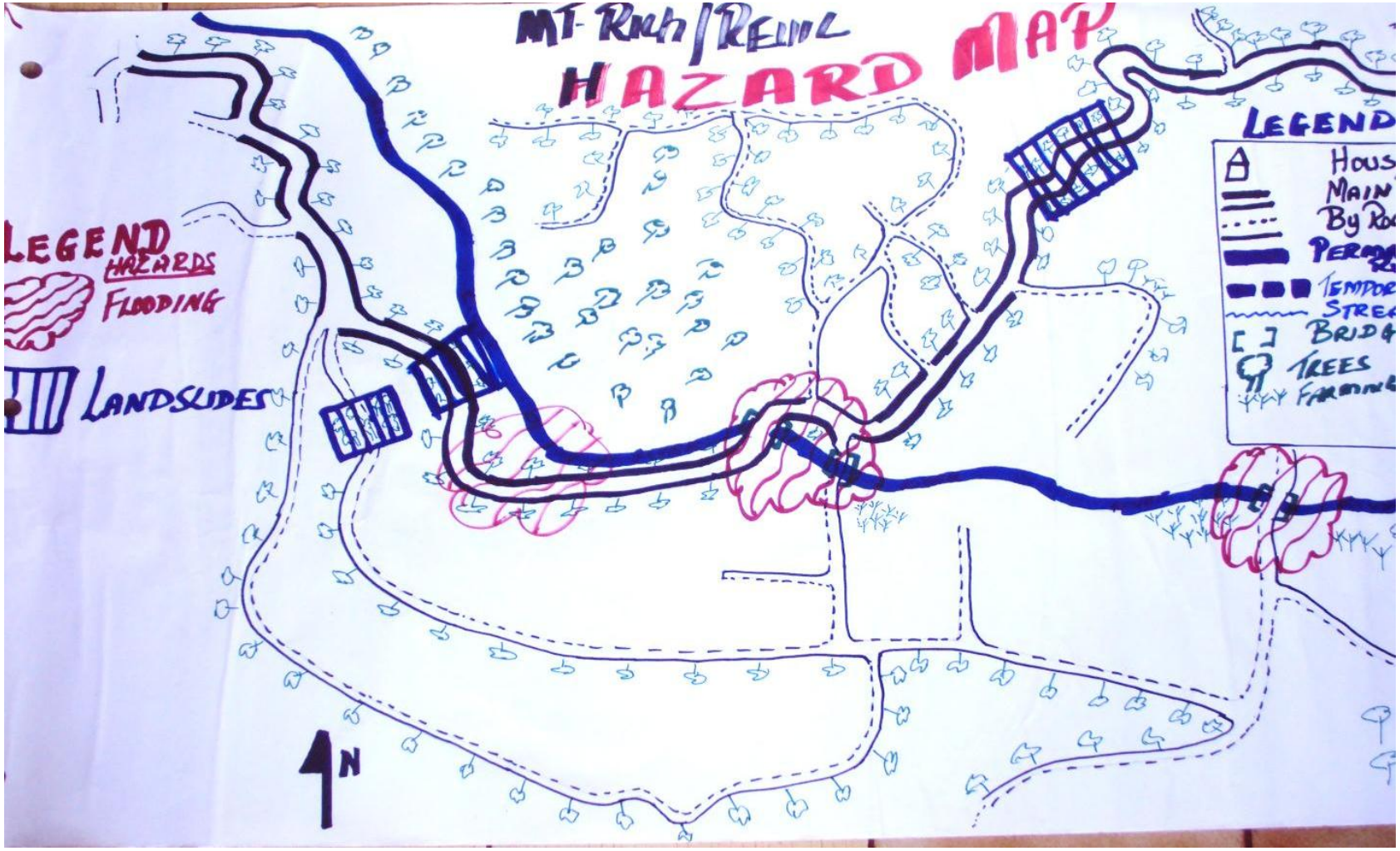
b. Mapping

The following maps were drawn by the community members in order to identify and document the areas which are most at risk as well as the location of resources.



Map 4: Mount Rich Capacity Map (Source: VCA focus group)

The residents highlighted various resources within their community: shops, stand pipes, factory, bridges; community center, roads, health center, school and historical sites.



Map 5: Vulnerability map (source: VCA focus group)

Some of the hazards highlighted by the above map are flooding, landslides and overhanging trees.

Part 2: Risk assessment in Mount Rich

The VCA process made it possible for the Grenada Red Cross Society (GRENADA RED CROSS) to get to know Mount Rich, while allowing the community members to share their knowledge, their fears and their ideas. At the same time, the project has offered a unique opportunity to go from theory to practice.

The GRENADA RED CROSS – in collaboration with partner agencies and local community stakeholders – has used the VCA method to identify and solve problems within their capability. In particular, as the following pages will show, the implementation of the VCA tools improves understanding of:

- ✓ the nature and level of risks that vulnerable people face;
- ✓ where these risks come from;
- ✓ who will be the worst affected;
- ✓ what is available at all levels to reduce the risks; and
- ✓ what initiatives can be undertaken to strengthen the impact of programs to raise the capacity of people at risk.

Methodology for a Risk assessment

The following five-step approach was used with the Mount Rich community members:

1. The first step meant identifying for each hazard the **Potential Risks to the community**; the areas of vulnerability and capacity that exists within the community.
2. The second step required identifying for each Hazard **Actions that could be undertaken** to transform vulnerabilities identified into capacities.
3. The third step consisted in differentiating the types of measures, whether they related to prevention, mitigation or preparation for response.
4. The fourth step involves a CIA Analysis, in which participants considered each and every action to transform vulnerability into a capacity and decide whether such changes were realistic.
5. The fifth and final step involved identifying a Plan of Action that could be implemented by the community. While a number of actions were identified, this final step identified realistic actions. It should be noted that the information gathered and the specific actions identified below while not reflected in the final plan of action are still relevant and needed and could be utilized by other agencies.

The results of these five steps are presented hereafter (points 1 through 5 below).

1. *Identifying hazards and their potential impact on the community*

Risk perception in the community

When asked "which disasters is your community prone to", most interviewed mentioned hurricanes. To a lesser extent, floods, landslides, drought and fire were also mentioned. Interesting is to notice however that only 8% pointed out earthquakes.

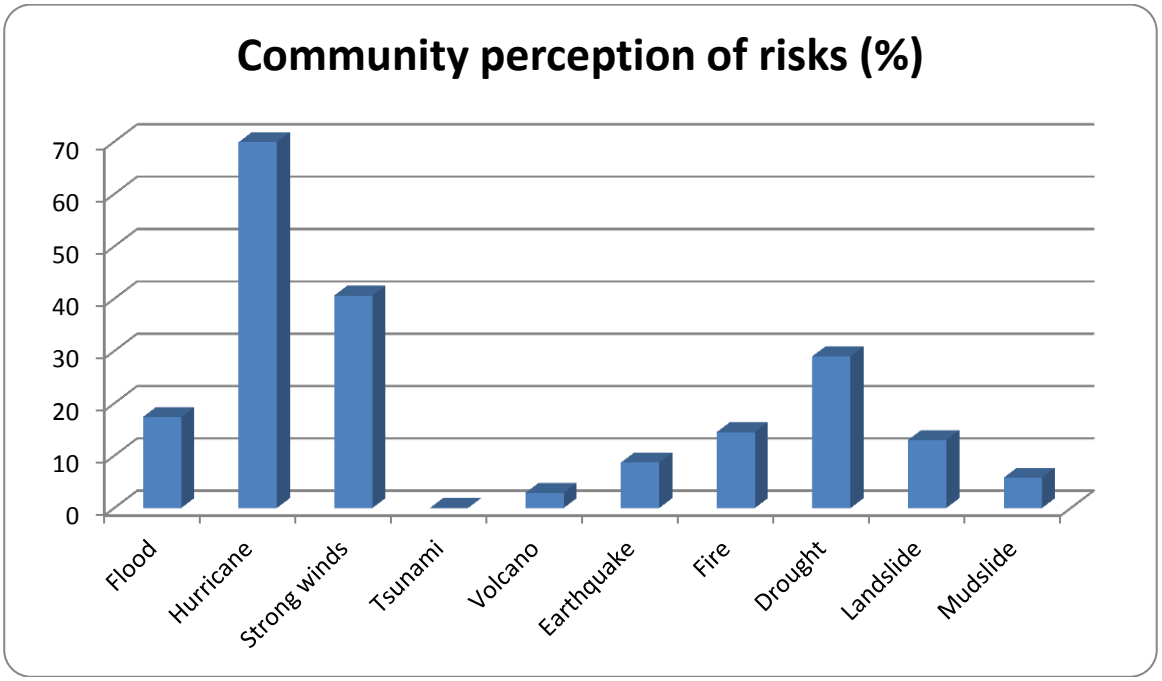


Figure 4: Risk perception in Mount Rich (source: Red Cross baseline survey)

56% of the interviewed declared they had never heard about the issue of climate change. When asked "how your community could be affected by climate change?" persons aware of the issue mentioned only drought and temperature rise, but nothing about the increased frequency of weather events.

The results of the baseline survey also show that most interviewed consider that their community is not ready at all in the event of a disaster (74%). Moreover, the facts that 87% of them don't know what a disaster plan is, and that there is no active disaster committee emphasize the low level of preparedness, and thus stress the need for awareness campaigns and disaster response trainings.

Impacts of previous disasters:

Although the probability of direct impact of a major natural disaster is relatively low in Mount Rich, the island is vulnerable to severe weather systems. During the 50 year period spanning 1955 – 2005, three major hurricanes directly affected the community of Mt. Rich: Janet in 1955, Category 3 Ivan in 2004 and Category 1 Emily in 2005. Similarly, the island was indirectly hit by at least four major storms between 1990 to present including Hurricane Lenny in 1999 (Peters, 2006).

85% interviewed during the baseline survey declared that they have been directly affected by a disaster in the past; mostly by hurricanes, and to a lesser extent by floods. Harvest, health, food storage, infrastructure, houses, livestock and access to water were the most impacted sectors.

Hurricanes Ivan and Emily severely affected Mount Rich. The community experienced broken bridges, destroyed houses, floods, devastated crops, landslides fall of utility poles and interrupted water supply. Information on the impact of disasters on agriculture and construction sector prior to 2004 is very limited.

At Risk areas

Some of the areas that are most at risk in the community of Mt. Rich are the main bridge and the Red Bridge (see picture), ***which joins*** the main road to the secondary road.

In the late 1990's the community experienced a rain storm (heavy rain) which fell in the mountain areas, where the water came down and damaged the community's infrastructure. One part of the community was completely cut off from the other. During hurricanes Ivan and Emily this river overflowed and damaged the bridge.

Potential hazards and their impact

Hazard	Potential Risk	Vulnerability	Capacity
Hurricanes/ storms	Floods High winds Loss of livelihoods Destruction of infrastructures	Poorly constructed houses Large amount of wooden houses Overhanging trees	Availability of a radio communication system Skills in construction Availability of carpenter

	Houses built in at risk areas Fall of trees	Large amount of population depending on agriculture Proneness to floods Distance to central rescuers and services Overhanging trees	and woodcutter equipment (chain saws, power saws, etc.) Solidarity in the community People trained in basic health Emergency shelter
Earthquakes	Damages to buildings Injuries/ deaths	Poorly constructed houses Settlements in risk zones Poor information	Availability of a radio communication system Building (strengthening constructions) skills Availability of tools and vehicles Health Center

Flooding	Damages to infrastructures and livelihoods Loss of life	Poorly constructed drains Low maintenance of drainage system Bridges built in at risk areas No warning system	Availability of tools and vehicles
House /bush fires	Damages to infrastructures and livelihoods Injuries/ deaths	Houses closely built	
Overhanging trees	Blocked roads or drains Injuries/ deaths Damage on goods and infrastructures (cars, buildings	Houses, drains and roads located under dangerous trees	Availability of carpenter and woodcutter equipment (chain saws, power saws, etc.) Health center

	, utility poles, etc.)		
Stagnating water	Vector borne diseases Proliferation of mosquitoes Pollution of water	Blocked drains Houses close to stagnant water areas Poverty (no private access to water)	Health center 30 persons trained in basic health

Table 5: Hazards and Resources (source: VCA focus group)

2. *Local capacity to respond to hazards*

The table below shows actions that could be undertaken to transform vulnerabilities into capacities, based on the resources available in the community.

HAZARD	Vulnerabilities identified	Actions to transform vulnerabilities into capacities
Hurricanes/ storms	Poorly constructed houses Large amount of wooden houses Overhanging trees Large amount of population depending on agriculture	Strengthen houses and roofs Diversify sources of incomes to be less dependent upon agriculture Regular cutting and maintaining of overhanging trees. Unblock drains through cleaning campaigns

	Proneness to floods Distance to central rescuers and services Overhanging trees	and maintenance system Host education and awareness activities in evacuation and early warning system. Training in building techniques/construction. Build windbreaks and construct terraces.
Earthquakes	Poorly constructed houses Settlements in risk zones Poor information	Strengthening houses Organize information and sensitization sessions Training in proper building techniques/construction. Map information on high risk zones Identify and map safe and unsafe zone. Develop and disseminate disaster plan Transform building code
Flooding	Poorly constructed drains Low maintenance of drainage system Bridges built in at risk areas No warning system	Proper drainage and maintenance. Host simulation exercises and first aid training. Setting up an alert system Education in evacuation and early warning system.
House/bush fires	Houses closely built	Have training in fire safety, response and prevention. Make fire extinguishers available.
Overhanging trees	Houses, drains and roads located under dangerous trees	Regular cutting and maintaining of overhanging.
Stagnating water	Blocked drains Houses close to stagnant	Clean and maintain clear passage in drains

	water areas Poverty (no private access to water)	

Table 6: local capacity to respond to a disaster (source: VCA focus group)

Community resources

NAME	CONTACT	RESOURCES
Mr. Beroy Andrew	442-1556	**Generator and Van**
Mr. Steadman Patrick		**Generator , Truck and Van**
Mr. Godwin Phillip	442-9181	**Generator and Bus**
Mr. Claude James	442-2946	**Car**
Mr. Joy Flemming	442-9838	**Radio Communication**
Mr. Paris Lewis	442-1741	**Wood Cutter and Van**
Mr. David James		**Wood Cutter**

Table 7: Community Resources

In the community of MT. RICH most of the members are equipped with items such as forks, cutlasses and spade etc.

3. *Type of measures to mitigate disasters*

The third step consisted in differentiating the types of measures, along three categories:

- Prevention actions: action which tries to reduce to probability of a disaster in the community;
- Mitigation actions: action that attempts to protect, strengthen, rehabilitate or reconstruct;
- Preparation actions: action that aims to strengthen the capacity of the community of Mount Rich to respond in an effective and efficient manner

Actions to transform vulnerabilities to capacities	Prevention	Mitigation	Preparation
Diversify sources of incomes	■	■	
Unblock drains	■		
Cut overhanging trees	■	■	
Clean up campaigns	■		
Building retaining walls	■		
Building houses in safer areas	■		
Strengthen vulnerable houses (hurricane straps, etc)		■	
Training in building techniques/construction.		■	
Print brochures, leaflets, post signs.			■
Awareness campaigns			■
Training if fire safety			■
Equip the community with fire extinguishers			■
Simulation and evacuation drills			■
Store a disaster supply kit			■
Early Warning Systems		■	■
Develop community and family disaster plans			■

Map information on high risk zones			
Modify building codes			

Table 8: Types of measures to mitigate disasters

4. Ability to act on hazards (CIA analysis)

The fourth step involves a CIA Analysis[5], in which participants considered each and every action to transform vulnerability into a capacity and decide whether such changes were realistic. Each problematic situation had to be categorized according to the three possible options:

- the situation can be **changed** with the participation of the people at risk;
- the situation cannot be changed directly, but could be **influenced** by the people at risk so that third parties can offer a solution to the identified need; or
- the situation cannot be changed or influenced and the community needs to **accept** the threat as it is.

Actions to transform vulnerabilities into capacities	Prevention	CIA	Mitigation	CIA	Preparation	CIA	Who should be involved
Diversify sources of incomes		C		C			Residents
Unblock drains		C/I					Residents and Ministry of works
Cut overhanging trees		C					Residents and GRENLEC
Clean up campaigns		C					Residents
Building retaining walls		I					Residents/Ministry of works
Building houses in safer areas		A					
Strengthen vulnerable houses (hurricane straps, etc)				C			Residents
Training in building techniques/construction.				C			Residents/third parties

[5] CIA: C = change, I = influence, A = accept.

Print brochures, leaflets, post signs.						C/I	Residents/NaD MA/third parties
Awareness campaigns						C/I	Residents/NaD MA/third parties
Training if fire safety						I	Fire department
Equip the community with fire extinguishers						C/I	Fire department
Simulation and evacuation drills						C	Residents/NaD MA/third parties
Store a disaster supply kit						I	Residents/third parties
Early Warning Systems				C/I		C/I	Residents/NaD MA
Develop community and family disaster plans						C	Residents
Map information on high risk zones						C	Residents
Modify building codes				A			Govenrnement

Table 9: Change, Influence and Accept analysis

Plan of action

The VCA process shows that hurricane is the main concern of Mount Rich residents in terms of disasters. Since most houses are of wooden structure and thus particularly vulnerable to high winds, the need for community shelter is high. The community center is an important resource for the residents of Mount Rich and Mount Reuil since it is also their designated emergency shelter. However, the center is also vulnerable; especially to floods, as there is no proper drainage system around the structure. Whenever there is a heavy rain fall/shower the water from the surrounding, especially from the pasture, runs down directly into the building. The community members came together and decided that the construction of a drain to eliminate the problem of flooding would be the priority. The center also needs additional upgrade, namely a new door and new windows.

During the VCA, the community members of Mt. Rich also requested support for the renovation and repairs to two dwelling houses in the community: One belonging to an elderly man and the other to a less fortunate and vulnerable single mother. In the month of April, fire destroyed the dwelling house of Ms. Alicia Best twenty-eight (28) years who is a single mother with five (5) children. The oldest being 12 years and the youngest 7 months.

Another priority to the community is the clearing of roads, drains and clearing of slides in the area. The members decided that they would come together to get this project done with the assistance of outside resources. This venture is as a result of the many debris and rubbish that is seen blocking the drains, thus causing a problem of flooding and also can give rise to possible health issues.

Drainage issues within the community of Mt. Rich remains a priority too. In particular, there is a dirt drain located on a slope that links one of the secondary roads unto the Main road which is blocked with stones, bushes and garbage. In the event of a hazard e.g. Hurricane, the water runs down into the main road causing landslides, flooding and destruction to the infrastructure

Priority Action List

- Construct a ten meters (10 m) drain to the front of the community center.
- Community Members Support (Renovation and repairs to dwelling houses)
- Continued clearing of roads, drains and clearing of slides(Clean-up campaign)
- Construct a drain from one of the secondary roads to the main road that will allow free flow of water.

.

Concept	Activities	Time Frame	Indicators Achievement	Assumptions

Construct a drain around the community center	Authorization of Ministry of works Needs assessment Dig and build the drain	September September October-November	Letter of authorization A budget and a list of items needed is submitted The drain is operational	Community members are mobilize

Conclusion: The next steps

The community of Mt. Rich was very supportive of the disaster preparedness project as was eminent in the way they participated in the Vulnerability and Capacity Assessment (VCA). As the VCA was conducted the community members saw the importance of prevention, mitigation and preparedness in limiting the impact of natural disasters. It is import to note that they willingly to support this project as it seeks to train educate and assist in capacity building. The project applies a qualitative research paradigm; however, it was not fully supported by content analysis of secondary data. It is with great desire that this survey results would inform the selection of good hazard risk management practices in Mt. Rich and would be used for future replication at the community level. This report highlights the main outcome of Phase 1 of the project. I hope that emanating from this project these information/data would become much more relevant and important to stakeholders as a result of this VCA project.