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# Government of Saint Vincent and the Grenadines

## Regional Disaster Vulnerability Reduction Project (RDVRP) Social Assessment Report

February 2014

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## Acronyms and Abbreviations

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Central Planning Division – CPD

Regional Disaster Vulnerability Reduction Project – RDVRP

Emergency Recovery Loan - ERL

Ministry of Education – ME

Ministry of Health and the Environment – MHE

Ministry of Housing and Physical Planning - MHP

Ministry of National Mobilisation – MNM

Ministry of National Security - MONS

Ministry of Transportation and Works – MTW

National Emergency Management Organisation – NEMO

Resettlement Policy Framework – RPF

Social Assessment – SA

Persons Affected by the Project – PAP

Participatory Research Approach - PRA

## Social Indicators

The list of variables, indicators and measures presented here provides a general guideline in this initial stage of the social assessment for monitoring the social impact in the implementation process.

Table: 1 Social Indicators

Variable	Indicator	Measure
Identity Age, Gender	Median age dependency Sex ratio	% persons <18 and 64> years Ratio of females to males
Social institutions	Educational, health , religious	Number and capacity (School, health services)
Environmental Water	Drought Available water	Period without water or rainfall
Wealth	Poverty rate	% persons living below the poverty level Level of dependence
Organization	Service organizations and NGOs People willingness to participate	Number of service organization Number of Community members available to help
Social well-being	Attachment to place	No. of family members in area.

## EXECUTIVE SUMMARY

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The Social Assessment (SA) was undertaken as part of the preparation requirements of the St. Vincent and the Grenadines Regional Disaster Vulnerability Reduction Project (RDVRP). The Assessment was conducted in compliance with World Bank requirements as presented in OP 4.12, World Bank Safeguards Involuntary Resettlement and OP/ BP 4.10 on Indigenous peoples, for Category B projects

The social assessment will a) analyze the potential social impacts of the project and develop associated social indicators for monitoring and evaluating the social impacts of the project, b) solicit stakeholder/beneficiary perspectives on project design and impact and c) identify and assess the nature and magnitude of land acquisition related issues. The social assessment will assist in the identification of poor and vulnerable populations and ensure that project objectives are acceptable to the intended beneficiaries.

The project would be implemented in several communities throughout St. Vincent and the Grenadines (SVG). The sites were selected by the Government of SVG. The main objective for selecting these sites was based on investigation of the vulnerable communities this was a joint collaboration of ministries, namely; the Ministry of Transportation and Works, Ministry of Health and the Environment, Ministry of Education, Ministry of Housing Lands and Surveys, Ministry of Finance and Economic Planning.

Its primary objective was to broadly understand the way in which the proposed project might impact or change the social condition of the receiving human environment. As well as, but not limited to identifying how these processes might be changed by the proposed project additionally the social assessment would identify the information gaps that would have to be addresses during the implementation

One of the main activities that formed part of this social assessment was the collection of data. Methodologies that were employed included primary and secondary data collection methods.

## INTRODUCTION

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St. Vincent and the Grenadines is among the most disaster-prone countries in the world, regularly suffering disasters related to natural events such as earthquakes, hurricanes, landslide, rain and drought. These hazards have caused significant and in some cases recurrent damage to national infrastructure including housing, road networks, schools, hospitals and other facilities such as phone lines, water and electricity. This significantly affects human welfare, national economic activities, property, and natural resources.

Additionally, the effects of climate change are already evident in many parts of the country with rising sea levels and storm activity continuing to impact on exposed coastlines and development. The situation is only expected to worsen as St. Vincent and the Grenadines is highly vulnerable to the effects of global warming and climate change.

Over the last decade, SVG began its risk reduction activities with the development of disaster preparedness and response investments. During this period, most of the activity in disaster risk reduction focused on the development of national disaster plans, setting up the disaster management agency, and promoting public education and awareness.

Despite these efforts, SVG continues to face high levels of risk to its economic stability and national welfare. Post-disaster rehabilitation of damaged infrastructure is a major contributor to the national economic risk profile. Studies have documented that aging public infrastructure presents very high levels of vulnerability, particularly in critical sectors such as health, education, water, and roads. The annual hurricane season, combined with the cumulative effects of climate change, will continue to threaten island economies. Without intervention, this will likely increase the future need to divert limited financial resources away from economic growth activities into repairs and reconstruction as a result of disaster and climate change-related events. While work continues in preparedness and response, the logical next step is reduction of vulnerability to natural disaster.



### Function of the Social Assessment in this project

The social assessment aims to understand the social factors influencing proposed project activities or the ones affected by those activities additionally it aims to solicit the active participation of the most directly affected individuals and groups by project activities during the design and implementation of the project (in particular, vulnerable groups). At the same time the social assessment aims to demonstrate the positive function of the project and prevent or alleviate negative social impacts.

### **Objective of the Disaster Vulnerability Reduction Project**

The Project seeks to measurably decrease the vulnerability of people and the national economy of SVG to climate change and natural hazards. The development objectives of the project would be to:

- (i) Integrate disaster vulnerability reduction and climate resilience in national development strategies and management of public infrastructure;
- (ii) Improve SVG's access to and benefit from regional collaboration and support structures for hazard monitoring and risk assessments, and
- (iii) Reduce the risk of loss of human life due to natural hazard induced structural failure of critical public infrastructure.

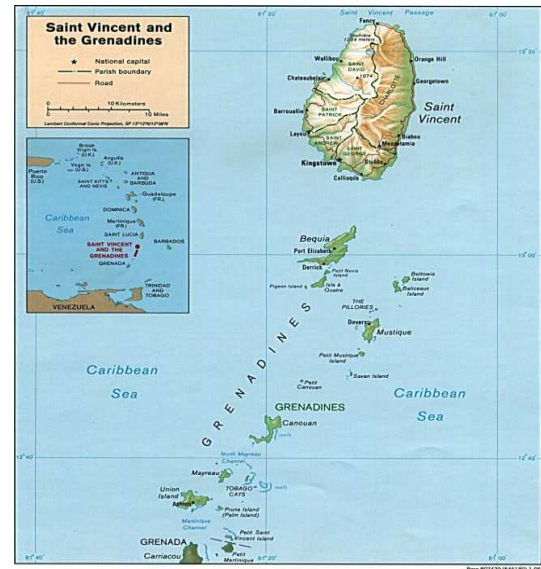
## Socio-economic profile of St. Vincent and the Grenadines

### Country Description

St. Vincent and the Grenadines is an archipelagic State in the Eastern Caribbean. The country is comprised of a main island, St. Vincent, and a chain of 32 islands and cays, the Grenadines, of which only seven are inhabited - Bequia, Mustique, Canouan, Mayreau, Union Island, Palm Island and Petit St. Vincent. The total area of the country is 150 sq. miles (389 km<sup>2</sup>) of which the main island is 133 sq. miles (344 km<sup>2</sup>).

The country has a territorial sea of 12 nautical miles and an exclusive economic zone (EEZ) and continental shelf of 200 nautical miles. The marine space is 70 times the land area. The terrain of the main island and several of the Grenadines is mountainous. The highest point on the main island is La Soufriere at 4,048sq.ft (1,234m). Forests cover between 25 percent and 30 percent of the country. The active volcano on the main island, La Soufriere, last erupted in 1979 damaging the agricultural sector and disrupting life.

The country is a small open economy which is highly susceptible to external economic shocks and natural disasters, such as hurricanes.



In the past, the country relied almost exclusively on agriculture, but within recent times, tourism and related services, construction and other sectors have become increasingly important as contributors to the national economy.

### Weather and Climate

St. Vincent and the Grenadines has a tropical marine climate characterized by a marked dry season, from mid December to mid May, and a rainy season from mid May to mid December. In the drier months higher than normal atmospheric pressure ensures dryness and drought conditions in coastal areas and the Grenadines. The wet season is characterized by tropical waves, depressions and hurricanes. Hurricanes are perennial hazards related to the atmospheric conditions of the region in the wet

season. Temperatures are high (27°C) all year round due to the moderating influences of the trade winds. The diurnal range is about 3 – 5°C and widest in the dry seasons on account of cool nights.

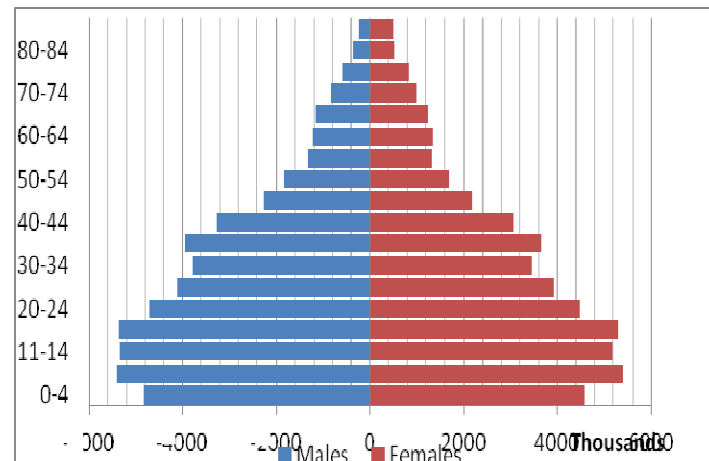
Rainfall is highest in the north central portion of St. Vincent (150 inches) and decreases on the coast (about 60 inches). The leeward side of the island is in a “rain shadow” and shows marked variation in rainfall compared with the windward side. In the well-watered interior, the water supply forms the basis of the potable supply of water and for hydroelectricity power generation on the Colonarie River, Cumberland River and the Richmond River. In sum, the rainfall distribution is quite reliable on the mainland.

*Population Demographic Factors*

Based on the 2001 Population and Housing Census Report, the population of St. Vincent and the Grenadines stood at 106,253. This represented a 0.2 percent decline from the previous census of 1991 of 106, 499 persons. In 2001, the largest single group of the population (30.7%) was in the under 15 age group. Additionally, the sex ratio was 1.02, i.e. for every 100 females, there were 102 males. Subsequent mid-year estimates indicate that the total population declined by an average annual rate of 0.9 percent, to 100,892 persons in 2009. These declines are

attributable to an average annual reduction in the birth rate of 1.9 percent, accompanied by adverse net migration. Within every age group, with the exception of those 65 years and over, there were more males than females. The demographic data based on the last census demonstrate that the migration option has continued to hold considerable significance in the economy and society of St. Vincent and the Grenadines. Remittance income is high, estimated at over 20 percent of household income, according to the SLC, but at percent of GDP

**Figure 1: Population Pyramid as at June 30<sup>th</sup> 2007**



Source: Statistical Unit, Central Planning Division

*Settlement Pattern*

The 1980 census revealed that 92.6 percent of the total population of St. Vincent and the Grenadines resided on mainland St. Vincent. In 1991, the figure was almost the same at 92.1 percent. In

2001 however, there was a slight decrease with 91.9 percent of the total 106,253 persons residing on the mainland. 85 percent of St Vincent’s population lives in the coastal zone. The major concentration of the population is in the more developed areas in the south, with 45% of the population in the census divisions of Kingstown: 12.3 percent Kingstown suburbs: 11.77 percent; and Calliaqua: 20.79 percent.

Table : Population and Density for St. Vincent and the Grenadines

CENSUS DIVISION	Area Sq. Miles	Population			Density		
		1980	1991	2001	1980	1991	2001
Kingstown	1.9	16,532	15,466	13,212	8,701	8,140	6,954
Kingstown Suburbs	6.4	8,609	10,757	12,508	1,345	1,681	1,954
Calliaqua	11.8	17,440	20,290	22,095	1,478	1,719	1,872
Mariaqua	9.4	8,408	8,864	8,145	894	943	866
Bridgetown	7.2	6,762	7,532	6,754	939	1,046	938
Colonaire	13.4	7,210	7,890	7,482	538	589	558
Georgetown	22.2	6,494	7,303	6,914	293	329	311
Sandy Bay	5.3	2,867	2,793	2,716	541	527	512
Layout	11.1	5,510	5,993	6,303	496	540	568
Barrouallie	14.2	4,667	5,199	5,422	329	366	382
Chateaubelair	30.9	6,101	6,045	6,087	197	196	197
<b>Total Mainland</b>	<b>133.8</b>	<b>90,600</b>	<b>98,132</b>	<b>97,638</b>	<b>677</b>	<b>733</b>	<b>730</b>
Northern Grenadines	9	4,740	5,514	5,389	527	613	599
Southern Grenadines	7.5	2,505	2,853	3,226	334	380	430
<b>Total Grenadines</b>	<b>16.5</b>	<b>7,245</b>	<b>8,367</b>	<b>8,615</b>	<b>439</b>	<b>507</b>	<b>522</b>
<b>TOTAL SVG</b>	<b>150.3</b>	<b>97,845</b>	<b>106,499</b>	<b>106,253</b>	<b>651</b>	<b>709</b>	<b>707</b>

*Source: Population and Housing Census 1980, 1991 and 2001*

### Environment

St. Vincent and the Grenadines is susceptible to tropical storms, hurricanes and also has an active volcano the La Soufriere. The highest point is the La Soufriere volcanic mountain of 1,234 m. The Island is signatory to the Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, and Whaling Agreements.

### Density

The average density for St. Vincent is 707 persons per sq mile.

The least densely populated areas are Chateaubelair (197/sq mile); Georgetown (311/sq mi); Barrouallie (382/sq mi) and Sandy Bay (512/ sq mi). There was a net loss of 14.6 percent of persons from the Kingstown census division with gains in the suburbs of 16.3 percent.

### Livelihood

In 2001, 41.6 percent of the total population worked in Agriculture, Construction and wholesale industries.

### Health

Recent basic health indicators for St. Vincent and the Grenadines have been positive. Particularly in infant and maternal health, expansion in primary health care coverage has brought this country on target

to achieve Millennium Development Goal (MDG) number four, “*Reducing Child Mortality*” by 2015. There is full immunization coverage for the under 5 age group and maternal deaths (per 1000) are negligible. Fertility rate is at a stable 2.8 children per woman with an average life expectancy at birth of 74.3 years, comparable to that of developed countries.

Through several line ministries, an array of social assistance programmes is implemented to address vulnerability in the population. However, these programmes provide less than adequate coverage and, due to insufficient coordination within and among them, duplication often occurs. Weaknesses in this area of the social sector have been observed throughout the OECS and reflect the need for organised social planning.

### Education

The literacy level of St. Vincent and the Grenadines is approximately 96 percent. Universal education and free education have helped to achieve this result. In addition the Government provides subsidies to further advance the provision of private and tertiary education system.

### Disaster vulnerability

St. Vincent and the Grenadines is vulnerable to a number of natural

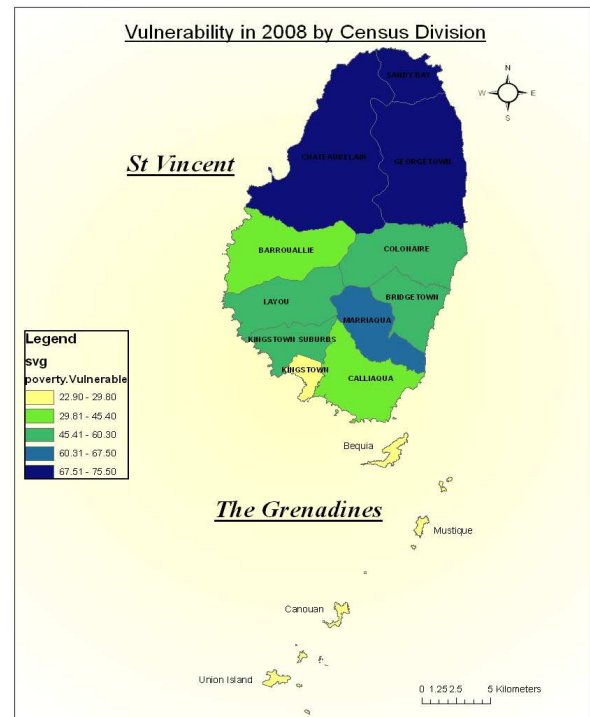
disasters and hazards. These include tropical storms, hurricanes, earthquakes, sea surges, high winds, droughts, wild fires, landslides, soil erosion, agricultural pest and volcanic eruptions. The La Soufriere Volcano, located at the most northern part of the island, last erupted in 1979. Additionally, there is an underwater volcano in the southern part of the Grenadines “Kick Em Jenny” that also poses a threat, this volcano last erupted in 1977 and most recently in 2001 this volcano is located near Union Island and Carriacou.

The topography of the island necessitates varying mitigation measures. The islands capital – Kingstown - has the highest concentration of economic activity. The Administrative complex, which is the administrative capital, was constructed on reclaimed land. The Cruise ship berth, the Port Authority, the E. T. Joshua Airport and the island is main police station are all in the vulnerable location. Many of the hotels are located on the sea front. More than sixty percent of the population lives on the coast.

The Grenadine islands have similar layout. Canouan, Mustique, Union Island and Bequia they are all susceptible to natural disasters.

The 2008 Country Poverty Assessment (CPA) report indicated that, 30.2 percent

of the population was deemed to be poor, and 2.9 percent was deemed to be indigent. An additional 18 percent, though not poor were vulnerable (defined as being at risk of falling into poverty in face of economic shock, or other **disaster**) Thus altogether 48.2 percent of the population was under the vulnerability line.



## Project Component

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### Slope Stabilization and Road Re-alignment Sub-projects

#### Ginger Village –Belmont Landslide sub-project

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**Background.** On September 2, 2013, a large landslide occurred on the Belmont main road in the area of Ginger Village – rendering the road impassable. The road is the main inland arterial road that connects several large communities between Mt. Pleasant/Peruvian Vale and Arnos Vale viz Fairhall, Belmont, Mesopotamia, Ginger Village, Evesham, Hopewell, Calder and Richland Park. This road is also the main inland route to the new international airport at Argyle, which is scheduled for completion in late 2014. As a result of the landslide, the road has been blocked and the traffic is not able to use the road over half of its length. This has caused significant disruption in the movement of traffic and great difficulties for the road users.

**Sub-project Rationale.** The failure of the slope at Ginger Village has resulted in complete failure of the Belmont main road in the area of Ginger Village - affecting the normal life and significant economic losses in the areas. The objective of this activity would be to stabilize the slope to facilitate the re-construction of the road in order to restore connectivity of the main road. Several technical options of using alternate routes have been considered, but they have not been found technically and economically viable due to increased distances, difficult road alignments and higher costs. Under the present situation, the most appropriate option would be to reconstruct the affected sections of road by improving road alignments and better design standards to reduce current disaster vulnerability as well as long-term climate risk. The geo-technical studies for the slope stabilization will also inform the full technical design for the road re-alignment that will be prepared in house.

#### Mt. Greenan, Spring and Maroon Hill Sub-project

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**Background.** Vulnerability analysis of the national road infrastructure network has identified three critical locations, which require either preventative or rehabilitative work to vulnerable slopes adjacent to road infrastructure. Mt. Greenan is a village located on the Windward Highway. Immediately north of Mt. Greenan, the Windward highway follows a coastal route cut from an unstable slope bordering the sea. The upper slope varies up to 40 feet in height and is

comprised of alluvial and reworked deposits. This 0.5 km stretch of road has suffered from continuous small-scale landslides over the years causing temporary blockage – particularly during the rainy season. The Windward Highway is the main route on the east coast of the island and provides access to approximately 54,000 people, 17,000 of which are directly affected by recurrent slope failures and resulting road blockage north of Mt. Greenan.

South of Mt. Greenan is an area called Spring where the Windward Highway road alignment borders the sea and where there is undercutting on the lower slope as a result of sea erosion. Although the area is comprised of hard material (lava flows and associated deposits), there has been steady erosion over the years to the road edge despite previous stabilization interventions. **Approximately, 23,000 persons would be affected if the road was to fail at this location.**

Maroon Hill is located inland and is along the main road connecting the valleys of three communities viz Richland Park, Charlotte and Greiggs. Both the upper and lower road slopes are comprised of alluvial and reworked deposits and have registered failures along a 0.5km stretch over the years.

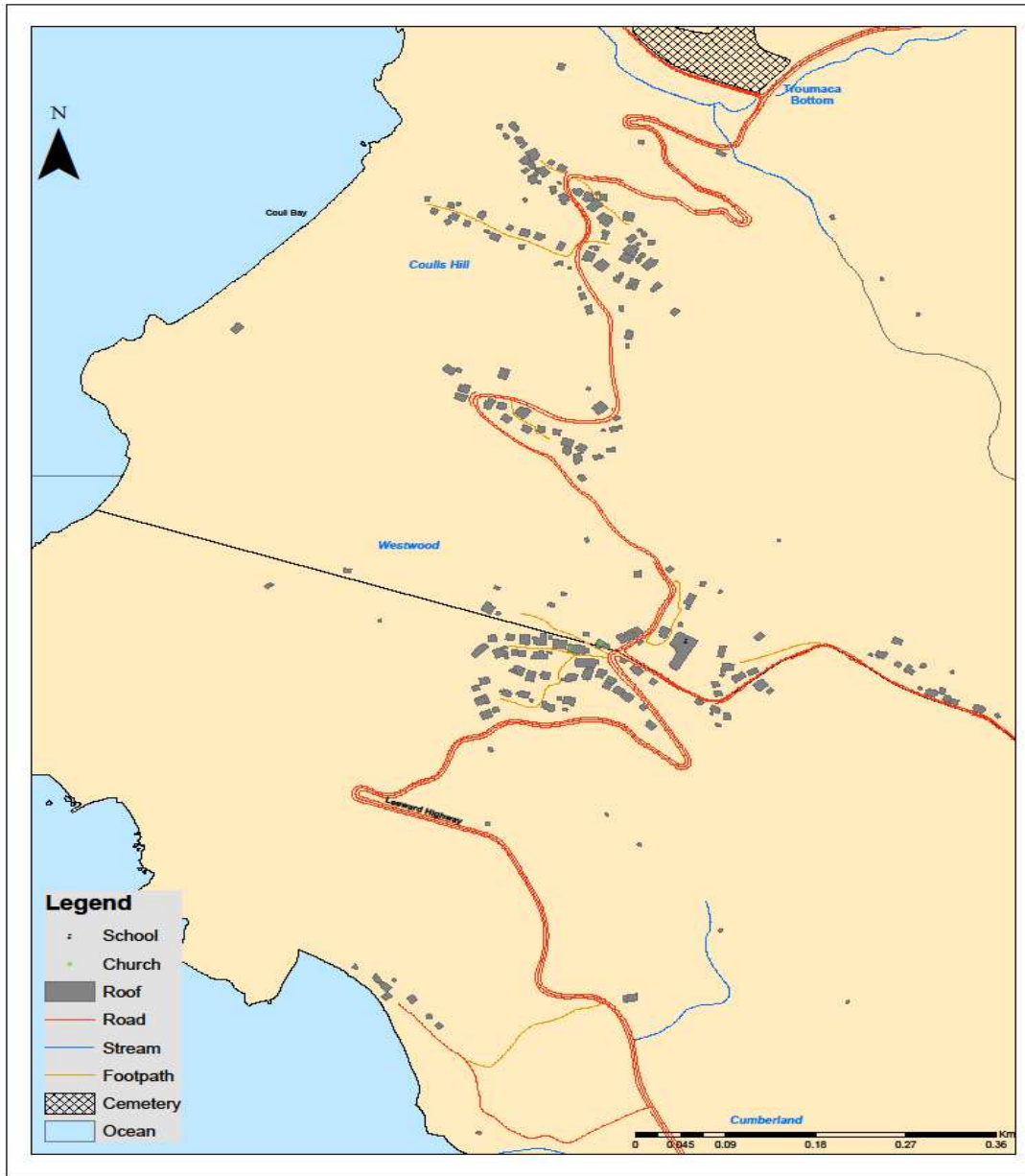
*Sub-project Rationale.* Landslides are common in St. Vincent and the areas referenced above suffer from recurrent slope instabilities that result in road blockage and are likely to fail completely, which would result in a major road blockage along the identified routes. These slopes require long-term stabilization measures to avoid further economic losses. The objective of this activity would be to ensure that the Windward Highway remains always open to traffic. Several technical options of using alternate routes have been considered but they have not been found technically and economically viable as they are secondary and tertiary roads and would require longer road lengths, difficult road alignments and higher costs.

Each site requires a combination of slope stabilization, road re-alignment, construction of bypasses across weak sections, and improved drainage systems in order to reduce current vulnerabilities. The geo-technical studies at each of these sites is underway and the full technical designs are expected to be ready by January 2015.



Road Rehabilitation - Coulls Hill Road Sub-project

**Cross Section Map  
Coulls Hill**



**Background.** In the disaster event on December 24-25, 2013, some sections on Leeward Highway in the areas of Coulls Hill and Belle Isle, were washed off and the road was closed to traffic.

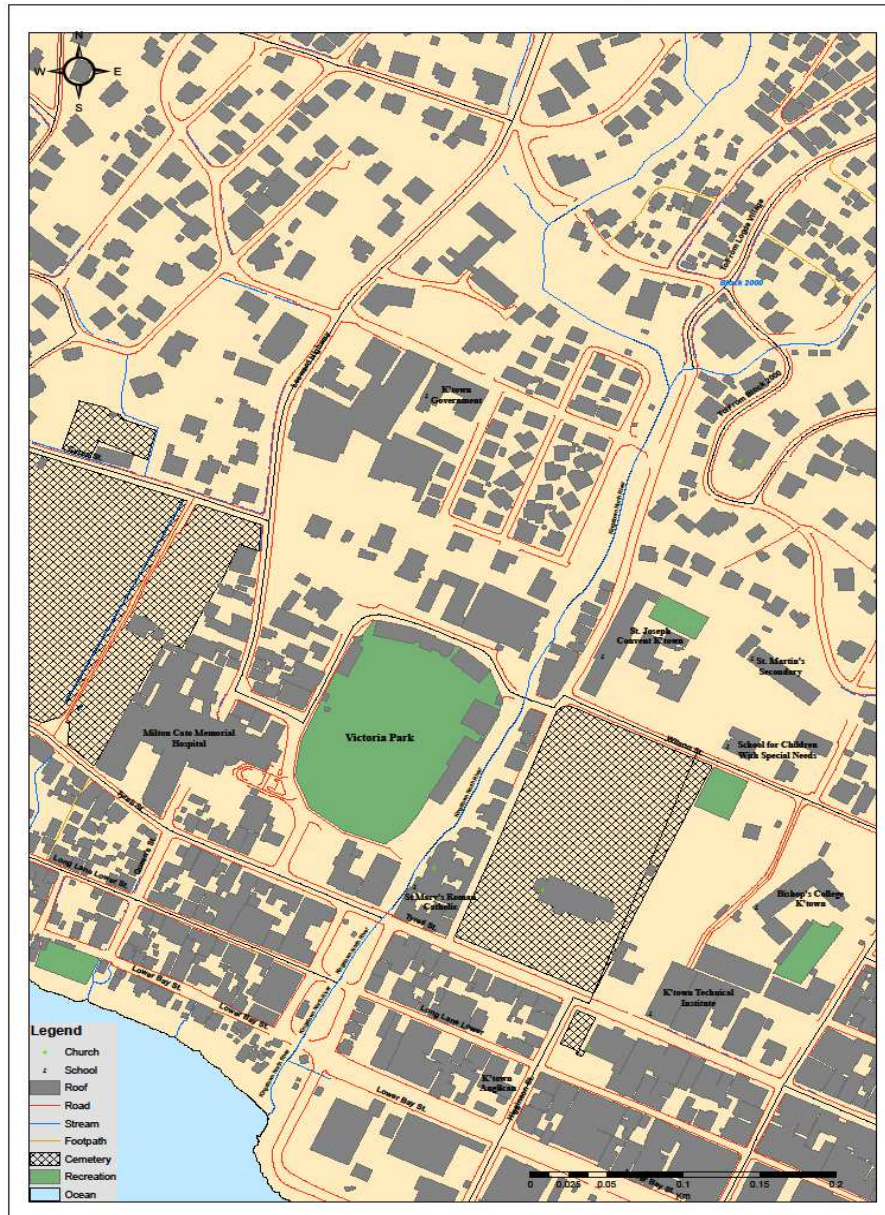
*Sub-project Rationale.* This road provides the only access to communities with population of 12,500, two hydro power stations and several local water supply systems. The rehabilitation of this road is critical to provide access to communities and to ensure proper functioning of the water supply system.

*Sub-project Beneficiaries.* The affected population of 12,500 will be the primary beneficiaries. The rehabilitation of road will promote economic development through improving transportation system and advancing social life. Direct beneficiaries will also include the National Security, National Emergency Management Organization, Power Company (VINLEC) and the Water Supply Company.

*Proposed Investments.* The rehabilitation of the affected sections of the road including gabion baskets, retaining walls, benching of slopes, surface water control and tree planting.

## River Training and Bridge Rehabilitation: North River and South River Sub-projects

**Cross Section Flood Zone: West Kingstown**



**Background.** The North River and the South River breached at various points causing extensive flooding in the commercial and administrative areas in Kingstown. Due to high rainfall intensity and severe flooding, the following damages occurred: (a) abutments of a number of bridges suffered scouring; and (b)

bridge decks were overtopped on account of inadequate bridge openings and water above the design flood level.

***Sub-project Rational.*** The North River Channel, suffered erosion during the event. The South River breached its banks in the lower reach in the Middle Street area. Over a length of approximately 1 km the river has approximately 15 bridges that serve the city road network. These bridges generally remained functional, however due to overflow two bridges in the Middle Street and Bay Street areas affected due to abutment scouring, and this will require immediate repairs. Parts of the main hospital on the island located in West Kingstown, were flooded causing evacuation of patients as well as damage and loss to the medical records, equipment (CT Scan machine and others), medical supplies and building finishes. The hydraulic study for North and South Rivers was carried out in 2005 by DLN consultants, which need to be updated.

***Sub-project Beneficiaries.*** Direct beneficiaries would be the population who will have savings in the travel costs and enhance safety. Hospital authorities will also be the beneficiary.

***Proposed investments.*** The proposed investments for the North River and South River areas include Bridge replacement, embankment protection and hydraulic design improvements. To prevent flooding of the hospital site, it requires a diversion of water from the existing drain to a new larger conduit into the North River. This will increase the flood levels in the lower reaches, which in turn will require the rehabilitation of the North River bridges. Additionally, the existing plan to relocate the Kingstown docks to the Western end of the bay will impose increased traffic loading on the old bridges, which in turn will require rebuilding or upgrading the existing drainage structures over the North River.

### **Additional Satellite Warehouses at Mesopotamia, Georgetown, Bequia and Union Island sub-projects**

***Background.*** Aging and unmaintained infrastructure coupled with changing climatic conditions have deteriorated existing public infrastructure, resulting in high levels of vulnerability to natural hazards. Existing vulnerabilities of the road infrastructure related to landslides and rock falls, while currently being addressed, would continue to provide uncertainties related to their functionality following significant climatic and seismic events. Under the proposed AF, additional satellite warehouses in Mesopotamia, Georgetown and the islands of Bequia and Union Island, some of the most isolated communities in SVG, would be constructed to improve community resilience and increase localized capacity to respond to a disaster event.

**Sub-project Rationale.** SVG is a multi-island state, and due to its rugged topography, communities on vulnerable sections of its road infrastructure such as Georgetown and Mesopotamia can easily be cut off from services in the event of a major disaster. The islands of Bequia and Union by virtue of their isolation from the mainland would be required to be first responders to disasters in isolation of assistance from the mainland. The objective of this activity would therefore be to construct satellite warehouses in specific vulnerable communities to provide immediate access to emergency equipment following a significant disaster related event, and to provide them with the capacity to respond to the crisis immediately following its occurrence.

**Sub-project Beneficiaries.** Direct beneficiaries of the proposed satellite warehouses would include the members of the communities in the various catchment areas of Georgetown (approx. 6,500 persons) with an estimated 55.6 percent poverty headcount, Mesopotamia (approx. 3,000 persons) with an estimated 29.2 percent poverty headcount, Bequia Island (approx. 4,000 persons) with under 20 percent poverty headcount and Union Island (approx. 3,000) with under 20 percent poverty headcount.

**Proposed Investments.** The satellite warehouses (reinforced concrete and block work structures) would primarily provide storage capacity for essential disaster response equipment and supplies. Also included, would be a small office, toilet and shower. It is anticipated that the office space would be used for meetings or converted into a Community Emergency Operations Center should the need arise. The building would be wired to receive power from the electric grid, generator and photovoltaic supply systems and have a limited water storage capacity. The warehouses would be managed by the local or district disaster committees.

**Component 2: Regional Platforms for Hazard and Risk Evaluation, and Applications for Improved decision making (Increase by US\$14.8 million).** The proposed AF would be used to cover financing gaps and scale up activities to increase the impact of RDVRP. Specific sub-projects and activities identified under this component are summarized in the following table:

Activities		
River Defense: Buccament, Carriere	Fords and River Defense: Arnos Vale/Warrawarrow River Watershed Pilot area: (i) South River Bridge; (ii) Green Hill Bridge; (iii) Dauphine Bridge; and (iv) Fenton River Fords	Coastal Defense: Georgetown: Dark View and Sans Souci

## **Buccament and Carriere River Defense Sub-projects**

*Background.* The lower sections of the Buccament and Carriere rivers pose potential threats to significant property and road infrastructure. In recent years, the Buccament valley has witnessed the development of a significant number of residential houses and a major hotel development. As a result, clearing and other poor land use practices in the development process have led to flooding of the river in its lower sections - requiring an intervention. The road through Carriere follows a vertical embankment of the Yambou River over a short (0.1km) stretch at a height of approximately 15m. The road is vulnerable to erosion at this point and requires an intervention on the river embankment.

*Sub-project Rationale.* According to climatic and development trends, flood events experienced in recent years by both rivers would continue to be exacerbated. Hydrological and hydraulic studies (DLN 2006) have been completed for several rivers including the Buccament River with similar studies underway on the Yambou River (among others) by the IBI Group.

The current project seeks to implement the most critical flood mitigation measures proposed by the hydraulic studies. This would involve a combination of both academic and permanent remedial measures and that would comprise part of an integrated watershed management plan.

The technical design and construction of risk mitigation works and adaptation measures to mitigate flooding and promote river erosion control would reduce damage to public and private property, improve the mobility of the target population during and after a flood event, and offset other socio-economic effects due to road blockage caused by flood waters. Moreover, the implementation of comprehensive river management plans would improve river flows and its biodiversity.

*Sub-project Beneficiaries.* The direct beneficiaries of proposed interventions (approx. 2,600 people) would include affected residents and users of at risk public buildings and roads. Along the Buccament River, there are two public schools (1 primary and 1 secondary) that frequently flood during times of heavy rainfall. The students and faculty of these institutions would be some of the primary beneficiaries of the proposed sub-projects. Additionally, population statistics indicate a population growth of 6 percent in the Layou District (includes both

Buccament and Carriere) over the past two decades<sup>1</sup>; this emphasizes the growing importance of investing in vulnerability reduction interventions in these areas. In the Buccament and Carriere areas, the poverty headcount is just above the national average at 32.4 percent and primary economic activities include agriculture, fishing, construction and services.

***Proposed Investments.*** The sub-project would include the appointment of a consultancy firm to design and implement recommendations derived from previous watershed studies - targeting the most critical vulnerable sections of the river, which the budget can support. This would include river defense measures that include a combination of reinforced concrete works, gabion baskets, realignment, levees, tributary drainage improvements, vegetation, and any other proven complementary efforts to improve past designs.

The integrated watershed management activities would involve both technical studies and permanent remedial measures. With regard to the technical studies, this sub-project would inform the existing management plan for the Arnos Vale watershed by providing critical field data. The activities associated with this aspect of the sub-project would include workshops and knowledge management support, which would be organized to facilitate regional collaboration around integrated watershed management. Additionally, a maintenance plan would be prepared, which would include activities related to periodical drainage cleaning and educational programs to change human behavior in relation to land use and waste disposal management.

### **Coastal Defense Dark View Sub-project**

***Background:*** In the disaster event on December 24-25, 2013, some sections on Leeward Highway in the areas of Dark View were washed off and the road was closed to traffic. The coastal erosion in the area of Dark View may be due to a process of coastal retreat in recent years, probably as a result of a combination of sea level rise, storm surge and human activities.

***Project Rationale.*** The Dark View sub-project has two components, the upper and lower slope protection. For the upper slope protection, the funding of the geotechnical studies is covered under RDVRP, and is scheduled to commence shortly. For the lower slope protection, the funding of the coastal studies for the sea erosion is covered under the Caribbean Development Bank and the studies are currently in progress. The technical reports on the concept designs and the

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<sup>1</sup> Government of Saint Vincent and the Grenadines Census Division Statistics.

preliminary investigations have been submitted and are being reviewed by the MoTW.

The recent storm event caused landslides in the area and unfortunately five persons died in Rose Bank. As a result, the road was closed to traffic for two days and the vulnerability of the road structure increased significantly. Therefore, it is critical to carry out immediate planning, design and implementation of remedial measures on an emergency basis. For the upper slope interventions, the funds are available under RDVRP; however, for the lower slope interventions no funds are available. The damages that occurred have created a major risk to the stability of all coastal infrastructure and particularly this section of the coastal infrastructure is vulnerable to disaster events and currently under serious threat of stability. Furthermore, the interventions proposed for the remedial works of the lower slope protection, has tremendous potential for economic development on account of planned improvement of amenities in the area, which has an expected outcome of increased tourism, local recreation and commercial activities.

***Sub Project Beneficiaries.*** The affected population about 9,500 will be the primary beneficiaries. The rehabilitation of road will promote economic development through improving transportation system and advancing social life.

***Proposed Investment.*** The proposed investment for the sub-project will include engaging consultants for carrying out feasibility studies, field surveys, soil investigations, engineering design, and preparation of bidding documents. This will also include to award civil works contract to execute urgently needed interventions of slope protection, retaining walls, gabions, rehabilitation and reconstruction of roads, bridges and other drainage structures to ensure safety of traffic on the road.

### **Coastal Defense- Sans Souci Sub-project**

***Background.*** Sans Souci is located in the southern end of the Mt Greenan slope stabilization project on the Windward coastline. This area, including the Mt Greenan stretch north of Sans Souci, has been subjected to steady erosions over the decades. Anecdotal information indicates an erosion rate of approximately 3 feet per year, similar to that of the Georgetown area to the north.

***Project Rationale.*** The Mt Greenan slope stabilization project is primarily designed for interventions in the upper slopes along the Windward road. The geotechnical investigation about to be launched on the upper slope is anticipated to provide a solution, which is likely to involve the reduction of the slope angle. This will produce between 60,000 and 100,000 cubic yards of material that will



have to be transported and placed elsewhere with substantial haulage costs. To identify location for the placement of such a huge quantity of material will impose a serious technical problem. The proposed Sans Souci coastal defense project would provide the following benefits: (a) an ideal location taking into account the economic and social development considerations; (b) providing opportunities for increased land area; and (c) ensuring protection of the foot of the lower slope of the Windward highway, which is currently being eroded along the Mt Greenan stretch. Furthermore there are four properties (combined value of approximately USD 100,000), which have been directly affected by the erosion in the Sans Souci area. These buildings are now vulnerable and under serious threat of collapsing, if the current rate of erosion continues. The proposed Sans Souci project will provide the synergy with the Mt Greenan Slope Stabilization project both in terms of reduced construction costs and increased coastal defense, and will ensure safety of road with both upper and lower slopes well protected.

*Sub Project Beneficiaries.* The affected population about 11,500 will be the primary beneficiaries. The rehabilitation of road will promote economic development through improving transportation system and advancing social life.

*Proposed Investments.* The proposed investment for this sub-project will include engaging consultants for carrying out a coastal erosion study, environmental impact assessment, design review and its updating based on recent field surveys, soil investigations, coastal erosion and geo-technical studies. Consultant will also update bidding documents, bill of quantities, works requirements and technical specifications based on which the bids will be invited, and civil work contract awarded. The anticipated interventions will include rock or concrete armor protection on geotextile fabric on the seaward side of the landfill, and the civil works, which will comprise of slope protection, retaining walls, gabions, rehabilitation and reconstruction of roads, bridges and other drainage structures to ensure safety of traffic on the road.

*Component 3: Natural disaster response investment* Funds will be allocated to support the GoSVG's future emergency response capacity, which can be reallocated to other components if not utilized by December 2016. The original allocation was mobilized in response to the December 2013 disaster event.

*Component 4: Project Management and Implementation* The AF would support strengthening of project management through scale up capacity building activities. In particular, the AF would be used to provide monitoring and evaluation (M&E) training and support to the staff of the implementing agency. (IDA: \$300,000; PPCR: \$200,000).

## SOCIAL ASSESSMENT CONSULTATION FRAMEWORK

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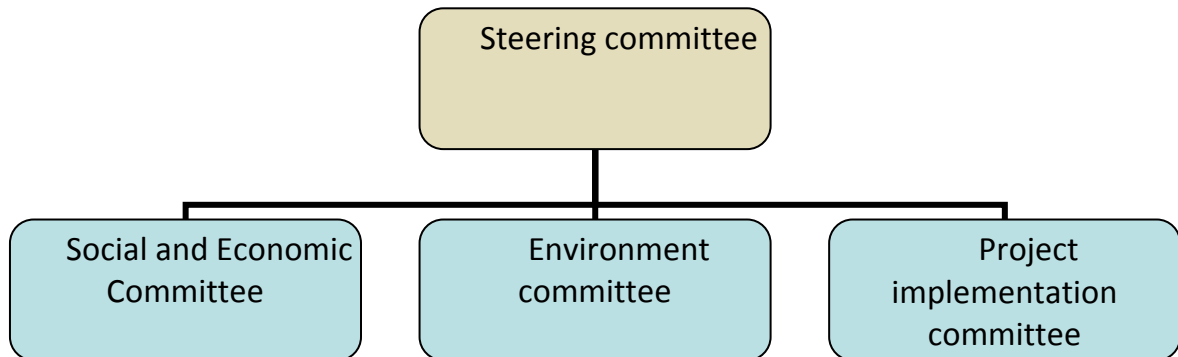
An extensive consultation framework was used for the Regional Disaster and Vulnerability Reduction Project. The development of the Social Assessment Report required the establishment of a project Steering Committee along with the active participation of all stakeholders.

The Steering Committee has representation from the Ministry of Finance and economic Planning, the Ministry of transport and works, the Ministry of Housing, Ministry of Health and the Environment, Ministry of National Security- NEMO.

The social and economic committee has representation from the Ministry of social Development, the Ministry of Finance and Economic Planning, the Ministry of Housing.

The Environment Committee has representation from the Ministry of Health and the Environment and the Ministry of National Security – NEMO.

The project implementation committee is mainly members of the PSIPMU in the Ministry of Finance and Economic Planning.



### Consultation with the community

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In addition to the direct interviews and focus groups discussion it is proposed that there would be various ongoing community meetings with key members of the community as well as the entire community to provide the community members with an opportunity to give their views on the different implementation cycles of the projects.

1. Explain the project initiatives
2. Get community buy-in
3. How can specific community members or individuals be involved

## Methodology

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### Overview

Participatory Research Approach (PRA): This approach is used to engage community residents, field research facilitators, team members of the PSIPMU, as well as, other Governmental and Non-Governmental Organizations. The PRA incorporates the knowledge and experiences of individuals most affected by the proposed changes into the assessment process. The field research facilitators would be trained in the use of the participatory research methods and techniques that would be used to collect and generate data. The PRA approach is process-oriented, bottom-up and global approach to identify and assess the social impacts.

The fundamental principles of the methodology are a multi-disciplinary team, a mixture of techniques, flexibility and informality. Creating opportunities for participation of the beneficiaries is essential to accurately reflect knowledge, practices, and beliefs.

### The Research Methods:

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The research method used consisted of the following:

- Focus group discussions: This is a qualitative method to obtain in-depth information on concepts and perceptions about a particular issue through small group discussion of approximately 6–12 persons.
- Representatives were invited from the communities of Marriaqua, Buccament, Rose Hall, Rose Bank and Green Hill to discuss the component of the project that would be implemented in their area. The questions chosen for the discussion were taken from the Regional Disaster Vulnerability Reduction Project Questionnaire.

Interviews were conducted with:

- **Individuals** from the community to learn about their own situation in detail, to discuss issues that would be difficult to address in group situations, and to reveal their personal perspective.

- **Key informants**, or people with specialist knowledge, to gain insights on a particular subject, or people who can represent a particular group or viewpoint; and
- **Groups**, either randomly, or systematically selected to allow a focused discussion of a particular issue

Interviews were chosen for this project because it is an efficient technique use to gather information.

Survey, a representative sample was selected by the Census office based on the population on each census division.

### **Research techniques:**

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Both the quantitative and qualitative approaches are use to test objectively as it regards the measurement of the social world as well as provide a more descriptive understanding of the social conditions and livelihood of a people.

### **PROCESS**

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#### **Stakeholder Meetings and Consultations**

Stakeholder meetings were conducted with the agency or agencies charged with responsibility for executing the specific project activity. These meetings served to clarify the activities to be completed (e.g. geographical location and work to be done), persons identified as beneficiaries, the social benefits to individuals and communities, possible negative outcomes and other related issues of social impact. In cases where project activities geared towards directly benefitting community members (e.g. Emergency communication and shelters) stakeholders were consulted to identify how issues of access and community involvement would be stimulated.

Wider consultations were conducted with individuals (or representatives of groups) with related expertise and community/field knowledge. These took the form of technical committee discussions to ascertain the social impact of the project activity, the need and acceptability of the project initiative, beneficiaries of the project and experiences of the community with related disasters (e.g flooding).

**Time Period:**

Interviews and consultations were conducted from December 2010 to February, 2011

Revisit to sites, annually, November, 2013

**Site Visits**

Visits were made to each site with representatives from the agency or Ministry charged with the responsibility for the specific project activity. These visits preceded community consultations and attempted to clarify exact geographic location and work to be done, persons currently using the site and level of risk.

**Community Participation**

Community participation was sought through the use of interviews, group discussions, consultations and surveys. At each site involvement was solicited from residents and users of facilities who have been identified as beneficiaries. Community discussions will attempt to gauge the level of awareness of risk, assess acceptability of project initiative and gather perspectives of need (relative to risk). This component will generate the bulk of data for the Social Assessment.

**Preparation**

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A questionnaire was designed by the Team for the purpose of soliciting community members' perspectives on the proposed activities. Specifically, it aimed to address objectives (a) to (d) of the Social Assessment:

- Ensuring that project initiatives are acceptable to beneficiaries
- Assessing their perspectives on the benefits and possible adverse impact of the proposed project
- Soliciting their recommendations for alternative or additional project activities
- Providing baseline data on each sub-project

This instrument also served as a guide for the group discussions.

**Methodology for the development of the questionnaire**

1. Comments and brief project description were review from a selected committee: Chief Statistician, Econometrician, Economist, Social Research Specialist, Project Director as well as the social Team .

2. The World Bank's Senior Social Assessment Specialist was consulted, basic questions were developed, and they were used to draft the base questionnaire which took the objectives of the social assessment as its rationale for including or excluding questions.
3. The World Bank Senior Social Assessment Specialist commented on the questions, suggested changes which were considered.
4. The changes were incorporated. The base questionnaire was circulated amongst a multi-disciplinary committee for review and comments.
5. A modified questionnaire was designed to incorporate the committee's comments. The modified questionnaire was re-circulated amongst the committee members, where further changes were made.
6. The final questionnaire was accepted by the committee as it was deemed to cover relevant areas.

### **Questionnaire design**

The questionnaire was divided into seven sections as follows:

1. Demographic attributes of the respondents;
2. Community members' experience of natural disaster; opinions towards social and environmental issues;
3. Community's views on rivers in their community, risks, uses and possible measures to mitigate risk
4. Community's views on slope stability and land stability in a changing climate in their community, threat, uses and possible measures to mitigate risk
5. Community's views on coast in their community, danger, causes and possible measures to mitigate risk
6. Community's views on the Disaster Vulnerability Reduction Project, possible impact, necessity and scope expansion.
7. Community members' views on climate change awareness, disaster preparedness, community participation, available skills of members, most effective early warning method.

### **Questionnaire Administration**

Sixteen (16) Field Officers were trained in data collection and community risk assessment for the purpose of the survey. This included Field Officers from the Community Division in the Ministry of National Mobilisation etc. Field work was carried out by the sixteen (16) field officers, along with members of the Social Assessment Team.

### **Data Collection:**

**Site Visits** were made to all project sites together with representatives from the relevant agencies, e.g. NEMO and Ministry of Transportation & Works. This was done in order to clarify specifics of the location, nature of the work to be done, and the potential impact.

**Technical Committee Meetings:** Several Technical Committee Meetings were held on separate project components to clarify issues related to project implementation and impact. (See appendix for list persons consulted.)

**Stakeholder Meeting:** One (1) all-inclusive stakeholder meeting was conducted. This meeting sought to engage representatives from all agencies charged with responsibilities in executing and coordinating activities under the project (See appendix for list persons consulted). The meeting was aimed at identifying:

1. Benefits of the project activities
2. Persons or category of persons who would benefit
3. Potential negative impacts including land acquisition, displacement and relocation

Two Hundred and Seventy (270) Questionnaire Interviews were conducted with residents of 16 communities: Sandy Bay, Fancy, Georgetown, Chester Cottage, Colonarie, Spring, Marriaqua, Arnos Vale, Kingstown, Buccament, Barrouallie, Cumberland, Rose hall, Rose bank, Dark view, and Troumaca.

Community selection was based on number of criteria including, number and scope of activities to be conducted, population around the project site, proposed impact e.g. land acquisition and relocation, and level of social vulnerability including poverty.

Apart from the questionnaire interviews, focus groups discussions were held with residents of two (2) Communities: Marriaqua and Buccament. Group discussions were also held with 1 environmental group (Kingstown) and 2 student-led groups engaged in environmental activities (Kingstown). In addition Interviews and informal discussions were held with key informants in Sandy Bay and Fancy.

Secondary sources were used in the collection of data for the Social Assessment.

Sources include:

- 2001 Population and Housing Census
- 2007/2008 Country Poverty Assessment
- Various Damage Assessment Reports
- Community Development data

### Sampling and Justification

A representative sample was selected from the country's thirteen (13) census divisions.

<b>Census division</b>	<b>Number</b>	<b>Actual</b>	<b>Response</b>
Kingstown	46	20	17
Suburbs	35	0	No project activity
Calliaqua	77	25	24
Marriaqua	25	30	24
Bridgetown	21	20	15
Colonaire	25	20	20
Georgetown	21	40	35
Sandy Bay	7	40	37
Layou	9	25	16
Barrouallie	21	35	30
Chateaubelair	18	65	51
Northern Grenadines	21	25	Not applied
Southern Grenadines	14	25	Not applied
<b>Total</b>	<b>340</b>	<b>365</b>	<b>270</b>

The sampling method was purposive. Questionnaires were administered to persons who, due to factors of physical or geographic location, and vulnerability to natural disaster, are most likely to benefit from the project. In practice, this included persons in close proximity to project sites, persons living near to rivers, persons living near to the coast, residents of communities near the coast and persons who own lands or operate businesses in the communities of interest. Similarly, discussions and informal interviews were held with key personnel, who,



through participation in community/ environmental organisations or previous experience with disaster, made them of interest to the assessment.

Given the Social Assessment was aimed at assessing the potential impact of the project, particular attention was paid to more vulnerable groups and communities for whom impact was most critical. Special mechanisms were employed to ensure that views of women, the poor, the elderly and other marginalized groups were adequately represented in the sample. The methodology therefore employed the use of:

1. Oversampling as well as key informant interviews in the communities of Sandy Bay and Fancy. These areas are of particular interest due to high levels of poverty and the possible presence of Indigenous People. The Social Assessment Team notes that these communities have also been subject to increased scrutiny and participatory research, and instead employed the use of key informants to ensure that quality data was collected. .
2. Oversampling and focus group discussions in the communities of Buccament and Marriaqua: Due to the size of these communities, their proximity to the rivers and the risk and incidence of flooding, it was anticipated that river defence activities would have significant impact. Residents were therefore invited to a discussion on the project.
3. Expert group discussions where possible: Community organisations and environmental groups were invited to discussions where possible due to their working knowledge of issues relevant to the project. This process also served to establish contact with the groups, foster collaboration with ongoing activities and identify opportunities for increasing project impact.
4. Purposive sampling in all communities to ensure the most relevant data was collected.

### **Survey Sample**

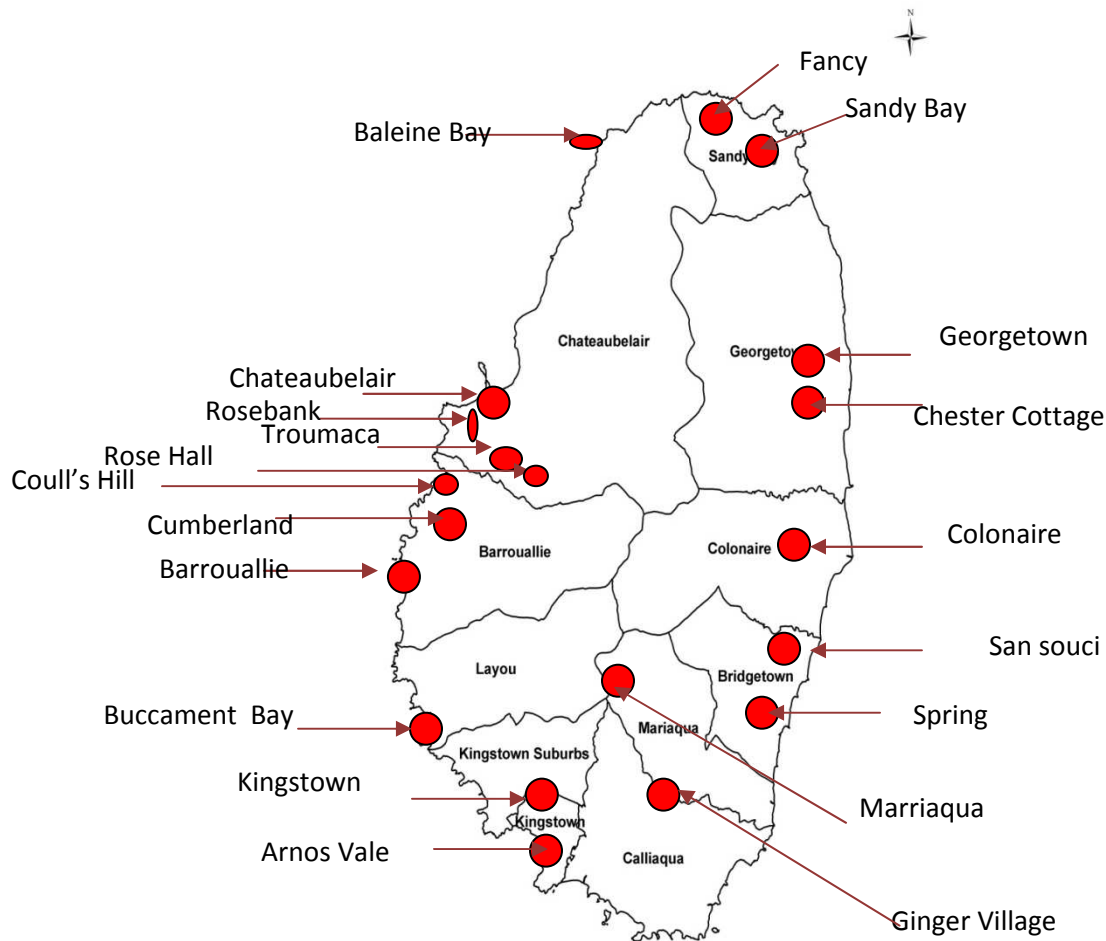
The survey sample comprised two-hundred and seventy (270) respondents from sixteen (16) communities, 49.2 percent male, and 50.8 percent female. All respondents (except 1) were over the age of 18. Thirty- two percent were over the age of 50 years and twenty -four percent were over 55. On average persons had been a resident in their communities for thirty and one half years.

The sixteen communities selected for the survey from which data were collected covered eight (8) of the thirteen (13) census divisions in St. Vincent and the

Grenadines. A total of 137 (50.7 percent) of the respondents reside in the Census Divisions of Georgetown, Sandy Bay, Chateaubelair and Colonaire. These Census Divisions were found to have the highest and most severe levels of poverty in the 2008 Country Poverty Assessment. While the survey did not collect data on the economic status of individuals or households, it can be taken as representing the views of the most poor and vulnerable.

### **Map: Communities where project would be implemented**

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The methodology for the social assessment process has been limited in the following instances:

- 2010 – 2011 was a pre census period in St. Vincent and the Grenadines, it was difficult to measure the population affected by the project implementation

because of the incompatibility of the census division and the project profiles. Household questionnaires could not have been implemented.

- the total potential benefits of project activities on the population have not been incorporated or investigated in some instances and would be determined in a post social impact assessment.
- There was a problem in defining the geographical extent of the project hence the range of the population affected may not have been adequately investigated. This is particularly relevant for the involuntary relocation of people who may reside in the project area.

### Key Social Finding

The Social Assessment revealed the need for the project activities to help to reduce the vulnerability of the communities in the event of natural disaster.

- Employment opportunities for unemployed youth, men and women on some the project sites, for example the construction of the satellite warehouse, river and coastal defence. In Sandy Bay some residents indicated the possible of having the opportunity to make basketry to display next to the coastal defence.
- In Colonaire, some families and farmers are currently experiencing difficulty to get to their farms and lands are being washed away therefore they welcomed the idea. They also suggested the construction.
- Generally gender disparity is not fundamental given that the project interventions are beneficial to all members of the community.

These finding were extracted from the questionnaire.

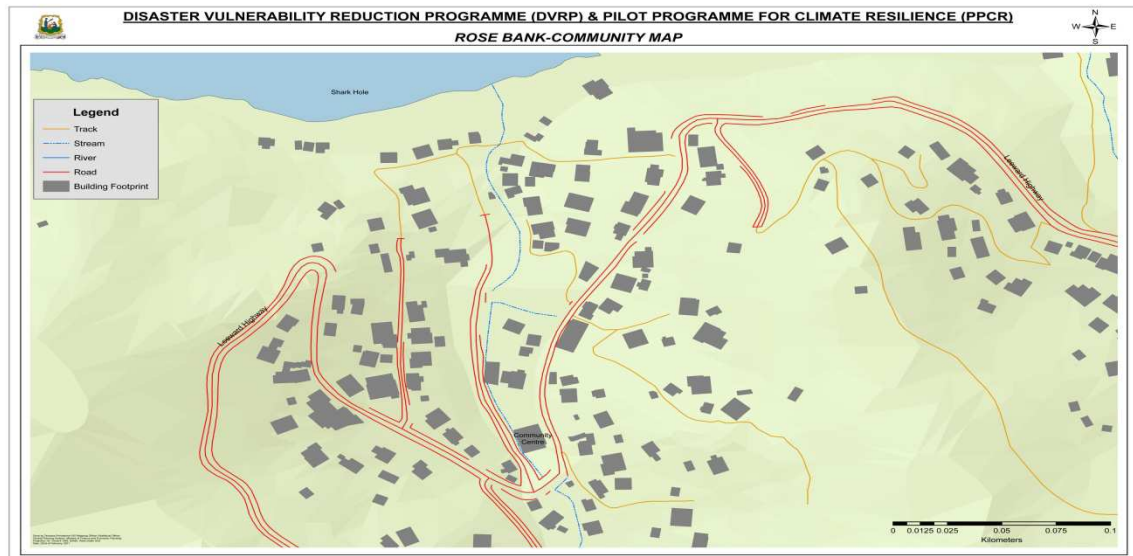
**Table 2: Key social findings**

Beneficiaries	Characteristics	Potential benefits
Women, Children, Vulnerable groups	Are poor, some may lack skills, education/literacy, information, health	Direct: Temporary employment from participation in the project activity. Indirect: Children enjoy better standard of living due to parents' employment.
Community	Members have a strong common interest (satellite warehouses and community centres). Members	Direct: Organization of Self- help groups Improvement the livelihood of community members in the event of the natural Disaster.

	share the responsibility and benefits equitably. leadership identified.	Possible skill training opportunities. Community mobilization
Farmers , fisher folks	Small producers who contribute to the country's economy	Direct: farmers can have tools readily available to clear drain and the Infrastructural support and training space in the use of equipment
Health department	Staff and equipment shortage, limited space	Direct: Better facilities for the entire community to health and nutrition care

## COMMUNITY PROFILES

### DARK VIEW



Dark View is situated in the North western section of St. Vincent. The surrounding topography consists of steep hills that rise to heights of approximately 400ft .The vegetation comprises a mixture of tall trees, grasses and shrubs. The general geology of the area comprises predominantly of the Yellow Tephra Formation underlain by volcanics (Robertson 2003) This Formation is a well bedded pyroclastic fall deposit produced by the Soufriere volcano during the late Pleistocene (Rowley 1978b). (The pyroclastic fall deposit in this location contains mainly fine-grained ash and beds of pumice). Volcanics are believed to have been derived from the Grand Bonhomme Volcanic Centre. Alluvial deposits are located in the area. Soil movement is a common occurrence at Dark View mainly due to the nature of the geology where the ash beds are fairly easily eroded and pumice beds can be washed out or individual pumice easily removed by hand. The beach and coastal front in Dark View has suffered considerable erosion, the sea is encroaching the land.

The Dark View main road borders the coastline. It is located approximately 50 ft away from the mean sea level position. The elevation of the road appears to be about 12 ft above MSL. From observation, it is evident that land seaward of the road has suffered severe coastal erosion and that undermining of the road is imminent.

The livelihood of most community members is seine fishing it is a traditional and current activity of residents.

## Ginger Village:

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### **Background:**

In September of 2013, torrential rains resulted in a 300 X 224 landslide in the Belmont, Ginger Village area. Sections of the roadway have failed due to the presence of underground water and surface water seeping into the land due to damage or blocked drains and other factors that are being investigated. The area has suffered considerable erosion, which may result in the realignment of the road and the possible relocation of the 1 unoccupied household. This resulted in the disruption of the main road network in the south central district of St. Vincent and the Grenadines. This act has caused significant interference in the movement of traffic and great difficulties for road users in the area.

### **Location**

Ginger Village is situated in the south of St. Vincent and the Grenadines on the Vigie Highway in the census division of Marriaqua. The area affected is the main road network connecting the capital Kingstown.

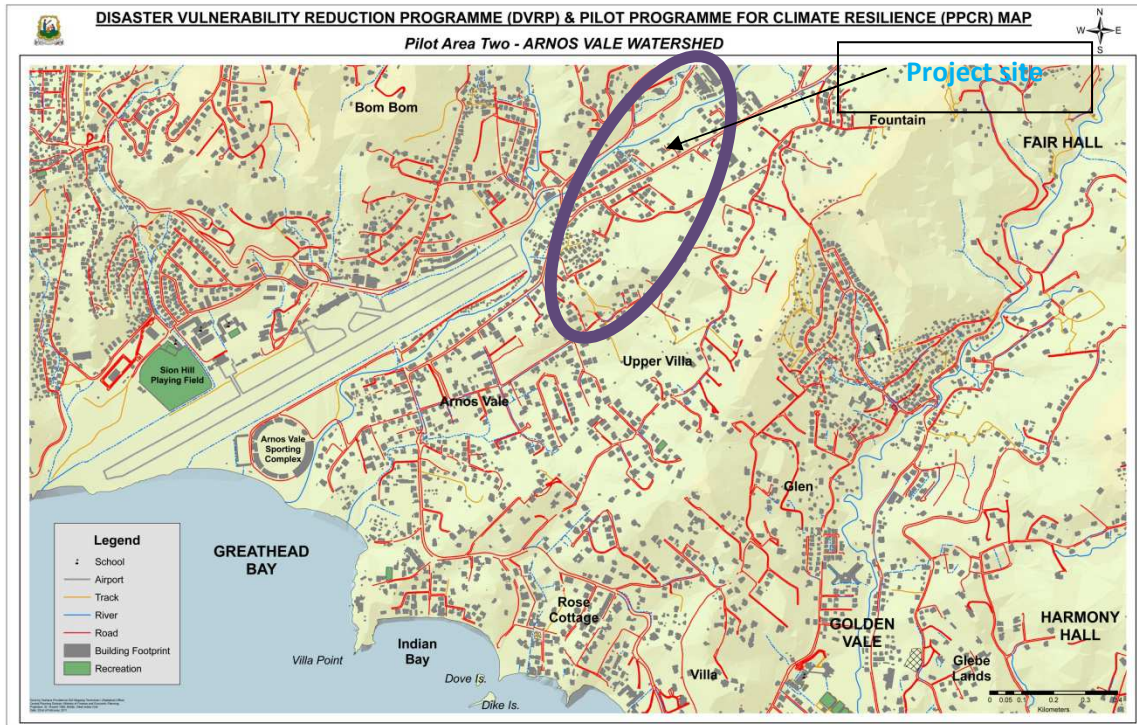
The livelihood of the community members is agriculture.

### **Activity**

This component of the project includes studying and stabilizing a failing slope to facilitate the building of a new section of road that was destroyed by landslides.

MORE INFORMATION ON THIS AREA WOULD BE AVAILABLE ON THE COMPLETION OF THE STUDY

## Arnos Vale



### Activity:

This component of the project includes the lining of the river via the installation 1500 x 18ft gabion baskets and reinforced concrete walls. This will be done in an effort to increase the capacity of the river and minimise the incident and impact of flooding

### Background:

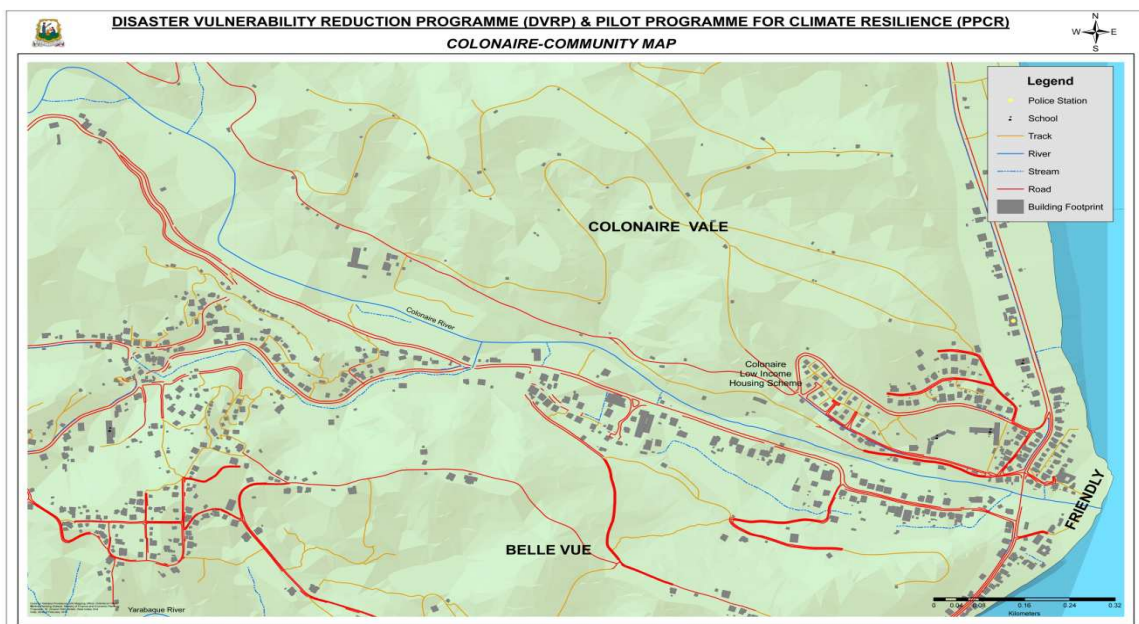
In 2006 the Government of St. Vincent and the Grenadines commissioned a Drainage Improvement Study to assess the existing drainage conditions. Among the key sites examined was the Arnos Vale drainage system which discharges directly into the Warrawarrow River. This area has become increasingly urbanised and the study highlighted problems of increased runoff into the river, increased incidence of flooding and erosion of river banks which threatens individuals' properties. The study further identified critical works required for flood protection and provided conceptual designs and preliminary cost estimates for the work.

**Areas in close proximity** include dwellings (approximately 15), 2 business outlets, 1 utility storage house and 1 health centre.

**Major beneficiaries** include the residents of these dwellings and users and customers of neighbouring facilities.

**Synopsis and justification:** The river presents a major safety risk particularly for dwellings along the river bank due to substantial soil erosion. In addition the river encroaches on the sewage systems of approximately two dwellings presenting various health hazards. Due to this, assessment at this site sought to engage residents in interviews in order understand current impact of the unprotected river and needs with regard to safety. These interviews created direct contact between researcher and beneficiary with a view to gaining in-depth information, soliciting cooperation during the project and enhancing the benefits to the intended beneficiary.

## Colonaire



### *Location:*

Colonaire is a small rural community located on the north eastern side of St. Vincent and the Grenadines. It is approximately 16 miles away from the capital Kingstown. It is mainly a farming community where persons cultivate bananas, citrus, ground provisions and vegetables. The vegetation along the riverbed



consists mainly of shrubs, coconut palms. There is no human settlement along the river. The area is currently being affected by Climate change patterns from torrential rains which endangers the stabilization of the public road.

### *Population*

According to the 2001 census the population of this area was seven thousand three hundred and five (7,305). Five thousand and ninety nine are in the economically active population (5,099), seven hundred and twenty nine (729), 527 males and 202 females are unemployed.

### *Family structure*

The extended family unit is quite evident in this community. Some households are nuclear. Few are of single parentage, in which a woman heads the household in most instances.

### *Culture*

Cultural activities such as ring games and storytelling were done especially on full moon. With the passing of the older generation and the accessibility of technology these customs have died. The main issues affecting the community are unemployment, teen-aged pregnancy, drug abuse, and lack of recreational activities.

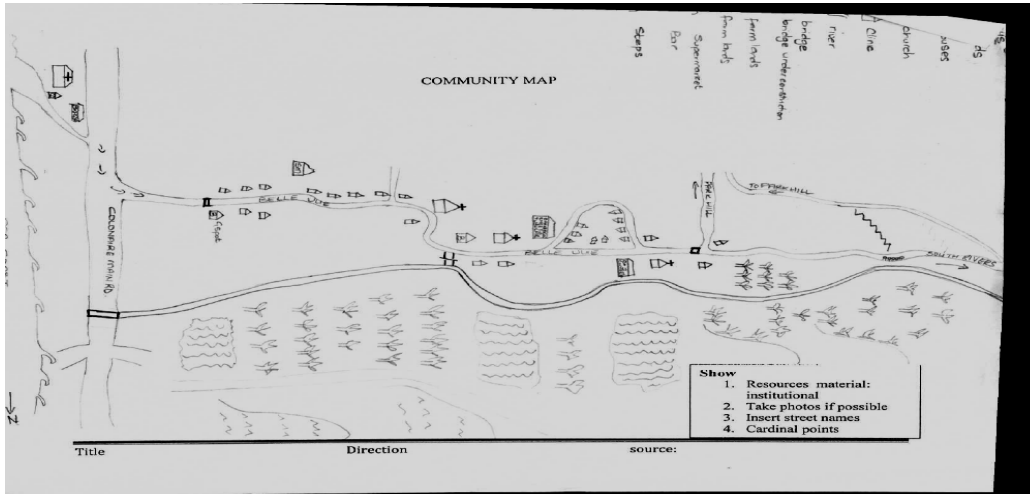
### *Public infrastructure*

The houses are constructed of concrete. Residents have easy access to utilities such as electricity, water, telephone, cable television and internet. Residents continue to use the river to conduct domestic chores such as washing and bathing. There is one health clinic, a police station, a secondary school and a primary school.

### *General*

The Colonarie river is one of the longest watercourses in St. Vincent and the Grenadines flowing from Grande Bonhomie in the north east to the Atlantic ocean on the central east coast. Land along the river is current used for nature conservation and research. Some agricultural activity is also supported. This area is considered a forest reserve in St. Vincent and there is no human settlement on the proposed site. The current 'status' of the river exposes surrounding the lands to erosion and threatens stability of the public road. Due to the steep valley

topography and relatively high moisture content of the soil, there is usually rapid runoff. The vegetation along the riverbank consists mainly of shrubs.



In an effort to mitigate the effects of disaster the project proposes to include this river in the river defence component.

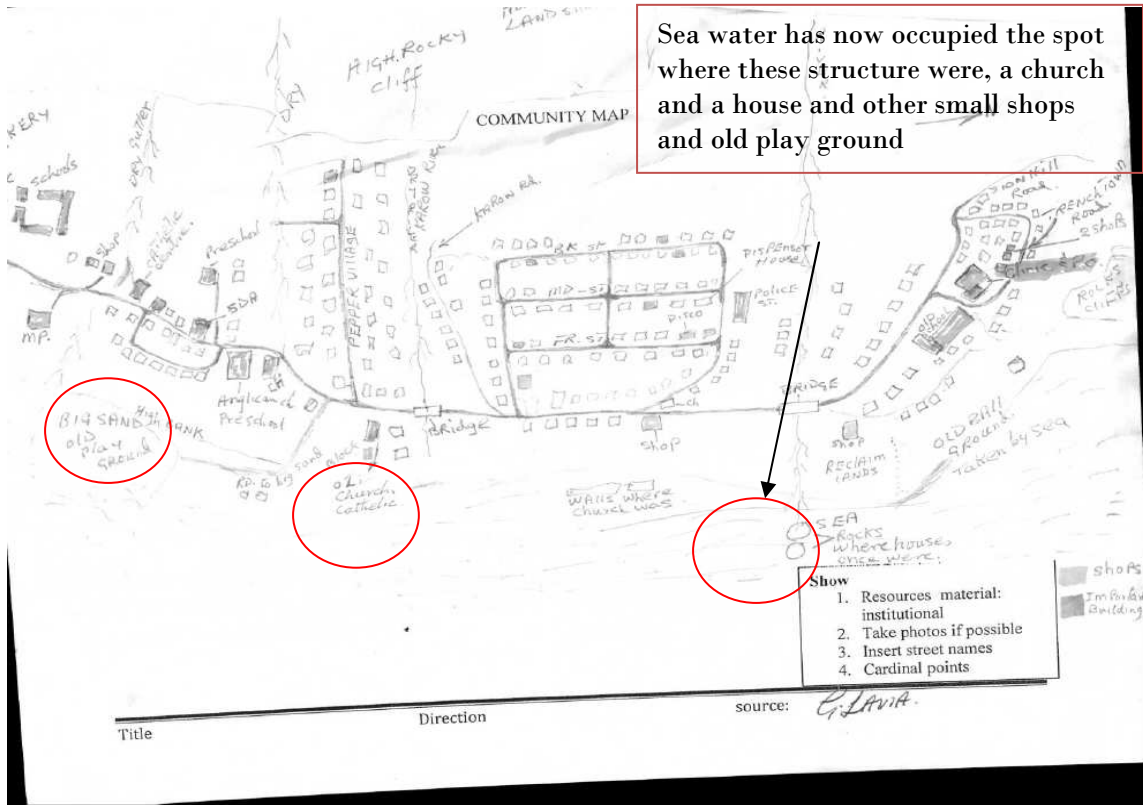
**Activity:** The activity includes the installation of 1000 x 18ft of Gabion baskets along the river bank.

**Areas in close proximity:** includes farm lands; there are no social activities or settlements,

**Major beneficiaries:** owners of farm lands, road users, and members of the surrounding community.

**Synopsis and justification:** The river presents medium risk to the community. Currently there is minimum access to farm lands which results in underutilization. This work will facilitate easy access to and increase the value of nearby lands. The Members of the community will therefore be engaged in group discussion to obtain their feedback on this activity. Additionally attempts would be made to engage land owner.

## SANDY BAY



### Location

Sandy Bay is a rural coastal village on the North Windward coast of St. Vincent and the Grenadines in the parish of Charlotte. It lies approximately four (4) miles north of Georgetown ( a main town in St. Vincent and the Grenadines)and south of the La Soufriere Volcano. The community is also in close proximity to one of the island deadliest rivers, the Rabacca Dry River. This river, which flows directly from the volcano for regularity is DRY in nature but very powerful when flowing. It is accessible by land and sea.

### Background:

The village comprises of two (2) major sections old Sandy Bay and New Sandy Bay. The old Sandy Bay section is believed to have existed in 1797 after the Carib wars with the British. The area comprises mainly of decedents of the Yellow Caribs, a small number of African slaves referred to as Black Caribs the ancestors of the Black Caribs became the first permanent non-carib settlers in the island in

1675 mainly survivors from the sinking Dutch ship. During the 1900s the community had numerous upsurges from heavy flooding, hurricanes and volcanic eruption.

### *Population*

The population according to the 2001 census, was two thousand seven hundred and sixteen (2,716). (This is the entire Sandy Bay census division that comprises surrounding communities. The economically active population is one thousand eight hundred and eighty (1,880) of which 718 are economically inactive. The unemployed women in the community are normally engaged in household chores, while the men seek odd and ends tasks.

### *Livelihood*

The community livelihood is embedded in subsistence and commercial farming, of crops including cassava, peas, sorrel and sweet potatoes.

### *Culture*

The traditional Carib culture is not practiced however, members of the community practice the Quadrille dance. November 1 (the day of the Dead) is also celebrated by the cleaning and lighting of candles on their deceased relatives graves. In December, like all other communities in St. Vincent and the Grenadines the members visits each other homes to bring a message of glad tidings and joy.

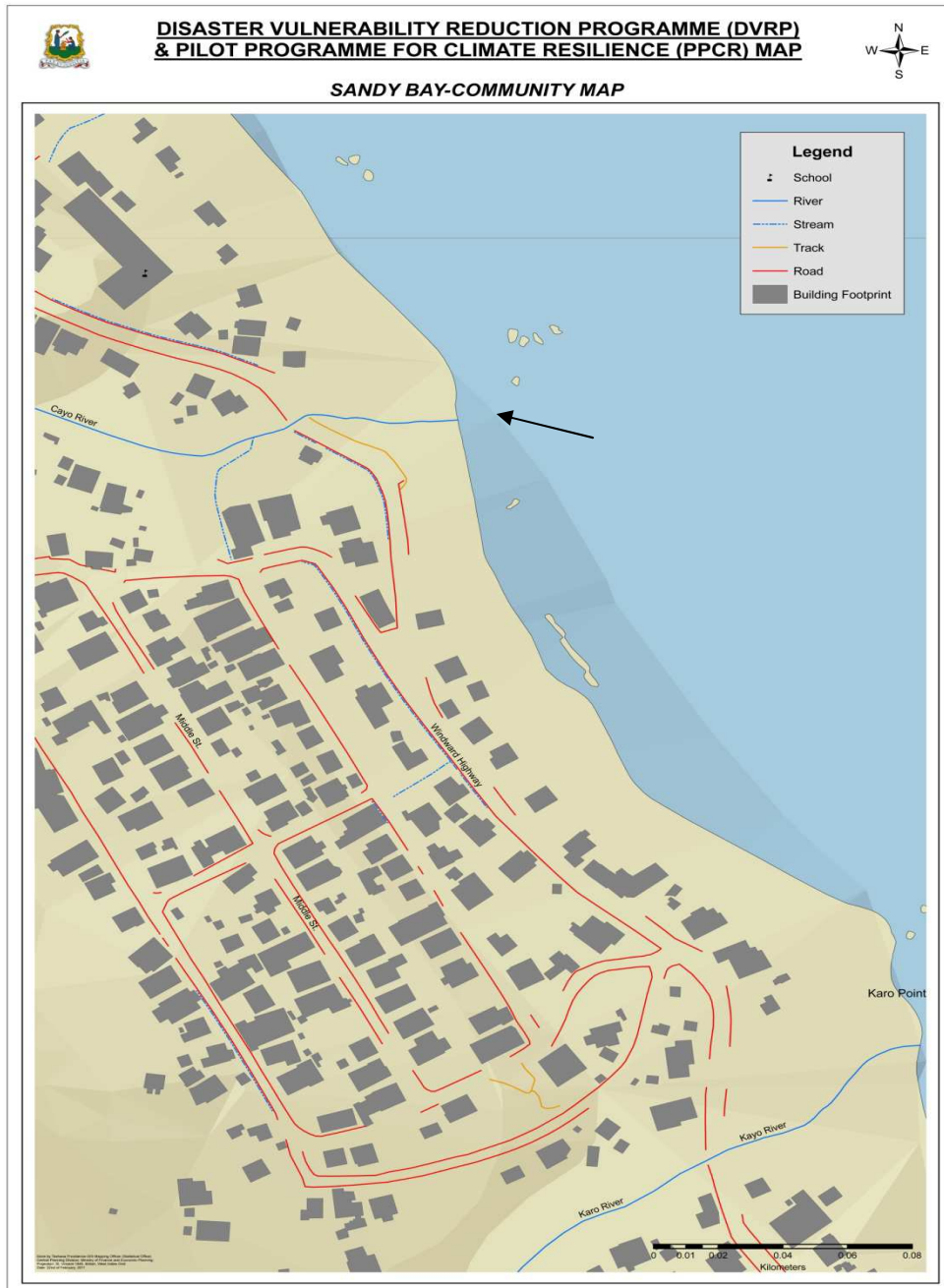
### **Family Structure:**

The family composition is single parents and extended families living in small to medium size concrete and partly wooden houses. Approximately 96 percent have electricity, and domestic water supply. Telephone in the homes is very common however a number of people have cellular phones. Approximately 15 percent of the population use pit latrines. Teen pregnancy seems to be the dominant social problem in this area.

### **Infrastructural**

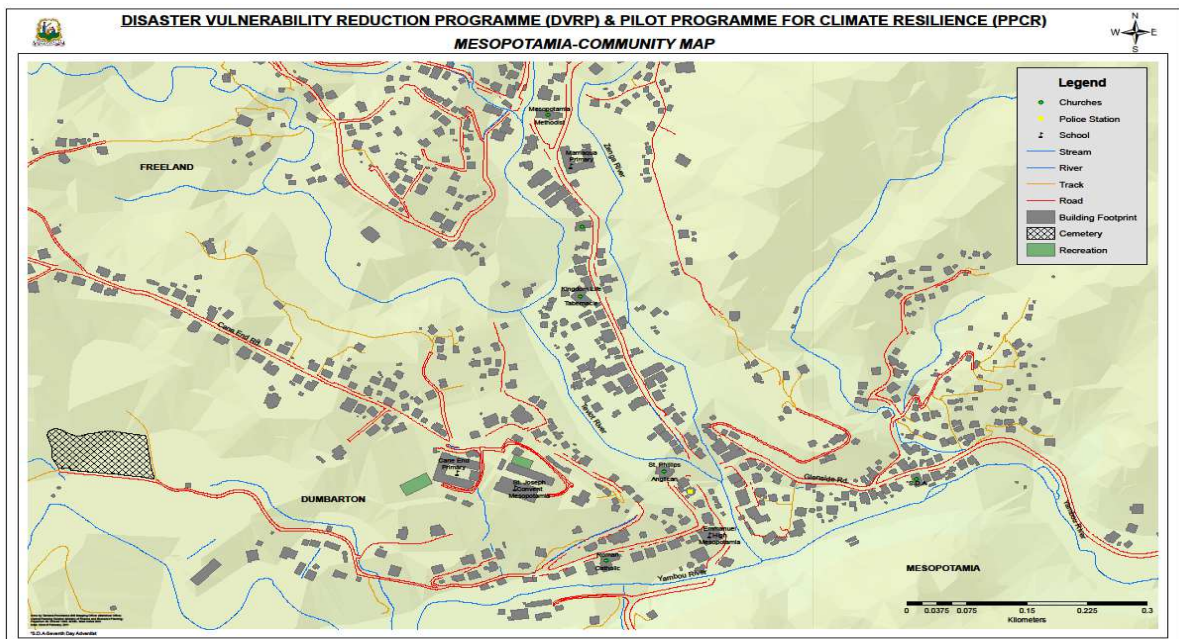
The institutions present in this community are one (1) health clinic, two (2) pre-primary schools, one (1) primary and one secondary school, Churches from all

religions (Anglican, Catholic, Spiritual Baptist, Adventist, etc.) one resource centre that serves as an office for teachers in the Secondary school, Adult Continued Education Programmes and community meetings. Additionally the community has its own radio station, Garifuna Radio, a post office, police station, playing field and a cemetery. Other businesses that can be found in Sandy Bay include hairdressing, bakery, and retail shops.



Sandy Bay

## Marriaqua



### Location

The Marriaqua area is located in the southern central district in St. Vincent and the Grenadines. The community is surrounded by rivers. The three main rivers are the Zinger; the Tiviate and Fold river, and all meet together towards (the marriage of waters) Yambou past river.

### Composition

The community has a mixture of races mainly East Indians and Africans. It is known as the bread basket of St. Vincent and the Grenadines for its 'agricultural base. The lands are very fertile as it is known to be an old volcano.

### Family Structure

The family structure is single parent, nuclear and to a great extent, extended. The main social problems according to residents in this area are unemployment, alcohol abuse, idleness among the youth, illiteracy, immortality and HIV / AIDS.

### Population

According to the 2001 Census the population was eight thousand one hundred and forty five (8,145) which accounts for 7.2 percent of the population. There are five thousand five hundred and forty seven (5,547) persons in the economically active

age group five hundred and fifty four (554) of whom were unemployed, 348 males and 206 females.

### **Livelihood**

While many of the persons are farmers, a great number is employed in the service sector. Other employment activities in this area include: domestic workers; self-employed; Block- and Baluster making and tradesmen.

### **Infrastructure:**

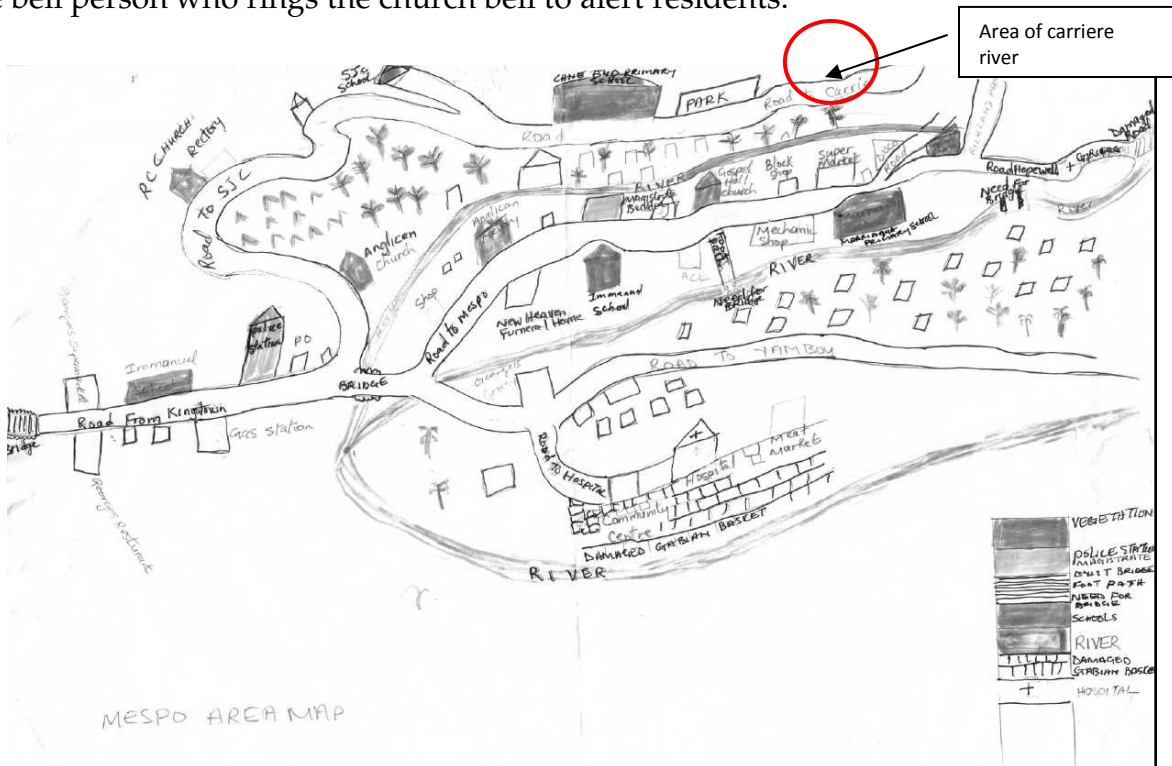
There are two (2) pre-schools, one (1) primary and one (1) secondary school. There is a health centre, post office, police station and magistrate court. There is a community centre that was erected by the elderly in the form of self help. It houses the village council clerk's office, and the community development field officer's office. There are various food shops, retail shop, rum shops and one supermarket. Other businesses include beauty parlour, barber shop, computer café. The community has electricity and water in about 96 percent of the population and access to domestic telephones.

### **General**

The Marriaqua community is prone to heavy flooding which is often caused by prolong or intense rainfall that result in channel overflow and human factors such as the dumping of debris in waterways, resulting in blockage of culverts and prevention of free passage of water, lack of river maintenance and squatting on the river banks also contributes to the onset of rapid flooding, allowing less than two (2) hours for safe evacuation from vulnerable areas. Many of the services in Marriaqua are located in this flood zone, the educational facilities, the medical facility, the food distribution (food shops) and supermarket facilities and the Police station.

Some efforts have been made to establish a warning system by the installation of simple flood-warning devices installed at Montreal and Majorca. These devices are calibrated to trigger an alarm at critical flood water levels and transmit this warning to designated telephone numbers. Once this warning is received it will be conveyed to residents. The chairperson of the Marriaqua Disaster Committee, the Co-ordinator of NEMO, the Officer-In-Charge of the Police Station, and the

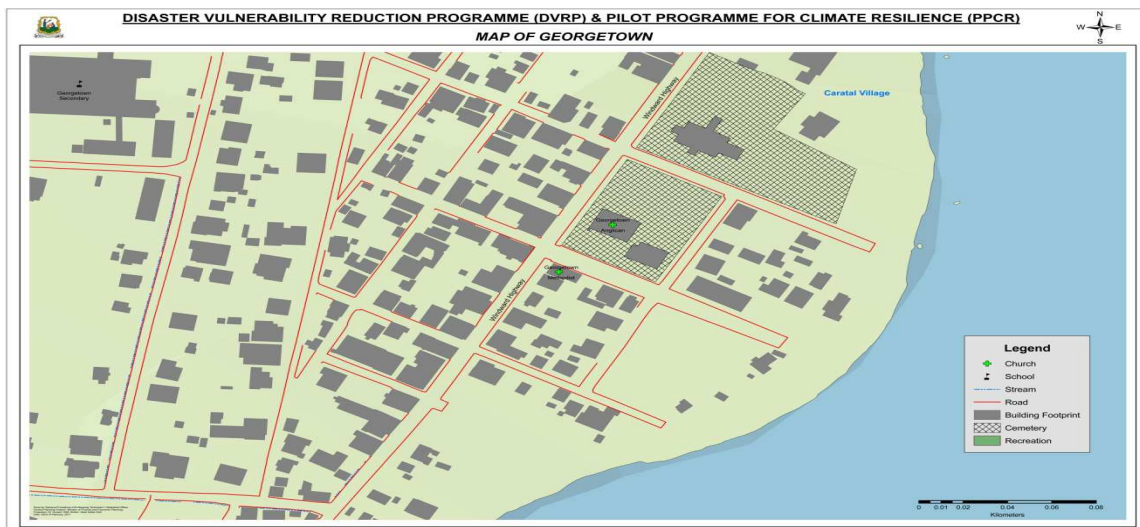
medical office will all receive warning signals. The information will then be sent to the bell person who rings the church bell to alert residents.



Marriaqua Map provided by the field officer in the area, 2011



## Georgetown:



### Location

Georgetown is the largest town in the north eastern side of St. Vincent and the Grenadines. It was once a prosperous community where most persons were employed in the sugar cane and arrowroot estates. Settlement begun in Georgetown in the late 1880s. About 10 percent of the village is below sea level, which makes it vulnerable to flooding. The area is vulnerable to high winds, flooding, sea surges and hurricanes. It is also one of the closest communities to the volcano.

### Livelihood

Residents make their livelihood by farming, construction sites, government and private businesses. Most of the houses in the area are concrete brick, a few are incomplete or are a mixture of wood and concrete. There are wooden houses that date back to 1950s

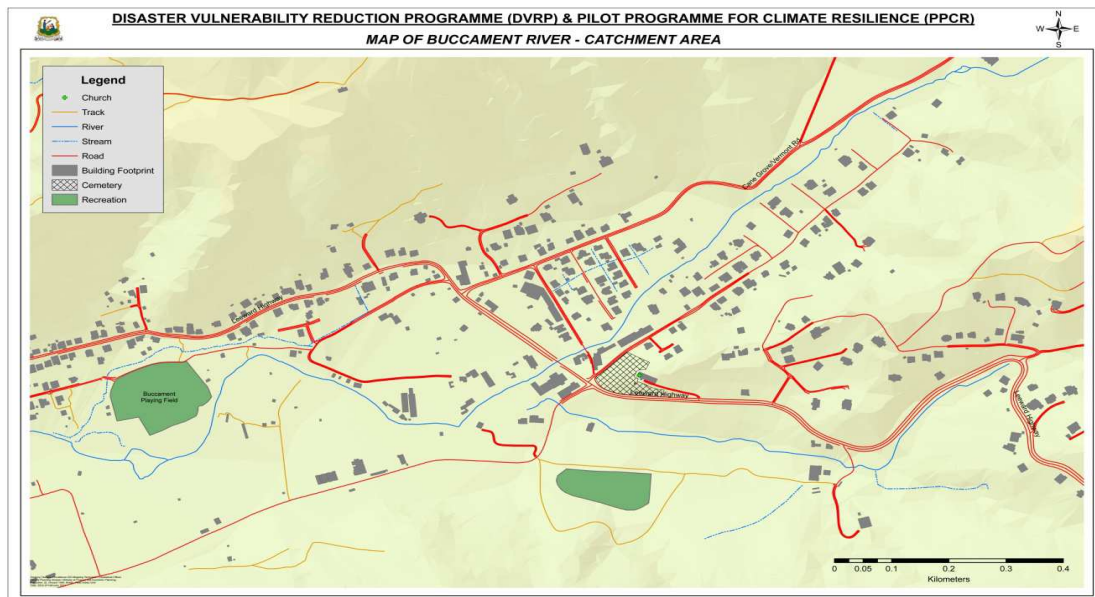
### Population

The population of Georgetown according to the 2001 census was six thousand seven hundred and sixty seven (6,767). There are four thousand six hundred and forty three (4,643) residents, seven hundred and twenty nine (729) of whom were unemployed 459 males and 137 females.

### **Family structure**

The family structure comprises of a majority of extended families, single parent and nuclear families are on the increase. The main social problems identified by residents are the unemployment and the unavailability of skilled labour

## BUCCAMENT



### Location

Buccament is located on the south leeward side of the island and sustains the largest and most reliable source of potable water on the island, the Dalaway catchment, which provides over 40% of the island's total water supply. Apart from this, the river supports community activities such as sport fishing, bathing, and water for farms and stones for building construction. From documentation, it was revealed that the riverbanks are relatively shallow at 8ft to 15ft. (2001). Additionally, the river has a profound impact on the structure and life of the communities. It empties into a flood plain of relatively poor drained soils near Buccament Bay that runs along the main road

### Activity:

The installation of gabion walls comprising staggered stocks of gabions baskets varying in height between 12ft and 15ft. The walls will be 50ft in length on both banks downstream of the main bridge and 1000 ft along the right bank upstream of the bridge and 500 ft along the left bank.

**Areas in close proximity:** includes farm lands, properties and enterprises.

**Major beneficiaries:** owners of farm lands, enterprise owners, and members of the community.

### **Composition**

Buccament is comprised of a number of small communities starting at Buccament Bay at the coast to Table Rock at 690 ft elevation. The Buccament economy is supported by both tourism and agricultural activities such as the newly opened Buccament Bay Beach Resort, a five star resort which employs...Vincentians. The Vermont Valley in the centre of Buccament is home to one of the country's prime eco-tourism sites, the Vermont Nature Trail and has a thriving agricultural community of over 200 registered farmers and over 400 agricultural plots, which produce a wide variety of vegetables and root crops.

### **Population:**

Buccament is comprised of a number of small communities largely at Buccament at coast to table rock. The Vermont valley, at the centre of Buccament is home to the country's prime eco-tourism sites, the Vermont nature trail.

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## STAKEHOLDER ISSUES

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This section of the report discusses the main stakeholders consulted, the method of consultation and the general issues raised.

### **Stakeholder Consultation**

The purpose of the consultation was to provide an opportunity for the stakeholders to participate in and provide input into the project as it relates to their feelings on the activities, ideas on implementation and their reservations. Generally, the parties which were consulted included the public/community members, government representatives, and special interest groups. Each stakeholder group is discussed briefly below:

### **Key Stakeholders**

#### *Public/Community members*

The communities were engaged in discussion (individually and Groups) about the possible impacts the projects may contribute to their livelihood.

#### *Government representatives (Ministries)*

This group was comprised of representatives from several government agencies with direct administrative and technical responsibility for specific project activities. This included engineers from the Ministry of Transport and Works, Technical officers from the Ministry of Housing, land and surveys, Physical Planning and Informal Human Settlements, Ministry of Telecommunications, Ministry of Health and the Environment, Ministry of Education, Ministry of National Security, and Ministry of National Mobilisation. Staff from these agencies provided technical and process related inputs to the assessment team. The consultations generally took the form of group discussions and individual interviews.

### *Special Interest Groups*

This group included representatives from specialist interest groups such as the Red Cross, Rainbow League and Community Disaster Management committees. This group provided information and input relative to special community issues.

### *Principles of the consultation and specific consultation approach*

In an effort to inform and engage the stakeholders and obtain constructive feedback, the social assessment team used a multi-tiered approach. This approach was designed to achieve the following specific objectives:

- Provide varied opportunities for stakeholders to participate in and provide input to the project;
- Ensure that key messages and concepts are conveyed in a clear, concise and understandable manner;
- Explain complex project details;
- Demonstrate a transparent decision-making process.

The following techniques were used:

- Presentations to groups and individuals
- Focus group discussion
- Individual interviews
- Group discussions and meetings
- Surveys

### Stakeholder List

Local Level - government authorities

User groups – residential, commercial, institutional, medical, farmers

Vulnerable Groups- residents living near project sites, Women, Children and elderly

The table below summarizes the types of approaches used, the particular parties consulted and their respective responses to the critical issues presented.

## STAKEHOLDER ANALYSIS AND CONSULTATION

Method	Activity	Stakeholder	Characteristics /interest	Issues raised	Response from questionnaires
200 questionnaires 3 group discussion	Satellite warehouse	Community members of Rose Hall and of Sandy Bay. Government Ministry of Telecommunication, NEMO,	Storage of material and other supplies to be readily available in the time of natural disaster.	Possible employment to monitor, secure and distribute material and supplies.	99.2% approval
200 questionnaires 3 group discussion	VHF/HF radios	Community members of Marriaqua , NEMO, NTRC, Rainbow League, Ministry of Telecommunication	The training of members to operate radios to communicate in the event of an emergency	Where are they going to be stored? Who will be trained?	100 % approval
140 questionnaires 3 group discussion	River defense	Community members of Buccament, Marriaqua , Ministry of Transport and Works	Work is necessary to protect properties and farm lands	Whether the gabions are the best source to protect the river	95.2 % work is necessary
1 group discussion: 2 informal interviews	Rehabilitation of bridges and roads	Community Members of Green Hill, Dauphine: Farmers, Ministries of Housing and Land development: Agriculture and Rural Development: Transport and works	Eco-tourism development possibility safe alternate route access	Management of the area especially Fenton consideration must be given to Green preservation	
Interview NEMO	Search and rescue (land and sea)	Ministry of National Security	Rapid response and a trained cadre of response officers	Storage of equipment	
Interview with Nurses at 2 Clinic, 3 police station, Nemo, Housing, Physical planning	Retrofitting\reconstruction of government buildings	Ministries of Health and the Environment: Housing: Transport and Works: Physical Planning: National Security: Ministry of Education	Health Services are interrupted: the Clinic in Fancy, Colonaire, Overland do not have a generator and vaccination and other medical supplies are at risk.	There is need for a resident doctor or nurse for 24 hours at health clinics. The building codes must be taken into consideration	

Method	Activity	Stakeholder	Characteristics /interest	Issues raised	Response
Interview	Upgrade of disaster management agencies	NEMO	Better coordination improved response		
Interview	Training	NEMO	Capacity building	Facilitators	
Interview	Institutional strengthening	Red Cross, Community based organization	Capacity building	Dispersion of knowledge	
Interview Site visit	Villa beach restoration	Public, Ministry of Culture and Tourism, Ministry of Transport and works			
Interview Site visit	Drainage Improvement	MTW, community members of Arnos Vale			
Interview Discussion	Relocation of the Milton Cato Memorial Hospital	Ministry of Health and Environment: Ministry of Finance and Planning Lands and surveys ; MTW:	The present building is structurally unsound Feasibility study and possible new location	Conduct a feasibility study, do design and other preconstruction	
Interview Discussion	Strengthening of institutions for the enforcement of the Building codes etc	Ministry of Housing, Physical Planning , MTW	Reconstruction training monitoring; higher building standards: public awareness		
Interview	Public Education and Awareness	Ministry of Education ; NEMO	Public awareness	Nationwide campaigns	
Interviews	Retrofitting of Emergency Shelters	Ministries of Education; Transport; National Security; Social Development; NEMO	Shelter management /organization. Suitable structures- repair to the roof, replacement of doors and windows.	Need for women and children to feel protected: address Water and sanitation issues separate areas for male and female	
Interviews, questionnaires (270) (4) Ginger village	Slope Stabilization Dark View Ginger village	Communities: Ministries of Transport, Health and the Environment, Housing, NEMO	Landslides resulted in the loss of lives, Landslides destruction of main road network	Almost all communities are at risk	Families in Ginger Village were interviewed



## Land Acquisition issues

Activity	Description	Land Acquisition	Land acquisition involving relocation	Estimated affected population	Categories of affected persons *
Emergency Communications	Installation of nine (9) VHF/HF radios with solar power at all the satellite warehouse facilities,	No	NA	Entire population	NA
Drainage Improvement	Drainage improvements work in Kingstown and Arnos Vale. Some of the activities include design and civil works.	No	No	~ 50 families ~ 15 business ~ 2 Farmers	Business Owners Homeowner Others - TBD
Relocation of the Milton Cato Memorial Hospital	Feasibility studies Design and site selection for the relocating the hospital.	TBD	TBD	TBD	TBD
Strengthening of institutions for the enforcement of the Building codes etc.	This activity involves reviewing the current building code and providing technical training to improve its enforcement	NA	NA	NA	NA
Coastal and River Defence	Protection of coastal areas and river defences including lining drainage channels	Yes	TBD	TBD	Farmers Fisherfolks Vulnerable groups Others TBD
Public Education and Awareness	Public education on hazards and reducing risks to the school population.	NA	NA	NA	NA
Roads and bridges	This activity will undertake design and construction of a bypass road.	Yes	Yes	TBD	Farmers Homeowner s Others NTBD

Activity	Description	Land Acquisition	Land acquisition involving relocation	Estimated affected population	Categories of affected persons *
Retrofitting of Emergency Shelters	Emergency shelters requiring total or partial retrofit	No	No	No	No
Slope Stabilization	Landslide prone communities in which intervention measures can be implemented.	Yes	On the completion of study this would be determined	TBD	Farmer, Entire population
Search and rescue (land and sea)	Capacitate to perform land and sea rescue operation.	NA	NA	NA	NA
Retrofitting/ reconstruction of government buildings	The upgrading of buildings such as clinics and police stations.	NO	No	TBD	TBD
Upgrade of disaster management agencies	Activity included the provision of equipment and internal training	NA	NA	NA	NA
Training	National Disaster Training Programme	N/A	NA	NA	NA
Institutional strengthening	Involves the establishment of mechanisms for the monitoring disasters	N/A	NA	NA	NA
Satellite Warehouse for communities	Construct and equip nine satellite warehouses for communities	No / TBD	TBD	TBD	TBD
Villa beach restoration	Study of reefs and the pollution levels	TBD	TBD	TBD	TBD

## Analysis of Project Impacts

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### Overview

*Research has shown that disaster greatly impacts the poor, most of whom are women. It also well-recognised that all vulnerable groups including the poor, women, children, and the elderly form a part, are less able to withstand the negative impact of changes to their environment. The survey for the Social Assessment therefore, takes into account social variables of gender, age, and poverty. A large proportion of the sample (50.7 percent) is drawn from the poorest regions in St. Vincent and the Grenadines, ensuring that views of the poor are thoroughly investigated. Women and the elderly<sup>2</sup>. are also sufficiently featured in the sample, and represent 50.8 percent and 23.8 percent of the sample respectively. Having sufficiently sampled these groups, the Social Assessment finds that the project objectives are acceptable and do not adversely impact any vulnerable groups.*

### **The impact of the project on the poor:**

Based on the analysis the project offers numerous benefits to poor communities as well as to the poor, directly.

First, in the implementation phase the civil works should provide some opportunities and new livelihood supports temporarily. Consistent with this, residents in the communities surveyed identified possible short-term employment creation as one major benefit of the project.

Second, training in the sub-components of the projects for example in the operation of the VHF/HF radios and the use of the equipment in the satellite warehouse are other components of the project will increase the skills –set available to persons in various communities . In particular, this will increase the capacity of poorer persons to gain employment, and improve their competitiveness. It will also provide the necessary skills to prepare for, mitigate and respond to disaster more effectively. Given that the poor are vulnerable to disaster, project components which reduce risk and improve disaster response and preparedness, also serve to reduce the vulnerability of the poor.

Third, the stabilization of land would reduce risk to farmers and residents. Processes of soil erosion which currently results in the devaluation of land and property will be halted. In this way farmers can maintain their level of produce given that the topsoil will be protected. Additionally, small businesses such as grocery shops, restaurants, and bars etc, found in the vulnerable locations near the coast will be made more secure.

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<sup>2</sup> Elderly is commonly defined as person 55 years and over.

One of the fundamental benefits to the poor is the mental security of knowing that they are protected and that risks of endangerment are reduced. The poor can now concentrate on other efforts such as increasing income for their families.

### **The impact of the project on gender**

The projects activities are being conducted throughout St. Vincent and the Grenadines. The nature of the project does not connote any significant difference in the number of females and males benefiting under the project. However, included as part of the scope of work to retrofit of emergency shelter, is the inclusion of a provision to make shelter more gender sensitive. The team further recommends that in retrofitting of emergency shelters consideration should be given for:

- (a) Space (Physical separation ) allocations for pregnant women
- (b) Women and men should be trained in shelter management and the operation of the VHF/HF radios, and they should be separated at night.

This includes providing separate facilities bathing and sleeping inter alia Apart from this it is impossible to identify and mitigate all social impacts at this stage of the development of the project. However, adequate information and community participation may reduce any uncertainty associated with the project. Several respondents indicated that the project may increase employment in the area; therefore consideration should be given to integrate members (workers) from the communities. A general rule of thumb is to maximize the use of local labour where the skill can be found.

## Analysis of Impact Specific Intervention

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### *River Defence*

The assessment conducted in the villages of Marriaqua, Colonaire, Arnos vale, Buccament, and Cumberland( Spring) indicated that the river defence is necessary for the protection of the village. In Marriaqua 76 percent of the respondent stated that the river plays an important role in their community as it is used mainly for farming, fishing, bathing and washing. 72 percent highlighted that the river poses a threat on their community and 68 percent felt that the river bank was not secure. 96 percent agreed that this activity should be undertaken in order to further secure the bank of the river.

This support was echoed in all of the villages. Residents living along the river in the Buccament and Colonaire areas are in agreement for the project, given their agricultural based livelihood. They support the structures because they are of the opinion that the Gabion basket or wall would help to protect their lands as well as reduce the serious soil erosion that results in the devaluing of their properties. One land owner in Buccament indicated that almost 8 feet of his land was washed away during the last five years due to torrential rains and flooding.

In Arnos Vale, there may be biophysical changes downstream as a result of the Gabion baskets. With the project intervention properties on the southern end of project would now be safer as the gabions would reduce flooding in these vicinities.

Overall, respondents felt that this intervention would help accelerate economic and social development in the community by providing a greater sense of security. Furthermore most persons interviewed considered it very necessary as a mitigation effort, especially in the Buccament area.

The measures that the project implement at the sites will help to strengthen the communities flood prevention and disaster vulnerability capacities as it relates to river. The additional positive impacts includes:

- Reduction of erosion
- Reduction in landslides
- Protection of lives
- Protection of properties
- Protection of roads and other infrastructure ( Buccament and Marriaqua)

There are no potential negative impacts identified by the respondents however some concerns were raised:

First in Colonarie, the project construction along the bank of the river may prevent farmers from rapid access to their lands. They indicated that to access the lands they would simply cross the river when the flow is low. The implementation of the river bank support structure implies that the height would prevent such access. They indicated that the project should take into consideration their every day crossing to access their lands and time they can spend cultivating their farms.

Secondly, some respondent stressed that it can create more problems for the residents if not supervised or done properly while others felt that gabion basket are not suitable as river defence and that there was a need for solid wall along the problematic areas. Suggestions were also made in Buccament and Marriaqua for the gabion baskets to be reinforced with cement, trees or mud. This suggestion was voiced by approximately 20 percent of the interviewees. A suggestion was made for the use of fascines or wattle.

Thirdly, the introduction of the gabion basket may reduce the space allotted for the flow of the water and the banks may continue to overflow. This therefore poses an ecological health impact, especially for vectored environmental diseases. One resident explained “if garbage is caught in between the baskets this could create new breeding grounds for mosquitoes and possible increase waterborne and water related infections if the river is not cleaned regularly”. This is not a direct negative impact of the gabion basket, but the unsanitary garbage disposal methods of the communities. Residents from all districts indicated that there is a problem of garbage disposal in the area from the general population and from farmers.

## **Coastal Defence**

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The Coastal defence assessment was conducted in the communities of Sandy Bay, Georgetown and Dark View (Rose Bank). The coastal front in some areas in St. Vincent and the Grenadines is developmental land for tourism. Prime beneficiaries of these activities consist of grocery shops operators, restaurants and bar owners and other small-business owner. In addition to questionnaires, informal interviews were conducted with entrepreneur living along the coast. In these communities, 95.2 percent of the respondents indicated that this activity was necessary for the community. 92 percent felt that the people living along the coast were unsecure and 90 percent of the respondents felt that it was necessary to secure the coastal front. They anticipate that the sea defence would help in flood and disaster mitigation and highlighted the following positive impacts:

- In Sandy Bay respondents anticipated that coastal defence would prevent beach erosion. This would enable the residents to reintroduce beach sports such as cricket, football and volleyball. Additionally, this would promote a sense of security among parents who indicated that their children would be safer while playing on the beaches.
- It would protect properties along the coastal front and provide environmental beautification.
- It would reduce the risk of loss of human life resulting from natural hazards. Particularly, in the communities of Georgetown and Sandy Bay, which are located near the Atlantic belt, where residents are endangered as high waves are frequently observed.
- The coastal defence work would protect the infrastructure particularly roads in some of the communities for example, Sandy Bay and Dark view. The roads in these two communities are an essential part of the road network and connect communities (in the north) to the rest of the island.

Generally the residents approve the objectives of this activity and indicated that if not implemented, there can be negative consequences to individuals, communities, the economy and the environment. Some of their responses are presented in the table below.

The respondents say: If the project was not implemented then:

Individual	Community	Physical Infrastructure	Environment
"people will lose their lives and too often persons have to evacuate the coastal areas when a hurricane strike"	"If nothing is done after a while the sea will claim all the lands at the sea front"	"if nothing is done the sea will take all the lands, and the roads and therefore the government will have to spend more money to cut roads and get lands to relocate people"	"there will be no beach and it will need some protection"
"people living in the area will have to find other places to live"	"many roads and homes along the coast lines will get damaged"	"in the next five years about fifty homes will have to be relocated (SANDY BAY)"	"damages to the beach and people's homes"
"very little or no beaches recreational areas"	"the sea will take more lands"	"the sea will continue taking land until it takes the public road"	"the sea water may continue to reclaim and erode the lands"
	"there will be a total cut off in some areas, main road will be destroyed. residents of low lying areas will have to move to higher ground"	"the water will destroy infrastructure like roads and other buildings along the coastline"	"there would be no land for living and in some areas of the community the roads will be completely destroyed"

The project has been deemed necessary for the community as it would provide a measure of security to the poor, the elderly, women, children and the general population in all three communities. They do not envisage any negative impact of the projects..

However some respondents in Sandy Bay expressed scepticism on the ability of coastal-defence structures to protect the community.

*Respondents stated :*

“if it is not maintained [the sea defence] it would not make sense”

“it will be impossible to build a sea defence because the coastal area is a broad area”

“it will limited beach area”

“well is if [what if] the sea come up higher”

“when water ready nobody can control it”

“How will we get access to it [the sea]”

Residents are concerned that a simple sea defence may not be sufficient to reduce their exposure the sea entirely because of the environmental changes that have been observed over the last 10 years.

### **Slope Stabilization:**

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Many of the lands in St. Vincent and the Grenadines are endangered and prone to landslide. The slope stabilization activities are scheduled to be conducted in Bequia, Fancy, Spring, Chester Cottage, Mount Greenan, Mt. Pleasant/Peruvian Vale, Petit Bordel, Maroon Hill, Ginger Village and Dark View. The Social Assessment finds that slope stabilisation activities are welcomed in the areas as they help to maintain the water table and fertility of the soil. In Chester Cottage, Fancy, and Dark view 89.6 percent of the respondents felt that it was necessary to secure the slopes. 99.3 percent were of the opinion that the work was necessary to protect properties and control erosion. In Ginger Village all residents of the four households interviewed were of the opinion that it was necessary to stabilize the area for security. Additionally, this area is the main road network for the island.

Residents of Dark View emphasised that it was necessary to stabilize the area to prevent hazards and prevent the communities in the north from being cut off. The implementation of the project implies that persons in Dark View must be relocated. The serious undermining of the road and mountain terrain endangers the lives and livelihood of the residents in this area. Thus, efforts should be made to prevent persons from further investing in the area if no stabilization is done to the terrain (Ginger Village; Dark View).

Moreover, the slope stabilization activities may bring changes in the soil structure, that is, protection for the top soil and may impact on the availability of land for farming, soil productivity and housing.

In Bequia, information from secondary sources revealed that major landslides have been reported in Paget Farm in 1992 and 1994. During that period six (6) homes were destroyed and one public building (church) was rendered uninhabitable. In November



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2005, flood waters and landslides significantly impacted the major road network restricting traffic and destroying two (2) homes. Several houses were also inundated by flood waters. During that same period a major landslide occurred along the coast and killed 2 fishermen sheltering in a cave. The *After Action Report* prepared by NEMO (date) (state objectives) recommends that persons who reside in the main affected area of Paget Farm should be relocated due to the vulnerability of the area. The social assessment team, after observation of the area, concluded that in addition to slope stabilization activities, a more holistic intervention is needed.

In Spring and Chester Cottage in addition to housing, the resident use lands for farming however, the frequent soil erosion, landslides and land slippage is decreasing the fertility of arable lands. The farmers in these rural areas depend entirely on the soil productivity for their livelihood. The respondents stated that the stabilization of the slope would help to protect and preserve lands for the next generation. Further, the slope stabilization would increase safety in the community as it becomes extremely dangerous during the rainy season for lives, property, vehicles, etc., as the roads become impassable.

The Maroon Hill, Mount Pleasant and Mount Greenan areas identified for slope stabilization were assessed by the Project Committee; consideration would be given to reforestation or the installation of strong apron, deep toe wall and sufficient foundations to prevent further erosion.

According to residents in all proposed sites, the potential negative impact may be environmental and if the stabilization is not properly implemented it may add to the existing problem of erosion and drainage.

Some of the views shared by residents from all sites:

Project	Potential impact of not implementing the project
Slope stabilization	<ul style="list-style-type: none"> <li>• damage the livelihood and property</li> <li>• farmers would lose their crops and also their animals</li> </ul>
	<ul style="list-style-type: none"> <li>• deaths and change of land features</li> </ul>
	<ul style="list-style-type: none"> <li>• destroy individual home property</li> </ul>
	<ul style="list-style-type: none"> <li>• destroy land the soil content</li> </ul>
	<ul style="list-style-type: none"> <li>• if nothing is done the problem will get worse no houses will be able to be constructed in these areas neither farming activities can take place</li> </ul>
	<ul style="list-style-type: none"> <li>• there would be constant erosion, and landslides on these slopes</li> </ul>
	<ul style="list-style-type: none"> <li>• more of the land will continue to slip thus creating road blockage for persons who use the road</li> </ul>
	<ul style="list-style-type: none"> <li>• more soil erosion from the water running on the road ; vehicles can drive over, loss of lives</li> </ul>
	<ul style="list-style-type: none"> <li>• over time the houses will collapse</li> </ul>
	<ul style="list-style-type: none"> <li>• over years the entire area would erode</li> </ul>

### Roads and Bridges:

This activity will include design and construction of a bypass road to Kingstown and replace two bridges at Fenton Road. This area was assessed using secondary data sources and a group discussion. The Fenton trail is a 6 mile stretch of mountain road which acts as a bypass between Gomea in the West St. George constituency and Green Hill in the Central Kingstown constituency. The road was constructed in the 1970's and passes through private and government-owned farm lands, forested areas and numerous streams. The trail is an area for hiking, sight-seeing, swimming, picnicking, hunting and increased farming. The farming created a major economic earning for the residents of Green Hill and surrounding areas. In recent years, the road was partially destroyed and the bridges were deemed unsuitable for use. The area also took a major setback with the passing of Hurricane Tomas and the bridges have now been declared hazardous. Farmers in the area are at risk and access to the area that once served as an ecotourism attraction is now closed. In an interview with, members of a community group in the area it was disclosed that it was necessary to improve these bridges and the roads as it would yield economical benefits for the community. Additionally the public perception of ecotourism will increase and hereby provide some employment opportunities including the employment of Rangers to work in the Fenton Mountain other opportunities include:

#### **Opportunities project may provide:**

Opportunity	How
Tourism attraction	Eco- tourism – wild life and bird watching Water falls Hiking areas
Recreational	Recreational spots Green protected area in Kingstown where persons can relax, hunt, farm, fish and take part in other cultural activities.
Farming	Farmer can produce more as they would be able to transport their produce. Reintroduction of the green hill market
Go- green home installation	This would a house that uses solar energy. Water pumped from the river or collected in tank from rainfall. Garbage Composting Home gardening
Employment	Forest rangers, tour guide operators,

The group indicated that because the area is somewhat abandoned it is increasing becoming a dumping ground causing environmental pollution. Therefore the potential impact for not implementing the project would include:

- Contributing to the loss of forest land, resulting in habitat degradation.

- Changes in the landscape and topography, which may further alter drainage line, downstream thereby, impacting the people Greenhill.
- Changing emphasis in community activity to ecotourism
- Creation of a National park

There are no land acquisition issues as it pertains to the repair of the roads and bridges in the Fenton area. The Land directly involved is owned by the Government of St. Vincent and the Grenadines.

Other issues raised:

In Green Hill – lack of value added facilities

Money is needed to develop area

### **Common impact for slope stabilization, road and bridges, coastal and river defence**

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Potential negative impact

- An increase in ambient noise levels that could annoy some residents
- A change in the traffic conditions ( traffic may have to be redirected)
- Water levels in the rivers

## Emergency Communication: Installation of VHF/HF Radios

The project activity involves the installation of emergency communication equipment (VHF/HF radios) in 10 communities across the island. These are Bequia, Canouan, Georgetown, Mayreau, Marriaqua, Rose Hall, Sandy Bay, and Union Island. It will include the training of personnel in radio usage and disaster management, physical placement of radios in community centres, satellite warehouses or other central location, and the erection of repeaters in remote areas to boost signal transmission. This project activity aims to improve the communication network across St. Vincent and the Grenadines, and to enable communication during and after a disaster.

The Social Assessment identifies residents or members of the ten (10) communities as beneficiaries of this activity. In particular beneficiaries include the poor, elderly, women and children who, together, are more vulnerable to the adverse effects of disaster. Shelter managers and emergency responders in each district (health clinics, police stations etc.) will also benefit from a more comprehensive communication network.

Anecdotal evidence obtained by the Social Assessment Team indicated that several communities (e.g. Bequia) were cut off from the main telecommunication network in previous disasters including the most recent Hurricane Tomas due to damage infrastructure. This evidence points to the need to provide all communities with the facilities to communicate in a national disaster. Further a large proportion of respondents of the survey point to *'early'* and *'reliable transmission of information'* as one area of concern related to disasters. The Social Assessment therefore concludes that not only is this activity acceptable to residents of the community (as indicated by a 99.3 percent approval rating), it is also consistent with the needs and concerns raised.

In order for stakeholders to benefit as intended, issues of training and accessibility will need to be carefully implemented and monitored. The Social Assessment therefore recommends that these aspects of capacity building/training and monitoring be treated with a high level of priority.

The Social Assessment finds that this project activity will have no known adverse impact on the quality of life, health, culture or environment of the residents of the respective communities, either directly or indirectly. The structures to be erected (repeaters) are of negligible size and will be placed in remote locations, integrated with already-existing telecommunication infrastructure. No land acquisition or issues of displacement have been identified.

The project will equip communities with the resources (and training) to communicate with the relevant authorities as well as other communities, in the event of disaster. Project deliverables will not impose on, or disadvantage persons in anyway – it serves and protects the interests of most vulnerable groups. Overall this project activity is likely to build capacity in the relevant communities, and increase disaster preparedness.

## Satellite Warehouse

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This component of the project involves the construction and outfitting of nine (9) satellite warehouses in communities across St. Vincent and the Grenadines in an effort to decentralise disaster management. Warehouses will be equipped with, and used to store emergency supplies such as food and clean-up equipment to be used in the aftermath of a disaster. Communities earmarked for Satellite Warehouses are Barrouallie (Peter's Hope), Bequia, Canouan, Georgetown/Colonaire, Mayreau, Mesopotamia, Rose Hall, Sandy Bay, and Union Island.

Persons who reside in the target communities (named above) are the direct beneficiaries of this activity. In particular, this includes residents of the poorest census division in St. Vincent and the Grenadines (Georgetown, Sandy Bay, Colonaire, Chateaubelair and Marriaqua). Separately, these regions have the highest numbers of poor households and the most severe incidences of poverty, as indicated by the 2007/2008 Survey of Living Conditions. Benefits are therefore necessarily transferred to the most vulnerable groups; this includes persons living in sub-standard housing who are often displaced by a disaster. Communities in which disaster management personnel or groups exist (e.g. Marriaqua) would benefit from the additional resources and training. Communities with no formal structure for dealing with disaster will also benefit from this initiative.

Research conducted by the Social Assessment Team indicates that the project activity is consistent with the needs and interests of community members. Focus group discussions in Marriaqua for example pointed towards the need for a place to 'house' emergency supplies and equipment and disaster management activities. Members of the local Disaster Management Committee (DMC) present at the discussion recommended such a facility to ensure sustainability and effectiveness of the DMCs. Separately, respondents in the Social Assessment survey indicated that timely distribution of aid after a disaster was an important area of concern, underscoring the need for community-based supplies.

The possibility of land acquisition has been identified in one case only (Bequia). The scope of impact has not yet been determined as designs are still in their preliminary phase. It is expected that, as in every other case for which it is applicable, the Resettlement Policy Framework and subsequent Action Plan will guide this process of land acquisition. This framework will ensure adequate compensation and humane treatment of the persons displaced.

Save for the case of land acquisition highlighted above, no other adverse impacts have been identified. In all instances a new facility will be designed and constructed. Feedback from the survey indicated that community members are pleased to have additional infrastructure in their communities. One Rose Hall resident remarked “*anything to benefit we community*”. Another in Sandy Bay remarked that the proposed Satellite Warehouse ‘*will help save people’s lives*’ by increasing ‘*access to tools and equipment*’.

In sum this project activity will have limited adverse impact on residents of the target communities and is found to be consistent with the needs.

### Risk assessment

Community	Potential hazards	Who is at risk	How	Existing control measures	Preventative measures
Sandy Bay	Environmental – socio – economic	Children, elderly, woman, disabled etc.	There is not enough work, hardly any recreational spot	Nil	Skill training classes art and craft, etc.
	Crossing the river without a bridge – only way to the house	Children, elderly, pregnant women	Unpredicted flooding, water level may be higher, pregnant women may fall	When it's rainy take extreme caution	
	Approximately 15 informal dwelling on the sea coast	Elderly, children, women, men, farmers	Sea waves can come to the land and wash away houses and crops	None ¿what do you do in the event of an eventuality? Just watch the sea	Relocate houses
Colonarie & South Rivers	Approximately 20 dwelling houses, 1 business place, more than 100 acres of farm lands (not in project area)	Children, elderly	During periods of heavy rain, water level rise and can flood area	none	Bank, river enforcement, sinking the river, removal of stones from the river
	Over 100 acres of farmlands (Park hill, north of the project site)	Farmers and families	Prolong period of dry spells, or heavy rains, agricultural pests	None	Restore irrigation system, grass barriers and contours drains.
	Unstable houses	Families in houses, road users	Area is prone to soil erosion and landslides during heavy	None	Proper drainage and or possible relocation



			rain		
	River contamination	The entire community	During heavy rainfall, pesticides used by farmers can leach in to river	None	Prevent overuse of pesticides. Contour drainage, garbage disposal cans
	Crossing the river to get to farmlands without a bridge. Farmers have to walk through river to get to lands. Some days the river is impassable	Farmers and their families	Unpredictable flooding, rising water levels during rainfalls, turbulent waters can wash away, family members, crops , farmland top soil	None	Construction of a vehicular bridge.
	<b>Potential hazards</b>	<b>Who is at risk</b>	<b>How</b>	<b>Existing control measures</b>	<b>Preventative measures</b>
<b>Ginger Village</b>	Further landslides, and total destruction of the farm lands, and disruption of livelihoods	School children who walk to school,' vehicle The general public,	Unpredictable land slippage,	No further vehicular use of roadway	Debris is placed on the road

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## Social Safeguard issues and other social risks

Issue	Significant/Limited/No Impact	Strategy to address issue	Plan or other measure included in design
<b>Involuntary resettlement</b>	Limited. Although there is potential involuntary resettlement issues in some activities, the project is designed to minimise land acquisition and resettlement impacts. The extent of these will be further defined as the project develops.	A project level Resettlement Policy Framework (RPF) has been drafted. Activity level RAPs will be prepared as necessary.	<b>Resettlement Policy Framework</b> ☒
<b>Indigenous Peoples</b>	No impact. The indigenous peoples are fully integrated into mainstream society. However, the impacts were investigated as part of the due diligence and it was found that the project is unlikely to affect this group.	Due diligence ☒	<b>No action required</b> ☒
<b>Labour Employment opportunities</b>	Construction operation is likely to generate considerable employment at both the local and national level		<b>No action required</b> ☒
<b>Other risk and vulnerability</b>	<b>No impact. No significant risks or vulnerability have been identified</b>		<b>No action required</b> ☒

### World Bank Safeguard Policies

World Bank Safeguard Policies and their implications			
Policy	Relevance to the project	Implications	Remarks
Environmental Assessment (BP/OP 4.01)	The following activities retrofitting of emergency shelter; VHF/HF radios with solar power; slope stabilization; coastal and river defence; rehabilitation of roads and bridges and the satellite warehouses will be undertaken. These have been affected by natural hazards and may have caused soil erosion. The activities would cause minor damage to nature and would contribute to the improvement of the vulnerability levels of the communities additionally would help to improve farm productivity.	Triggered	Activities proposed would help improve environmental conditions. However, an environmental assessment has been carried out where a mitigation plan would guide the way to contain any adverse impact of project activities.
Indigenous Peoples (BP/O.D. 4.20)	There are people of indigenous descent living in some project sites however these people do not have a separate culture or livelihood to the other habitat of St. Vincent and the Grenadines	Not triggered	Social assessment highlights that no project activities are going to adversely change the quality of life of any indigenous people or any individual in area where project activities are being developed No actions required.
Involuntary resettlement (BP/O.P 4.12)	There may be some land acquisition issues in Specific Subproject coastal defence and slope stabilizations	Triggered	It is necessary the demarcation of geographical boundaries of the project sites for effective application of social assessment. The Chief Surveyor, Social Specialist along with the Ministry of Housing would make recommendations for suitable relocation where necessary.

**Beneficiaries table\***

Community	Issues to be address	BENEFICIARIES						consultation	Social Safeguard Possible safeguards triggered
		WHO	Total	GENDER ( 2001)		How	Vulnerab le group		
				Male	Female				
<b>Grenadines</b>									
Union Island	VHF/HF radios with solar power		3354	1 765	158 9			yes	Environmental Assessment (OP/BP 4.01)
	Satellite warehouse								
Mayreau		poor	254	1 37	117			yes	Environmental Assessment (OP/BP 4.01)
	Satellite warehouse	marginalized							
		community							
Canouan	VHF/HF radios with solarpower		1165	6 65	500			yes	Environmental Assessment (OP/BP 4.01)
	Satellite warehouse								
Bequia	VHF/HF radios with solarpower		4861	2 511	235 0			yes	Involuntary Resettlement (OP/BP 4.12) Environmental Assessment (Op/BP 4.01)
	Satellite warehouse	Teenage mothers							
	Retrofitting of Emergency Centre								

	Slope Stabilization Paget farm	poor							
	rehabilitation of road Paget farm								
<b>Community</b>	<b>Issues to be address</b>	<b>BENEFICIARIES</b>						<b>Social Safeguard</b>	
		<b>WHO</b>	<b>Total</b>	<b>GENDER ( 2001)</b>		<b>How</b>	<b>Vulnerabl e group</b>	<b>consultation</b>	<b>Possible safeguards triggered</b>
				Male	Female				
	Retrofitting /reconstruction health clinic	marginalized							
Sandy Bay	VHF/HF radios	indigent	1425	769	656			yes	
	Satellite warehouse	Elderly							
	coastal / river defence	Teenage mothers							
Overland	Retrofitting /reconstruction health clinic	poor	549	284	265			yes	Environmental Assessment (OP/BP 4.01) Indigenous peoples (O.D. 4.20)
	Public awareness Education								
Georgetown	VHF/HF radios	poor	5676	2888	2788			yes	
	Satellite warehouse								Environmental Assessment (OP/BP 4.01)
	Coastal/River defence opp.Ferdies								
	Retrofitting of Emergency Centre								





									(OP/BP 4.01) Natural hazards Vulnerability, floods, soil stability /erosion
Argyle	Emergency response capacity at International airport	Entire population					N/A	Technical Interview	
<b>Community</b>	<b>Issues to be address</b>	<b>BENEFICIARIES</b>							<b>Social Safeguard</b>
		WHO	Total	GENDER (2001)		How	Vulnerable group	consultation	Possible safeguards triggered
				Male	Female				
Ginger Village	Slope stabilization	Farmers, School children					Children, elderly	Interview	
Marriaqua	VHF/HF radios with solarpower	poor, teenage mothers, children, farmers, elderly, disabled, nurses, police, community, unemployed	3103	1569	1534			Yes/Interview	Environmental Assessment (OP/BP 4.01) Natural hazards Vulnerability, floods, soil stability /erosion
	Public awareness Education								
	Satellite warehouse								
	Retrofitting /reconstruction Police station								
	Retrofitting /reconstruction health clinic								
	River defence (Tiviot river)								
Carriere	River Defence	Community						Technical	





South River road	Coastal defence							Interviews	Environmental Assessment (OP/BP 4.01)
Kingstown	Relocation of the Milton Cato Memorial Hospital	urban poor, teenage mothers, children, elderly, disabled, police, community, unemployed						Technical interviews	Environmental Assessment (OP/BP 4.01)
	Retrofitting of Kingstown Government								Natural hazards Vulnerability, floods, soil stability /erosion
Fenton	Rehabilitation of roads and bridges	surrounding community Green Hill,						Yes/interviews	Environmental Assessment (OP/BP 4.01)
Dorsetshire Hill	Retrofitting of Emergency Shelter	community members	1064	538	526			Yes	Environmental Assessment (OP/BP 4.01)
<b>Community</b>	<b>Issues to be address</b>	<b>BENEFICIARIES</b>							<b>Social Safeguard</b>
		WHO	Total	GENDER ( 2001)		How	Vulnerabl e group	<b>consultation</b>	Possible safeguards triggered
				Male	Female				
<b>Leeward</b>									
Campden Park	Retrofitting of emergency centre-	poor, children,	2914	149 6	141 8				Environmental Assessment

	Community centre	elderly, community, unemployed							(OP/BP 4.01)
Buccament	River defence	high poverty index , teenage mothers, children, elderly, disabled, community, unemployed	1460	723	737			Yes / interviews	Environmental Assessment (OP/BP 4.01) Natural hazards Vulnerability, floods, soil stability /erosion: Water quality and water resource availability and use
Peter's hope			785	401	384			Interview s	Environmental Assessment (OP/BP 4.01)
	Satellite warehouse								
<b>Community</b>	<b>Issues to be address</b>	<b>POPULATION</b>							<b>Social Safeguard</b>
		WHO	Total	GENDER ( 2001)		H ow	Vulne rable group	consultatio n	Possible safeguards triggerred
				Male	Female				

Barrouallie	VHF/HF radios with solarpower	high poverty index , teenage mothers, children, elderly, disabled, community, unemployed	2558	132 2	123 6			Interviews	Environmental Assessment (OP/BP 4.01)
	Satellite warehouse								
Cumberland	River defence		222	126	96			Interviews	Environmental Assessment (OP/BP 4.01)
Rose hall	Retrofitting of emergency shelter	poor, children, elderly, community, unemployed women	978	518	460			Interviews	Environmental Assessment (OP/BP 4.01) Indigenous peoples (O.D. 4.20)
	VHF/HF radios with solarpower								
	Satellite warehouse								
Troumaca	Retrofitting \reconstruction of Government building	poor, children, elderly, community, unemployed	517	272	245			Interviews	Environmental Assessment (OP/BP 4.01)
<b>Community</b>	<b>Issues to be address</b>	<b>BENEFICIARIES</b>							<b>Social Safeguard</b>
		<b>WHO</b>	<b>Total</b>	<b>GENDER (</b>	<b>H</b>	<b>Vuln</b>	<b>consultation</b>	<b>Possible</b>	

				2001)		ow	erable group		safeguards triggered
				Male	Female				
Rose Bank	Retrofitting of emergency shelter	poor, children, elderly, community, unemployed	794	421	373			Interviews	Environmental Assessment (OP/BP 4.01)
Chateaubelair	VHF/HF radios with solarpower	poor, children, elderly, community, unemployed	764	270	494			Interviews	Environmental Assessment (OP/BP 4.01)
Baleine	Slope Stabilization		18	15	3			Interviews	Environmental Assessment (OP/BP 4.01) Natural hazards Vulnerability, floods, soil stability /erosion

- This Table would be completed during the implementation process when the exact geographical scope of the project is known.

## **Recommendations**

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To respond to the situation that may arise during the implementation of this project the focus would be on the community development aspects.

Community development is the process to strengthen the participation and organization of the population in search of answers to improve their own locality, under the principles of cooperate, mutual aid and community.

### **Recommendation to address social issues:**

#### **Access to facilities:**

- The implementation of new structures requires the dissemination of information as it regards accessibility and operation to potential beneficiaries. Awareness campaigns and other educational activities should be conducted at all projects implementation sites.
- The formation of Community Self help groups is recommended for the sustainability of the project management.

#### **Traffic**

Safeguard be built into the implementation in order to minimize impact which include scheduling works at best time to minimize disruptions. Where disruptions cannot be avoided develop a traffic plan outlining alternative routes and appropriate signage.

#### **Financing:**

Social protection activities and their funding levels should be taken into consideration.

Additional funding would be require for social protection programmes

#### **NOISE Pollution**

- Noise Control: In the execution of works, particularly in residential communities, the contractor shall control noise emissions generated as a result of contracting activities to the extent possible. In the case of site locations where noise disturbance will be a concern, the contractor shall

ensure that the equipment is in good working order with manufacturer supplied noise suppression (mufflers etc.) systems functioning and in good repair. Where noise management is a concern, the contractor shall make reasonable efforts to schedule activities during normal working hours (between 8 am and 5 pm). Where noise is likely to pose a risk to the surrounding community, the contractor shall inform the site manager and shall develop a public notification and noise management plan for approval by the Central Planning Division.

- Inform communities when heavy equipment usage would be taking place and during what hours.
- Organize scenic tours to take members if noise prolongs beyond 2 hours

**For the areas with Emergency shelter, Satellite warehouse,**

- Forming Self Help Groups (SHGs) in all project areas of Saint Vincent and the Grenadines.
- Co-ordinate actions with the populace of the area and the authorities so that there is institutional support.
- Use of the community members with leadership skills (observed and identified by community members) in the areas of health, education, etc.
- Facilitate training to the SHGs through a workshop.
- Establish a system of communication and information in the communities.
- Support programmes which build the capacity of the local authorities and other institutions which can support community members in Shelter management.
- Train various members in the use of VHF radios

**For the schools that would be emergency centres: Disruption to school**

- The project includes rehabilitative works to schools. In some cases, construction may occur while classes are being held. If this is the case, the school will use undamaged areas for classroom activities. The contractor shall seek to minimize as much as possible, the impacts to ongoing classes. Contractors shall also work with the Ministry of Education's designate to manage the storage and flow of materials so as to minimize disruption to

school activities. In cases where this is not an option, the project implementation unit will coordinate with the Ministry of Education to propose a system which will ensure that the smallest level of disruption to school activities e.g. shift system in collaboration with neighbouring schools.

- Work should commence during holiday period at best.
- An unoccupied building can be used during the period of retrofitting.
- A shift system can be implemented if needs be; - morning period for younger children and older grades in the afternoon- a special bus can be contracted during this period.

### **Recommendations related to specific vulnerable groups**

- Determine whether special groups such as the elderly, the disabled, women and children would suffer discriminatory practices and provide a basis for proposing mitigation measures.
- Raise parents' awareness on the importance of preparation for natural disaster and give preparation tips.
- Encourage and facilitate young women involvement in the dissemination of information and organization of the community in the period of natural Disaster.

### **Additional Specific research:**

- Small-scale studies to monitor the responses of vulnerable groups.
- Conduct risk assessment studies
- Develop community evacuation plans

### **Actions of the Social Specialist**

- Actions to enhance the development of human capabilities in the community with the aim of achieving social wellbeing.
- Identify the skills that the population has and their training needs
- Identify some leaders in the population for the program to be self sufficient.
  - (i) To provide information and form networks with self-help groups



- (ii) Provide consultation, advice and logistical support
  - (iii) To promote community education
  - (iv) Investigate the social problems of the community
  - (v) Review and agree upon the working procedures to be followed. i.e. in cases of resettlement ensure that the World Bank Operational procedures are followed.
  - (vi) Undertake a systematic intervention.
  - (vii) Organize the effort to identify all active elements of the intervention, with special attention to the unique contribution of social support to the desired end result.
  - (viii) Take precautions to observe side effects (immediate or delayed) insofar as it affects the source of support and beneficiaries.
- Promote the organization of the institution. Translating public education campaigns (e.g., promotion of informal sources of support and mutual aid groups).
  - Guide and assist the poor in setting up plans to rebuild their social life if affected by project implementation.
  - Strengthen the efforts which enhance gender participation for all age groups, and raise awareness and contribution of all community members in disaster management preparation.
  - Conduct risk assessment studies
  - Develop community evacuation plans.

**General recommendations:**

**Policy:**

- Utilization of the Sustainable livelihood approach provides a useful guide or checklist for identifying and assessing social impacts.

**Targeting:**

- Develop community specific responses.
- Allow community to define the response.
- Each community where the project would be implemented signifies different personalities therefore it is important to recognise that addressing cultural and attitudinal factors requires more effort and continuous intervention additionally, the vulnerability of children may require a broad approach.

**Implementation:**

- The Social specialist must guard against creating unrealistic expectations, and be sure that the community understand the aim of the project and are familiar with its components;
- The Social Specialist will need to explore all the relevant dimensions of the social environment, not only those that are obvious and easily accessible;
- During implementation it will be important to consciously seek out the views of marginalized and vulnerable individuals and social groups. To access their perspectives requires conscious effort and strategizing and may mean that intervention has to be done on an individual level.

A schedule of the exact project components will be needed in advance for the determination of relocation and resettlement so that the procedures can be followed to allow a smooth transition of the affect persons.

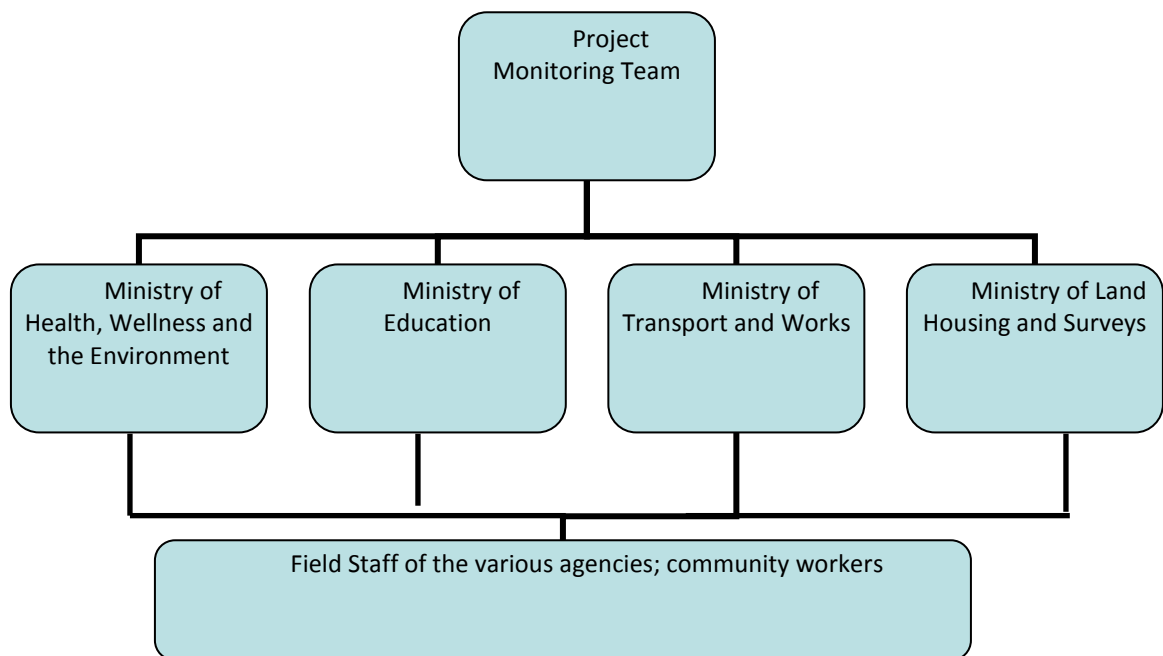
## Monitoring and Evaluation Plan

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Project Sector Investment Programme Management Unit (PSIPMU) in the Central Planning Division will manage the monitoring of the social impact of the project. This team will consist of a social specialist enlisted for the life of the project for the purposes of monitoring project impact, and staff of the PSIPMU. The PSIPMU is staffed with professionals trained in the area of monitoring and evaluation, (including in data collection and evaluation methods) who are experienced with World Bank projects. The World Bank team will assist the PSIPMU in monitoring by the performance indicators outlined below.

### Institutional arrangements

Project impact will be monitored using a three-tiered monitoring and evaluation system. This will comprise the Project Monitoring Team at one level, key personnel within the Implementing agencies/line ministries, and field staff. The team will also engage the World Bank for input between reporting and during Bank missions.

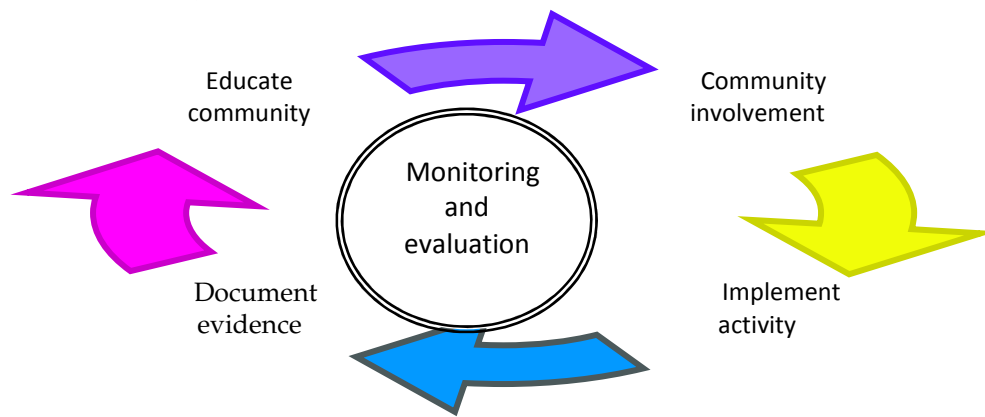


### **Monitoring procedure**

The monitoring team will report to the World Bank quarterly as part of the agreed project reporting on performance indicators outlined below. Updates will also be provided to the Bank semi annually in the context of the Bank’s supervision missions. These will include generally beneficiary analyses and treatment of persons affected by the project.

The monitoring team will ensure that the management of the project takes social safeguards into account, at all levels, and that facilities are enacted to mitigate social impacts highlighted by this assessment. It will monitor the schedule of physical works and progress, use of social safeguards and World Bank Operational Policy, and adherence to stated Resettlement Policy Framework where required. To do this the team will gather information from Project Steering Committee, implementing agencies, and field workers, on a regular basis as demanded by the progress of the project. It will consult with members from the relevant government ministries such as the Legal Affairs department in monitoring the legal framework of resettlement and the Ministry of Housing, land and Surveys for issues relating to land acquisition and relocation .

The monitoring team will also collect data from field workers of the various line ministries in all communities relevant to the project, including staff of the Community Development Department and the Ministry of National Mobilisation. This will be done in order to more directly monitor impact at the community level and mitigate against unforeseen negative impact during the course of the project.



NO.	Objective	Indicator
	Participation	<ul style="list-style-type: none"> <li>• One adult member from every household in the village attend community public meeting.</li> <li>• Formal requests from the community for information</li> <li>• Willingness to contribute labour and time</li> <li>• Record of previous participatory activities (with other agencies /sectors or independent community activities</li> <li>• Community characteristics</li> <li>• Number and type local organizations</li> <li>• Suitable leadership</li> <li>• Social homogeneity / strength of factions</li> <li>• Settlement characteristics</li> </ul>
	Inclusiveness	<ul style="list-style-type: none"> <li>• At least 1 representation from every street (Block) is a member of the Community Self Help Group</li> <li>• Gender representation</li> <li>• Youth representation</li> <li>• Elderly representation</li> <li>• Squatter representation</li> <li>• Church Based Organizations representation</li> </ul>
	Ownership	Development of rules and regulation for the management of the use of project activities.
	Capacity building	<ul style="list-style-type: none"> <li>• Users of project activities are trained.</li> <li>• Information sharing</li> <li>• Disaster management groups developed</li> <li>• In Fenton( Rehabilitation of Bridges) – at least 5 members of the communities are trained in ecotourism, nature guide etc.</li> </ul>
<b>Social safeguards</b>		
1	Conflict management	Legal awareness of rights and responsibilities Community meetings on project implementations activities
	Relocation and resettlement	(Slope Stabilization ) – Establishment of user groups for conservation and sustainable outcomes. Areas acquired are used for aforestation and nature parks
<b>Intervention outcomes</b>		
		<ul style="list-style-type: none"> <li>• Number of people adopting and using interventions</li> <li>• Number of problems arising from misuse of facilities</li> <li>• Number of persons attending training meeting</li> <li>• User satisfaction measured</li> <li>• Number with satisfactory knowledge to use new equipment</li> </ul>

## Results and Monitoring Framework

Indicators	Baseline	Target	Data Source	Frequency of Collection	Responsibility for Data Collection	Notes
<b>Project Activity: Retrofitting of emergency Shelters</b>						
<b>Indicator One:</b> Number of persons benefitting from access to safe emergency shelters	Number of Emergency Shelters (118), Population with access (11,800)	Two (2) shelters to be retrofitted, estimated target (12,000)	Project Progress Report, Certificate of Completion	Bi-annual	Project Steering Committee, Ministry of Transport and Works	
<b>Project Activity: Construction of Satellite Warehouses</b>						
<b>Indicator Two:</b> Number of communities with a fully equipped Satellite Warehouse	Zero (0)	Eight (8)	Certificate of Completion, NEMO	Bi-annual	Project Steering Committee, Ministry Transport and Works	
<b>Project Activity: Installation of VHF Radios</b>						
<b>Indicator Four:</b> Number of community members with training in the use of VHF Radios	0	Nine (9)	NEMO	Bi-annual	Project Steering Committee, NEMO	
<b>Indicator Five:</b> Number of communities with access to VHF Radios	1	Nine (9)	NEMO	Bi-annual	Project Steering Committee	
<b>Project Activity: Slope Stabilisation, Bridges , Coastal and River defense</b>						
<b>Indicator Six:</b> Reduced risk to failure of roads and bridges to natural hazards	10,500	0	NEMO,MoT W Supervision Report	Bi-annual	Project Steering Committee	Fenton Daily User (500) South Rvr Rd

						(10,000)
<b>Indicator Seven:</b> Reduced risk of community population to flooding in areas with flood mitigation works financed by the project	60	0	NEMO	Annual	Project Assessment and Report, MoTW Supervision Report	15 HH, approx 4 persons each
<b>Indicator Eight:</b> Number of persons relocated from unsafe locations (exposure to flooding, erosion etc.)	0	30	Ministry of Housing, Land and Surveys	Annual	Social Team,	
<b>Project Activity Education and Awareness</b>						
<b>Indicator Nine:</b> Number of Community Disaster Management Groups functioning	Eight (8)	30	NEMO	Bi-annual	NEMO and Project Steering Committee	*Group meetings
<b>Indicator Ten:</b> Number of persons participating in disaster management workshops	0	108	NEMO, Ministry of Education	Bi-annual	NEMO and Project Steering Committee	

## **Community Participation Plan**

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A steering committee whose members are created from the PSIPMU responsible for guiding the preparation and broad policy direction on the future development as they serve as an informational resource tot project development.

In an effort to deliver maximum benefit to stakeholders and ensure that project outcomes do not adversely affect the intended beneficiaries, the Social Assessment Team recommends the communities, both geographical and that as defined by interests, be included in the following activities during the life of the project:

- **Educational and Awareness Programmes** on disaster risk management and climate change issues and project activities. This will be done at the school level and will be incorporated into National Emergency Management Organization (NEMO's) existing plans. NEMO, Ministry of Education and Project Monitoring Committee will take responsibility for this activity.
- **Training** in the use of facilities. Key personnel identified during the social assessment will be trained in the use of VHF and HF radio. This activity will include persons and organizations with expertise in Radio Communication such as Radio Rainbow League and the National Coast Guard, and will target interested community members and members of Community Disaster Management Groups. NEMO will take responsibility for this activity.
- **Shelter Management Committees:** In line with existing procedures, shelter management committees will be set up, where none exists, to govern the operation of the shelters retrofitted under this project and operation of the Satellite Warehouse facilities. Procedures will be formalized for the operation of the facilities, including the role of shelter managers and committee members, and guidelines for the operation and use of facilities within emergencies and in 'down time'. This activity will target Community Disaster Management Groups, interesting community members, and will include existing shelter managers. Attempts will also be made to encourage formation of additional Community Disaster Management Groups.



- **Establish linkages between organization:** Project implementation activities should strengthen linkages between the various emergency organization, including the Ministry of Transport and Works, Health Facilities, NEMO, Community Disaster Management Groups etc. by increasing visibility, and providing opportunities for networking.

Community Participation Plan for year 1 of implementation					
Objective 1 : Identify potential representation in partnership with the community,					
Strategy	Task	Performance indicator	Timeline	Responsibility	Outcome
Develop and maintain links with community groups in project areas	Maintain relationships with community groups	Attendance to meetings Links established	Ongoing	Steering committee Social specialist Community field officers	Network of community groups; Sensitization Awareness on the geographical scope of the project
Conduct Community meeting	Public meeting Solicit involvement	Attendance to meetings	January	Steering committee Social specialist Community Field officer	Inform and educate about the project Assess preliminary issues Solicit representations
Form community group where they do not exist	Use representation suggested from public meeting for the formation of Community Self Help groups	No: of Groups formed	January to April	Social specialist Community Field officers	Awareness information on capacity of community members formation of community self help groups
Objective 2: Ensure that social specialist and community self help group have knowledge, skills and capacity of project implementation and community					
Conduct a needs assessment ( resources, demographics , persons affected by project)	Conduct a survey to determine knowledge, skills and needs	Report on information gathered	May to August	Steering committee Social specialist SHGs Community field officers	Solicit who are the best community leaders on different aspects Are there vulnerable groups affected
Improve communication about community participation	Utilise media, community meetings and institutional meetings to inform on project activities and need for	Flyers , API coverage at least 3 institutional meetings	March Initial Ongoing	Social specialist SHGs Community field officers	Information sharing

**Social Assessment**  
**Regional Disaster Vulnerability Reduction Project**

	community participation				
Community meeting of the Project affected persons	Use assessment of project area by SHGs	Report from assessment	July – September	Social specialist SHGs	Review issues arising out of project implementation Inform communities about possible time delays likely to occur
Community participation Month	Annual event Formal evaluation of all members contribution (crime reduction, youth success in school, family disaster plan)	Annual event conducted Report on evaluation	Annually	Social specialist SHGs Community Field Officers	Identify members of the community who made development contributions
Training of Community Self Help Groups	Training in Disaster Management, Groups dynamics, Community participation, communication	Report on training	Ongoing	Steering committee Social specialist SHGs	Equip members with the necessary skills
<b>Objective 3: Incorporate community members participation and feedback in project</b>					
<b>Strategy</b>	<b>Task</b>	<b>Performance indicator</b>	<b>Timeline</b>	<b>Responsibility</b>	<b>Outcome</b>
Develop framework to enhance opportunity for community members to participate	Establish a database of resource members of the community Review demographic data Integrate with other development sectors	Database established	August – October	Social specialist SHGs Community field officer	Resource persons from the community identified
Public meeting	Organize a community meeting – public forum Community development of a risk map	Attendance	November – December	Social specialist SHGs Community field officer	Comments from general public on issues of implementation Draft community risk map
Development of the	SHGs develop	Risk map developed	December -	Social specialist	Risk map developed

community risk map			January	SHGs Community field officer	
<b>Strategy</b>	<b>Task</b>	<b>Performance indicator</b>	<b>Timeline</b>	<b>Responsibility</b>	<b>Outcome</b>
<b>Objective 4 : Development of community disaster management groups</b>					
Develop management committees	Establishment of shelter management committee	Committee developed	September to November	SHGs	Community education programmes
	Establishment of satellite warehouse management				Identify suitable leadership
Know of social capital in the community in its development aspect	Documentary and field research Discussion with community members display of community resources	Report on documentation	January 2013 to March	Social Specialist SHGs	Social capital and development Identification of internal and external opportunities
Investigate the social and ecological impact	Conduct survey to verify what are the damage or benefit to the population	Survey conducted	Ongoing	Social specialist SHGs	

**List of contact:**

Point Persons	Agency/Organisation	Email
Mr. Brent Bailey	Ministry of Transportation and Works	<a href="mailto:office.transport@mail.gov.vc">office.transport@mail.gov.vc</a>
Mr. Nikolai Lewis	Ministry of Transportation and Works	<a href="mailto:office.transport@mail.gov.vc">office.transport@mail.gov.vc</a>
Mr. Hudson Nedd	Ministry of Housing	
Ms. Saskia Scotland	Ministry of Housing	
Ms. Michelle Forbes	NEMO	<a href="mailto:nemosvg@gmail.com">nemosvg@gmail.com</a>
Roxanne Williams	NEMO	
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Mr. Sylvester Tannis	Radio Rainbow League	<a href="mailto:syltan@vincy.com">syltan@vincy.com</a>
Edwin Durrant	SVG Coast Guard Service	
Mr. Andre Alexander	Ministry of Telecommunication	<a href="mailto:andrealexander@gov.vc">andrealexander@gov.vc</a>
Ms. Ronette Jordan	Central Planning Division	
Members	St. Vincent Boys Grammar School Young Leaders	
Members	GHS – Young Leaders	
Members	Green Hill Sport and Cultural Organisation	
Members	Marriaqua	
Members	Buccament Development Organisation	
Dolly Prescott	Marriaqua Community Member	<a href="mailto:Baby-dee13@hotmail.com">Baby-dee13@hotmail.com</a>
Devern London	Marriaqua Community Member	<a href="mailto:devernlondon@hotmail.com">devernlondon@hotmail.com</a>
Catherine John	Marriaqua Community Member	
Wanda Dascent	Marriaqua Community Member	<a href="mailto:mwjdascent@hotmail.com">mwjdascent@hotmail.com</a>
Leonard Cordice	Marriaqua Community Member	
Noble Davis	Marriaqua Community Member	
Stanley Stephens	Marriaqua Community Member	<a href="mailto:stanleypops@hotmail.com">stanleypops@hotmail.com</a>
Glaudeus –Myers	Buccament	
Diam Hickson Samuel	Buccament	
Norma Browne	Buccament	
Kathleen Prescott	Buccament	

Othniel Browne		
Amor Jackson		
<b>Training</b>		
<b>NAME</b>	<b>Area assign</b>	
Sandra Augustus	Troumaca	
Amor Jackson	Buccament /Grenadines	
Yoland London	Spring / Grenadines	
Dwight Samuel	Spring	
St. Clair Yearwood	Georgetown	
Fiara Castello	Kingstown	
Learie Johnson	Georgetown	
Catherine John	Marriaqua	
Nola Craig	Arnos Vale	
Karen J. Nero	Arnos Vale	
Roger Young		
Everal INCE	Chateaubelair Baliene	
Donnette Pierre	Colonaire	
Shamanth Labban	Colonaire	
Philcol Jeffers	Barrouallie	
Glaston Lavia	Sandy Bay/ Fancy	
Gwenneth Anthony	Marriaqua	

## Sandy Bay

<b>NAME</b>	<b>GEN DER</b>	<b>COMMUNITY</b>
Hoyte Alford	M	Biabou
Jordon Ronette	F	CPD
Ralph De-Anna	F	CPD
Stewart Chiaka	F	CPD
Peters Hulda	F	NEMO
OSMENT Kendol	M	Sandy Bay
Hoyte Nesta	F	Sandy Bay
May Andrea	F	Sandy Bay
Walter St. Elbert	M	Sandy Bay
Ballantyne Peters	M	Sandy Bay
Hepburn Sheldon	M	Sandy Bay
Lavia Alex	M	Sandy Bay
Ballantyne Christian	M	Sandy Bay
Fraser Patsy	F	Sandy Bay
Locke Justin	M	WB
Oppong Yaa	F	WB

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## ANNEX 1

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### St. Vincent and the Grenadines Disaster Vulnerability Reduction Project

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#### Terms of Reference for a SOCIAL ASSESSMENT

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August 15, 2010

#### 1. Introduction

The purpose of these Terms of Reference (TOR's) is to identify the nature, scope and extent of the social assessment to be undertaken during the preparation of the St. Vincent and the Grenadines Disaster Vulnerability Reduction Project (DVRP). The Social Assessment will be undertaken by the social policy specialist, Ms. DeAnna Ralph of the Public Sector Investment Programme Management Unit, with guidance from the World Bank's Social Development Specialist.

#### 2. Background Information

St. Vincent and the Grenadines is among the most disaster-prone countries in the world, regularly suffering disasters related to natural events such as earthquake, hurricane, landslide, rain and drought. These hazards have caused significant and recurrent damages to national infrastructure including housing, road networks, schools, hospitals and other facilities such as phone lines, water and electricity. The resulting impacts significantly affect human welfare, national economic activities, property, and natural resources. The effects of climate change are already evident in many parts of the country with rising sea levels and storm activity continuing to impact on exposed coastlines and development. The situation is only expected to worsen as SVG is highly vulnerable to the impacts of global warming and climate associated impacts.

Over the last decade, SVG began its risk reduction activities with the development of disaster preparedness and response investments. During this period, most of the activity in disaster risk reduction focused on the development of national disaster plans, setting up the disaster management agency, and promoting public education and awareness. Despite these efforts, SVG continues to face high levels of risk to its economic stability and national welfare. Post-disaster rehabilitation of damaged infrastructure is a major contributor to the national economic risk profile.

Studies have documented that aging public infrastructure presents very high levels of vulnerability, particularly in critical sectors such as health, education, water, and roads. The annual tropical storm/hurricane season, combined with the cumulative effects of climate change, will continue to threaten island economies. Without intervention, this will likely increase the future need to divert limited financial resources

away from economic growth activities into repairs and reconstruction as a result of disaster and climate change events. While work continues in preparedness and response, the logical next step is reduction of vulnerability to infrastructure.

### Project Objectives

The project for which this social assessment is being developed would seek to measurably decrease the vulnerability of people and the national economy of SVG to climate change and natural hazards. The development objectives of the project would be to: (i) integrate disaster vulnerability reduction and climate resilience in national development strategies and management of public infrastructure; (ii) improve SVG's access to and benefit from regional collaboration and support structures for hazard monitoring and risk assessments, and (iii) reduce the risk of loss of human life due to natural hazard induced structural failure of critical public infrastructure.

### 3. Purpose of Social Assessment

The social assessment will a) analyze the potential social impacts of the project and develop associated social indicators for monitoring and evaluating the social impacts of the project, b) solicit stakeholder/beneficiary perspectives on project design and impact and c) identify and assess the nature and magnitude of land acquisition related issues. The social assessment will assist in the identification of poor and vulnerable populations and ensure that project objectives are acceptable to the intended beneficiaries.

Specifically, the SA will serve as a:

- I. **Baseline data collection** tool in *each* of the project sites and a means to identify
  - a. **Stakeholder analysis** (including those who can influence the project outcome, e.g. NGOs? etc) and their roles, responsibilities and priorities in the various project locations.
  - b. **Social diversity and gender profile** of project beneficiaries including the identification of key socio-economic characteristics of the communities including their livelihood strategies and characteristics (gender, age, poverty, disability status etc.). What are the cultural and social features that differentiate social groups in the various project areas and who are the poor and vulnerable?
  - c. **Potential social impacts of the project including opportunities and risks** among the differentiated stakeholder groups outlined above in each project site.
  - d. **Key institutions** (formal and informal organizations) likely to affect the project and relationships between project beneficiaries/ stakeholders and institutions.
  - e. **Key social indicators** for monitoring and evaluating potential project impacts on the identified groups.



## II. Consultation and participation tool to:

- a. **Consult with project beneficiaries** (paying particular attention to otherwise excluded groups) and to identify and document what communities want in terms of information/ community level engagement.
- b. **Identify stakeholder opportunities to influence project design** as well as social risks.
- c. **Better understand the nature, scope and magnitude land acquisition** issues in each project site as well as land ownership and strategies to mitigate potentially adverse impacts as well as to inform project affected peoples of project plans.
- d. **Prepare a participation plan** for the project.
- e. The findings from this analysis and consultation will be incorporated into the project design and resettlement processes;

## 4. Expected Outputs

The outputs should include:

(a) **Consultation Strategy.** Documented consultations (and their outcomes) with project affected peoples/project beneficiaries and the development of a **consultation strategy** for the project going forward;

(b) **Monitoring and evaluation plan:** The assessment should provide a framework, including indicators and institutional arrangements, for monitoring the social impacts of the project.

(c) **Recommendations for project design and implementation arrangements:** Provide input to the RPF and Resettlement Action Plans and link SA findings to resettlement policy framework when appropriate including an *estimate* of the numbers and categories of affected peoples at the sites identified as triggering OP/BP 4.12.

(d) Identification of poor and vulnerable populations and **assessment of how the project might best respond to/address reduction of vulnerability of the poor.**

5. **Data collection and research methods:** Build on existing data and review all relevant literature (e.g past NEMO consultations) as well as any ongoing and relevant activities. The consultant is expected to use relevant and appropriate research methods such as rapid user surveys, consultations and stakeholder workshops and key informant interviews as necessary with project affected people/beneficiaries/institutions in *each* of the project sites paying particular attention to the poorest and most vulnerable communities.

The SA should be carried out in parallel to the development of the Resettlement Policy Framework and the key findings should be included in the RPF.

6. **Team:** Ms. DeAnna Ralph has been identified as the social scientist who will design, conduct and write up the results of the social assessment with input – where necessary - from the affiliated ministries, particularly Housing.

7. **Schedule and Reporting**

- Level of effort = approximately 30 days
- Develop a research plan with research methodology (data collection methods, units of analysis, interview questions/guidelines) timeline and outputs and submit to the Bank for review prior to the commencement of field research. This initial report should include a comprehensive update of the summary table below.
- Prepare a draft report and submit to the Bank.
- Incorporate Bank input and prepare final report.
- Submit final report to the Bank prior to project appraisal.

ANNEX 2

**RISK ASSESSMENT Disaster Vulnerability / Climate Resilience**

Potential Hazard (State the hazard)	Who is at risk?	How	Existing Control Measures	Possible Preventative Measures
Environmental: social: economic:	Children, elderly, women, disabled etc.			
Environmental Crossing the river to get home without a bridge, only way to house	Children , elderly, pregnant woman	Unpredicted flooding, water level may be higher, pregnant woman can fall.	When it's rainy take extreme caution	Parents cross the children in the morning
Environmental Socio-economic Approximately 15 informal dwelling on the sea coast	Elderly, children		None, ( what do you or would you do in an eventuality ) just watch the sea	
Social ( houses are unstable )	The elderly	The walls of the house are shaking due to soil erosion	None	

Sample

## Documents

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The Town and Country Planning Act No.45 of 1992

The Central Water and Sewerage Act of 1992

The Waste Management Act, No. 31 of 2000

The Environmental Services Act No. 14 of 1991

The Environmental Health Services Act No. 15 of 1991

The National Emergency and Disaster Management Act of 2006



**ANNEX 3**

Enumeration District					
For official use only					
Location	Central	Windward	Leeward	Grenadines	
Interviewer Surname (use block letters)					

**CENTRAL PLANNING DIVISION**  
 MINISTRY OF FINANCE AND ECONOMIC PLANNING  
 P.O. BOX 608, KINGSTOWN  
 ST VINCENT AND THE GRENADINES

Tel. (784) 457-1746 Fax. (784) 456-2430  
 E-mail: [cenplan@vincysurf.com](mailto:cenplan@vincysurf.com)

**DISASTER VULNERABILITY REDUCTION PROJECT**

**PILOT PROGRAMME CLIMATE RESILIENCE**

**Objective:** To assess the level of awareness and preparedness for climate change related events.  
 To solicit community perspectives on proposed mitigation measures.

**Instructions for completion of the questionnaire**

Please complete sections 1, 3, 5 and 6. Complete sections 2 and 4 where applicable. Tick boxes where appropriate, write out responses to open – ended questions.

Name of Community:  
 \_\_\_\_\_

How long have you lived in this area?  
 \_\_\_\_\_

<b>Sex of interviewee</b>	Male	Female

Age	
15-19	
20-24	
25-29	
30-34	
35-39	
40-44	
45-49	
50-54	
55 +	

**SECTION 1- GENERAL**

**This section deals with community members’ experience of natural disaster. It is to be answered by all interviewees.**

1. Which of the following natural disasters are you likely to be affected by in your community? ( multiple responses can be selected)

EVENTS	NOT AT ALL	NOT LIKELY	SELDOM	LIKELY	VERY LIKELY
Floods					
Landslides					
Soil erosion					
Tropical storms /hurricanes					
Drought					
Storm Surges					
Earthquakes					
Volcanic eruptions					
Agricultural pest					
High winds					
Other please specify					

2. Have any of these impacted on your life, health, property, livelihood, environment in the past 5 years?

If **Yes**, please continue by stating which ones and what aspect.

If **no**, Please skip go to question 4

Events	Life (way of life)	Health (injury)	Property (damage)	Livelihood (earnings)	Environment (Surrounding)	Other Please state:
Floods						
Landslides						
Soil erosion						
Tropical storms /hurricanes						
Drought						
Storm Surges						
Earthquakes						
Volcanic						

eruptions						
Agricultural plagues						
High winds						
Other please specify						

3. How would you rate the level of impact of these events?

Events	Level of Impact					Not exposed to this event
	Not at all	Very Low	Low	High	Very high	
Floods						
Landslides						
Soil erosion						
Tropical storms /hurricanes						
Drought						
Storm Surges						
Earthquakes						
Volcanic eruptions						
Agricultural plagues						
High winds						
Other please specify						

4. What social problems are most common in this community? Rate the level of occurrence from very low to very high.

	FREQUENCY LEVEL					
	Very low	Low	High	Very high	Not sure	NOT a problem
Youth unemployment						
Adult unemployment						
Teenage pregnancy						
Drug use/abuse						
Drug dealing						
Domestic violence						
Violence against women						
Violence						

Theft / Burglary						
Predial Larceny						
Gang violence						
Poverty						
School drop outs						
HIV/AIDS						
Other, Please specify						

5. Please rate what level of impact would a natural disaster have on the services in your community.

	None at all	low	Not Sure	high impact	Very high impact	Community does not have this service
The school						
The health Clinic						
Community or resource centre						
Police station						
Roads						
Telephones						
Electricity						
Water						
Other, Please Specify						

6. How prepared are you for another eventuality? (related to natural disaster)

- A. Don't believe in preparation
- B. Not prepared at all
- C. Somewhat prepared
- D. Prepared
- E. Very prepared
- F. Would prepare in the future



7. What do you think is needed for you to be more prepared? List options (e.g home repairs, information etc.)

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8. What is your main source of water supply

a) Pipe borne CWSA

b) River

c) Collecting rain water

d) Public pipes

e) Other, Please Specify \_\_\_\_\_

9. In the event of a disruption in the water supply from CWSA. How would this affect you?

Not at all

Very much

1

2

3

4

5

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10. Do you have alternative water storage facilities?

Yes  No  If no go to question 13

11. If Yes, state types

(a) Plastic tanks

(b) Concrete tanks

(c) Drums

(d) Water jugs

(e) Buckets

(f) Cisterns (underground storage)

(g) Other, please specify \_\_\_\_\_

12. How long would this water last you, if the main water source was shut down due to natural disasters?

- a. less than a day
- b. a little less than a week
- c. 1-2 weeks
- d. 2 weeks to a month
- e. More than a month

**GO TO NEXT SECTION**

13. Why not

- a. Too expensive
- b. Not enough space
- c. not necessary
- d. Other, Please specify \_\_\_\_\_

## SECTION 2 RIVERS

**COMPLETE THIS SECTION ONLY IF THERE IS A RIVER IN THIS COMMUNITY**

*This section seeks to gain community's views on rivers in their community, risks, uses and possible measures to mitigate risk.*

14. Is this river important to you/your community? (Tick in the box, 1 – 5)

	Not at all important								Very Important
	1	2	3	4	5				

15. What do you use this river for currently?( Tick boxes)

- (a) Cooking
- (b) Farming/fishing/ animal use
- (c) Bathing
- (d) Washing clothes/utensils
- (e) Construction
- (f) Cleaning
- (g) I do not use the river water
- (h) Other ( Please Specify) \_\_\_\_\_

**PLEASE COMPLETE**

		No	somewhat	Yes	Not sure
16.	Do you think the river pose a threat to you or your community?				
17.	Do you think the river bank is secure at present?				

18. Do you think it is necessary to further secure the bank of the river?

Yes

No:

If yes, What do you think can be done to protect the river bank ?

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19. Have you noticed any changes in the river pattern?

Yes

No:  (go to question 20)

If yes, please explain

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(B) What do you think is responsible for these changes

---

---

---

---

20. What do you think would happen if nothing was done to change the situation?

---

---

---

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### SECTION 3. SLOPE STABILIZATION:

21. Which of the following are currently considered a problem in your community?

	Tick appropriate boxes
Rock fall	
Cracks in the land	
Landslides	
Land slippage	
Water logged soil	
Soil erosion	
None of the above	

Other: Please specify \_\_\_\_\_.

22. Do you feel these problems pose a danger or threat to you or your community?

Events	Level of THREAT					Not exposed to this event
	Not at all	Very Low	Low	High	Very high	
Rock fall						
Cracks in the land						
Landslides						
Land slippage						
Water logged soil						
Soil erosion						
Other please specify						

23. What is your land being used for currently?( Tick boxes)

(a) Housing

(b) Farming/ animal use

(c) Business

(d) Vacant lot

(e) Other ( Please Specify) \_\_\_\_\_

24. Have you noticed any recent changes in the land stability in your community?  
(Landslides, swamps, new streams etc.)

Yes

No:

if, no go on to question 25.

If yes, please explain

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(B) What do you think is responsible for these changes

---

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25. Do you think it is necessary to further secure the land from erosion, landslides, etc  
?

Yes

No:

Please explain

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---

26. What do you think is needed to protect the area?

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27. What do you think would happen if nothing was done to change the situation?

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## SECTION 4 COASTAL DEFENCES

COMPLETE THIS SECTION ONLY IF THIS COMMUNITY IS SITUATED NEXT TO THE COAST.

Please rate the following on a scale of 1 to 5: 1 (lowest) to 5 (highest) as explained below.

28. Does the coast pose a danger to you or your community?

None at all    1    2    3    4    5 Very High Risk  
           

29. How secure are you and the people living along the coast at present?

Very secure    1    2    3    4    5    Very Unsecure  
           

30. Do you think it is *necessary* to secure the Coast?

Not at all    1    2    3    4    5    Very necessary  
           

31. Have you noticed any changes in the coastal front? (Sea level, beach erosion, etc.)

Yes        No:        (Go to question 32).

If yes, please explain

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(B) What do you think is responsible for these changes?

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32. What do you think is needed to protect the area?

---

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33. What do you think would happen if nothing was done to change the situation?

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## SECTION 5 DISASTER VULNERABILITY PROJECT

### ACTIVITIES UNDER THE PROJECT (DVRP)

The work to be done in this community includes... (Please explain the work to be done).

34. What are the possible positive impacts of the work? Please state:

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35. . What are the possible negative impacts of the work? Please State

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36. How would this project activity impact.

	IMPACT LEVEL				
	Not at all	low	Not Sure	high	Very high
You					
The community					
Agriculture					
Health					
Education					
The economy					

37. Do you find that the proposed work is necessary to your community?

Yes  No

If no, why.

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38. What other areas do you think the project could/should address?



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39. Would you like further information on the project?

Yes

No

## SECTION 6 OTHER

40. Are you aware of climate change issues

(a) I have never heard the term

(b) Somewhat aware

(c) Aware

(d) Very aware

Other, Please Specify \_\_\_\_\_

41. Outline what projects would be helpful in strengthening our response to a changing Climate

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42. Do you have any concerns regarding possible future disasters?

Yes

No

Please \_\_\_\_\_ explain

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---

43. In the event of a natural disaster do you have any of the following currently:

(a) Food supply that does not require cooking for at least 3 days

(b) Battery powered radio

(c) Lantern (battery/ oil)

(d) Flashlight

- (e) Candles
  - (f) Secure shelter
  - (g) Plan of what to do
  - (h) Important documents secured
  - (i) Other ( Please Specify)
- 

44. Does your community have disaster a preparedness committee or plan?

Yes  No  Don't know

45. Would you be interested in becoming more aware of natural disaster and disaster planning?

Yes  No  Not sure

46. Would you like to be involved in disaster reduction programmes?

Yes  No

47. What do you think you can offer to help your community in the event of a disaster?

---



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48. What are the three best ways to inform you and your community about natural disasters? Indicate using a scale from 1-3, 3 being the very best.

<input type="checkbox"/> Non governmental organizations	<input type="checkbox"/> Radio	<input type="checkbox"/> Telephone /text message
<input type="checkbox"/> Volunteer groups	<input type="checkbox"/> Television	
<input type="checkbox"/> The local disaster committee	<input type="checkbox"/> Newspaper	
<input type="checkbox"/> Friends, relatives, neighbors	<input type="checkbox"/> Other, please specify:	

**Thank you**

**Annex 4 Community of Sandy Bay**

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**SAINT VINCENT AND THE GRENADINES**

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**REGIONAL DISASTER VULNERABILITY REDUCTION PROJECT (RDVRP)**

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**ANNEX TO SOCIAL ASSESSMENT**

**COMMUNITY OF SANDY BAY**

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April 2012

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## 1. Rationale

The Regional Disaster Vulnerability Reduction Project (RDVRP) is being implemented in Saint Vincent and the Grenadines (SVG). The initial social scoping of the project and subsequent social assessment indicated the presence of a Garifuna population in the project site of Sandy Bay. Therefore, it was determined that an assessment needed to be made as to whether the community met the requirements laid out in the Bank's policy on Indigenous people (O.P 4.10) and whether the policy was therefore triggered. It was concluded that while the community (Sandy Bay) self identify (and are also identified by others) as being a distinct indigenous community and while they do occupy a specific geographical location, they do not have distinctive customary cultural, economic, social or political institutions that are separate from the dominant society and culture, nor do they have an indigenous language different from the official language (English) of St. Vincent and the Grenadines.

In sum, while the community possesses some of the attributes necessary to trigger the World Bank's policy on Indigenous Peoples they do not fully meet the criteria and it has been decided (by mutual consent) by the World Bank and the Government of St. Vincent and The Grenadines that the policy is not triggered in the case of the Garifuna population.

Nevertheless, it was felt that it was important to conduct "extra due diligence" on these communities to ensure that project impacts are positive and that any potentially negative impacts are successfully mitigated, particularly given the higher than average poverty rates among the community.

The planned intervention in Sandy Bay under the RDVRP is the construction of a Satellite Warehouse which seeks to provide for basic emergency resources in the event of a natural disaster - thus, reducing the vulnerability of the communities.

## 2. Social Assessment Objective

A Social Assessment was undertaken during project preparation to assist in the identification of potential social benefits and potential negative impacts. Specifically the aim was to identify potential positive and negative impacts associated with the construction of the Satellite Warehouse in Noel Sandy Bay.

**3. INVESTIGATION DESIGN:** The methods used in the development of the Social Assessment were as follows:

- (a) **Type of study:** Exploratory
- (b) **Method:** Deductive
- (c) **Techniques and Instruments**

Techniques	Instruments
Documental or Desk research	Maps

Interviews	Risk assessment
Observation	Observation guide
Site visit	Surveys
Community discussion	Focus groups

#### 4. EXTRA DUE DILIGENCE

---

Sampling Method to ensure extra due diligence in Sandy Bay. A Survey was conducted at all project sites. A representative sample was selected by the Census office based on the population on each census division. A number of 7 persons were suggested to be interviewed in Sandy Bay however, the survey was conducted on 37 persons in order to ensure extra due diligence.

This included persons in close proximity to project sites, persons living near to rivers, persons living near to the coast, residents of communities near the coast and persons who own lands or operate businesses in the communities of interest. Similarly, discussions and informal interviews were held with key personnel, who, through participation in community/ environmental organisations or previous experience with disaster, made them of interest to the assessment.

##### **Respondent Note on Methodology:**

Key informant interviews in the communities of Sandy Bay and Fancy noted that these areas are of particular interest to many External groups due to high levels of poverty and the possible presence of Indigenous People.

##### **Social Assessment Response**

The Social Assessment Team notes that these communities have also been subject to increased scrutiny and participatory research, and instead employed the use of key informants to ensure that quality data was collected.

##### **1. Obtaining the Information:**

- Community Development Officer was identified
- The Director of the Sandy Bay Government School
- An anthropologist living in the Sandy Bay Area
- Community members
- Children from the School

## 5. Diagnostic of Community:

---

### OPERATIONAL DEFINITION:

(A) It's a rural community from the mouth of the Noel River on the coast in a westerly direction. All the way to its source in the Waterloo Mountains in the vicinity of the parish boundary, then northward along Acayau River to the coast at Belleisle Gutter, then along the coast back to the start.

(B) The parish is Charlotte. its geographical coordinates are 13° 21' 0" North, 61° 8' 0"

(C) Problems identified by the community study for the RDVRP

- Poverty
- High unemployment
- Teen pregnancy
- High vulnerability to natural disaster
- Landslides
- Sea blast
- Coastal erosion

### Location:

Sandy Bay is a rural coastal village on the North Windward coast of St. Vincent and the Grenadines in the parish of Charlotte. It lies approximately four (4) miles north of Georgetown (a main town on St. Vincent Island) and south of the La Soufriere Volcano. The community is also in close proximity to one of the island deadliest rivers, the Rabacca Dry River. This river, which flows directly from the volcano for regularity is DRY in nature but very powerful when flowing. The village is accessible by land and sea.

### Background:

The village comprises of two (2) major sections old Sandy Bay and New Sandy Bay. The old Sandy Bay section is believed to have existent in 1797 after the Carib wars with the British. The area comprises mainly of decedents of the Yellow Caribs, a small number of African slaves referred to as Black Caribs the ancestors of the Black Caribs became the first permanent non-carib settlers in the island in 1675 mainly survivors from the sinking Dutch ship. During the 1900s the community had numerous upsurges from heavy flooding, hurricanes and volcanic eruption.

### ***Population***

The population according to the 2001 census, was two thousand eight hundred and sixty- seven (2,867). This is the entire Sandy Bay census division that comprises surrounding communities. The economically active population is seven hundred and twenty –two (722) the lowest of all census division in the island, of which 537 are male and 185 are female. The unemployed women are engaged in household chores, while the men seek odd and end tasks.

### ***Livelihood***

The community livelihood is embedded in subsistence and commercial farming, of crops including cassava, peas, sorrel and sweet potatoes.

### ***Culture***

The traditional Carib culture is not practiced; however, members of the community practice the Quadrille dance. November 1 (the day of the Dead) is also celebrated by the cleaning and lighting of candles on their deceased relatives graves. In December, like all other communities in St. Vincent and the Grenadines the members visits each other homes to bring a message of glad tidings and joy.

### **Family Structure:**

The family composition is single parents and extended families living in small to medium size concrete and partly wooden houses. Approximately 96 percent have electricity, and domestic water supply. Telephone in the homes is very common however a number of people have cellular phones. Approximately 15 percent of the population use pit latrines. Teen pregnancy seems to be the dominant social problem in this area.

### **Physical Infrastructure**

The institutions present in this community are one (1) health clinic, two (2) pre-primary schools, one (1) primary and one secondary school, Churches from all religions (Anglican, Catholic, Spiritual Baptist, Adventist, etc.) one resource centre that serves as an office for teachers in the Secondary school, Adult Continued Education Programmes and community meetings. Additionally the community has its' own radio station, the Garifuna radio, post office, police station, playing field and cemetery. Other businesses that can be found in Sandy Bay include hairdressing, bakery, and retail shops.

## **6. Key Social Findings**

---

The Social Assessment revealed the need for the project activities to help to reduce the vulnerability of the communities in the event of natural disaster.

- Employment opportunities for unemployed youth, men and women on some the project sites, for example the construction of the satellite warehouse, river and coastal defence. In Sandy Bay some residents indicated the possibility of



having the opportunity to make basketry to display next to the coastal defence, thereby improving tourist attraction and create employment.

### **Coastal Defence:**

The Coastal defence assessment was conducted in the communities of Sandy Bay. The coastal front in some areas in St. Vincent and the Grenadines is developmental land for tourism. Prime beneficiaries of these activities consist of grocery shops operators, landowners. In addition to questionnaires, informal interviews were conducted with entrepreneur living along the coast. In these communities, 95.2 percent of the respondents indicated that this activity was necessary for the community. 92 percent felt that the people living along the coast were unsecure and 90 percent of the respondents felt that it was necessary to secure the coastal front. They anticipate that the sea defence would help in flood and disaster mitigation and highlighted the following positive impacts:

- In Sandy Bay respondents anticipated that coastal defence would prevent beach erosion. This would enable the residents to reintroduce beach sports such as cricket, football and volleyball. Additionally, this would promote a sense of security among parents who indicated that their children would be safer while playing on the beaches.
- It would protect properties along the coastal front and provide environmental beautification.
- It would reduce the risk of loss of human life resulting from natural hazards. Particularly, in the communities of Georgetown and Sandy Bay, which are located near the Atlantic belt, where residents are endangered as high waves are frequently observed.
- The coastal defence work would protect the infrastructure particularly roads in some of the communities for example, Sandy Bay and Dark view. The roads in these two communities are an essential part of the road network and connect communities (in the north) to the rest of the island.

Generally the residents approve the objectives of this activity and indicated that if not implemented, there can be negative consequences to individuals, communities, the economy and the environment. Some of their responses are presented in the table below.

The respondents say: If the project was not implemented then:

<b>Individual</b>	<b>Community</b>	<b>Physical Infrastructure</b>	<b>Natural Environment</b>
"people living in the area will have to find other places to live"	"many roads and homes along the coast lines will get damaged"	"in the next five years about fifty homes will have to be relocated (SANDY BAY)"	"damages to the beach and people's homes"
"very little or no beaches recreational"	"the sea will take more lands"	"the sea will continue taking land until it takes the public"	"the sea water may continue to reclaim and"

areas"		road"	erode the lands"
	"there will be a total cut off in some areas, main road will be destroyed. residents of low lying areas will have to move to higher ground"	"the water will destroy infrastructure like roads and other buildings along the coastline"	"there would be no land for living and in some areas of the community the roads will be completely destroyed"

### **Satellite Warehouse at Noel, Sandy Bay: Consultation**

**Sandy Bay Site Visit.** A site visit to Sandy Bay was conducted in order to consult with stakeholders regarding the project in general and location of the Satellite Warehouse specifically. The site visit took place on April 10, 2012. Residents in Sandy Bay were informed of the planned consultation by flyer (see attached) and by local community radio on Sunday April 8. In the event attendance was limited with 9 community members participating (see list of attendees) along with 6 representatives from Central Planning, NEMO and the World Bank. The discussion was a rich one however and the issues raised related to:

**The location of the Satellite Warehouse** and suggestions by several community members to situate the warehouse on the site of the abandoned Old School more centrally located within the community. The proximity to the sea of the Old School and its ownership by the Anglican Church were discussed. The fact that the suggested location is on Crown Land (thereby circumventing land acquisition) and the broader catchment area of the proposed Warehouse was viewed positively by the community. The pros and cons of the various sites were discussed and ultimately the benefits of the proposed land in terms of an extended catchment area and land ownership status were sufficiently attractive to the community members present.

**The procurement process was explained** to the community by the PCU Procurement Specialist. The community raised concerns about the importance of hiring local contractors in order to generate employment and concerns that some local contractors might not have the necessary documentation although registered. Community members were assured that contracts will be locally advertised.

**Contents of the Satellite Warehouses.** The NEMO representative addressed community questions regarding the contents and use of the Warehouse.

**Temporary storage of emergency equipment.** In addition, with hurricane season fast approaching, it was agreed that a temporary storage site should be established to house some emergency equipment given that the construction of the warehouse could be 6 months or more away. The Principal of the Sandy Bay Government School, Mr. St. Elbert Walters, offered to provide two small storage rooms in the school to house a limited amount of equipment prior to Satellite Warehouse construction.

**Emergency Management Committee.** The need for a Community Emergency Management Committee was discussed and the need for it to work with District level preparedness groups. Central Planning agreed to assist as necessary in the organization and establishment of the group.

**Community Fatigue with Consultations.** Several community members expressed frustration with consultations which lead no-where. Examples were given of

consultations that have taken place in the past and led by NEMO, the Red Cross and others (unrelated to the RDVRP) which for years have promised Disaster Relief initiatives in Sandy Bay which have not materialized.

**Limited Attendance.** Limited community attendance was explained in terms of the message not sufficiently getting out and in terms of community fatigue with meetings that lead no-where. *It was agreed that a further consultation would be organized during a Parent Teacher Meeting at the Sandy Bay Government School within the next month in order to reach a wider segment of the community given that construction going ahead in the foreseeable future.*

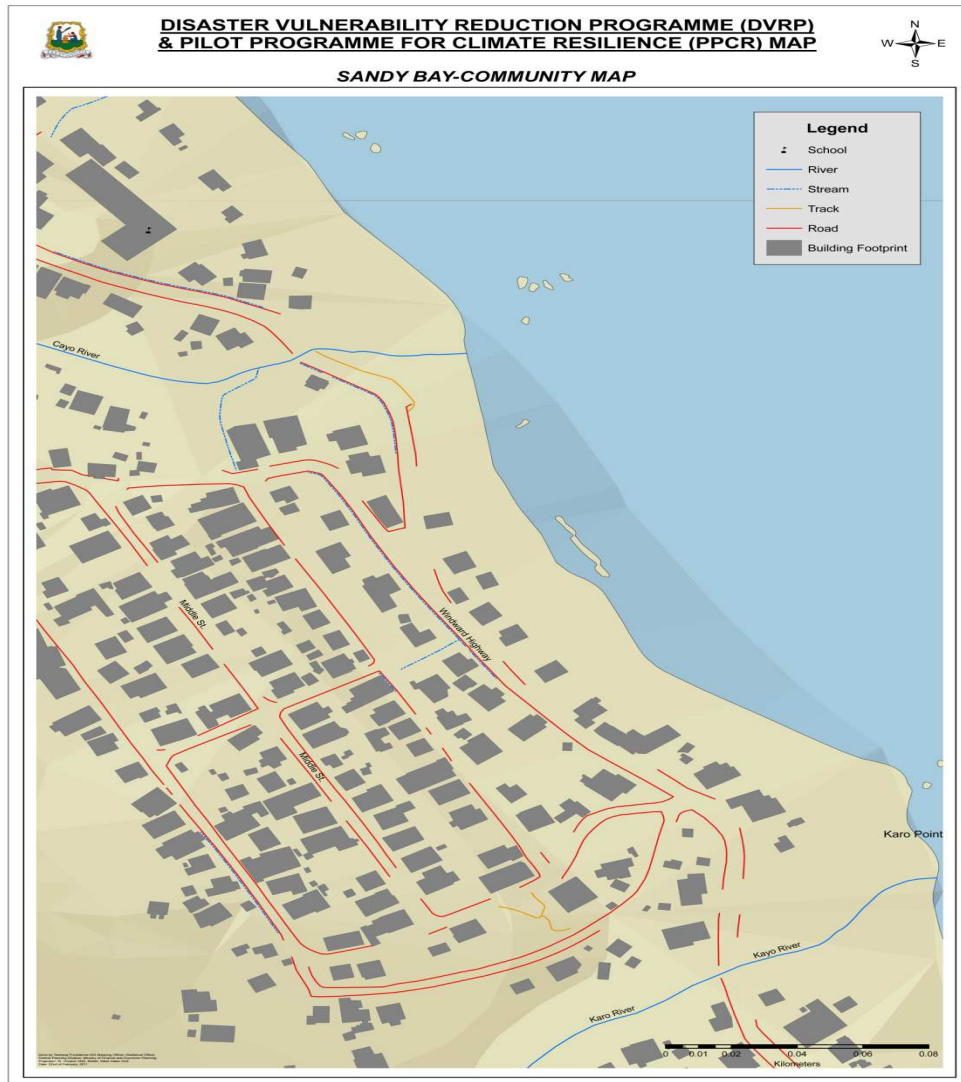
## 7. Risk Assessment

Community	Potential hazards	Who is at risk	How	Existing control measures	Preventative measures
Sandy Bay	Environmental – socio – economic	Children, elderly, woman, disabled etc.	There is not enough work, hardly any recreational spot	Nil	Skill training classes art and craft, etc.
	Crossing the river without a bridge – only way to the house	Children, elderly, pregnant women	Unpredicted flooding, water level may be higher, pregnant women may fall	When it's rainy take extreme caution	
	Approximately 15 informal dwelling on the sea coast	Elderly, children, women, men, farmers	Sea waves can come to the land and wash away houses and crops	None ¿what do you do in the event of an eventuality? Just watch the sea	Relocate houses

## 8. Next Steps

The “extra due diligence” on the communities of Sandy Bay has taken the form of a sampling method during the social assessment which sought to “over sample” the community as well as additional consultations during implementation and planned in the coming months. The Satellite Warehouse at Noel (to be situated on Government Land) has been positively greeted by the community and no planned negative social impacts are envisaged under the project,

### Community Map



SATELLITE WAREHOUSE – MAGUM, SANDY BAY

**Addendum to Social Assessment:**

**Disclosure of Land Ownership & Consultations**

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REGIONAL DISASTER VULNERABILITY PROJECT  
ST. VINCENT AND THE GRENADINES

**1. Introduction**

The Regional Disaster Vulnerability Project (DVRP) is sponsored by The World Bank to provide assistance [Grant and/or Loan] to the Governments in the Region to measurably decrease the vulnerability of people and national economies in the Eastern Caribbean to climate change and natural hazards. The construction and equipping of nine (9) satellite warehouses throughout St. Vincent and the Grenadines are among the activities to be realized. The Satellite Warehouse in Magum, Sandy Bay is on the list of investments.

During project preparation it was decided that extra due diligence needed to be conducted in the implementation of sub-projects in the Sandy Bay area given the presence of persons of Garifuna ancestry, this despite the fact that the project did not trigger the Bank's Policy on Indigenous Peoples (OP/BP 4.10). Nevertheless the social assessment included an Annex on Sandy Bay and consultations with the community were held in order to inform the community of the planned Satellite Warehouse and provide an opportunity for feedback. This note is part of the extra due diligence required in Sandy Bay.

The DVRP triggered the Bank's Policy on Involuntary Resettlement (OP/BP 4.12) since some of the sub-projects under consideration might entail land acquisition and/or relocation. As a result a Resettlement Policy Framework (RPF) was developed and publically disclosed during project preparation in order to clarify resettlement principles, organizational arrangements, and design criteria to be applied to subprojects to be prepared during project implementation (See OP 4.12, paras.26-28).

In the case of the Magum, Sandy Bay Satellite Warehouse no land acquisition is entailed for its construction and the land is fallow. This sub-project will not entail (as per OP/BP 4.12):

- (a) The involuntary taking of land resulting in
- Relocation or loss of shelter
  - Loss of assets or access to assets; or
  - Loss of income sources or means of livelihood, whether or not the affected persons must move to another location; or

## **2. Objective: Disclosure of Land Ownership**

The objective of this document is to disclose the land ownership status of the land to be used for the construction of the Magum, Sandy Bay Disaster Management Satellite Warehouse and to further document consultations conducted with the Sandy Bay community. Specifically, this note serves to document that:

- The Warehouse is to be constructed on Public Land (Crown Land) (See Annex A Cabinet Memo 427/12 dated November 7, 2012);
- A series of additional consultations have taken place with the Sandy Bay Community (Annex C)
- Extra due diligence required of this geographic area (See Social Assessment) has been conducted.

## **3. Sub-project Location**

Project: Satellite warehouse

Census Division – Sandy Bay

Location: Magum

Expected users: 2535 members of the community (2012, Census)

Cabinet granted approval for 6,017 sq. ft. of land to be reserved for the exclusive use of NEMO for the construction and operation of this Disaster Management Satellite Warehouse. The satellite warehouses would include a small office and washroom that can be used for meetings and converted into a Community Emergency Operations Centre, and a storage facility for critical disaster response equipment. The warehouses would be managed by the local district disaster committees.

## **4. Monitoring & Implementation**

The PSIPMU will have overall responsibility for monitoring project activities and the Social Development and Communications Specialist within the PSIPMU will monitor the

implementation of this sub-project and consult regularly with the community. In addition, two members of the Sandy Disaster Committee will sit in on all Stakeholder meetings

**Annex A: Cabinet Memo No. 427/12 – Request to Vest Exclusive Use of Crown Land in NEMO**

**MEMORANDUM**

**GOVERNMENT  
OF  
ST. VINCENT AND THE GRENADINES**

**YOUR FILE:**

**OUR FILE:**

**FROM:** Cabinet Secretary

**DATE:** 07<sup>th</sup> November, 2012

**TO:** PS/Housing etc.  
Director of Planning  
PS/National Security etc.

**SUBJECT:** REQUEST TO VEST EXCLUSIVE USE OF CROWN LAND IN NEMO

**IN CABINET ON MONDAY, 05<sup>TH</sup> NOVEMBER, 2012**

1078. With reference to Memorandum No. 427/12 on the captioned subject, Cabinet granted approval for 6,017 sq. ft. of land as shown on Plan No. C21/37 at Magum, Sandy Bay, to be reserved for the exclusive use of NEMO for the construction and operation of a Disaster Management Satellite Warehouse.

The project will be financed through grants and loans by the World Bank under the SVG Regional Disaster Vulnerability Reduction Project.

  
Cabinet Secretary



**Annex B. Survey Plan No. C21/37. Land Location**

MEMORANDUM

GOVERNMENT                      YOUR FILE NO                      OUR FILE NO  
OF  
ST. VINCENT AND THE GRENADINES

FROM:                      Chief Surveyor                      DATE: July 05, 2012

TO:                      PS/Ministry of National Security etc.

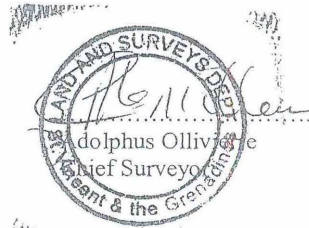
SUBJECT:                      Site selection for satellite warehouse- Sandy Bay Regional Vulnerability Project.

Reference to your memorandum of 11<sup>th</sup> May, 2012 on the above captioned subject.

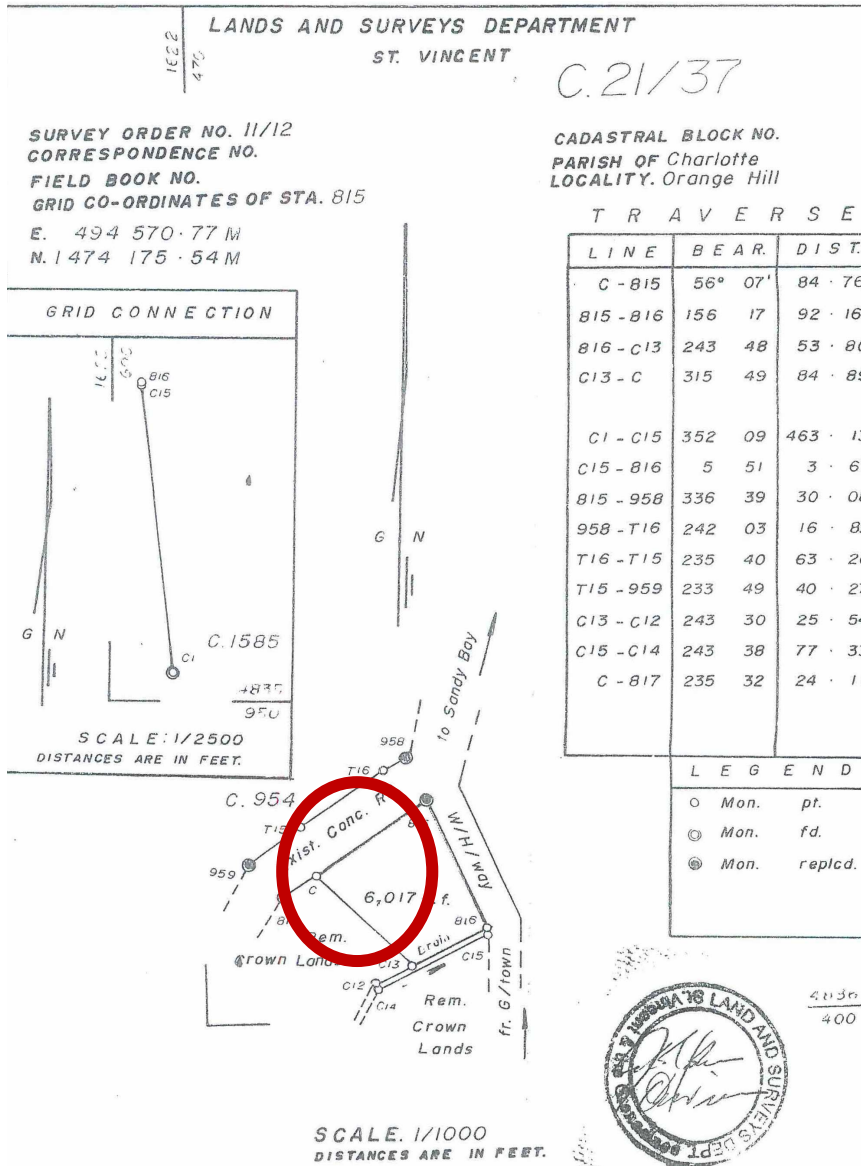
Attach is a certified copy of plan C21/37 as requested.

The land identified has been fallow and qualifies as 'Virgin Land' since the land was only surveyed in February 2012 to be utilized by NEMO.

The land belongs to the Crown and NEMO is an entity of the state.



CM/pp



NB: This plan supercedes a portion of lot 10a on C. 954.  
**Plan of a parcel of land bordered red Containing six thousand,  
 and seventeen square feet.**

Surveyed by me with due authority in Nov. - Dec. 2011 at the  
 instance of The Min. of Housing, Informal Human Settlements,  
 Lands and Surveys & Physical Planning.

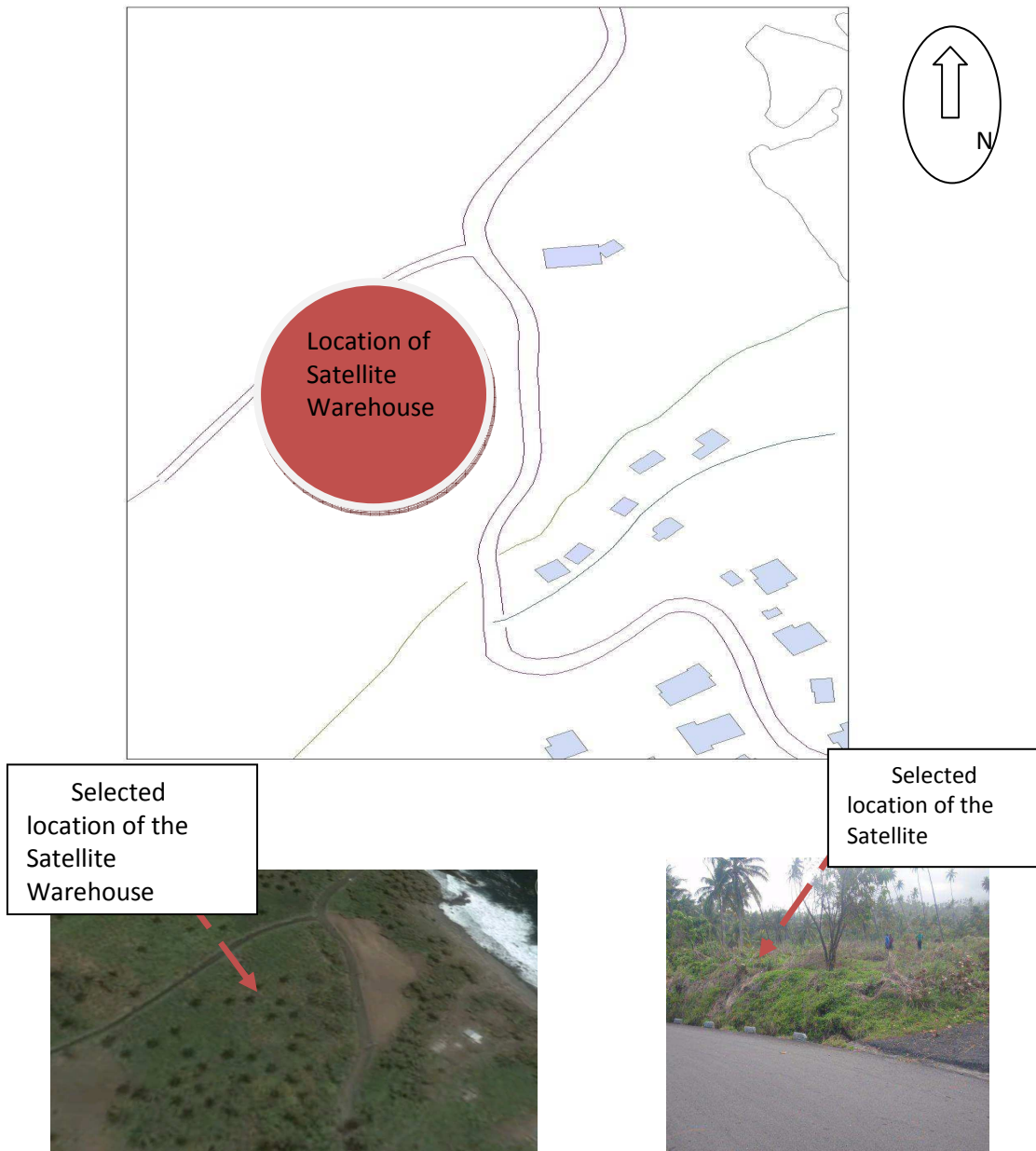
Rosevelt Trent  
 SURVEYING ASSISTANT

Carliss Murray  
 AUTHORISED LAND SURVEYOR

Approved and Lodged on 9 February 2012

DRAWN BY   
 CHECKED BY   
 ENTERED ON 9474

CHIEF SURVEYOR



Source: Statistical Office, 2012 GIS

**Annex C. Consultations****APRIL 10, 2012**

In attendance

<b>NAME</b>	<b>GEN DER</b>	<b>COMMUN ITY</b>
Hoyte Alford	M	Biabou
Jordon Ronette	F	CPD
Ralph De-Anna	F	CPD
Stewart Chiaka	F	CPD
Peters Hulda	F	NEMO
OSMENT Kendol	M	Sandy Bay
Hoyte Nesta	F	Sandy Bay
May Andrea	F	Sandy Bay
Walter St. Elbert	M	Sandy Bay
Ballantyne Peters	M	Sandy Bay
Hepburn Sheldon	M	Sandy Bay
Lavia Alex	M	Sandy Bay
Ballantyne Christian	M	Sandy Bay
Fraser Patsy	F	Sandy Bay
Locke Justin	M	WB
Oppong Yaa	F	WB

**Sandy Bay Site Visit.** A site visit to Sandy Bay was conducted in order to consult with stakeholders regarding the project in general and location of the Satellite Warehouse specifically. The site visit took place on April 10, 2012. Residents in Sandy Bay were informed of the planned consultation by flyer (see attached) and by local community radio on Sunday April 8. In the event attendance was limited with 9 community members participating (see list of attendees) along with 6 representatives from Central Planning, NEMO and the World Bank. The discussion was a rich one however and the issues raised related to:

- **The location of the Satellite Warehouse** and suggestions by several community members to situate the warehouse on the site of the abandoned Old School more centrally located within the community. The proximity to the sea of the Old School and its ownership by the Anglican Church were discussed. The fact that the suggested location is on Crown Land (thereby circumventing land acquisition) and the broader catchment area of the proposed Warehouse was viewed positively by the community. The pros and cons of the various sites were discussed and ultimately the benefits of the proposed land in terms of an extended catchment area and land ownership status were sufficiently attractive to the community members present.

- **The procurement process** was explained to the community by the PCU Procurement Specialist. The community raised concerns about the importance of hiring local contractors in order to generate employment and concerns that some local contractors might not have the necessary documentation although registered. Community members were assured that contracts will be locally advertised.
- **Contents of the Satellite Warehouses.** The NEMO representative addressed community questions regarding the contents and use of the Warehouse.
- **Temporary storage of emergency equipment.** In addition, with hurricane season fast approaching, it was agreed that a temporary storage site should be established to house some emergency equipment given that the construction of the warehouse could be 6 months or more away. The Principal of the Sandy Bay Government School, Mr. St. Elbert Walters, offered to provide two small storage rooms in the school to house a limited amount of equipment prior to Satellite Warehouse construction.
- **Emergency Management Committee.** The need for a Community Emergency Management Committee was discussed and the need for it to work with District level preparedness groups. Central Planning agreed to assist as necessary in the organization and establishment of the group.
- **Community Fatigue with Consultations.** Several community members expressed frustration with consultations which lead no-where. Examples were given of consultations that have taken place in the past and led by NEMO, the Red Cross and others (unrelated to the DVRP) which for years have promised Disaster Relief initiatives in Sandy Bay which have not materialized.
- **Limited Attendance.** Limited community attendance was explained in terms of the message not sufficiently getting out and in terms of community fatigue with meetings that lead no-where. It was agreed that a further consultation would be organized during a Parent Teacher Meeting at the Sandy Bay Government School within the next month in order to reach a wider segment of the community given that construction going ahead in the foreseeable future.

**CONSULTATION : November 5<sup>th</sup> 2012**

**Sandy Bay Annex (2)**

**Action:** Consultation in Sandy Bay on November 5, 2012.

Residents in Sandy Bay were informed of the planned consultation by local community Disaster Preparedness committee, through Patricia Fraser community member.

**Discussion**

☐ **The location of the Satellite Warehouse**

Suggestions were made by several community members to situate the warehouse on the site of the abandoned Old School more centrally located within the community.

An **explanation** was given that the Satellite Warehouse is to service all communities north of the Dry River 'Rabacca'. Additionally, the proposed site [Old Sandy Bay school] is in a vulnerable location and opened to high winds. The ownership of the land lies with the Anglican Church. The suggested location is Crown Land. The spacing is adequate.

The members embraced the idea[use of Crown Land] unanimously agreeing to use the suggested area, it is a bit far from Sandy Bay "proper" however, the Disaster Group is prepared to work together to protect it.

☐ **The procurement process**

Ms. Stewart explained to the community the procurement process.

- The community members enquired about the possibility of using local residents to be a part of the project.
- The World Bank requirements were explained; indicating that any Bids that are disqualified, must be submitted to the Bank any decision taken would be in keeping with the Bank Guidelines.
- The community members felt that they would feel more ownership of the project if they are given the opportunity to work during the construction period on the project. There are many available tradesmen in the area who are competent and this would significantly increase the prospects for community development and participation.

☐ **Contents of the Satellite Warehouses.**

The NEMO representative addressed community questions regarding the contents and use of the Warehouse.

- Community members felt it would be necessary to buy a tractor (small) or excavator because of the frequent Landslides that block off Fancy from time to time and Orange Hill from Sandy Bay. They further explained in the event of a disaster the notification may not be timely for the community of Fancy given that most of the members leave at 5:00 a.m or before and even with the VHF radio they may not be notified on time. Therefore they recommend that an excavator can be used to clear the blockage and be included in the list of equipment for the Satellite Warehouse.

☐ **Emergency Management Committee.** The disaster Management Committee has been reactivated the members present were keen on the possibility of the Warehouse;

- they requested information on how to organize the management committee of the warehouse as well as the sustainability.

- Nemo and Central Planning agreed that the management would be entrusted to the Disaster Preparedness Committee with ex- officio members from the Police, Nemo, Health, however as plans move forward the management committee would be established.
- It was agreed that at the next meeting of the Disaster Committee two members should be selected to serve on the Stakeholders committee so as to keep members informed.

Other Questions:

Does anyone present here know of any reason why the land of Magum cannot be use? Eg..  
Religious/sacred

No.

Is the site selected an old burial ground?

No

#### **Possible positive Impacts**

- Ideal storage of equipment to be used for communities North of the Dry River
- Accessibility
- Readily available tools to be mobilized during a disaster.
- Possible creation of employment.
- Educational information distributed about disasters
- Very high positive impact on most sector of the community

#### **Possible negative impacts**

- Possible bad management
- Community not involved in decision making
- Lack of project information
- Lack of commitment from community
- Police interference
- Changes in the natural landscape
- Less land for agriculture
- Bad security of the building

#### **Other areas the project should address?**

- Training in management
- Training in the use of equipment
- Proper security of the building.

## In attendance

NAME	GENDER	COMMUNITY	Telephone
Davidson Baptiste	M	Sandy Bay	
Sonia Child	F	Sandy Bay	
Shirile Child	F	Sandy Bay	
Pearl Lewis	F	Sandy Bay	
Michael Hoyte	F	Sandy Bay	
Patricia Glasgow	F	Sandy Bay	
Carol Delves	F	Sandy Bay	
Josiane Cordice	F	Sandy Bay	
Avonel Lewis	F	Sandy Bay	
Deana Lewis	F	Sandy Bay London	
Jennis Baptiste	F	Old Sandy Bay	
Shaldon May	F	Sandy Bay	
Denise Francois	F	Sandy Bay	
Clorine Baptiste	F	Sandy Bay	
Rosanell May	F	Sandy Bay	
Camelita Williams	F	Sandy Bay	
Tita Hoyte	F	Sandy Bay london	
Catherine Lavia	F	Sandy Bay	
Ann Brackin	F	Sandy Bay london	
Gracie John	F	Sandy Bay london	
Drucilla Nero	F	Sandy Bay	
John Baptiste	M	Sandy Bay	
Nesta Hoyte	F	Sandy Bay	
Camey Ballantyne	M	Sandy Bay	
Enos Francis	M	Sandy Bay	
Carl Toppin	M	Sandy Bay	
Norit Baptiste	M	Sandy Bay	
Maxwell Francis	M	Fancy	
Lelewyn lavia	M	Sandy Bay	
Carl Roberts	M	Sandy Bay	
Davail Roberts	F	Sandy Bay	
Kendol Osment	M	Sandy Bay	
Patricia Fraser	F	Sandy Bay	
Melena Bowens	F	Sandy Bay	
Monique Hoyte	F	Sandy Bay	
Sekai Stewart	F	CPD	
Howie Prince	M	NEMO	
Richard Macleish	M	CPD	
De-Anna Ralph	F	CPD	