SAINT VINCENT AND THE GRENADINES

Pilot Program for Climate Resilience (PPCR)

PHASE ONE PROPOSAL

SAINT VINCENT AND THE GRENADINES PPCR PHASE 1 PROPOSAL

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Glossary of Terms and Abbreviations

CARICOM	Caribbean Community
CIA	Criminal Investigation Agency
CIF	Climate Investment Fund
CSO	Civil Society Organisation
DMP	Disaster Management Plan
GCM	Global Climate Models
H	Hurricane
IDB	Inter-American Development Bank
IMF	International Monetary Fund
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
KAP	Knowledge Attitude and Practice Survey
MTESP	Medium-Term Economic Strategy Paper
NCSA	National Capacity Self Assessment
NEAB	National Environment Advisory Board
NEMO	National Emergency Management Organisation
NEMS	National Environment Management Strategy
NESDC	National Economic and Social Development Council
NESDP	National Economic and Social Development Plan
NFP	National Focal Point
NGO	Non-Governmental Organisations
OECS	Organisation of Eastern Caribbean States
PEO	Public Education and Outreach
PPCR	Pilot Program for Climate Resilience
RPIU	Regional Project Implementation Unit
SGD	St. Georges Declaration
SNC	Second National Communication
SPCR	Strategic Program for Climate Resilience
SVG	St. Vincent and the Grenadines
TOR	Terms of Reference
TS	Tropical Storm
TWG	Technical Working Group
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change

USD	United States Dollars
VCA	Vulnerability Capacity Assessment
VINLEC	St. Vincent Electricity Services Ltd.
XCD	Eastern Caribbean Dollars

Summary of Phase 1 Grant Proposal

Country/Region: Saint Vincent and the Grenadines/ Caribbean Region		1. CIF Project ID #:	{Trustee will assign ID.}
2. Date of First Joint Mission:	*August 26 -27*		
3. Funding request:			
4. Type of request:	*Accelerated funding for phase 1:* x *Yes* ☐ *No*		
5. Multilateral Development Banks/focal points:	World Bank - Mr. Niels Holm-Nielsen; Inter-American Development Bank- Mr. Alfred Grunwaldt; Ms. Cassandra Rogers		
6. National Implementing Agency: Central Planning Division, Ministry of Finance and Economic Planning, St. Vincent and the Grenadines			

7. Project Description:

(i) **Key development challenges** (vulnerability) related to climate change/climate variability: Water Resources; Health; Coastal and Marine Resources; Agriculture and Forestry; Disaster Risk Management; Tourism; Data Collection and Management; Energy; Infrastructural Development; Human Settlement; and Socio-Economic Development.

(ii) **Areas of intervention –** sectors and themes (indicative):

Areas of intervention identified targeting sectoral and cross sectoral enhancements include:

- Conduct of multiple assessments and studies to provide the requisite technical foundation through a comprehensive Strategic Program for Climate Resilience (SPCR) and a corresponding Investment Plan. These activities include:
  - The conduct of Vulnerability and Risk assessments to identify specific programs/projects as well as specific activities which can be undertaken to build climate resilience in Saint Vincent and the Grenadines;
  - The development of a results framework with performance indicators for sectors identified as being vulnerable to climate variability and climate change;
  - The collection; analysis and storage of data related to climate change, climate variability and climate resilience;
  - The review of existing legislative framework to address climate change;
  - The design of public education/outreach to promote and encourage behavioral policy changes in the quest of building climate resilience;
  - The provision of technical and administrative support for coordination and facilitation of Phase II of the Pilot Program on Climate Resilience (PPCR).

(iii) **Outcome:**

The following are expected outcomes of the PPCR Phase 1 in Saint Vincent and the Grenadines:

- The development of long, medium and short-term strategies, projects and interventions to build climate resilience in Saint Vincent and the Grenadines;
- A comprehensive, holistic and integrated program for climate resilience that is inclusive of key sectors and vulnerable groups;
- The identification of a strategy to engage general public and inform sector-specific policy and decision makers on climate change impacts and the risks it poses to livelihoods in Saint Vincent and the Grenadines;
- The provision of a National Strategic Program on Climate Resilience (SPCR) and investment plan that integrates public and sectoral inputs through a participatory, consultative process;
- The identification of an initial strategy for strengthening national capacity in, *inter alia*, Geographic Information Systems (GIS), data collection and management, climate impact assessment and related areas, that will facilitate linkages with, and benefits from data and knowledge generation by regional agencies;
- The identification of knowledge, data and institutional gaps that may contend with the quest to effectively build climate resilience;
- The identification of institutional capacity needs and the provision of recommendations to strengthen the capacity of institutions/stakeholders involved in the PPCR;
- The development of recommendations targeting improved legislation in the area of climate

change {laws, policies, regulations} to assist Saint Vincent and the Grenadines to develop in a more sustainable manner.

- Enhanced coordination and facilitation of the PPCR in Saint Vincent and the Grenadines; and

(iv) **Key Results:**

The following are key results of the PPCR Phase 1 in Saint Vincent and the Grenadines:

- Initial guidance framework for the integration of climate change into national development planning;
- Phase II outreach strategy developed for engaging public and policy decision-makers to support the integration of climate change into social and physical development activities;
- Provisional climate impact baseline established from existing data, and initial future data needs identified;
- Hazard Vulnerability Maps compiled;
- Operational framework for Saint Vincent and the Grenadines to address climate change in a cross sectoral, integrative manner, through the formulation of an initial climate resilience-focused investment plan;
- Phase II strategy developed to address data collection, capture, sharing and overall management amongst agencies in Saint Vincent and the Grenadines in partnership with regional agencies; and
- An integrated framework and initial activities identified for Phase II.

8. Budget (indicative):

Expenditures	**Amount** ($) - US$277,440
Consultants:	US$170,000
Administrative:	US$25,000
Workshops/seminars:	US$27,000
Contingencies:	US$5,440
Travel	US$50,000
Total Cost:	**US$277,440**

Other contributions (bilateral or private sector):

9. Timeframe (tentative) – milestones

Submission for Trust Fund Committee approval: October 25, 2010.

Phase I – Second Joint mission: February 1, 2011

SPCR for Trust Fund Committee approval: March 30, 2011

1.0 PROJECT BACKGROUND

As a Small Island Developing State (SIDS) with a high level of vulnerability to climate change, Saint Vincent and the Grenadines (SVG) has been invited to participate in the Pilot Program for Climate Resilience (PPCR) as a pilot country under the Caribbean regional pilot program. Six countries are involved in the Caribbean pilot program, namely: Haiti, Jamaica, Dominica, Grenada, Saint Lucia and Saint Vincent and the Grenadines.

The objective of the PPCR is to provide incentives for scaled-up action and to support transformational change through the integration of climate risk and resilience into core development planning and the design of projects to build resilience to climate change. It also creates a platform to complement other ongoing development activities in pilot countries.

The PPCR in Saint Vincent and the Grenadines is led by the Ministry of Finance, in particular the Central Planning Division, in collaboration with the Ministry of Health and Environment – Environment Management Department. The program will enable Saint Vincent and the Grenadines to re-align some of its current practices in order to better address climate risks and vulnerabilities. It is expected that at the end of implementation of Phase 2, Saint Vincent and the Grenadines will be able to more strategically, and measurably begin to reduce climate vulnerability across different sectors.

Saint Vincent and the Grenadines shares climate change adaptation challenges with its Caribbean neighbors. Common challenges that are more efficiently addressed at a regional level, which have been identified by countries participating in the Caribbean pilot, will be addressed through the regional track of the Caribbean Pilot to the potential benefit of all CARICOM members. The regional track of the PPCR will focus on five broad lines of activities:[1] (1) climate change and climate change impact monitoring and modeling, (2) creating the enabling environment for climate resilient development planning, including for private sector involvement, (3) technical assistance for improving land use management and spatial planning, (4) awareness raising on climate change issues, and (5) development of support tools for better integration of climate change impacts into development planning To achieve this, the regional track of the PPCR will provide financing for critical activities within these themes, with medium and long-term implications, which must be done regionally, in the process supporting the development of harmonized approaches, promoting knowledge sharing among pilot countries and assessing the potential for replication across the Caribbean.

[1] See details in Appendix 4.

The latest available information from the Climate Investment Fund suggests that the Caribbean Regional Pilot will benefit from between US $60-75 million in grant resources for the preparation and implementation of country-specific Strategic Program for Climate Resilience (SPCR) and related Investment Plans for the six participating pilot countries linked by a regional track.

It is anticipated that Saint Vincent and the Grenadines will benefit from US $5 million in grants to carry out pilot activities in phase 2. Further, the PPCR also allows for concessional loans (0.25%) at an initial ceiling of twenty percent of the total available concessional finance amount per pilot program.

In Phase I, a Strategic Program for Climate Resilience (SPCR) and Investment Plan will be developed for Saint Vincent and the Grenadines that identifies at the national level, specific projects/programs which will be implemented in Phase 2. The indicative timeframe for Phase I for Saint Vincent and the Grenadines is 5 months with an expected presentation of the SPCR to the PPCR Sub-Committee (PPCR-SC) after 4 months[2]. The key activities leading up, to and executed, during Phase I include:

- Scoping Mission for project introduction, planning and preparation (held in February 2010);
- First Joint Mission to finalize the Phase I Proposal (held from August 26-27, 2010)
- Tasks related to the development and formulation of the SPCR and Investment Plan;
- Second Joint Mission to review and finalize the SPCR and Investment Plan (anticipated February 2011); and
- Submission of the final SPCR with specific investment recommendations as the output of Phase I (February 2011).

1.1 National Overview

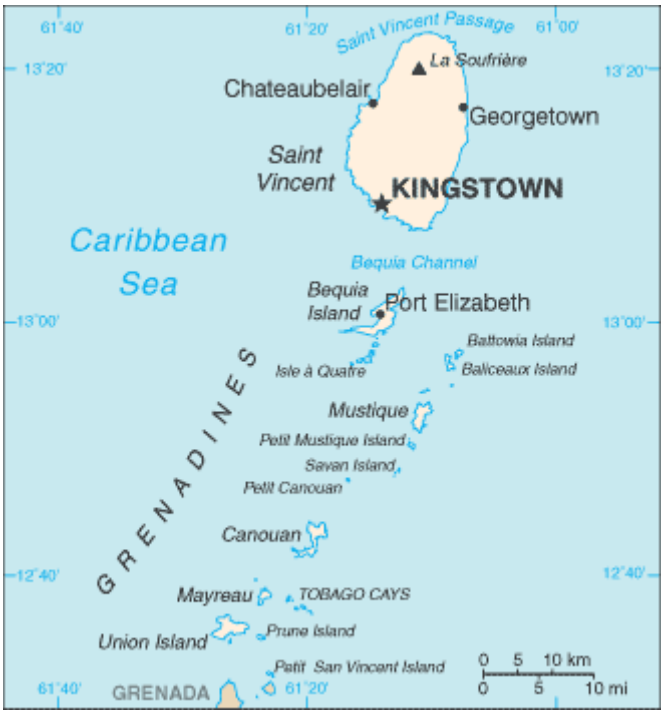
1.1.1. Country Context

Saint Vincent and the Grenadines is a multi-island state located in the Eastern Caribbean. It lies approximately 61° west of the Prime Meridian and 13° north of the Equator. It is in the Windward Island group together with St. Lucia and Grenada among others.

[2] Saint Vincent and the Grenadines will build its SPCR on, among other things, a large number of analysis, reports and consultations that have been carried out over the past years. These are described in more detail in the main text of this proposal.

The total land area is 150 square miles, approximately 96,000 acres and is seen as one of the biodiversity hotspots of the Caribbean. In addition, the country has an exclusive economic zone covering 10,000 square miles.

Figure 1: Map of St. Vincent and the Grenadines



Source: CIA Fact book

The islands that comprise Saint Vincent and the Grenadines are volcanic in origin. Saint Vincent, the largest of the chain (133 square miles) is especially rugged with the vast majority of the settlements located along coastal areas.

Saint Vincent is covered with wet upland forests, numerous rivers and black sand beaches reflecting their volcanic origin. The islands' soils are fertile with rainfall supporting a wide variety of agricultural commodities - of which bananas are the most important cash crop. Yet, a scarcity of flat agricultural land, among other development-induced pressures, has caused encroachment into steep slopes at higher elevations, contributing to land-slides and increased sediment transport. Additionally, the pattern of coastal settlements has increased vulnerability and risk to storm surge.

The Grenadine islands are much smaller and less rugged than Saint Vincent. They are lined with white coral sand beaches and are highly vulnerable to rising sea-levels. In addition, the marine biodiversity, which is important to local livelihoods, has been adversely impacted by warming sea temperatures. The rising temperature has contributed to coral bleaching and has produced other adverse effects to the underwater habitats. Compounding the impact, more intensive tourism development is affecting water quality and placing stress on near shore coral reefs in both the Grenadines and Saint Vincent. As an initial response, the Government of Saint Vincent and the Grenadines has instituted measures to protect the biodiversity in Tobago Cays - an area heavily visited by yachts and tourists. The area was also designated as a marine sanctuary.

2.0. Vulnerability Context

Saint Vincent and the Grenadines, like many Small Island Developing States (SIDS), has many features that serve to increase its vulnerability to the potential impacts of Climate Change. These characteristics include:

- Its small size. The total land mass is 150 square miles (389 km^2);
- It is surrounded by large expanses of ocean;
- Limited natural resources;
- Its Rugged and steep topography. As a result, the islands are prone to landslides and sediment flow;
- Vulnerability to natural disasters and extreme events;
- Openness of its economy;
- Large populations with high growth rates and densities;
- Poorly developed infrastructure;
- Limited access to international financial resources;
- Human resources and skills.

These characteristics limit the capacity of Saint Vincent and the Grenadines and other Small Islands Developing States (SIDS) to mitigate and adapt to Climate Change.

2.1 Climate

2.1.1 Precipitation

On average Saint Vincent and the Grenadines receives 219 cm of rainfall per year. The wet season occurs during June to November and the dry season between January and May. Saint Vincent receives approximately 70 percent of its total annual rainfall during the rainy season, which is also the period of highest tropical storm activity in the region, which peaks in the months of September, October and November.

Most models project a drying throughout the year in Saint Vincent and the Grenadines. Maximum possible changes indicate up to 24 percent less annual rainfall by the 2030's, 41 percent less rainfall by the 2060's and 58 percent less rainfall by the 2090's. The models also point to drying occurring in the wet season from June to November.

Notwithstanding a reduction in the number of rain days, observations show an increase in the intensity of rainfall in the fewer rain days. As a result, St. Vincent and Grenadines is vulnerable to both drought as well as secondary effects of torrential rains such as landslides and temporary contamination of water supply.

2.1.2 Temperature

In Saint Vincent and the Grenadines, the mean temperature varies by 2°C throughout the year. Maximum temperature can reach a high of 31°C between the months of May and October and minimum temperatures can reach a low of 23°C in February. Both the maximum and minimum temperature records show a warming trend over the past 22 years. The maximum temperature for Saint Vincent and the Grenadines is increasing at a slightly faster rate (0.2°C/decade) than minimum temperatures (0.15°C/decade). Further, temperature indices support the conclusion that warm days and nights have increased over the last two decades and cool days and nights have decreased.

Global Climate Models (GCMs) project that for Saint Vincent and the Grenadines mean temperatures are expected to increase over the next century, on average approximately 0.15°C per decade. Under A2(high emissions) GCM project maximum temperature changes of up to 4°C by the end of the century, with median annual increase of up to 1°C, by the 2030s, and 1.8°C by the 2060s ad 2.7°C by the 2090s.

2.1.3 Sea Level Rise

While it is not possible to project sea level rise for Saint Vincent and the Grenadines, changes in the Caribbean are expected to be near the global mean. Under the A1B scenario, sea level rise within the Caribbean is expected to be between 0.17 m and 0.24 m by 2050 (IPCC 2007). Meanwhile, sea level rise is expected to lead to greater coastal flooding and damage to shorelines and infrastructure from storm surge.

2.1.4 Climate Extremes

While the number of dry days has been increasing, calculated rainfall indices show an increase in the number of heavy rainfall events that occur in a year. This is reflected in an increase in the number of days with rainfall between (10-20 mm) and the number of consecutive wet days. This trend is also reflected in the increase in some rainfall intensity indices e.g. daily intensity, maximum consecutive five day rainfall and maximum one day rainfall.

In general, north Atlantic hurricane frequency is characterised by a multi-decadal cycle which yields active and inactive phases lasting 10 or more years (Goldenberg et al. 2001). It is noteworthy that since 1995, the north Atlantic has swung into an active hurricane phase.

Between 1995 and 2000 the region experienced the highest level of north Atlantic hurricane activity on record. Over the last three decades, the Caribbean region has suffered direct and indirect losses estimated at between US$700 million and US $ 3.3 billion owing to natural disasters associated with extreme weather events. Meanwhile, models indicate that hurricanes in the future will likely become more intense, with larger peak wind speeds and heavier near storm precipitation.

Saint Vincent and the Grenadines is by no means safe from the effects of adverse changes. According to the World Development Indicators Report of 2006, and as cited in the Article IV consultation by the IMF, the country is extremely vulnerable to natural disasters. Using data from 1970-2005, the researchers compiled an index to convey and rank vulnerability of countries across the globe to Natural Disasters. In terms of land area, Saint Vincent and the Grenadines was ranked the 2nd most disaster prone country in the world. In terms of population, it was ranked 5th. See Appendix 2. Combined with its small size, a single disaster event can be devastating to the entire country.

Further, Saint Vincent and the Grenadines over the years has received tremendous damages from storms. For instance, in 2002, Tropical Storm Lili caused damage estimated at EC$978,000. Damages from Hurricane Ivan in 2004 amounted to EC$100 million. In 2005, Hurricane Emily caused an estimated EC$10 million dollars worth of damages, while Hurricane Dean caused EC $2.2 million worth of damages in 2007. In 2008, Hurricane Omar effectuated damages at an estimate cost of EC$5.6 million. (S*ee Appendix 3*)

2.2 Vulnerable Sectors

Changing rainfall patterns, sea level rise, increasing temperatures and extreme weather events are some of the adverse impacts of climate change and climate variability that will have serious environmental, social and economic consequences in Saint Vincent and the Grenadines. As a result, several sectors are vulnerable.

The vulnerable sectors include inter-alia:

- Water;
- Tourism;
- Health;
- Agriculture;
- Coastal Zone;
- Fisheries;
- Energy; and
- Critical Infrastructure.

2.2.1 Water

The models project that there would be less rainfall in the future in Saint Vincent and the Grenadines as a result of climate change. This will greatly impact our water supply which is obtained from rivers and streams. The Grenadines are already water scarce islands and practice rain water harvesting, however given that less rainfall is projected, adaptation would also be critical for these islands.

According to the National Water Resource Management Study, there is need for greater sample size to increase the statistical validity of hydrological monitoring. Groundwater monitoring data are also necessary to support the development and management measures needed to address the impacts from climate change. These data include water levels, aquifer properties, abstraction rates, and natural flow rates of rivers and springs. Effective collection of these data would not only present a situational analysis, but it would also allow for climate impact modeling.

2.2.2 Health

The Health of the population can be affected if there is too much or too little water. The conditions can facilitate the spread of water and vector borne diseases such as malaria, dengue, cholera and leptospirosis. Increasing temperatures and rainfall events and or more droughts can lead to an increase in the severity and frequency of dengue fever outbreaks throughout Saint Vincent and the Grenadines. Evidence of this has occurred in 2010 where there was a prolonged drought period and there has also been an increase in the number of dengue cases report as well.

The number of hot days and nights will increase and may cause heat stress especially in vulnerable groups such as the elderly and children. Further, the increase in the intensity and frequency of tropical storms and hurricanes can also directly affect persons by causing physical injury and even death.

2.2.3 Agriculture

Decreasing rainfall and increasing temperatures in the future, will have a negative impact on agriculture in Saint Vincent and the Grenadines. Changes in rainfall patterns will increase crop vulnerability to certain diseases. In the case of the highly dependent banana crop that requires between 1300 and 1800 mm of rainfall per year an adequate water supply is necessary to produce a larger fruit size.

The agricultural sector will remain vital to the livelihoods of many in the rural and poorer communities in Saint Vincent and the Grenadines and therefore this sector must become climate resilient to ensure food security in the future.

2.2.4 Coastal zone

Owing to the mountainous topography, in Saint Vincent and the Grenadines, 85 percent of the population lie on a narrow coastal strip less than 5m above sea level and less than 5 km from the high water mark. Additionally, 80 percent of Saint Vincent and the Grenadines total infrastructure, including fish landing sites, fish markets, roads, telephone and electricity lines, water lines, airports, homes and hotels, is located in the coastal zone and at risk.

Meanwhile, the tourism infrastructure is also at risk to storm surge and sea level rise. Also, the reefs that provide critical habitat for many species of fish are already being affected by rising sea surface temperatures which lead to coral bleaching. This has impacts not only on the tourism sector as dive sites become degraded but the livelihoods of many fishermen. Additionally, sand mining on beaches (a source of fine aggregate used in building construction) in Saint Vincent and the Grenadines has increased the country's vulnerability to coastal flooding, erosion and storm surge.

The coastal zone has to cope with a growing population, increasing tourism development and pollution, all of which would add further pressure on the fragile coastal ecosystems. Saint Vincent and the Grenadines would therefore need a combination of hard and soft adaptation options to reduce the impacts of climate change and climate variability on the coastal zone.

2.2.5 Energy

Electric power for Saint Vincent and the Grenadines is provided by St. Vincent Electricity Services ltd (VINLEC), which operates diesel power stations on Saint Vincent, Bequia, Canouan, and Union Island and five hydro power stations on Saint Vincent. While imported liquid fuels include gasoline, jet kerosene, gas oil and fuel oil are the primary fuels that are used in Saint Vincent and the Grenadines, the high cost of these fossil fuels among other things have prompted the focus of alternative methods of electrical production such as hydro power. Adverse changes in the rainfall regime is likely to impact this process. As such, Saint Vincent and the Grenadines is dependent on a reliable flow of water to generate hydro-electrical power.

3.0 PARTICIPATORY PROCESS

Numerous documents and processes have guided, and will continue to guide through an iterative process, the national thrust towards building resilience to climate change and climate variability in Saint Vincent and the Grenadines. These include:

A: The National Economic and Social Development Plan 2011 -2025[3]

"The plan was compiled using a multi-tiered approach. First, the services of two consultants were procured to guide the planning process. Additionally, the National Economic and Social Development Council[4] (NESDC) provided review and advisory services, while several technical working groups were established to suggest strategies, targets and activities for their various fields of expertise to guide development planning. In another tier, consultations were held throughout St. Vincent and the Grenadines to solicit a vision and ideas from the citizenry, to guide the development of the State. Consultations were also held with the Vincentian Diaspora, including nationals living in Canada, the UK, USA and four (4) other Caribbean Countries to receive an 'outside the box' guide to development. Further to the aforementioned, the staff of the Central Planning Division, conducted several desk researches. These included reviews of several policy documents and research papers, reviews of several development plans from across the globe, and analysis of several conventions/declarations that the country is party to, including the Millennium Development Goals, the OECS Development Charter, the Montréal Protocol and the Mauritius Strategy on Sustainable Development."

Cognizant of the need to build climate resilience, this Plan, among other things, proposes the following strategic interventions:

1. Formulate comprehensive adjustments and adaptation measures to mitigate the impact of coastal erosion caused by sea level rise;
2. Further strengthen national capacity for data management/capture to facilitate linkages with, and benefit from, data and knowledge generation by regional agencies;
3. Develop the physical and human capacity to measure and monitor climate change impacts;

[3] Sourced from document entitled "Report on the Implementation of Mauritius Strategy" by the Government of St. Vincent and the Grenadines.

[4] A national committee comprised of Government and umbrella Civil Society Organisations (CSO) that analyses national development issues and provides policy recommendations to Cabinet.

4. Assess the socio-economic implications of climate change and develop a strategy for public education/outreach surrounding context-specific climate impacts;
5. Development of a comprehensive Strategic Program for Climate Resilience; and
6. Establish a platform for climate risk modeling.

Further, it targets, among other things, the following outcomes:

1. A National Plan of Action in place to mitigate the negative effects of climate change;.
2. A cadre of adequately trained climate change monitors;
3. Vulnerability map compiled;
4. Computer based information system developed;
5. Improved public understanding of the potential impact of climate change;
6. Increased participation in bilateral research on climate change;
7. A National Strategic Program for Climate Resilience with a corresponding Investment Plan; and
8. Effective climate change risk monitoring and modeling systems.

B: The United Nations Framework Convention on Climate Change (UNFCCC)

Saint Vincent and the Grenadines signed on to the United Nations Framework Convention on Climate Change (UNFCCC) on September 6th, 1996. Saint Vincent and the Grenadines has since participated in a number of regional projects to build capacity at the national level to address climate change. These projects include:

(1) The Caribbean Planning for Adaptation to Climate Change (CPACC) Project (1998-2001):

Since April 1997, the Organization of American States (OAS) as the executing agency, and the World Bank as one of the implementing agencies of the Global Environment Facility (GEF), in collaboration with the University of the West Indies (UWI), the CARICOM Secretariat and other regional agencies have been engaged in the implementation of a four year project entitled " Caribbean Planning for Adaptation to Climate Change" (CPACC). The overall purpose of CPACC was to support Caribbean countries in preparing to cope with the adverse effects of Global Climate Change (GCC), particularly sea-level rise, on coastal areas through vulnerability assessment, adaptation planning and capacity building.

The project is being coordinated through a Regional Project Implementation Unit (RPIU) based in Barbados, as well as National Focal Points (NFPs) based in each participating country. The project followed a regional approach through a combination of national pilot/demonstration actions and regional training and technology transfer activities to achieve its objectives.

Some of the specific objectives are to:

1. Strengthen regional capacity for monitoring and analyzing climate and sea level dynamics and trends in order to determine potential impacts of GCC;
2. Identify socioeconomic, environmental and geographic areas, which are particularly vulnerable to the adverse effects of GCC;
3. Develop an integrated management and planning framework for cost effective responses and adaptation to the impacts of GCC on coastal and marine areas;
4. Enhance regional and national capabilities in preparation for the advent of GCC through institutional strengthening and human resource development; and
5. Identify and assess policy options and instruments that may help initiate the implementation of a long-term program of adaptation to GCC in vulnerable coastal areas.

Project activities were grouped within four regional and five pilot action components. The components are divided as follows:

The Regional Components

1. Design and establishment of sea level/climate monitoring network;
2. Establishment of database and information systems;
3. Inventory of coastal resources and use; and
4. Formulation of a policy framework for integrated coastal and marine management.

The Pilot Components

5. Coral-reef monitoring for impacts of climate change (Bahamas, Belize, and Jamaica);
6. Coastal vulnerability and risk assessment (Barbados, Grenada, and Guyana);
7. Economic valuation of coastal and marine resources (Dominica, Saint Lucia, and Trinidad and Tobago);
8. Formulation of economic/regulatory proposals (Antigua and Barbuda, and St. Kitts and Nevis); and

9. Green House gases inventory/vulnerability of agriculture and water resources sectors (St Vincent and the Grenadines).

National Response

Under Component One of the Caribbean Planning for Adaptation to Climate Change (CPACC) Project the Sea Level and Climate monitoring station was installed at the Coast Guard Base in Calliaqua. This station is one of 18 stations located in the twelve participating countries, which would form a network throughout the Caribbean region. These stations have the capacity to measure a number of climate parameters, including relative humidity and air temperature, rainfall, barometric pressure, wind direction, wind speed and the sea level. This station was installed in 1998, and the meteorological office has the responsibility for the maintenance of this piece of equipment.

In honoring its commitments under the United Nations Framework Convention on Climate Change (UNFCCC) Saint Vincent and the Grenadines produced its first National Communication on Climate Change in November 2000. An initial workshop was conducted from 2-4 November 1998 in Saint Vincent to initiate the development of the National Communication. At this workshop, particular attention was given to the development of the Greenhouse gases inventory. The Communication also contains vulnerability studies on the Coastal and Marine Environment, and the Agriculture and Water sector.

In promoting education and public awareness, in March, 1999, The Environmental Services Unit in the Ministry of Health and the Environment conducted a one-day workshop on Climate Change for fourth form students in secondary schools. This was a prelude to the preliminaries of the secondary school public speaking competition that was held in April and May of the same year. The finals of the competition, was held in September. The topic was "The Consequences of Sea level rise in Small Island Developing States".

A Secondary School Summer workshop held in 2001 produced a document called "Climate Change and its Effects on Saint Vincent and the Grenadines." This document focused on Agriculture, Fisheries, Water and Forestry. A Survey done by the students highlighted the need for public awareness with regard to Climate Change in Saint Vincent and the Grenadines. Public Awareness is achieved through radio and television programs, presentations to schools and community groups, Environmental Summer Workshops and participation at the annual National Health Fair. The Environmental Services Unit also hosts National Workshops. The most recent Workshop targeted the financial sector - particularly the banking and

insurance sectors. This workshop highlighted how "risk management" can be applied by these sectors in the design and selection of strategies, for coping with areas of uncertainty, vis a vis climate change.

Under component four (4) of the CPACC project, Saint Vincent developed its **National Climate Change Adaptation Policy Paper** using the participatory approach. This document highlights the potential impacts of Climate Change on various sectors such as coastal and marine, agriculture and forestry, water resources, human settlement, socioeconomic development, tourism and human health. This Policy document is an attempt to integrate climate change concerns into the development plans of the relevant sectors/ministries. Consequently, the appropriate adaptation measures may be taken to reduce the potential impacts of climate change and climate variability on Saint Vincent and the Grenadines.

This document, which is the result of at least four national consultations, ten small group discussions and a series of inter-ministerial discussions, represents national input into the development process.

(2) The adaptation to climate change in the Caribbean (ACCC) Project (2001-2004):

This was a CIDA–funded initiative that provided an effective bridging facility between CPACC and the mainstreaming adaptation of climate change (MACC) project. It built on the foundation laid by CPACC, including the addressing of some of the gaps identified during the implementation of the CPACC project. This project facilitated the establishment of the Caribbean Community Climate Change Centre (CCCC) located in Belmopan, Belize in 2003.

(3) Saint Vincent and the Grenadines TOP-UP Activity Project for Climate Change

As a follow-up to the efforts initiated under the CPACC, the Saint Vincent and the Grenadines top-up activity for climate change sought to support the improvement of the country's preparedness for responding to and adapting to climate change.

One of the main thrusts of the top-up activity therefore has been to initiate planning for supporting Saint Vincent and the Grenadines' adaptation to climate change impacts, through the implementation of a technology needs assessment (TNA) methodology developed by UNDP. Additionally, an upgrade to the sea level and climate monitoring system, which will allow it to generate data compatible with other systems in the region, which will significantly improve climate modeling at

the regional level. This is key to determining levels of vulnerability and risk to climate change in the Caribbean. Lastly, education and awareness activities targeting the Ministries and other agencies identified as stakeholders in the adaptation response to climate change, the general population of Saint Vincent and the Grenadines, the financial sector, the tourism sector, and coastal communities at risk, were implemented by the project; among these, a social marketing approach was applied towards establishing a knowledge, attitude, and behavior baseline amongst stakeholders through the application of a scientific survey.

Simultaneously, the top-up activity is supporting Saint Vincent and the Grenadines' commitment to the international community and the United Nations Framework Convention on Climate Change (UNFCCC) in particular, by updating the first greenhouse gas (GHG) emissions inventory generated as part of its First National Communications report to the UNFCCC. Through this activity, the project also sought to determine if there is substantial GHG emission mitigation potential, and if so, to identify mitigation activities to be implemented by follow-up projects - such as the regional Mainstreaming Adaptation to Climate Change (MACC) project.

(4) Mainstreaming Adaptation Climate Change (MACC) Project (2003-2009):

The Mainstreaming Adaptation to Climate Change (MACC) Project was a four-year (2003-2007) initiative funded by the Global Environmental Facility (GEF) for the Caribbean region to build capacity in the CARICOM SIDS, (participating countries included: Antigua & Barbuda; The Bahamas; Barbados; Belize; Dominica; Grenada; Guyana; Jamaica; Saint Kitts and Nevis; Saint Lucia; Saint Vincent & the Grenadines; Trinidad & Tobago), to develop Stage II adaptation strategies and measures (as defined by the Conference of Parties to the UNFCCC) through the mainstreaming of adaptation into the general planning process of the countries in the region.

The project had four components:

- Mainstreaming adaptation to climate change in national development planning and public and private sector strategies
- Supporting the formulation of a regional strategy on adaptation and specific measures for adaptation (demonstration pilots)
- Expanding and strengthening the existing knowledge base to facilitate Global Climate Change impact assessment as a basis for decision making on adaptation

- Public Education and Outreach including Cross-regional dissemination and replication

(5) Special Program for adaptation to Climate Change (SPACC)

This World Bank / GEF project was launched in February 2007 with an aim to support efforts by Dominica, Saint Lucia and Saint Vincent and the Grenadines to implement specific (integrated) pilot adaptation measures. These adaptation measures were to address the impacts of climate change on the natural resource base of the region, focused on biodiversity and land degradation along coastal and near-coastal areas.

In Saint Vincent and the Grenadines the pilot site is on the Grenadine Island of Bequia. Paget Farm, on the south-eastern side of Bequia, was identified as being a vulnerable community to the impacts of decreasing rainfall as a result of climate change. This is because of the unavailability of rivers and streams in Bequia and the residents were not able to afford to construct underground rain water storage tanks when building their homes.

Consequently, the SPACC project aims to reduce the impacts of decreasing freshwater availability by the installation of a salt water reverse osmosis (SWRO) plant to provide to the residents of Paget Farm a clean, adequate and reliable supply of potable water which would also be distributed directly to the homes using a metered water distribution system. The project will also install a renewable energy source to not onl offset the cost of producing freshwater by the SWRO plant, as well as to ensure that the water that is produced is affordable to the residents.

(6) Sustainable Land Management (SLM) Project

The objective of the SLM project is to "To strengthen and/or develop capacities for sustainable land management in relevant government ministries, the private sector, and civil society organizations, and to mainstream sustainable land management into national development planning".

The project has five outcomes which include:

- SLM is mainstreamed into national development policies, plans and regulatory frameworks (inclusive of completion and ratification of the National Action Plan);
- Individual and institutional capacities for SLM are developed;
- Capacities for knowledge management in support of SLM are developed;

- Investment planning and resource mobilization for implementation of SLM interventions are elaborated; and
- Adaptive Management and Learning.

The three-year project will be implemented by the Environmental Management Department in the Ministry of Health and the Environment using a multi-stakeholder participatory approach involving public, private and non-governmental organizations.

(7) Disaster Management Plans

The National Emergency Management Organisation (NEMO) was established in 2002, with the mandate of reducing the impact of natural hazards through disaster preparedness and planning. This organization performs this mandate through training, public sensitization, implementing mitigation projects as well as establishing a National Disaster Response Plan. While considerable work was done at the national level to develop such plans, there is a need to build community resilience through risk reduction measures. NEMO has outlined nine priority areas. However, two directly relate to the PPCR framework. These are:

1. Slope Stabilization (landslide risk reduction); and

2. Coastal and River Defenses to build resilience against flooding and storm surges.

4.0 PPCR LINKAGES TO NATIONAL PROCESSES

A: UNFCCC

St. Vincent and the Grenadines, as a result of signing the United Nations Framework Convention on Climate Change, is mandated to fulfill a number of obligations under the convention. For example, according to article 4.1 of the convention Saint Vincent is required to "*Take climate change considerations into account. To the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change*".

The country reports to the UNFCCC through National Communications. An initial Communication was sent and a Second National Communication is ongoing.

B: St. George's Declaration (SGD) and National Environmental Management Strategy (NEMS)

The St. George's Declaration (SGD) of Principles for Environmental Sustainability in the OECS was signed by the OECS Ministers of the Environment in April 2001. The declaration sets out the broad framework to be pursued for environmental management in the OECS region. The SGD has 21 principles, and principle 8 is aimed at addressing the causes and impacts of climate change.

The National Environment Management Strategy (NEMS) is the mechanism by which the SGD is implemented. The NEMS for SVG contains two broad strategies (27 and 28) which give effect to principle 8 of the SGD. Strategy 27 speaks to establishing appropriate and relevant integrated strategies, plans and policies to adapt and respond adequately and in a timely fashion to the causes and impacts of climate change while Strategy 28 allows for collaboration at the regional and international levels, in the implementation of obligations under the United Nations Framework Convention on Climate Change.

C: The Liliendaal Declaration on Climate Change and Development

The Liliendaal Declaration was issued by the Heads of State and Government of the Caribbean Community (CARICOM) at the thirteenth meeting of the conference in Liliendaal, Guyana from 2-5th July 2009. The declaration recalled the objective, principles and commitments of the UNFCCC and its Kyoto protocol. It emphasized that dangerous climate change is already occurring in all SIDS (small islands and low-lying coastal developing states) and that many SIDS will cease to exist without urgent, ambitious and decisive action by the international community to reduce global greenhouse gas emissions significantly and to support SIDS in their efforts to adapt to the adverse impacts of climate change, including through the provision of increased levels of financial and technical resources.

The declaration also indicated that the estimated total annual impact of potential climate change on all CARICOM countries is estimated at US$ 9.9 billion in the total gross domestic (GDP) in 2007 US$ prices or about 11.3% of the total annual GDP of all 20 Caricom Countries (member states and associate member states) according to the World Bank estimates.

It is against this backdrop that the heads of CARICOM declared, inter alia, to strengthen educational institutions to provide training, education, research and development programs in climate change and disaster risk management particularly in renewable and other forms of alternative energy, forestry, agriculture, tourism, health coastal zone management and water resource management to increase the regions capacity to build resilience and adapt to climate change.

D: Draft National Climate Change Adaptation Policy

This document highlights the potential impacts of Climate Change on various sectors such as coastal and marine, agriculture and forestry, water resources, human settlement, socioeconomic development, tourism and human health.

It is also an attempt to integrate climate change concerns into the development plans of the relevant sectors/ministries. Consequently, the appropriate adaptation measures may be taken to reduce the potential impacts of climate change and climate variability on Saint Vincent and the Grenadines.

The objectives of the *National Climate Change Adaptation Policy* are:

1. To develop management strategies and approaches which should:

    - Increase public awareness with regard to climate change issues;

- Reduce or avoid damage to settlement and infrastructure caused by climate change and sea level rise;
- Minimize damage to beach and shoreline integrity and marine ecosystems caused by climate change; and
- Avoid or minimize the negative impact of climate change on human health.

2. To develop economic incentives to encourage investment in public and private sector adaptation measures.

3. To develop appropriate legislative/regulatory framework, for proper environmental management, and institutional systems for planning and responding to climate change.

Further to the PPCR linkages identified above, Appendix 1 provides a summary of some climate change issues and possible adaptation options.

5.0 KEY PPCR COMPONENTS

The vulnerable sectors, which have been identified, include: Water, Health, Agriculture, Coastal Zone, Fisheries, Energy and Infrastructure. While the PPCR may not be able to build resilience in all sectors highlighted, it is the aim of the pilot program to undertake activities that will assist the government of Saint Vincent and the Grenadines to integrate climate change adaptation into national development planning in an effort to reduce vulnerability across the highlighted sectors and build national resilience to climate change. Consequently the PPCR in Saint Vincent and the Grenadines will focus on four (4) main components.

Component (1) - Vulnerability and Risk Assessments

This component is expected to identify and quantify (where appropriate) climate change vulnerability and risk in the sectors identified. The component also involves the collection of exposure data: buildings info including GIS location, building characteristics (i.e. number of stories, construction type, etc), number of people living in the building, etc. These data are fundamental for any kind of risk assessment. They are also useful to aid in understanding of the impact and potential impact of Climate Change, as well as planning for management and disaster response. These assessments will also assist Saint Vincent and the Grenadines to better inform decision-making and to identify specific programs/projects as well as specific concrete activities, which can be undertaken to build climate resilience at the national level.

In this component, the consultants would be required to analyse all that has been done in the area of climate change adaptation and combine all existing climate change data or assessments into a comprehensive multi-sectoral strategy. Here the consultants would also identify and provide recommendations for any data gap that may exist.

This component should also take into consideration building capacity at the national level during all stages of the assessments. This includes capacity building in, inter alia, GIS, data collection and management, climate impact assessment and related areas, for which technical expertise would be required to conduct requisite training.

Component (2) - Data Management (data collection or capture, analysis and storage)

Various agencies in Saint Vincent and the Grenadines are engaged in collecting, monitoring and processing critical data required to support climate change impact

modeling and analysis. These include agencies such as the Ministry of Agriculture, Lands, Forestry and Fisheries; Ministry of Transport and Works; Meteorological Office; Statistical Department of the Government of Saint Vincent and the Grenadines; Ministry of Physical Development and the Environment, inclusive of its Physical Planning and Survey and Mapping Sections; Ministry of Health and the Environment; and others. This fragmented approach to data management in Saint Vincent and the Grenadines has its challenges, including limited institutional capacity to capture and share information within and between ministries.

This component is expected to conduct an interagency inventory of data collection and management resources, as well as a comprehensive catalogue of current data holdings and subsequent data gap analysis, which is required to provide the basis for determining future areas requiring investment and support. This analysis will include the examination of supporting software, data management and distribution hardware and field instrumentation, as well as an assessment of current capacity and institutional strengthening needs.

Once completed, this evaluation will produce the needs assessment and recommendations, which will serve as the basis for designing institutional strengthening and investment activities. The component also involves the collection of exposure data: buildings info including GIS location, building characteristics (i.e. number of stories, construction type, etc), number of people living in the building, etc. These data are the fundamental for any kind of risk assessment. They are also useful to aid in understanding of the impact and potential impact of Climate Change, as well as planning for management and disaster response.

As part of the process of conducting the comprehensive analysis of current data available that is relevant to climate change adaptation programs, a consultant will be procured to facilitate the collection of relevant data for storage in a common database for access and collaboration, as appropriate. The consultant will also conduct basic quality assessment of the data with regard to its applicability for climate change adaptation analysis. Based on the evaluation and interaction with relevant data holders, this consultancy will provide input for future data management policies, protocols, procedures and standards.

The consultant would also train a cadre of persons that collect, handle, analyse and generally manage data. Trained individual(s), would, in turn, be responsible for data management functions, executed through vertical, horizontal and cross-sectoral channels, as appropriate. Additionally, a Data Manager would be jointly supported through the PPCR phase 1 process and the Government of Saint Vincent and the Grenadines, as appropriate and feasible, towards the establishment and operation of a sustainable, efficient and effective data management regime, including the PPCR, but functioning well beyond it. Persons trained would also assist with tasks relating

to setting up systems and platforms for improved data and information collection, sharing (as appropriate) and overall management, related to climate change analysis. A national focal point is to be selected from among trained personnel for the operation of a data infrastructure and risk assessment platform, who will interact with the regional entities, as appropriate

Component (3) - Review of existing legislative framework to address Climate Change

Building resilience at the national level can be achieved by developing in a sustain able manner. While there is legislation that currently exists, which allows for this development, the lack of enforcement increases risks to the impacts of climate change at the national level.

This review is expected to make recommendations and develop a strategy for the mainstreaming of climate change concerns into existing legislations. The expected outcome is the development of improved legislation (laws, policies, regulations) to assist Saint Vincent and the Grenadines to develop in a more sustainable manner. It is anticipated that revisions to existing legislation will be undertaken during Phase II. The sectors already highlighted would be targeted for this component.

Review and revision of Climate Change Adaptation Policy, which was developed under the CPACC Project that operated from 1997 to 2001 (See Section 2.0): This policy document was prepared to "*foster and guide a national process for addressing the short, medium and long term effects of climate change in a coordinated, holistic and participatory manner in order to ensure that, to the greatest extent possible, the quality of life of the people of Saint Vincent and the Grenadines and the opportunities for sustainable development are not compromised*". A revision of the document, through a consultative process, will ensure that the SPCR is appropriately aligned and provides an opportunity to propose policy changes if deemed necessary.

Review of fiscal regimes that seek to address climate change: Such a review would compile past, current and planned regimes (e.g. regimes on the importation of water saving mechanisms and energy efficient systems) and include recommendations for the improvement of the regimes that would encourage the adoption of appropriate policies and best practices, in Saint Vincent and the Grenadines, related to climate change.

Component (4) – Design Public Education and Outreach Strategy

Participatory assessment of public awareness re climate change: In 2005, the first-ever Climate Change Knowledge, Attitude and Practices survey was conducted in Saint Vincent and the Grenadines as part of the MACC Project, which operated from 2004 to 2009 and the Vulnerability Capacity Assessment (VCA) Project, which operated from 2005 to 2006 (See Section 2.0). The survey has yielded information that has proved invaluable for the planning of subsequent initiatives. Given the regularity of the topic of climate change in the media and the growing interest among the population, it would be useful to re-conduct the survey with the intention of facilitating a national dialogue on climate change and the risks it poses to livelihoods, and expand it to other areas, which would assist in directing planning and implementation of climate change activities in Saint Vincent and the Grenadines.

It is therefore critical that a Public Education and Outreach (PEO) strategy be developed during Phase I and implemented in Phase II that is geared towards relevant stakeholders such as decision makers to promote and encourage policy changes which would facilitate a shift towards building climate resilience.

It is envisaged that this component will improve information access and data resources for key stakeholders, disseminate project generated data and information (component 1-2-3) and include public awareness about the potential impacts of climate change. During phase I of the PPCR, a Knowledge, Attitude and Practice (KAP) survey can be conducted to inform the development of the PEO strategy. This strategy would be implemented in phase II of the PPCR with the assistance of a local communication specialist Consultant who will be recruited by the project.

6.0. PPCR IMPLEMENTATION

Roles of Local Agencies

The Ministry of Finance and Economic Planning, in particular the Central Planning Division, is the focal point for the PPCR. This Division will coordinate the activities of the PPCR. Meanwhile, the Division would work in tandem with the SVG PPCR Technical Working Group (TWG). The TWG convenes and would further convene at regular intervals to receive updates on the PPCR process, guide the implementation of the PPCR as well as to report on the implementation of the PPCR activities. In addition, the group is comprised of representatives from Government Ministries as well as CSOs and NGOs. Its membership is not closed. Other members would be added to the list, if the need arises, based on a decision of the Ministry of Finance and Economic Planning. Annex 3 portrays the present members of the TWG.

More specifically, the Ministry of Finance and Economic Planning will be responsible for administrative and fiduciary activities, including mobilizing of additional resources, and overall coordination with key stakeholders. The Ministry of Health and the Environment, through its Environment Management Unit, will assume the technical responsibility. The TWG combines to provide a cadre of socio-economic and environmental enabling both an advisory and a consultative mechanism for the PPCR.

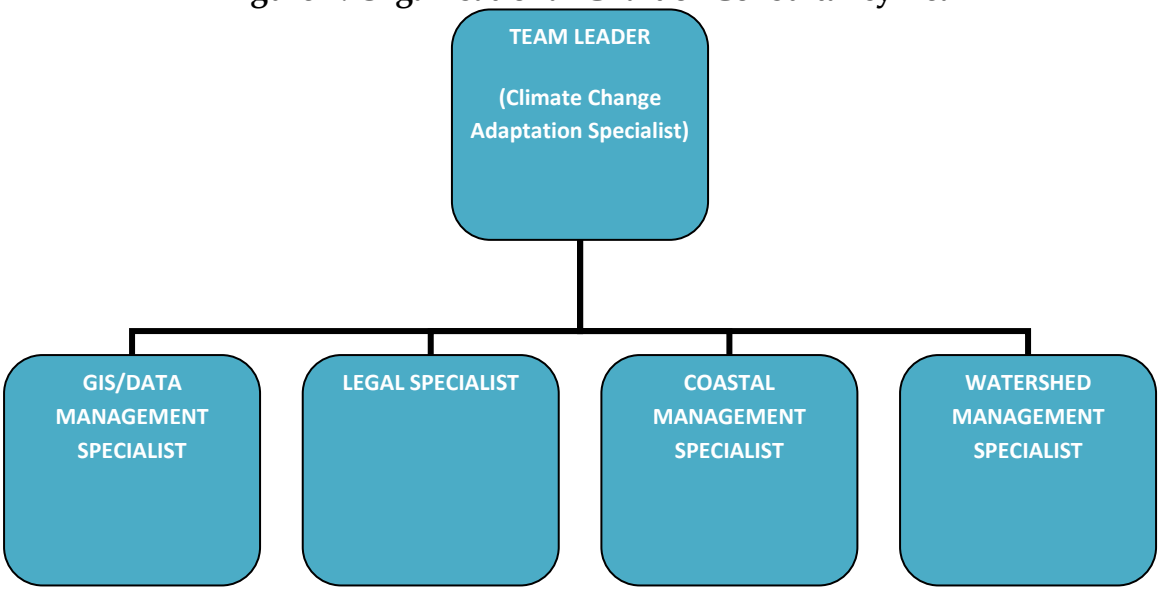
Nonetheless, human resource limitations at the Ministry of Finance and Economic Planning and within the TWG, is expected to be a limiting factor during Phases I and II of the PPCR. As a result, additional technical and administrative assistance will be required and sought under the PPCR. This technical assistance is required for the preparation of the SPCR and Investment Plan for the PPCR. Accordingly, a team of five (5) consultants will be procured to undertake activities during Phase I and formulate the SPCR and related Investment Plan.

Roles of Consultancy Team

The consultancy team will be comprised of a Lead Consultant with extensive experience in climate change and managing integrated teams, a GIS / Data Specialist, a Coastal Management Specialist, a Legal Specialist and a Watershed Management Specialist. All the consultants will liaise with the Lead Consultant and report directly to the Central Planning Division. The respective specialist consultants will work with the appropriate line ministry or stakeholder and collate the information and data needed to complete their respective section of the SPCR as

well as the related Investment Plan. Figure 2 below outlines the relationship between the team.

Figure 2: Organisational Chart of Consultancy Team



The Lead Consultant

The Lead Consultant would be charged with the overall responsibility of coordinating the consultancy team and being the lead author of the SPCR and the Investment Plan. The Team Leader will be responsible for managing and delivering all the proposed deliverables / activities under Phase 1 – most importantly, the SPCR and the Investment Plan. The Lead Consultant will be contracted for the entirety of Phase I and possibly into the initial stages of Phase II, meanwhile the specialist consultants will be contracted for specific timeframes based on their area of expertise.

The GIS/DATA Specialist

This GIS/Data Specialist will lend technical support to building capacity in data management, including Geographic Information Systems, data collection and management, climate impact assessment and other related areas in Saint Vincent and the Grenadines. This consultant would assist in the development of the SPCR and investment plan, particularly the areas that relate to data management, geographic information system as well as disaster risk modeling among other things. This consultant would consult the TWG and other stakeholders during the conduct of activities. This consultant reports directly to the Lead Consultant.

The Legal Specialist

The Legal specialist is responsible for reviewing existing pieces of legislation in Saint Vincent and the Grenadines that relate to climate change and make recommend that would enable Saint Vincent and the Grenadines to build resilience to climate change. As aforementioned, this review is expected to make recommendations and develop a strategy for the mainstreaming of climate change concerns into existing legislations. This consultant must also consult the TWG and other stakeholders during the conduct of activities. This consultant reports directly to the Lead Consultant.

The Watershed Management Specialist

The Watershed Management Specialist will be required to provide technical support on water resources and watershed management issues for Saint Vincent and the Grenadines. This consultant will conduct discussions with members of the TWG and other stakeholders towards the development of the SPCR and the Investment Plan. This consultant will be required to formulate appropriate sections of the SPCR and Investment Plan as relating to water resources and watershed management. This consultant should involve TWG members and other stakeholders during the conduct of activities relating to the PPCR. This consultant reports directly to the Lead Consultant.

The Coastal Management Specialist

The Coastal Management Specialist will be required to provide technical support on issues of coastal management and sea-level rise for Saint Vincent and the Grenadines. and contribute to appropriate sections of the SPCR. This consultant will conduct discussions with members of the TWG and other stakeholders towards the development of the SPCR and the Investment Plan. The consultant will be required to formulate appropriate sections of the SPCR and Investment Plan as relating to coastal management and sea-level rise. The consultant should also involve TWG members and other stakeholders during the conduct of activities relating to the PPCR. This consultant reports directly to the Lead Consultant.

Team Work

The terms of reference for the Phase I Consultancy Team will be highly integrated, and drafted based on the agreed Phase I activities and CIF SPCR template. At the end of the process, the TWG will review the draft SPCR and provide comments to the Lead Consultant.

The SPCR will be based on, among other things, activities identified in this proposal as well as national priorities related to climate change. These consultants will also prepare, through consultations with various agents of the TWG and other stakeholders, a corresponding investment plan to facilitate the implementation of the activities outlined in the strategic program. The consultancy team, through the lead consultant will report to the Central Planning Division.

Working in tandem with the Central Planning Division of the Ministry of Finance and Economic Planning, the consultants would be required to undertake:

- Stakeholders consultations (formal and informal), towards the identification of priority needs for the SPCR for Saint Vincent and the Grenadines;

- Compilation (through documentation review and meetings) of relevant adaptation measures, strategies, programs and actions/projects linked with resilience to climate change, that have been implemented or have been proposed to date for various sectors, including recommendations for replication or scaling up;

- Identification and analysis of knowledge and research gaps that exist and institutional capacity needs for the implementation of the SPCR;

- Preparation of the SPCR and Investment Plan for Saint Vincent and the Grenadines, in collaboration with the Sustainable Development and Environment and other stakeholders;

- Identification of technical measures/recommendations that would enable Saint Vincent and the Grenadines to build resilience to Climate Change;

- Initiation of project appraisal activities;

- Assistance in the development of a work plan, budget, results framework and schedule for the implementation of Phase II of the PPCR;

- Liaising, as appropriate, with technical personnel in national, regional and international public and private institutions involved in adaptation/climate resilience, to seek coordination and integration, where appropriate, that may be beneficial to the PPCR Project sub-components and activities in Saint Vincent and the Grenadines;

- Establishment and maintenance of working relations with appropriate local level and national agencies and groups to ensure effective implementation of

sub-components and activities under the PPCR in Saint Vincent and the Grenadines;

- Facilitation of the dissemination and sensitization of the PPCR across key sectors and to the private sector, civil society and international agencies;

- Facilitation of the review of, and feedback on, all reports and other deliverables under the PPCR;

- Assistance in the preparation, where appropriate, and the facilitation of the review of bidding documents, Terms of Reference and performance contracts for supervising and evaluating the performance of the consultancies that shall be retained for specific activities in Saint Vincent and the Grenadines;

- Preparation of progress reports of the PPCR in Saint Vincent and the Grenadines;

- Maintaining proper records of all documentation under the PPCR;

- Assistance to the Planning Division of the Ministry of Finance and Economic Planning in the coordination and supervision of technical and administrative activities related to the implementation and execution of the PPCR, including, among others: the organization of meetings, workshops and consultations; facilitation of stakeholder meetings, workshops and consultations; preparation of documents and reports of meetings; preparation of correspondence and other required documentation.

Role of the World Bank

In the essence of time, the Government of Saint Vincent and the Grenadines is proposing to work directly with the World Bank to procure the services of the aforementioned consultants in accordance with the CIF guidelines. As such, Saint Vincent and the Grenadines will lead the process through advertising for and selecting the team of consultants; however, will request that the World Bank procure the Phase 1 consultants.

The Central Planning Division in Saint Vincent and the Grenadines, acting on the advice of the TWG would design the terms of reference (ToRs) for the various consultants. The World Bank will pay these consultants directly, subject to their fulfilment of obligations in the Terms of Reference and through confirmation of the

received and approved deliverables by the Director of Planning in Saint Vincent and the Grenadines.

The World Bank and Inter-American Bank would also submit comments to Director of Planning on the draft SPCR and the Investment Planning, to be incorporated into revised copies, pending acceptance by the TWG.

7.0 COOPERATION ARRANGEMENTS WITH DEVELOPMENT PARTNERS

A PPCR Scoping Mission held in February 2010 involved the following partners:

- World Bank
- Inter-American Development Bank
- Caribbean Development Bank
- United Nations Development Program

The First Joint Mission held in August 2010 also involved development/investment partners. Partners who supported Saint Vincent and the Grenadines First Joint Mission are as follows:

- World Bank, represented by Mr. Niels Holm-Nielsen, Hazard Risk Management Specialist; Mr. Gerald Meier, Environmental and Coastal Zone Management Specialist; and Mr. Justin Locke, Disaster Risk Management Specialist
- IDB, represented by Ms. Cassandra Rogers, Lead Disaster Risk Management Specialist.

The Aide memoires from the Scoping Mission and the First joint Mission has outlined cooperation arrangements between the Government of Saint Vincent and the Grenadines and multilateral development Partners. Notwithstanding, these cooperation arrangements with development/investment partners are still evolving. This will become more defined as the SPCR and Investment Plan are developed.

The PPCR process will seek to build on existing projects, as discussed in Sections 2.0 and 3.0, including:

- United Nations Development Program-Second National Communications Project;
- World Bank and Caribbean Community Climate Change Centre-Special Program on Adaption to Climate Change; and

- World Bank-Disaster Vulnerability Reduction Project

This PPCR recognizes that regional organizations will play a pivotal role in supporting climate change adaptation and building resilience through sharing of information and knowledge amongst key agencies and in building capacity to address climate change at the national level. These regional agencies include, inter alia:

- Caribbean Tourism Organisation (CTO);
- Caribbean meteorological Organisation (CMO);
- Caribbean Development Bank (CDB);
- Caribbean Disaster Emergency Management Agency (CDEMA);
- Caribbean Environmental Health Institute (CEHI);
- Caribbean Community Climate Change Centre (CCCCC);
- Caribbean Institute for Meteorology and Hydrology (CIMH);
- Caribbean Agricultural Research and Development Institute (CARDI);
- Caribbean Regional Fisheries Mechanism (CRFM);
- University of the West Indies (UWI); and
- Organisation of Eastern Caribbean States – Environment and Sustainable Development Unit (OECS-ESDU)

These organizations can provide support in:

- Strengthening national capacities through training, program support, technical assistance and resource mobilization;
- Information sharing, documentation, and comparative analyses of issue on a regional and sub-regional basis;
- Coordinating sub-regional or regional disaster risk reductions projects;
- Developing common regional or sub-regional policy platforms and advocating regional policy initiatives in global forums; and
- Undertaking comprehensive, post-disaster damage assessments.

Other potential partners can include, but are not limited to:

- United States Agency for International Development (USAID)
- United Nations Environment Program-Caribbean Environment Program (UNEP-CEP)
- The Nature Conservancy (TNC)

- International Union for the Conservation of Nature and Natural Resources – World Conservation Union (IUCN)
- United Kingdom, Department for International Development (DFID)
- United Nations Development program (UNDP)
- United Nations Economic Commision for Latin America and the Caribbean (UNECLAC).

8.0 OUTLINE OF KEY ACTION AREAS IN PREPARING THE STATEGIC PROGRAM WITHIN CARIBBEAN REGIONAL FRAMEWORK AND PPCR REGIONAL TRACK

Under the PPCR Caribbean regional track, regional key entities in the Caribbean will work to provide scientific analysis and the necessary technical support so that countries can incorporate climate resilience into their national climate change strategies as well as in regional planning strategies, policies and financing mechanisms. The regional track will be synergistic with the country tracks, supplementing and strengthening these country-led programs and activities and also extending public good benefits and lessons learned from the pilot program to all CARICOM member countries.

In this regard, regional organizations and participating countries together with development partners have met to develop the regional approach. Saint Vincent and the Grenadines has actively participated in all of these meetings and has provided significant inputs into the development of the program. A PPCR Regional-Track steering committee has been established to act as an advisory group to provide guidance and make decisions on key issues of the regional program.

The regional track of the PPCR will focus on five broad lines of activities: 1) monitoring and climate modeling activities; 2) enabling environment (policy and institutional framework); 3) up-streaming sustainable land management (bringing the issue to the higher political level); 4) capacity building and awareness raising aimed at different levels, including sectors and policy makers; and 5) how to integrate climate change into development and budget planning (enable dialogues at the regional level with policy makers from different sectors – e.g Finance, Agriculture, Education, Water and the need for innovative financial mechanisms to support adaptation measures). (*See Appendix 5*)

Overall, the PPCR regional track Phase 1 preparation will draw upon expertise from, and complement planned and ongoing initiatives by the regional organizations, and bilateral and multilateral development partners. A number of regional initiatives developed by those organizations are already underway and can be built upon through the PPCR, relevant examples include: the Caribbean Carbon Neutral Tourism Project, which includes a component focusing on financing integration of climate resilience into development plans - executed by CCCCC; a Caribbean Risk Atlas – with the University of West Indies (UWI); and initiatives relating to Community Based Landslide Risk Reduction – by the World Bank; and Regional Monitoring and Evaluation Framework for Disaster Risk Management and Climate Change Adaptation in the Caribbean Tourism Sector – executed by CDEMA and

financed by the IDB; Mainstreaming Disaster Risk Management in OECS Countries – executed by the Caribbean Development Bank with IDB financing.

Figure 3 below[5], among other things, illustrates proposals and necessities expressed by Saint Vincent and the Grenadines at the First Joint Mission held August 2010 and reflects discussions held at the regional track meeting held in Barbados in June 14-15, 2010 (*See also Appendix 5*); however, details are still subject to change in accordance with agreements reached with regional agencies.

As figure 3 outlines, the Caribbean regional PPCR framework is dual tracked. These two tracks flow in adverse directions, indicating a mutually supportive relationship between Saint Vincent and the Grenadines and the regional institutions entrusted with the role of implementing the regional component of the PPCR. As such, national initiatives will be structured to compliment regional activities, while regional institutions will be engaged to deliver results under a regional framework. This dual-track relationship helps to augment the overall success of the PPCR.

SVG to Regional track Support

The first joint mission for the PPCR regional track was held in Barbados on June 14-15, 2010 to provide support to the development of Regional Strategic Programs for Climate Resilience, through, (i) outlining the governance structure of the PPCR regional-track; (ii) drafting an outline of the activities to be carried out in Phase 1 including work program, timetable, roles and responsibilities; and (iii) drafting a funding proposal for the development of the Regional Strategic Program for Climate Resilience (SPCR).

At that meeting, each country/regional institution present identified priority thematic areas. These thematic areas were combined to form the regional thematic areas/themes under the PPCR. There, Saint Vincent and the Grenadines outlined five (5) priority thematic areas. They are: (i) Monitoring and evaluation of environmental hazards; (ii) Watershed management; (iii) Public sensitization and awareness; (iv) Integrated planning; and (v)Data management.

These priority thematic areas are consistent with regions thematic priorities of (i) monitoring and climate modeling activities; (ii) facilitating an enabling environment (policy and institutional framework); (iii) raising the political profile of the importance of factoring in climate risks into sustainable land-use management and spatial planning; (iv) capacity building and awareness raising aimed at different

[5] This table is still under discussion and may be modified subsequently.

levels, including sectors and policy makers; and (v) integration of climate change into development and budget planning. (*See Figure 4*)

In this regard, Saint Vincent and the Grenadines would support the PPCR Regional Track through:

- Providing available data;
- Facilitating, where possible, assessments by teams from the regional to undertake assessments;
- Assist, where possible, regional implementing institutions of the PPCR Regional Track with national assessments to supplement the regional track;
- Providing feedback on interventions administered by the regional implementing institutions of the PPCR Region Track.

Regional track to SVG Support

The regional track can best support Saint Vincent and the Grenadines through, among other things, the following:

- Review and expansion of the National Climate Change Adaptation Policy;
- Training and investments for improved data capture, collection, and management; for climate change impact assessments purposes;
- Training and investments for understanding and interpreting climate impact models and assessments; and
- National level-specific infrastructure investments.

Figure 3. Caribbean Regional PPCR Framework

Regional priority thematic areas/themes under PPCR

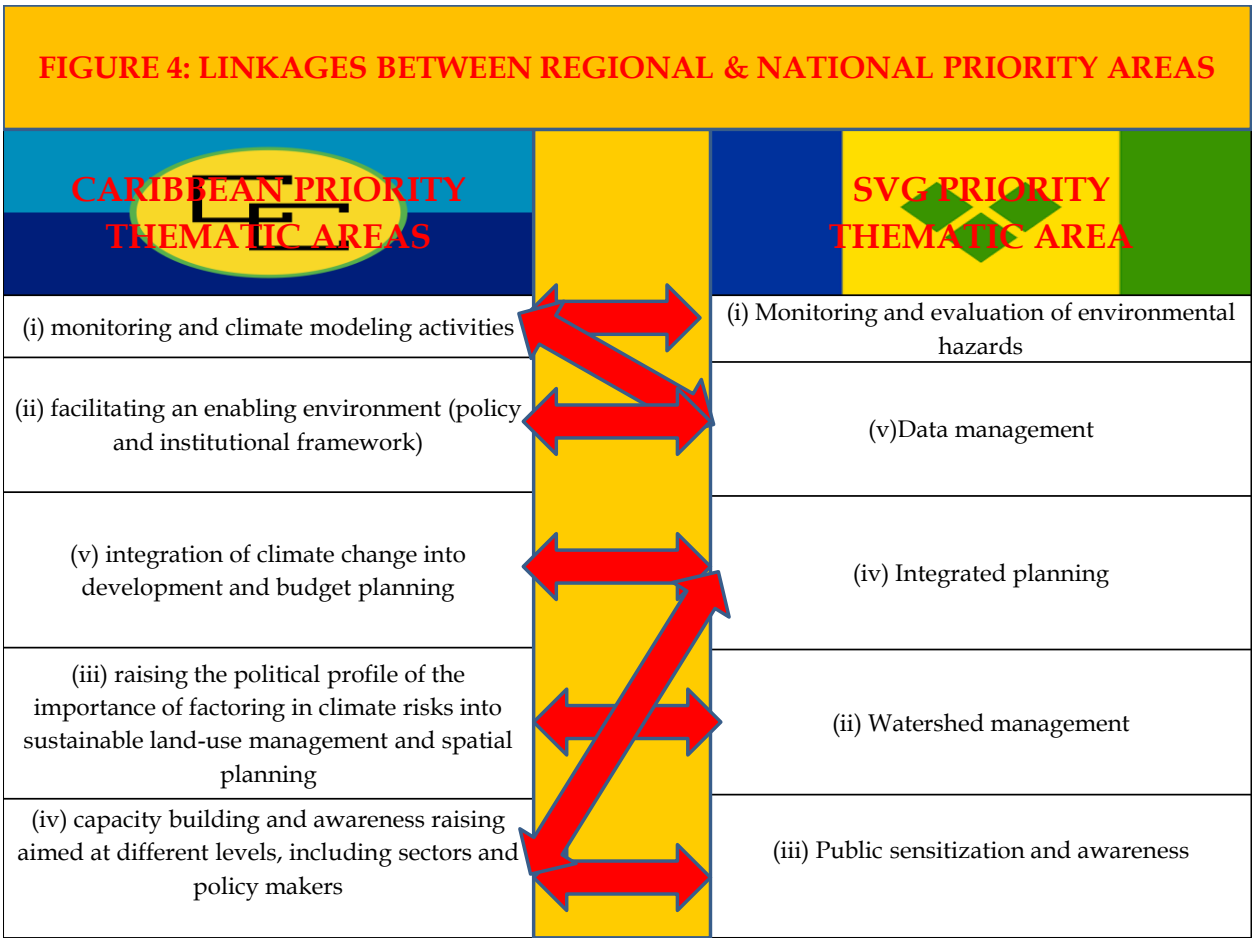
Cross-cutting themes: (i) monitoring and climate modeling activities; (ii) facilitating an enabling environment (policy and institutional framework); (iii) raising the political profile of the importance of factoring in climate risks into sustainable land-use management and spatial planning; (iv) capacity building and awareness raising aimed at different levels, including sectors and policy makers; and (v) integration of climate change into development and budget planning

National level priority thematic areas/themes under PPCR

Cross-cutting themes: data management, capacity building and public awareness on climate change.

Haiti	**Jamaica**	**Saint Lucia**	**Grenada**	**Saint Vincent & the Grenadines**	**Dominica**	**CARICOM**
•Agriculture and food security •coastal zone management •reconstruction • tourism • infrastructure and land planning •data management	• Water Resources • Agriculture and Food Security • Tourism • Human Health • Human Settlements • Coastal Resources	•Agriculture •Coastal and marine resources •Financial sector •Forestry Biodiversity •Health human settlement •Critical infrastructure •Tourism •Water resource management (Bathometric and Hydrometric data)	• Integrated water resource management • Capacity building at the sector level • Data Management	• Monitoring and evaluation of environmental hazards • Watershed management • Public sensitization and awareness • Integrated planning • Data management	(To be determined)	Priority Actions of CARICOM's Regional Strategy for Achieving Development Resilient to Climate Change, 2009 -2015

Figure 4: Linkages between Regional and National Priority Areas



9.0 WORK PROGRAM, TIMETABLE AND FUNDING REQUIREMENTS

Phase one (1) involves the preparation of a Strategic Program for Climate Resilience (SPCR) as well as a corresponding investment plan . In examining the requirements to move the process forward, the PPCR TWG determined that it would be more advantageous to procure the services of a team of consultants to prepare the Strategic Program for Climate Resilience (SPCR) and the Investment Plan. This component is expected to cost US$277,400 and funded by the PPCR grant resources afforded by the IDB/World bank partnership.

Table 2: Work Program for Phase 1 PPCR

INDICATIVE WORK PROGRAM AND SCHEDULE-PPCR PHASE 1							
ACTIVITY		TIME PERIOD					
#	DESCRIPTION	OCT 2010	NOV 2010	DEC 2010	JAN 2011	FEB 2011	MAR 2011
1	Submission of Phase 1 Proposal to CIF	X					
2	Preparation of Consultant Team TORs	X					
3	Approval of Proposal for Phase I and release of funds	X					
4	Hiring of Lead Consultant for development of SPCR, Investment Plan and Program Results Framework *(For detailed deliverables by consultant, refer to Outline of Key Action Areas in preparing the SPCR above)*		X				

5	Hiring of Specialist Consultants: GIS/Data Specialist, Water-shed Management Specialist, and Coastal Management Specialist		**X**				
7	First Round of Formal National sector consultations		**X**				
8	Preparation and refinement of draft SPCR, Investment Plan and Program Results Framework by Lead Consultant, in collaboration with Section and stakeholders			**X**	**X**	**X**	
9	Request for Joint Mission 2 to finalise SPCR and Investment Plan				**X**		
10	Joint Mission 2 to finalise SPCR, Investment Plan and Program Results Framework					**X**	
11	Presentation of SPCR to national stakeholders					**X**	
12	Finalization of SPCR, Investment Plan and Program Results Framework					**X**	
13	Preparation of a brief/memo for the Cabinet of Ministers on the PPCR, specifically the SPCR and Investment Plan					**X**	

14	Submission of SPCR, Investment Plan, inclusive of Program Results Framework to CIF for approval						**X**

During November 2010, the Consultant team will begin work on the preparation of 1st Drafts of both the Strategic Framework for Climate Resilience (SPCR) and the Investment Plan. In the process, the Consultant team will liaise with members of the Technical Working Group as well as other stakeholders. In addition, the Consultant team will review documents, reports, strategies and plans including those identified by the TWG. The Consultant team will also be required to generate quantitative and qualitative data related to PPCR issues to produce the SPCR and the Investment Plan. The final version of these documents should be submitted to the Central Planning Division by the 15th February 2011.

The final documents would then be submitted to the Climate Investment Fund (CIF) by March 31st, 2010. During the process also, the consultants should submit drafts (electronic and hard copies) to the Central Planning Division. These drafts would be sent to the IDB and the World Bank to allow them to channel comments and recommendations via the Central Planning Division.

The following diagram summarizes the reporting relationship between the key parties involved.

Figure 3: Summary of the reporting relationship between the key parties involved

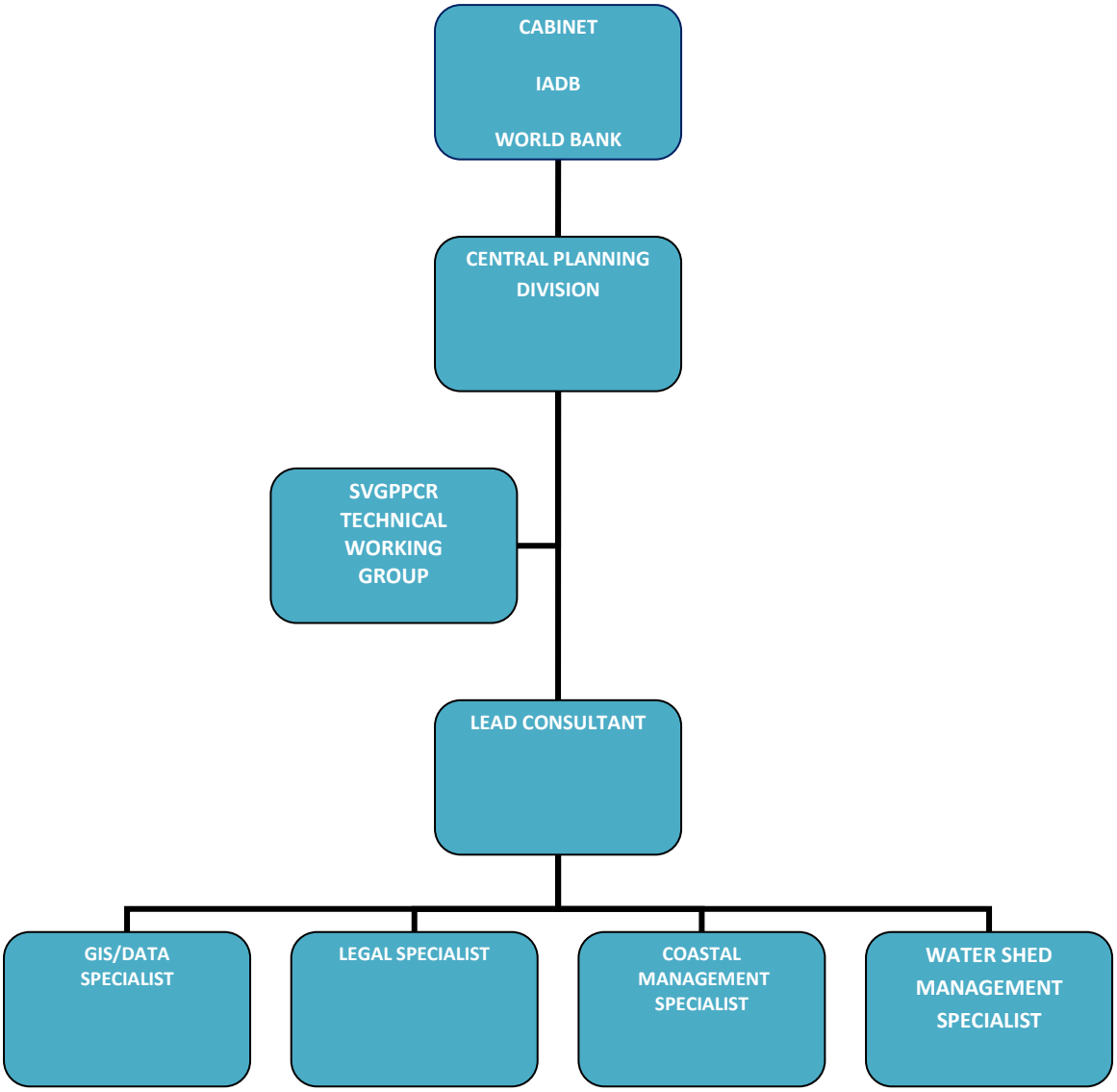


Table 3 portrays indicative financial resources requirements to facilitate phase 1 of the PPCR in Saint Vincent and the Grenadines. Total Consultancy fees are estimated to cost US$170,000 of which, the Lead Consultant would receive US$50,000, while the other four (4) Consultants would receive US$30,000 each. Adminitrative costs is estimated at US$25,000, of which supplies total US$5,000, Adminitrative support US$10,000 and Equipment US$10,000. Workshops, seminars, training and consultations are expected to sum to US$27,000, while Travel is expected to sum to US$50,000. These give a primary total of US$272,000. A two (2) percent contingency of US$5,420 is added, bringing the overall total to US$277,440

Table 3: Financial Resource Requirements

CATEGORY	ACTIVITY	COST
PROCUREMENT	Procurement of Phase 1 LEAD CONSULTANT	50,000
	Procurement of GIS/DATA MANAGEMENT SPECIALIST	30,000
	Procurement of LEGAL SPECIALIST	30,000
	Procurement of WATER MANAGEMENT SPECIALIST	30,000
	Procurement of COASTAL ZONE MANAGEMENT SPECIALIST	30,000
	SUB TOTAL	**170,000**
ADMINISTRATIVE	Administrative Supplies	5,000
	Administrative Support	10,000
	Equipment	10,000
	SUB TOTAL	**25,000**
CONSULTATIONS	Publicity	5,000
	Rental of Venues	3,500
	Refreshments	3,000
	Training	15,000
	SUB TOTAL	**27,000**
TRAVEL	Inter State Travel	45,000
	Local (intra State) Travel	5,000
	SUB TOTAL	**50,000**
TOTAL	**PRIMARY TOTAL**	**272,000**
	CONTINGENCY (2%)	5,440
	GRAND TOTAL	**277,440**

10.0 SIGNATURE OF APPROVAL

This document in its entirety represents Saint Vincent and the Grenadines' proposal for Phase one of the Pilot Program on Climate Resilience (PPCR), administered by the Climate Investment Fund (CIF); Signed this Monday, the 1st Day of November, 2010.

For the Government of St. Vincent and the Grenadines:

Ms. Laura Anthony-Browne

Director of Planning,

Ministry of Finance and Economic Planning

11.0 APPENDICIES

Appendix 1: Summary of Climate Change Issues

SECTOR	IMPACT	ADAPTATION MEASURES
Coastal and Marine Resources	Destruction of reefs, increased erosion of beaches, damage to low-lying and coastal areas, towns, roads and property infrastructure as a result of increased frequency, and intensity of hurricanes.	* Undertake public awareness campaign to educate the population about the potential impact of climate change and climate variability on the coastal and marine environment. * Identify cost effective measures to protect and or reduce the damage to the coastal environment, including coastal infrastructure and coastal near-shore ecosystems.
Agriculture and Forestry	Reduced production and decrease in soil productivity as a result of less rain and drought.	* Undertake public awareness campaign to educate the population about the potential impact of climate change and climate variability on Agriculture and Forestry. * Identify and adopt appropriate Methods of technology to facilitate the introduction of drought resistant crops. * Promote the maintenance of forested and green areas as a buffer to the negative effects of climate change.
Water Resources	Negative impact on the generation of hydroelectricity and potable water as a result of adverse changes in the rainfall pattern, landslides and increased soil erosion.	* Undertake comprehensive inventory of all water resources including surface and ground water. * Identify cost effective methods to increase water recovery.
Human	Impact on settlement	* Develop a comprehensive land use

Settlement	patterns and building design.	planning and management plan * Develop a disaster management plan
Socio/Economic Development	Increased costs to the financial sector including the banking and insurance sector.	* Facilitate the availability of cost effective insurance and reinsurance to aid affected areas, in order to rebuild and restore infrastructure. * Adopt "risk management" techniques as a tool that can be applied in the design and selection of strategies for coping with the uncertainty of climate change.
Tourism	Damage to tourism infrastructure located in coastal areas and coastal ecosystems such as coral reefs, as a result of storm surges.	* Undertake public awareness campaign to sensitize individuals about the potential impact of climate change and climate variability on Tourism. * Adopt appropriate technologies and develop policies to promote water conservation, the use of renewable energy and the management of both solid and liquid wastes in the Tourism Industry.
Human Health	* Increased incidence of heat stress and related injuries. * Increase in vector and water borne diseases as a result of increased temperature and precipitation.	Undertake public education and training program to increase awareness about the potential impact of climate change and climate variability on health.

Appendix 2: World Incidence of Natural Disasters, 1970-2005

Worldwide Incidence of Natural Disasters, 1970-2005

	All Recorder Disasters				
	Number of Events	Number of Events Divided by Land Area		Number of Events Divided by Population	
		Index	Rank	Index	Rank
All countries	7,963	100	93	100	93
Advanced economies	1,601	10	103	37	113
Caribbean	272	631	23	400	29
ECCU	50	784	7	786	7
Antigua and Barbuda	7	679	7	717	6
Dominica	9	512	12	1,037	3
Grenada	6	753	5	467	11
St. Kitts and Nevis	7	829	4	1,210	2
St. Lucia	9	619	10	451	12
St. Vincent and the Grenadines	**12**	**1,312**	**2**	**836**	**5**
Other Caribbean	222	540	34	168	43
Other	6,090	55	98	77	96

Sources: EM-DAT for data on natural disasters; World Bank Indicators for data on land area and population

Appendix 3: Storm Damage 2002 to 2010

YEAR	2002	2004	2005	2007	2008	2010[6]
SYSTEM	T.S Lili	H. Ivan	H. Emily	H. Dean	H. Omar	H. Tomás
XCD Million[7]	0.978	100	10	2.2	5.6	> 100

Source: National Emergency Management Organisation

[6] Preliminary Assessment. This report was completed within 48 hours of this hurricane.

[7] USD 1 = XCD 2.70; XCD 1 = USD 0.37

Appendix 4: Regional Framework for
Caribbean Pilot Program for Climate Resilience (PPCR)

Introduction

In September 2009 the Caribbean Region was selected by the Pilot Program for Climate Resilience Trust Fund Sub-Committee as one of two pilot country groupings to participate in the PPCR. The rationale for the use of a regional approach within the PPCR was that a regional program would likely "provide significant benefits over a single-country/country-by-country approach in cases where a single country lacks adequate level of resources, knowledge, and capacity and/or where opportunities for key adaptive measures may only be realized through regional or sub-regional cooperation on the management of transboundary resources. It is expected that this regional approach will optimize the efficient use of PPCR resources within the region, taking into account and building on existing resources and activities at country as well as at regional level.[8]"

In developing the regional pilot, it was agreed that the focus of the program should:

(a) place emphasis on relatively poorer states
(b) concentrate the bulk of resources in a limited number of countries,
(c) maximize synergies between activities in individual countries, including where appropriate through thematic approaches, and
(d) work with and strengthen, regional institutions, particularly with a view to promoting cross-learning.

It is within this context that the Caribbean region was selected as a pilot to demonstrate the benefits of this approach within participating countries and among regional organizations.

Rationale for a Regional Approach for the Caribbean

It is widely recognized that Caribbean countries are particularly vulnerable to climate change. The main impacts of climate change in the region will include shifts in precipitation patterns, with more intense storms and longer dry spells, increased hurricane intensity and unrelenting sea-level rise. These unavoidable consequences of climate change are coupled with the fact that most are small island states with the majority of their populations and main commercial activities on, or near, the coastline and with limited surface and groundwater resources.

[8] Climate Investment Funds, 2009. Guidance Note on PPCR Regional Programs.

Nevertheless the Caribbean states have a strong history of collaboration on the issue of climate change with a significant amount of analytical work already done or underway on regional adaptation to climate change projects. Regional projects such as the Caribbean Planning for Adaptation to Climate Change (CPACC); Adaptation to Climate Change in the Caribbean (ACCC) Project and Mainstreaming Adaptation to Climate Change (MACC), have supported countries with development of National Adaptation Programs of Action (NAPAs) and UNFCCC National Communications, and provide some lessons learned—particularly with regard to institutional arrangements and strengthening and knowledge sharing. In addition the Caribbean Community (CARICOM) the economic entity that links many of these states, established a climate change center (Caribbean Community Climate Change Center - CCCCC) with the mandate to coordinate the Caribbean region's response to climate change. An integral part of this mandate is to provide climate change-related policy advice and guidelines, and be the official repository and clearing house for regional climate change data to the Community. A substantive initiative from the Center was the development in 2009 of a Regional Strategy for Achieving Development Resilient to Climate Change, 2009 -2015. Four strategic goals were identified in the strategy, two of which namely (a) mainstreaming climate change adaptation strategies into the sustainable development agendas of the CARICOM States; and (b) promotion of actions to reduce the vulnerability of natural and human systems in CARICOM to the impacts of a changing climate, are particularly relevant to the overall objective of the PPCR.

Overall, as a result of similar climate risks and vulnerabilities of the countries within the Caribbean region, coupled with the already existing strong political and institutional collaboration within the region on climate change, forms the basis for the regional approach in the Caribbean under the PPCR.

Scope of Caribbean Regional PPCR Pilot

The Caribbean regional pilot consists of an approach that proceeds along two closely linked and mutually supportive tracks (i) country based investment activities in six highly vulnerable nations—Haiti, Jamaica, Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines; and (ii) region-wide activities that may include investment in data management and monitoring for improving understanding of climate risks and potential impacts, as necessary to take actions to enhance climate resilience, coupled with activities that will benefit all Caribbean countries. The regional track will work through key entities involved in differing aspects of climate change related work in the Caribbean region - CARICOM Secretariat ; Organization of Eastern Caribbean States (OECS) Secretariat; Caribbean Community Climate Change Center (CCCCC); Caribbean Disaster Emergency Management Agency (CDEMA); Caribbean Institute for Meteorology and Hydrology (CIMH); University of the West Indies; Caribbean Environmental Health Institute (CEHI), Caribbean Regional Fisheries Mechanism (CRFM) and the International Union for Conservation of Nature (IUCN) and the Caribbean Development Bank (CDB).

At the country level, the six country specific activities will focus on key sectors and priority thematic areas such as agriculture and food security, coastal zone management, tourism, water resource management, health, ecosystem-based adaptation, infrastructure and land use planning. In addition there will be significant focus on cross-cutting themes such as data management, capacity building and public awareness on climate change. These activities will support and be supported by the regional activities preliminary identified as (i) monitoring and climate modeling activities; (ii) facilitating an enabling environment (policy and institutional framework); (iii) raising the political profile of the importance of factoring in climate risks into sustainable land-use management and spatial planning; (iv) capacity building and awareness raising aimed at different levels, including sectors and policy makers; and (v) integration of climate change into development and budget planning.

The relationship between the regional and country track is presented in Figure 1.

Approach of the development of the regional pilot

The development of the scope and activities of the regional pilot has been through a consultative process at both the regional and country levels, emphasizing country ownership and participation. The dialogue with the PPCR participating countries and regional organizations together with the MDBs and development partners was initiated in late 2009. This initial dialogue was followed by scoping and joint missions to participating countries with consultations being held with key stakeholder groups ranging from public, private sector and civil society groups. At the regional level, virtual consultations have taken place, which were supported by first regional joint mission in June 2009 that brought together both regional organizations and participating countries. The purpose of the first regional joint mission was to bring together all regional relevant stakeholders to discuss and agree on the objectives, activities, timeline and funding of the Caribbean Regional-track Strategic Program on Climate Resilience (Regional SPCR). The specific objectives of the joint mission were: (i) to reach an agreement on the governance structure of the PPCR regional-track; (ii) to draft an outline of the activities to be carried out in Phase 1 including work program, timetable, roles and responsibilities; (iii) to draft a funding proposal for the development of the Regional Strategic Program for Climate Resilience (SPCR). As a result of this meeting, a PPCR Regional-Track Steering Committee was created to act as an advisory group to provide guidance and make decisions on key issues during Phase 1 such as agreeing on TORs for hiring consultants, coordination of the proposed and agreed activities for Phase 1, procedures to follow under the PPCR and related matters affecting the development of the Caribbean Regional-track PPCR Phase 1 program. Steering Committee members are representatives from: Haiti; Jamaica; 2 OECS countries (Grenada and Saint Lucia); DFID; UWI; CCCCC and CARICOM Secretariat. The CARICOM Secretariat will be a member of the steering committee to insure the interest of the non-PPCR participating countries from the region. The IDB will act as secretariat for the Steering Committee and a regional consultant is being hired to develop the regional SPCR.

Implementation of regional and country activities

Regionally activities of the Caribbean program will be implemented through regional organizations in the program under the direction of the regional steering committee and guided by the MDBs and supported by developmental partners. The implementation of country activities will be implemented through local and regional consultants where possible. It is anticipated that regional organizations could be consultants for the country activities.

Developmental Partnerships

Under an agreed division of labour between the implementing Multilateral Development Banks (MDBs) the Inter-American Asian Development Bank (IDB) and the World Bank Group (WBG), the IDB leads on the regional track and country activities in Jamaica whereas the WB leads on the program in Haiti and the OECS. In addition the IFC and the private sector entities of the IDB are participating in the development of the private sector component of the program. All of these efforts are being supported by the development partners including the Caribbean Development Bank, DFID, CIDA, JICA and UNDP.

SAINT VINCENT AND THE GRENADINES PPCR PHASE 1 PROPOSAL

PPCR Regional-Track Activities, Implementation Modalities, and timeline.

Activity	Implementation Modalities	Funding	Work Needed	Duration
1. Identification of Resources – Stakeholder and program mapping. Knowledge product to be hosted on Clearing House platform	- CCCCC - CDKN	- DFID - CDKN	- Stakeholder and information analysis, institutional assessment and capability, consultants. Formal agreement/ commitment	2 months (Interim product) 5 months – Final web based on line product following consultations
2. Clearing House Mechanism	- CCCCC - PPCR - Countries	- PPCR - CDB	- Specifications for CH structure, platform design, accessibility, knowledge management and learning, other data formats - Consultations: Country and technical	3 months
3. Needs Assessment to identify tools, training & data gap analysis etc for implementing PPCR	- PPCR (Consultant)	- PPCR (link with Implement. Plan	- Consultation (with regional organizations and countries especially for data gap analysis) - Documentation	3 months
4. Regional Dialogue	- CARICOM SEC. - OECS	- PPCR	- Mobilisation	End of Month 3
5. Climate Proofing Screening Tool - national and sectoral plans	- CCCCC - PIOJ - CIMH - CDEMA	- PPCR - Other Donors - CDB	- Scoping Exercise - Key sectoral gaps and needs in climate resilience - Development of template & tool kits	5 months
6. Knowledge Management - Identify knowledge management tools for sharing lessons learned for wider Caribbean use	- UNDP - CCCCC - UWI - CIMH - Other partners	- PPCR - Other Donors including CDB	- Needs assessment - Resource - Identification of case studies, lessons learned and best practices	On-going Concept of a broad network of specialized agencies linking with the 5Cs in information management and dissemination

Future activities

The PPCR Regional-Track Phase 1 proposal is under development in close supervision and cooperation of the PPCR Caribbean Steering Committee. This proposal will be discussed during a meeting of the PPCR Caribbean participating countries, regional organizations and development partners to take place on November 11th 2010, at the headquarters of the IDB in Washington DC. It is expected that this proposal will be submitted for endorsement by the end of 2010.

Appendix 5: PPCR Caribbean – Regional Track – possible regional activities

This document was developed by the PPCR Caribbean participating countries and key regional organizations during the Caribbean Kick-off Meeting (Oct 28-29, 2009, held at IDB's Headquarters) and further developed during the Videoconference held on February 1st, 2010. This document also reflects some of the ideas/suggestions coming out of the scoping missions to the PPCR countries in the region. This outline states the five main topics as the main areas to be potentially developed under the PPCR regional track by Caribbean regional organizations. The options provided under the five headings are intended to assist future discussions on the regional program.

The proposed options for regional activities under the PPCR Regional Caribbean are as follows:

1. **Monitoring and climate modeling activities**
   - 1.1 Strengthening climate change modeling and monitoring capacity of regional organizations or regional group – e.g. strengthen the modeling group of CCCCC/UWI/ISMNET.
   - 1.2 Development of standards/protocols for collecting and managing data – this would also include improving the human and institutional capacity to collect and manage data. Development/implementation of Disaster Risk Management and Climate Change adaptation indicators in key economic sectors. Within this context, there could be the development of standards/protocols related to monitoring, evaluation and reporting of these indicators.
   - 1.3 Strengthening monitoring capacity by increasing the number of monitoring stations in the Caribbean especially in those countries with very limited resources e.g. Haiti. Provide pertinent training of maintenance, data collection and analysis.
   - 1.4 Strengthen linkages between regional modeling and monitoring networks with the PPCR pilot countries.

2. **Enabling environment (policy and institutional framework)**
   - 2.1 Expansion of the Comprehensive Disaster Risk Management program in the Caribbean; Insure greater integration of DRM approaches with measures to integrate resilience to climate change (including measures to manage the impacts of climate change over the medium and longer-term) in the Caribbean, consider using pilot countries of the PPCR as case studies.

2.2 There is an opportunity for the expansion of policy/legal framework to deal with issues related to climate change e.g. revamping of the land use or spatial planning legislation in the Caribbean to incorporate climate change resilience; development of new land codes/practices and guidelines.

3. Raising the Political Profile of the Importance of Factoring in Climate Risks into Sustainable land-use management and Spatial Planning

3.1 What are the outreach opportunities or options for "upstreaming" the issues to the political level?

3.2 What is the role of regional organizations to facilitate awareness raising at the political levels?

4. Capacity building and awareness raising aimed at different levels, including sectors and policy makers)

4.1 Development and/or expansion of a platform for sharing information/data/best practices/case studies to all members states (in all major languages used in the Caribbean – English, French, Spanish and Dutch). Is there an existing platform that can be used for these purposes?

4.2 Development of practical/user-friendly CC training packages for:

- Policy/decision makers of key vulnerable economic sectors
- High level politicians
- Public awareness and communities

4.3 Provide training on climate change modeling to scientists in the Caribbean (particularly those who are not part of the Caribbean climate modeling group and may have less capacity).

4.4 Provision of "adequate information" on climate change and the impact of climate change in selected productive sectors.

4.5 Strengthening regional coordination, planning and active participation in the UNFCCC.

5. How to integrate CC into development and budget planning

5.1 Enable dialogues at the regional level with policy makers from different sectors – Planning, Finance, Agriculture, Education, Water, etc.)

5.2 Need for innovative financial mechanisms to support the implementation of adaptation measures in the different sectors e.g. explore use of carbon taxes/levies and how PPCR can provide seed funding to support piloting and/or scaling-up of such financial mechanisms.

Appendix 6: OECS Pilot countries Activities to form part of SPCR – based on Appendix 5

1. MONITORING AND CLIMATE MODELING ACTIVITIES	CORRESPONDING PRIORITY ACTIONS
a. DATA COLLECTION AND SHARING i. Streamflow (Flow Meters/Instrumentation) ii. Bathymetric data iii. Hydromet data (include rainfall intensity, temperature, expand and improve the existing network coverage, improved Data Quality) iv. Topography v. Land Use and Built Environment **b. Include considerations for a Risk Assessment Platform/Model (Open Source, Multi-Hazards type)** i. Capacity building for use of risk assessment platform for key sectors ii. Communication tool to visualize climate impacts for different decision makers • including economic impacts • integrated planning	1.1 1.1 move # 4.1 and include in section
2& 5 ENABLING ENVIRONMENT (Policy and institutional framework) c. Include data collection, capacity building	Link/join with #5 Include reference to UNECLAC study on economics of climate change (SVG)
3 & 4 CAPACITY BUILDING AND AWARENESS RAISING d. Expand #4.2 to include other key target groups e.g. technical specialists, GIS specialists, sector experts, water specialists e. Assessment of/closing gaps in national/regional climate resilience actions	4.2 include reference to communities and livelihoods Existing regulatory frameworks (including sectors e.g. transport, finance, energy, planning

Appendix 7: Mission Report Caribbean Pilot Program for Climate Resilience Regional Track Support to the Development of the Regional Strategic Programs for Climate Resilienc: First Joint Mission 14-15 June, 2010

A. Mission Report

I. Background

The Caribbean accepted the invitation extended by the Pilot Program for Climate Resilience (PPCR) Sub-Committee on May 14th, 2009, to join the program as one of its two regional pilots. The Caribbean pilot consists of a regional approach that proceeds along two closely linked and complementary tracks (i) country based investments in six highly vulnerable nations—Haiti, Jamaica, Dominica, Grenada, St. Lucia, and St. Vincent and the Grenadines; (ii) region-wide activities including data management and monitoring for improving understanding of climate risks and potential impacts, as necessary to take actions to enhance climate resilience, coupled with activities to tackle risks and vulnerabilities common to all Caribbean countries. The regional track will work through key entities in the Caribbean region to provide the scientific analysis so that countries can incorporate climate resilience into their national climate change strategies as well as in regional planning strategies, policies and financing mechanisms. The two tracks will thus be synergistic—the regional activities will supplement and strengthen the country-led programs and activities and also extend public good benefits and lessons learned from the pilot program to all CARICOM member countries.

The dialogue with the regional organizations which also involves country representatives, MDBs and development partners was initiated in late 2009. In October 2009, the IDB hosted the PPCR Caribbean Kick-off Meeting in Washington DC, which begun the dialogue on the Caribbean Regional PPCR program with the participating countries and regional organizations[9]. The MDB teams provided an update on the program's framework and jointly with countries and regional organizations looked at the state-of-play of existing and planned regional activities on climate resilience. The result of this meeting was a preliminary assessment and identification of vulnerable sectors and an agreement which outlines five main areas

[9] Participants included representatives from : St. Vincent and the Grenadines; Grenada; Saint Lucia; Haiti; Dominica; Jamaica; DFID; Caribbean Community (CARICOM) Secretariat; Caribbean Disaster Emergency Management Agency (CDEMA); Caribbean Community Climate Change Centre; OECS Secretariat; University of West Indies; IDB and World Bank.

of activities to be potentially developed under the PPCR regional track by Caribbean regional organizations (*See Appendix 5*). They are: 1) monitoring and climate modeling activities; 2) enabling environment (policy and institutional framework); 3) up-streaming sustainable land management (bringing the issue to the higher political level); 4) capacity building and awareness raising aimed at different levels, including sectors and policy makers; and 5) how to integrate climate change into development and budget planning (enable dialogues at the regional level with policy makers from different sectors – e.g Finance, Agriculture, Education, Water and the need for innovative financial mechanisms to support adaptation measures).

A follow up virtual meeting took place in February 2010, and had the participation of additional regional organizations working on climate change related issues, together with the MDBs and development partners[10]. The objective of the meeting was to discuss the options provided under the five main areas of activities previously indentified and to include some of the ideas/suggestions coming out of the scoping missions to the six PPCR participating countries. The discussion of the meeting was centered around: 1) recognition that there are different climate change-related programs being implemented in the region and there is concern that overlap or duplication might occur. In response to this issue, the IDB coordinated a database of these activities, including the tracking of the financing of the various climate change efforts in the region; 2) It was suggested that a working session (roll – up sleeves meeting) should be used to formulate the priority areas together with developing a draft of the proposal for the development of the strategic program for the regional component of the PPCR; 3) With regards to the development of the implementation plan for the Regional Framework for Achieving Development Resilient to Climate Change , with funding support from DFID and developed by Caribbean Community Climate Change Centre, it was suggested that the PPCR could contribute and supplement the plan ; 4) There was discussion on the governance structure of the regional activities of the PPCR, such as how decisions will be made, who will coordinate activities, how will funding be disbursed etc. Various ideas were presented such as use of a task force, a steering committee, use of national focal points; and 5) Need to use filters in framing the regional perspective (e.g. must have regional solutions; create knowledge and networking; create harmonization and methodologies etc.).

Moreover, during the six joint scoping missions to the PPCR participating countries in the Caribbean, the MDB teams briefed relevant ministries and agencies on the

[10] Participants included representatives from: CARICOM Secretariat; CCCCC; CDB; CDEMA; CEHI; CIMH; DFID; IDB; OECS Secretariat; UNDP; UWI – Mona; IDB and World Bank.

PPCR regional track programming details and discussed potential benefits and the importance of the supportive role of the regional track to the development and implementation of the PPCR national SPCRs.

II. Objectives of the First Joint Mission of the PPCR Regional-Track

Based on the initial activities, and under the coordination and overall guidance of the PPCR participating countries and regional organizations, in accordance with the PPCR guidelines, the Inter-American Development Bank (IDB) and the World Bank Group (IDA/IBRD and IFC) organized the first joint mission for the Regional-track on June 14th - 15th, 2010 in Barbados. The mission was a two day, broad-based workshop that was comprised of government representatives from Haiti, Jamaica, Saint Lucia, Grenada, and Saint Vincent and the Grenadines; regional organizations - CCCCC, University of the West Indies, CARICOM Secretariat, OECS Secretariat-Environment and Sustainable Development Unit, Caribbean Disaster Emergency Management Agency (CDEMA), UWI Climate Studies Group, Caribbean Development Bank, Caribbean Regional Fisheries Mechanism (CRFM); as well as the Climate and Development Knowledge Network (CDKN) and the development partners DFID, UNDP, CIDA, and International Union for the Conservation of Nature (detailed list of participants and contacts is in *Appendix 8*).

The purpose of the joint mission was to bring together all regional relevant stakeholders to discuss and agree on the objectives, activities, timeline and funding of the Caribbean Regional-track Strategic Program on Climate Resilience (Regional SPCR). The specific objectives of the joint mission were: (i) to reach an agreement on the governance structure of the PPCR regional-track; (ii) to draft an outline of the activities to be carried out in Phase 1 including work program, timetable, roles and responsibilities; (iii) to draft a funding proposal for the development of the Regional Strategic Program for Climate Resilience (SPCR).

III. Summary of Main Activities, discussions and findings

1. Stock-taking Exercise: All participants took part in this exercise, which was built on the abovementioned events. Previous, current, and possible future climate resilience activities in the Caribbean were discussed and a matrix was completed containing all the information (see document Appendix 6). In addition, participants identified the linkages of the climate resilience activities with the “Regional Framework for Achieving Development Resilient to Climate Change (2009-2015)”.

2. Countries' Updates: PPCR participating countries provided updates of the country led activities under the Caribbean Regional PPCR Country-track. With regard to national coordination of the PPCR work, the government of Grenada is awaiting support from the Caribbean Development Bank to sponsor consultants that could be fully dedicated to work for the PPCR while the government of Saint Lucia is in the process of engaging the CDB in that regard. The IDB is under the process of hiring a full time consultant for Jamaica's PPCR.

To date only Haiti has had its First Joint Mission under the PPCR and the main findings are provided below. The First Joint Mission to Jamaica will take place from July 11th-16th, 2010. Saint Lucia, Grenada and St Vincent and the Grenadines anticipate that their first joint missions will take place during August-September, 2010.

Based on preliminary work and consultations that have been done during the scoping missions and subsequently, the following preliminary priority sectors/areas have been identified by the countries. These priorities, however, will need to be finalized by broad base consultations which will take place during the official Joint Missions – with the exception of Haiti, which already has had its First Joint Mission.

Haiti: Agriculture and food security, coastal zone management and reconstruction (sectors/themes) are the main areas, with sub-sectors/themes being tourism, infrastructure and land planning and data management.

Jamaica: Agriculture, land-use planning, health, water resources, integrated coastal zone management, climate proofing of national and sectoral plans, tourism, and data management.

Saint Vincent and Grenadines: Monitoring and evaluation of environmental hazards, watershed management, public sensitization and awareness, integrated planning, and data management.

Grenada: Integrated water resource management, capacity building at the sector level, and data.

Saint Lucia: Agriculture, coastal and marine resources, financial sector, forestry, biodiversity, health, human settlement, critical infrastructure, tourism, and water resource management. Data needs were also highlighted for Saint Lucia particularly the need for Bathometric and Hydrometric data.

3. Country Priority Areas/Sectors and Links to Possible Regional Activities: Countries' priority areas/sectors were compared against the previously identified five main sets of activities to be potentially developed under the PPCR Regional-Track (Appendix 5). The result of this exercise was a prioritization of regional activities and preliminary actions for the regional-track program and the identification of areas in which the regional PPCR activities could support and complement country level PPCR activities.

3.1 General Findings:

(1) Countries understand that engaging and accessing the resources of the regional organizations is essential to the development and implementation of country-driven activities and welcome the participation of the regional organizations in the official joint missions;
(2) Data management and information sharing between regional and national agencies have been identified as an immediate need of the countries that should be met by regional organizations.
   a. Data and information sharing (Regional Platform which can be easily accessed and utilized in multiple uses and forms)
   b. New data collection for priority sectors / sea-level rise
(3) There is an urgent need for support for strengthening enabling environments for effective implementation of the program.
   a. Tools and training for capacity-building
   b. Climate Proofing national and sectoral plans
(4) Need to understand what is underway and who is doing what - mapping of activities.

3.2 Identification of Activities for Phase I Regional Track: The following activities have been agreed upon by the participants as Phase I regional activities:

(1) Stakeholder mapping to understand what is being done and by whom.
(2) CCCCC clearing-house under development – assess whether PPCR could support specific interactive elements of this program.
(3) Assess what tools / training / data collection needs are most urgent to strengthen the implementation of the national programs (these will be informed by country joint missions). As well as by priorities identified by countries during regional joint mission. (See Appendix 5)
(4) Regional organizations dialogue – to build commitment for meeting identified sectoral needs and filling data gaps.
(5) Pilot a Climate-Proofing Service – for national and sectoral plans
(6) Identify knowledge management tools for sharing of lessons learnt beyond the Pilot countries to others in the Caribbean.

4. PPCR Regional-Track Activities, Implementation Modalities, and timeline.

Activity	Implementation Modalities	Funding	Work Needed	Duration
7. Identification of Resources – Stakeholder and program mapping. Knowledge product to be hosted on Clearing House platform	- CCCCC - CDKN	- DFID - CDKN	- Stakeholder and information analysis, institutional assessment and capability, consultants. Formal agreement/ commitment	2 months (Interim product) 5 months – Final web based on line product following consultations
8. Clearing House Mechanism	- CCCCC - PPCR - Countries	- PPCR - CDB	- Specifications for CH structure, platform design, accessibility, knowledge management and learning, other data formats - Consultations: Country and technical	3 months
9. Needs Assessment to identify tools, training & data gap analysis etc for implementing PPCR	- PPCR (Consultant)	- PPCR (link with Implement. Plan	- Consultation (with regional organizations and countries especially for data gap analysis) - Documentation	3 months
10. Regional Dialogue	- CARICOM SEC. - OECS	- PPCR	- Mobilisation	End of Month 3
11. Climate Proofing Screening Tool - national and sectoral plans	- CCCCC - PIOJ - CIMH - CDEMA	- PPCR -Other Donors - CDB	- Scoping Exercise - Key sectoral gaps and needs in climate resilience - Development of template & tool kits	5 months

12. Knowledge Management - Identify knowledge management tools for sharing lessons learned for wider Caribbean use	- UNDP - CCCCC - UWI - CIMH - Other partners	- PPCR - Other Donors including CDB	- Needs assessment - Resource - Identification of case studies, lessons learned and best practices	On-going Concept of a broad network of specialized agencies linking with the 5Cs in information management and dissemination

VI. Agreements and Next Steps

- The Inter-American Development Bank will sponsor the regional consultant to be based at the CCCCC to work full time on the Phase 1 of the PPCR Regional-track. The main activities to be developed by the consultant, but not limited to these area: (i) develop activities 2, 3 and 4 within 3 months; (ii) participate as much as possible in the country missions; (iii) engage in consultations at both national and regional levels; (iv) prepare a draft regional SPCR before the second joint mission of the regional-track to discuss and agree among the participants.

- A PPCR Regional-Track steering committee was created to act as an advisory group to provide guidance and make decisions on key issues during phase 1 such as agreeing on TORs for hiring consultants, coordination of the proposed and agreed activities for phase 1, procedures to follow under the PPCR and related matters affecting the development of the Caribbean Regional-track PPCR Phase 1 program. It is intended that the steering committee will take its decision by mail, and when necessary teleconferences will be organized. Decisions will be taken on majority vote.

- Steering Committee members are: Haiti (Erick Balthazar); Jamaica (Hopeton Peterson); 2 OECS countries; DFID (Simone Banister); UWI (Michael Taylor); CCCCC (Neville Trotz) and CARICOM Secretariat (Garfield Barnwell).

- The CARICOM Secretariat will be a member of the steering committee to insure the interest of the non PPCR participating countries from the region.

- OECS countries will take a decision among themselves to determine which two island representatives will represent the OECS on the Committee. The decision should be informed to the IDB by Tuesday, 22nd June, 2010. On Tuesday June 22nd, 2010 the IDB was informed of the decision that Grenada (Joyce Thomas) and Saint Lucia (Neranda Maurice) will be representing the OECS countries in the Steering Committee.

- The IDB and WB will act as secretariat for the steering committee.

- The Joint Mission Group is consisted of the participants of the PPCR Joint Mission of the Regional-Track (refer to the list of participant in Appendix 8)

- The IDB will circulate among all participants a TOR for the regional consultant.

Appendix 8: Detailed List of Participants

Country/ Organization	Name	Title	Email	Contact Information
Countries				
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Appendix 9: Members of the PPCR Technical Working Group

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NON-GOVERNMENT ORGANISATIONS			
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