



PILOT PROGRAM FOR CLIMATE RESILIENCE

JAMAICA'S PPCR PHASE I FINANCING PROPOSAL

OCTOBER 29, 2010

GOVERNMENT OF JAMAICA

PILOT PROGRAM FOR CLIMATE RESILIENCE Summary – Phase 1 Grant Proposal			
1. Country/Region:	Jamaica, Caribbean Region	2. CIF Project ID#:	(Trustee will assign ID)
3. Date of First Joint Mission:	July 12-16, 2010		
4. Funding Request:	Fiver Hundred and Seven Thousands US Dollars – US\$507,000		
5. Type of request	Accelerated funding for phase 1: yes/no		
6. Multilateral Development Banks/focal points:	World Bank – Dr. Enos Esikuri; Inter-American Development Bank – Mr. Gerard Alleng	Country-Level	
7. National Implementing Agency: Planning Institute of Jamaica			
8. Description of activities:			
<p>a) Jamaica as a small Island developing state, is faced with a number of climate change /vulnerability issues, the most significant ones include: deficiencies in the existing risk information framework; inadequate climate data and data management systems; unplanned settlement patterns; inadequate level of knowledge/awareness of the impacts of climate change; weak physical planning system and land use practices; inconsistent enforcement of planning and land use regulations; the degradation of terrestrial and coastal and marine resources.</p> <p>b) The primary objective of the PPCR Phase I Proposal is to develop Jamaica’s strategic Program for Climate Resilience over a nine to ten months period. The SPCR will be based on the best available data, and will reflects the inputs and enjoy the support of all the key stakeholders and the wider public.</p> <p>c) The main components/ activities that will be carried out under this phase of the Program are:</p> <ul style="list-style-type: none"> i) Developing a PPCR financing proposal; ii) Conducting studies and analyses to secure the type of data/information required to inform the development of the SPCR. This includes review of all development policies, plans and regulations to ascertain the extent to which climate change concerns are incorporated; conducting a climate change knowledge, attitude and practice survey, and an assessment of the gap in the capacity and the needs of key institutions to implement climate change programs. iii) Strengthening the climate change data management system. iv) Development of a climate change communication strategy and action plan, then commence implementation of a climate resilience awareness and practice program, targeting the most vulnerable communities and groups; v) Developing Jamaica’s Strategic Program for Climate Resilience (SPCR) for the period to 2030, through a participatory and consensus building process, and also develop related investment proposals as the basis for accessing/leveraging financing. The SPCR will include a monitoring and results management framework; vi) Capturing data, and collaborating with activities to be carried out under the regional track. vii) Strengthening the program coordination capacity of the Sustainable Development & Regional Planning Division of the PIOJ, to facilitate implementation of the PPCR. The indicative time-frame for completion of Phase I is in the range of 9-10 months. <p>The sectors that will be given priority attention are – Water resources; agriculture and food security; tourism; human health, Human settlement and coastal resources. The key crosscutting themes that will be addressed in the SPCR include climate change knowledge and awareness; risk information platform; and data collection and management.</p>			

9. Expected outcomes:	
<ul style="list-style-type: none"> i) Increased consensus on the appropriate climate resilient strategies and action plan for Jamaica over the period to 2030, with clear indicators as to the priority initiatives over the short, medium and long term. ii) A framework that facilitates increased access to financing for initiatives that result in climate resilient development. iii) Enhanced learning and knowledge sharing on integration of climate resilience into development, at the country, and regional levels. 	
10. Key Results:	
<ul style="list-style-type: none"> i) An up-to-date assessment of the current of knowledge, attitude and practice with respect to Climate change. ii) A national climate change communication strategy and increased awareness of climate change risks, especially among the poor and vulnerable, and at the local planning and community levels. iii) A comprehensive SPCR that is owned by the key stakeholders iv) Strengthened climate change data management system 	
11. Budget (indicative) :	
Expenditures	Amount (USD) - estimates
Research & Studies required to develop the SPCR	84,000
Consultants - coordinating & developing SPCR & developing Investment proposals	130,000
SPCR & Communication strategy Workshops and Public Awareness Initiatives	115,100
Data Management Systems	106,000
Equipment	8,000
Administrative & accounting support; Evaluation	40,000
Sub- Total	483,100
Contingencies	23,900
Total Cost	507,000
12. Timeframe (tentative) –milestones	
Scoping Mission	January 13-15, 2010
First Joint Mission	July 12-16, 2010
Development of the SPCR with Investment proposals	April 2011
Final Joint Mission:	April 2011
Submission of SPCR for PPCR Sub-Committee Endorsement:	May 2011
13. Other Partners involved in SPCR¹:	
UNDP, Inter-American Development Bank, Caribbean Development Bank, Global Environmental Facility, European Union and World Bank	

¹ Other local, national and international partners expected to be involved in design and implementation of SPCR

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List of Acronyms

ADA	Association of Development Agencies
CC	Climate Change
CIDA	Canadian International Development Agency
ConSOC	Civil Society Consulting Group
DFID	Department For International Development
EFJ	Environmental Foundation of Jamaica
FCF	Forest conservation Fund
GAR	Global Assessment Report
GDP	Gross Domestic Product
GEF	Global Environment Facility
GHGs	Green House Gases
GOJ	Government of Jamaica
HRRACC-TWG	Hazard Risk Reduction and Climate Change Thematic Working Group
IADB	Inter-American Development Bank
IBRD	International Bank for Reconstruction & Development - World Bank
IMF	International Monetary Fund
IPCC	Inter-governmental Panel on Climate Change
JICA	Japan International Cooperation Agency
MDB	Multilateral Development Bank
MEFP	Memorandum of Economic and Financial Policies
MOA&F	Ministry of Agriculture & Fisheries
MOF&PS	Ministry of Finance & the Public Service
MOH	Ministry of Health
MOT	Ministry of Tourism
MOWH	Ministry of Water & Housing
MSJ	Meteorological Services, Jamaica
NEEC	National Environmental Education Committee

NEPA	National Environment & Planning Agency
NGO	Non- Governmental Organisation
NIC	National Irrigation Commission
NWA	National Works Agency
ODPEM	Office of Disaster Preparedness & Emergency Management
OPM	Office of the Prime Minister
PBPA	Portland Bight Protected Area
PCU	Project Coordinating Unit
PIOJ	Planning Institute of Jamaica
PPCR	Pilot Program for Climate Resilience
PSOJ	Private Sector Organisation of Jamaica
RADA	Rural Agricultural Development Authority
SD&RDD	Sustainable Development & Regional Planning Division
SIDS	Small Island Development States
SNC	Second National Communication
SPCR	Strategic Program for Climate Resilience
UK	United Kingdom
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
UWI	University of the West Indies
WRA	Water Resources Authority

1.0 PPCR Program Background

In May 2009, Jamaica, a Small Island Developing State (SIDS), accepted the offer extended by the Sub-Committee of the Pilot Program for Climate Resilience (PPCR) to participate in the Pilot Program for Climate Resilience (PPCR), as one of the six countries in the Caribbean regional pilot program. The other five countries are Grenada, St. Vincent, St. Lucia, Dominica, and Haiti.

The PPCR which was approved in November 2008, aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development policies, planning and implementation. It seeks to provide incentives for the scaling up of climate resilient actions, building on other ongoing initiatives and the initiation of transformational change.

Like our Caribbean neighbors in the regional program, Jamaica shares common climate change adaptation challenges, some of which are more efficiently and cost-effectively tackled at a regional level. These common challenges which have been identified by the member states of the regional pilot grouping will be addressed through the regional track of the PPCR. The regional track will include a) Region wide data management and monitoring activities, in order to improve understanding of climate risks and potential impacts, and to take action to enhance climate resilience; b) the implementation of activities to tackle risks and vulnerabilities common to all Caribbean countries; c) working through key entities in the Caribbean region to provide the scientific analysis so that countries can incorporate climate resilience in their national climate change strategies as well as in regional planning strategies, policies and financing mechanisms.

The pilot programs and projects to be implemented under the PPCR in Jamaica will be led by the Planning Institute of Jamaica, a statutory body within the Office of the Prime Minister. The PPCR will build on the Hazard Risk Reduction and Climate Change Adaptation framework as set out in Vision 2030 Jamaica, the National Development Plan of Jamaica; the Jamaica National Climate Change Policy and Action Plan which is now being finalized by the Office of the Prime Minister, and the Second National Communication.

At the end of Phase I of the PPCR Jamaica will have a fully developed Strategic Program for Climate Resilience covering the period to 2030. This program which will be consistent with proposed regional activities will be presented to the PPCR Sub-Committee at the end of this Phase. The indicative period for the completion of Phase I is nine to ten months. Phase II will focus on the implementation of the strategic program developed in Phase I, through actions such as support to the integrating of climate risk and resilience into development policies, planning and implementation, institutional capacity building, and scaling up of other investments in key sectors.

Both the national SPCR and the regional track will have a synergistic relationship. The regional activities will support and strengthen the country led program and activities, while the lessons learnt from the individual country pilot program will be shared with all CARICOM countries. By the end of the project the intermediate outcomes expected include: a) improved integration of

climate change in planning, processes and implementation b) Enhanced learning and knowledge sharing on the integration of climate resilience in development at the country, regional and global level.

2.0 OVERVIEW

2.1 Country context

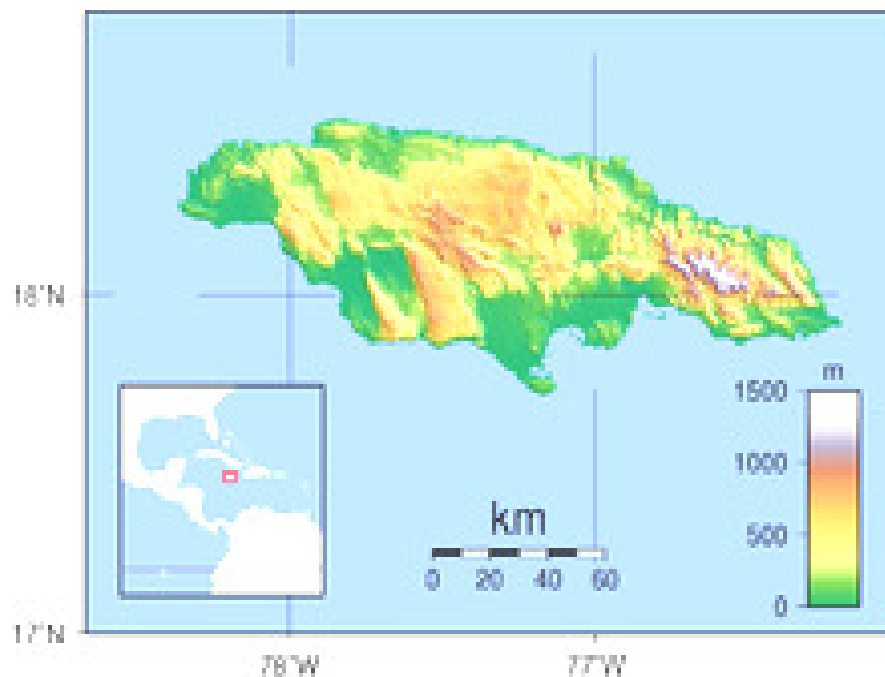
Geography

Jamaica is a caribbean island nation of approximately 145 miles (convert to km) in length and up to 50 miles (convert to km) in width at its widest point, amounting to an estimated 4,300 sq miles (convert to km). It is situated in the Caribbean Sea, 90 miles (convert) south of Cuba and 120 miles (convert) west of Haiti, its nearest neighbours.

Geology

The country can be divided into three landform regions: the eastern mountains, the central valleys and plateaus, and the coastal plains. The eastern mountains are formed by a central ridge of metamorphic rock running northwest to southeast from which many long spurs jut to the north and south. For a distance of over 3 kilometers, the crest of the ridge exceeds 1,800 meters. The highest point is the Blue Mountain Peak at 2256 metres. See Figure 1 below. The Blue Mountains rise to these elevations from the coastal plain in the space of about sixteen kilometers, thus producing one of the steepest general gradients in the world. To the north of the Blue Mountains lies the strongly tilted limestone plateau forming the John Crow Mountains. This range rises to elevations of over 1,000 meters.

Figure 1: Topographic Map of Jamaica



Source: Commons.wikimedia.org

To the west, in the central part of the country, are two high rolling plateaus: the Dry Harbour Mountains to the north and the Manchester Plateau to the south. The limestone plateau covers two-thirds of the country, so that karst formations dominate the island. To the west of the mountains is the rugged terrain of the Cockpit Country, one of the world's most dramatic examples of karst topography.

The Jamaican coastline is approximately 886 kilometres long. It is a coastline of many contrasts. The northeast shore is severely eroded by the ocean. There are many small inlets in the rugged coastline, but no coastal plain of any extent. A narrow strip of plains along the northern coast offers calm seas and white sand beaches. Behind the beaches is a flat raised plain of uplifted coral reef.

The southern coast has small stretches of plains lined by black sand beaches. These are backed by cliffs of limestone where the plateaus end. In many stretches with no coastal plain, the cliffs drop 300 meters straight to the sea. In the southwest, broad plains stretch inland for a number of kilometers. The western coastline contains the island's finest beaches.

Climate

Jamaica has a tropical maritime climate. The country has a bimodal pattern in mean annual rainfall, with the heaviest rainfall occurring from May to June and again from October to November. The drier months are January, February, March and July. The average rainfall is 1,960 millimetres (77.2 in) per year. Rainfall is much greater in the mountain areas facing the north and east, however, where the higher elevations of the John Crow Mountains and the Blue Mountains catch the rain from the moisture-laden winds, rainfall exceeds 5,080 millimetres (200 in) per year. The southern sections of the island lying in the rain shadow of the mountains, have a semiarid climate and receives fewer than 760 millimetres (29.9 in) of rainfall annually.

Temperatures are fairly constant throughout the year, averaging 25 to 30 °C (77 to 86 °F) in the lowlands and 15 to 22 °C (59 to 71.6 °F) at higher elevations. Temperatures may dip to below 10 °C (50 °F) at the peaks of the Blue Mountains.

Environmental Characteristics

Jamaica's environment is characterized by diverse biological and physical features which give rise to a wide variety of coastal and terrestrial ecosystems; and biodiversity. Jamaica's coastal ecosystems include bays, beaches, rocky shores, estuaries, mangroves, cays and coral reefs. These ecosystems are important because they contribute to biodiversity by providing nurseries and habitats for fish and non-motile species. In addition, they act as defenses or buffers against storm surges and hurricanes. They also

support numerous livelihood activities, particularly related to fishing and tourism. However, there has been continued degradation of coastal ecosystems by both man-made and natural factors.

Jamaica's terrestrial ecosystems support include wet and dry forests, rivers, caves, mineral springs, sandy beaches, rocky shores, herbaceous swamps, mangrove swamps, and swamp forests. The 300,000 to 500,000 hectares of forests are very important for the country's development as they provide a variety of goods including lumber, posts, yam sticks, charcoal, fruits, medicinal plants, drinks, and other consumables. In addition they protect watersheds, provide water supply, provide habitats for many wildlife species, and maintain soil productivity. Over the years, the destruction of forests has resulted in severe degradation of watershed areas which has also impacted coastal areas.

Natural Hazard Risk and Vulnerability

Jamaica is vulnerable to multiple hazards, particularly hydro-meteorological and geologic hazards. Some of these include hurricanes, tropical storms, floods, landslides and earthquakes. The country's vulnerability has been exacerbated due to growing exposure and susceptibility of its population, physical assets and economic activities; socio-economic fragility; and lack of social resilience. Exposure of Jamaica's population to tropical cyclone, has been calculated at 10 per cent, while the exposure of national GDP was calculated to be at seven per cent (UNEP; PIOJ, 2010)

The country's vulnerability to natural hazards has been evident in the on-going impact of hurricanes and tropical storms on the productive sectors of the economy such as agriculture and tourism; infrastructure, and the livelihoods of numerous communities island-wide. Over the last decade, the country has experienced at least one major hurricane or tropical storm annually. Since 1988, the cumulative impact of these events due to damage and losses has been estimated at J\$105 billion and over 116 lives have been lost. It is estimated that by 2025, the cost of these natural hazards for Jamaica could be 13.9% of GDP (based on 2004 GDP), 27.9 % by 2050, 42.3 % by 2075 and approximately 56.9% by 2100 (Bueno et al, 2008)

A strategic evaluation of country disaster risk conducted by the IDB in 2009 showed that for hurricanes, the probable maximum losses associated with a catastrophic event with a return period of 500 years amount to approximately US\$3 billion (25% of GDP). In addition, a complementary IDB study on Indicators of Disaster Risk and Risk Management shows that for a catastrophic event with a return period of 500 years, the Disaster Deficit Index is 2.4, suggesting that Jamaica has low economic resilience and lack the financial capacity to recover from the event. The study also indicates that while disaster risk management performance in the country increased from 1990 to 2008, the level of performance in the core areas of disaster risk management viz. risk identification, risk reduction, disaster management, and governance and financial

protection, remains relatively low, and that the country is at an incipient stage of comprehensive disaster management.

Climate change is likely to increase Jamaica's vulnerability to natural hazards. This is particularly true of coastal and marine ecosystems which already face numerous stresses, including habitat destruction, coastal development and pollution. Among the potential impact of climate change on the islands coastal and marine ecosystems are: increased coastal erosion; more extensive coastal flooding; higher storm surge flooding; salt-water intrusion; and higher sea-surface temperatures; by resulting in an increase in the frequency and intensity of extreme weather events.

With increasing disaster frequency, Jamaica is constantly faced with the situation in which scarce resources that were set aside for development projects have to be diverted to relief and reconstruction in post-disaster scenarios. Thus, there is a need to reduce the vulnerabilities that Jamaica currently faces as this will help to build resilience to climate change. These adaptation strategies should, in part, aim at reducing the external stresses on Jamaica's ecosystems.

Socio-economic characteristics

Since 2001, Jamaica has maintained an annual population growth rate of 0.5 per cent with population estimated at 2.7 million in 2007. In 2007, an estimated 9.9% of the population was living below the poverty line, the majority of whom (73.1%) live in rural areas on slopes of the island's central mountain range. Most of The poor consist mainly of the unemployed, and persons working in low-wage employment, including underemployed persons. Persons earning low wages depend heavily on incomes from small-scale subsistence farming, agricultural labour, domestic services, street vending and activities in the informal sector. Livelihoods in the agriculture sector are the most vulnerable to natural disasters, explaining the chronic levels of poverty observed in rural areas. Declining performance in the agriculture and fisheries sub-sectors is directly related to the sector's vulnerability to natural disasters and is exacerbated by environmental degradation from inappropriate land use and waste management practices. These have resulted in challenges for the sector as a viable source of sustainable income; especially for small farmers and fisher-folk.

Macro-economic Context

The key economic sectors rely directly or indirectly on natural resources. The agricultural sector for example, contributed an estimated 5.6% of real GDP in 2009 and provided employment to 20% of the labour force. The tourism sector, the largest foreign exchange earner for the country (US\$1,939.7m in 2009) attracted 1,831,000 stopover visitors and 922,000 cruise ship passengers. The declining state of the eco-systems across Jamaica therefore signals a major threat to economic growth and the livelihoods of a significant segment of the labour force.

The wider economic context, is one in which the country is experiencing one of the lowest rates of economic growth in the region, with no real growth in the last two years, increasing national debt and a volatile global economy. For the fiscal year 2009/10 the total debt to GDP ratio was 129%, with the total debt servicing to total government expenditure at 60.6%. These developments have impacted negatively on the GOJ's Tax intake, severely limiting the fiscal space required to finance critical infrastructure and institutional development. Some relief was however created with the successful Jamaica Debt Exchange initiative between the Government and holders of Government bonds. This initiative resulted in interest savings to the government of J\$40.0 billion and helped to pave the way for an IMF twenty seven months US\$1.27 billion Stand By Agreement. Even with these developments, the capacity of the GOJ to finance programmes to enhance climate resilience is severely restricted.

Future Climate Change Implications

Jamaica, combined with all other Small Island Developing States across the globe, contributes less than 1% of the GHGs (Green House Gases) released into the atmosphere annually. In 1994, GHG inventory records showed that Jamaica's emission of carbon dioxide was 8,585 gigagrams (Gg) and increased by 10% over the period 2000-2005 to 9,532 gigagrams. Emissions data shows that the energy sector is responsible for over 86% of carbon dioxide emissions released into the atmosphere. Carbon dioxide removals (sink) showed quite a remarkable increase from 167 Gg in 1994 to 1,108 Gg in 2005. The change in sinks was largely due to land use related activities, particularly in forestry and agriculture. In spite of Jamaica's minimal contribution to rising global surface temperatures, the estimated 0.74°C rise in temperatures (IPCC, 2007) over the past ten decades and the predicted 0.2°C increase over the next two decades will have significant impacts on the tropical climate system. These surface temperature changes based on the AR4 chapter on small islands (Mimura, L et al., 2007) will lead to the following impacts on Jamaica:

- Sea level rise
- Increased surface warming
- Ocean warming and thermal expansion
- Increased threats to human health via the spread of tropical diseases
- Increase or decrease in precipitation
- Increased occurrence of extreme events

The Climate Study Group of the Physics Department at the University of the West Indies in Mona uses numerical weather predictions to model the future climate of the Caribbean and Jamaica. The group generated various climate scenarios based on observed evidence and the results as it relates to Jamaica are as follows:

Temperature: For Jamaica there is great confidence that temperatures are very likely to increase. There were uncertainties in determining exact values from the results, however, it is estimated that annual temperature increases are expected to be about 0.5 degree Celsius by 2015, 0.7 degree Celsius by 2030, 1.0 degree Celsius by 2050 and nearly 2.5 degree Celsius by 2080. This is likely to cause the death of the coral reefs exposed to these rising sea

temperatures and by extension a decline in commercial fish stocks. Farming of crops that require cooler temperatures will also be negatively affected.

Precipitation: There is general agreement among the Global Circulation Models that in the vicinity of the Greater Antilles (which includes Jamaica); there will be significant drying during the months of June, July and August. Agricultural production will therefore be adversely affected.

Tropical Cyclone: There were not enough results from hurricane simulations to make conclusive statements about tropical cyclone activity. However, Jamaicans have experienced an increase in the frequency and intensity of tropical cyclone activity in recent times and can expect at least one system each year within 50 kilometres or less of the island. Since 2001 Jamaica has experienced the effects of six hurricanes, five of which were category 4 and one category 5. We have also experienced two storms. The strong winds and heavy precipitation floods, landslides and coastal storm surges resulted in damages estimated at J\$96.5 billion, with each event affecting over 250,00 persons on average, fifty eight lives were also lost over the period (PIOJ 2010). The recent tropical storm Nicole resulted in damages of US\$94.0m, fourteen lives lost and 507,312 persons affected.

Sea Level Rise: Over the 20th century, estimates of sea-level rise are in the range of 0.12 to 0.22 metres globally. In the Caribbean based on estimates from 1950 to 2000 (Church et al, 2004) the rise appears to be close to the global mean. Projections based on IPCC findings for the A1B emission scenario is for a global average up to the end of the 21st century of 0.35 metres and changes in the Caribbean are expected to be near this average. Consequently coastal flooding, erosion/loss of beaches and contamination of ground water sources due to the intrusion of sea water into coastal aquifers are all likely impacts of sea level rise in Jamaica. In fact these developments have already begun to take place, e.g. coastal flooding in the Portland Bight area. Comprehensive national programs therefore need to be formulated and executed to ensure adaptation to these changes.

Jamaica's Response to Climate Change

Jamaica has had a history of involvement in climate change adaptation/resilience programs. It participated in GEF and CIDA funded Projects seeking to assist countries in the Caribbean to integrate climate change adaptation strategies into national development planning on issues such as tourism, health, agriculture, fisheries and infrastructure. Achievements under the program have been as follows:

- *Caribbean Planning for Adaptation to Climate Change (CPACC) Project 1997 –2001:* (i) Establishment of sea level & climate monitoring system (ii) Articulation of national climate change policies & implementation plans and (iii) Establishment of coral reef monitoring protocols.
- *Adaptation to Climate Change in the Caribbean (ACCC) Project 2001 – 2004:* (i) Development of risk management guidelines (ii) Implementation of pilot projects in the

water, health & agricultural sectors and (iii) Preparation of a draft Regional Public Education Strategy.

- *Mainstreaming Adaptation to Climate Change (MACC) Project 2004 – 2007*: (i) Integration of climate change adaptation into national and sectoral policies and (ii) Strong public education and outreach. In 2008 a draft National Water Sector Adaptation Strategy to address Climate Change in Jamaica was prepared under the *Mainstreaming Adaptation to Climate Change Project* being led by the Caribbean Community Climate change Centre (CCCCC). The strategy provides an assessment of the water sector vulnerability to climate change and outlines the duties of the government and other key stakeholder groups in helping to build the resilience of the sector against climate change and other potential hazardous impacts. This strategy has not yet been adopted.

In light of the historical and anticipated impacts of climate change, the recently finalised *Vision 2030 Jamaica: National Development Plan*, has outlined the national priorities and actions with regard to climate change in the combined sector plan on Natural Resources and Environmental Management and Hazard Risk Reduction and Climate Change (2007). A primary focus of the Vision 2030 is to adapt to climate change through mainstreaming climate risks into government policies and plans, identifying strategic priorities and adoption of best practice, as well as promoting greater public awareness of the issues. The National Development Plan is further complemented by the Second National Communication, which is set to be formally adopted by the government by the end of 2010. It sets out among other things, **steps taken or envisaged to facilitate adequate adaptation to climate change for the water resources, coastal resources, human health, human settlement and agricultural sectors**. It should be noted that the Initial National Communication was completed in 2000. It outlined among other things, a green house gas inventory for Jamaica, an initial assessment of Jamaica's vulnerability to climate change, and proposed key adaptation measures. The sectors prioritized and examined were agriculture, water resources and the coastal zone.

Based on the strategic framework set out in the Vision 2030 Jamaica and the Second National Communication, a National Climate Change Action Plan is now being developed. The objective of this plan is to effectively develop and implement climate change strategies and action plans, and to incorporate such strategies in key national development plans and policies, particularly those related to resource usage and consumption, energy usage and conservation, land use and coastal zone planning and management, economic and fiscal management and human health. Against this background, therefore, the PPCR is seen as an initiative that will catalyze and provide the type of support that will contribute significantly towards Jamaica's climate change resilience goals and outcomes.

Other Climate Change Adaptation **Initiatives and Achievements include:**

- The National Building Code - This is currently under review. This code will establish new guidelines for the construction of hurricane resistant buildings across the island, which includes for example the use of hurricane straps and water tanks. The code will also outline in detail the building standards for construction within the coastal zone, which will take into consideration physical planning standards, such as coastal setbacks.

- The National Works Agency (NWA) is engaged in a Palisadoes Protection and Rehabilitation Project that will help to protect the Palisadoes Road, the only access by land to the Norman Manley International Airport and the town of Port Royal.
- An Evacuation Plan has been developed for Portmore, one of the low-lying areas of St. Catherine which is vulnerable to sea-level level rise. This programme will be expanded to facilitate the preparation of evacuation plans for other low-lying coastal areas both in rural and urban areas.
- A number of community-based adaptation projects under the Global Environment Facility Small Grants Program are now being implemented. The goal of these projects is to reduce vulnerability and enhance the capacity of selected communities to adapt to climate change and variability.

Strengthening Laws, Regulations, and Policies Relevant to Addressing Climate Change

The Government of Jamaica, as part of its overall approach in addressing the emerging issues of climate change has reinforced the need for climate change considerations to be reflected in key regulations, laws and other policy measures across all sectors. As signatories to the UNFCCC and Kyoto Protocol, Jamaica has moved forward to develop and implement the following:

- In 2009 a draft National Carbon Emissions Trading Policy was prepared as part of Jamaica's overall attempt to address climate change. The policy represents the commitment of the Jamaican Government in participating in the Clean Development Mechanism and Kyoto Protocol, but more importantly establishes the guidelines and terms under which Jamaica will participate in the carbon market to not only assist developed countries in realizing a portion of their quantified emission reductions targets but at the same time move towards achieving the country's national sustainable development goals.
- The Jamaica Energy Policy 2009-2030 which was approved by the Cabinet in October 2009, aims to facilitate a comprehensive programme of efficiency improvement and energy diversification, to provide high quality, affordable, environmentally friendly energy, and to reduce the country's dependence on high-cost imported oil.
- A draft climate change communications strategy has been developed by the National Environmental Education Committee (NEEC) and Panos Caribbean with financial support from the Environmental Foundation of Jamaica.

Improving the Institutional Structures and Capacities to Support Climate Change Initiatives across all Sectors

- The Hazard Risk Reduction and Adaptation to Climate Change Thematic Working Group (HRRACC-TWG) was established by the PIOJ in 2010. This group consists of up to 25 organisations and key individuals appointed by the chair under the advice of the PIOJ. Members are drawn from a cross section of stakeholders with technical interest in and

knowledge of hazards, risk and climate change issues. The HRRACC-TWG will serve as the main mechanism for coordinating and monitoring activities related to the National Outcome Hazard Risk Reduction and Adaptation to Climate Change, under Vision 2030 Jamaica - National Development Plan (NDP) and successive Medium Term Socio-Economic Policy Frameworks (MTFs).

- The Climate Studies Group, at the UWI Mona Campus, conducts statistical analyses of climate, analyses of climate dynamics, and regional climate modeling using the MM5 and PRECIS models. The Group also participates in the Assessments of Impacts and Adaptations to Climate Change (AIACC) project and it is assisting with climate change scenarios in the MACC project. The Group provides technical support to public and private sector organizations in the development of regulations and policies for addressing climate change.
- In 2004, the University of the West Indies launched a Centre for Disaster Risk Reduction (pre-disaster phase) to begin coordinating a regional approach to disaster management in the Caribbean. The centre provides multidisciplinary training and technical expertise in disaster management and risk reduction in Caribbean communities, while conducting research to support the development and implementation policies and regulatory measures aimed at disaster management.

2.2 Key PPCR Issues in Jamaica

Jamaica has over the years, through a variety of initiatives, made progress in: analyzing and projecting the likely effects of climate change on Jamaica; increasing awareness of the possible effects and developing the capacity at all level to take appropriate actions, as well as mainstreaming it into the national planning framework. However, in order to consolidate, strengthen, and build on the progress made to date, a number of important issues need to be systematically addressed. These issues were identified and highlighted through a) analytical work done on the climate change challenges faced as a country and a region; b) information garnered from evaluation of climate change projects implemented; c) consultations with a wide cross section of stakeholders including community groups, regulatory, implementing and funding agencies. These issues include:

I. **Climate Data & Data management** – A number of data and data management needs identified are as follows:

a) Inadequate and insufficient equipment and technology for the collection and transmission of climate data - Historically, the MSJ has maintained a network of rainfall and climatological stations, rainfall data loggers and automatic weather stations. The network now has only 60% and less than 25% of required rainfall and climatological stations respectively.

Additionally, data are collected and processed manually, leading to an over reliance on field observers, and delays in reporting on and analysis of data. There is no modality to detect when a station is not reporting and so there is often a lag time between detection, trouble shooting and restoring a station to operability. When such delays occur, data are irretrievably lost, which can be particularly challenging if it happens during the passage of significant weather events.

Other limitations include the fact that for most locations Island-wide, rainfall is the only climate parameter measured. Additional parameters such as rainfall intensity, temperature, solar radiation, wind (direction and speed) and relative humidity are needed for regional model validation, to assess future climate change impacts, and to adequately quantify sectoral responses to cope with the vagaries of climate variability and change.

b) Lack of a tide gauge network for the collection of Sea Level and related data – There is no existing tide gauge network around the island to secure reliable and timely data on changes in sea level, temperature and other related data.

II. **Building capacity for planning and forecasting, including the use of appropriate tools**

Key stakeholders consulted have confirmed the need to develop the capacity of entities engaged in planning both at the local and national levels, as this would among other things enhance the level of analysis and the quality of planning decisions made at those

levels. A related capacity development need identified is that for researching and understanding the mechanisms responsible for extremes in climate and their impacts on both Jamaica and the wider Caribbean, and developing or refining models to use this understanding to predict the impacts of climate change. The models developed could also aid in the design of strategies to enhance resilience to predicted CC impacts.

III. Inadequate level Climate Change Education & Awareness and the absence of a comprehensive Communication Strategy

A climate change knowledge, attitude and practice survey conducted in 2005 revealed that there were significant gaps in CC knowledge, attitudes and practices. This has contributed the significant level of damage and loss suffered by the poor and vulnerable with the passing of each severe weather event. Despite the implementation of a number of climate change awareness projects in selected communities/parishes in recent years, there is still a need for a comprehensive targeted education and awareness programs at various levels and groups within the public and private sectors as well as at the community level and the general public. A related issue also is the inadequate packaging of the climate change awareness information. There is a felt need for CC information to be appropriately packaged for the various groups targeted, to ensure effective communication.

There is also the absence of a clear and comprehensive national CC communication strategy which has also hindered the communication effort. Given that the last CC knowledge attitude and practice survey was done in 2005, there is a need to do another survey and to use the findings to inform the development of an appropriate CC communication strategy.

IV. CC Institutional Framework

The enabling environment for climate change adaptation has not been fully created, largely because of the absence of a legislative framework to support other aspects of the overall system. Additionally, existing institutions do not have the requisite structure in place to facilitate the implementation of key climate change initiatives. Lack of financial resources, limited trained staff with the requisite expertise, and the absence of a strong research and development core within institutions, have limited their overall ability to develop and expedite key projects, programs and plans of action associated with climate change adaptation and resilience. The institutional arrangements for coordinating and implementation of climate change issues/initiatives in Jamaica have at best remained fragmented. There is therefore a need to establish a coherent institutional framework for CC issues.

- V. **Risk Information platform** - Although there are varying levels of hazard mapping, disaster vulnerability and risk assessment for sections of the island and for particular hazards, they are incomplete and inadequate in the context of what is needed for national and local planning and decision-making. Thus a comprehensive risk information

platform is needed to provide the data/information for the development of evidence based policies, regulations, and plans. It would also provide the basis for effective decision-making by the various planning and development agencies, the private sector as well as the general public.

- VI. **Agriculture & Food Security/Inadequate land management** – The agricultural sector is a very vital sector in term of livelihoods for the rural areas where 73% of those living below the poverty lines reside. Among the climate change related issues faced by most farmers are erosion, flooding and landslides due to the combined effects of deforestation of watershed areas, inappropriate farming practices and extreme weather events. Other climate change related issues affecting the agricultural sector include low productivity due to the effects of drought and or inadequate water supply/water-harvesting and storage facilities for farmers.

Agricultural risk management as it relates to climate change is an issue that is also considered to be critical. There is a felt need for a comprehensive hazard assessment, hazard maps, as well as a comprehensive risk analysis of the key farming areas around the country. This will serve as the basis for decision making as to the farming activities if any, to be carried out at different locations and the actions to be taken to enhance resilience to extreme weather events.

The destruction of the critical fisheries habitats anticipated from the impacts of climate change is also an issue for concern, particularly the rise in water temperature and the adverse affect on stocks of coastal fishes.

- VII. **Absence or inadequacy of Climate Change Considerations in legislation, sectoral plans & Policies**

In Jamaica, the need is not so much for the development of new laws to support climate change, but instead, the mainstreaming of adaptation and risk reduction strategies into the broader sectoral policies and plans for key sectors such as energy, agriculture, tourism, health, water, forestry, land use (coastal zone) and natural (marine and terrestrial) resources.

Over the past five years, several policies and strategies were developed, which adequately addressed environmental protection and climate change concerns. These included: (i) the Water Sector Adaptation Strategy for addressing Climate Change, (ii) The Energy Sector Policy, (iii) The Carbon Emissions Trading Policy (iv) National Hazard Risk Reduction Policy, (v) National Biological Diversity Strategy and Action Plan and (vi) National Policy on Ocean and Coastal Zone Management. The main challenge however, has been that these policies are still in the draft stage, or have not yet been formally adopted into law by the relevant authorities.

Of great concern also is the fact that existing plans and policies have failed to address the issue of climate change in a comprehensive manner. They have neither considered

possible CC implications, nor have they sufficiently articulated the need for climate change mitigation and adaptation measures to be put in place to reduce Jamaica's vulnerability. This therefore is an issue that will be addressed through the PPCR.

VIII. **Water Resources Sector**

The changing precipitation patterns and, sea-level rise which are projected impacts of climate change, that are likely to cause:

- Reduction by 7-8% in the length of the rainy season and Increase of 6-8% of the dry season
- Saltwater intrusion: contamination of ground water sources due to the intrusion of sea water into coastal aquifers as sea level rises;

Based on statistics from the Water Resources Authority, 84% of our exploitable water resources are from under ground aquifers; while 92 percent of the National Water Commission's (NWC) annual water production came from groundwater sources. This highlights the heavy dependence on ground water resources and hence the need to monitor and manage it, to minimize contamination, while ensuring the provision of the quality and quantity needed.

Other important issues in this sector are: a) The need to harvest enough water to meet the needs of households, communities and large population centres especially during periods of drought, as well as assisting communities presently without adequate access to water, to harvest rain water, either as a sole water supply source or as complementary to the existing source of water. b) The need to develop and implement strategies to minimize the risk/effects of flooding on communities and economic infrastructures.

- IX. **Coastal & Marine Resources** – The key issues of concern are the continuing erosion of our beaches, degradation of the coral reefs, sea grass beds and mangrove forests and the anticipated rise in sea levels. The degradation of Jamaica's coastal and marine resources is due in part to poor environmental practices such as improper disposal of waste, indiscriminate removal of forest cover, poor land use practices and inappropriate farming practices. The effects of these inappropriate environmental practices are projected to be further exacerbated by anticipated sea level rise of 0.35 meters by the end of the 21st century, increased ocean temperature and the increased frequency and intensity of hurricanes. Distinct physical impacts that are expected to occur and have begun to occur in Jamaica include:

- increased and more severe coastal flooding and storm damage
- submergence of low-lying wetlands and dry land areas
- erosion of beaches by increasing offshore loss of sediment
- increased salinity of estuaries and aquifer.

The formulation and execution of adaptation strategies are therefore critical for coping with these challenges.

X. **Human Settlements** – the main issues of concern under human settlements for Jamaica are unplanned settlement patterns; weaknesses in the physical planning system and land use practices; inadequate adaptive capacity of communities to climate change.

a) Unplanned Settlement patterns-

Population growth, uncontrolled urbanization, rural and urban poverty have contributed to the development of unplanned settlements in vulnerable areas such as flood plains, steep unstable slopes and along coastline where they are vulnerable to storm surge. This pervasive situation has continued because of inadequate planning and environmental management; inadequate enforcement of existing legislation and policies; inadequate institutional and legislative arrangements; inadequate support for acceptable settlement development for the poor and vulnerable.

The impacts experienced with the now more frequent severe weather event include:

- Destruction of settlements, coastal properties, utilities and infrastructure.
- Displacement of settlements and settlers
- Increased need for financial resources to deal with the associated costs of relocation of settlements and infrastructure

b) Weakness in Physical Planning System and Land Use Practices- Recent natural disasters, particularly hurricanes, floods and landslides, have exposed weaknesses in physical planning, land use practices and building practices. The policies and guidelines that exist are not always followed.

Limited steps have been taken in the preparation of development plans and orders to guide sustainable land use developments across the island. The absence of a comprehensive land use planning framework however, has resulted in the proliferation of informal and non-conforming developments, illegal removal of forests, reduction in terrestrial resources and biodiversity, destruction of natural coastal resources and sprawl development. There is therefore a great need for effective land use and coastal zone policies to be developed, to explicitly address all needs related to the use and management of natural resources.

c) **The development of adaptive capacity of communities to climate change** - Climate change impacts are experienced differently in rural and urban areas across Jamaica, and even within rural areas, the experience is not uniform. The impacts on coastal fishing communities, for example, are different from those on inland farming communities. There is therefore the need to test and document methods for building adaptive capacity in different types of communities, faced with different hazards, risks and vulnerabilities. This will aid in informing the formulation of future community based adaptation interventions in the context of a national climate change strategy.

2.3 Participatory processes followed to prepare the proposal

Following the acceptance of the invitation extended to Jamaica to participate in the Caribbean region PPCR, the participatory process for the development of the PPCR began on November 26, 2009. This took the form of a meeting of key stakeholders called by the PIOJ to provide them with information about the PPCR and to secure their views concerning the main issues that should be addressed under this program. A further meeting was held on 7th January 2010 to update the key stakeholders as to developments under the PPCR programme since the November meeting and to formulate a matrix of the main climate change issues for the various sectors. The objectives of the consultation were achieved as the stakeholders were fully appraised and a matrix of the various issues affecting each sector was developed. The organisations that participated included the Planning Institute of Jamaica (PIOJ), Office of the Prime Minister (OPM) – Environmental Management Division, Ministry of Finance and the Public Service, National Environment and Planning Agency (NEPA), Water Resources Authority (WRA), Meteorological Services Jamaica, Forestry Department, Private Sector Organization of Jamaica (PSOJ), National Works Agency (NWA), United Nations Development Programme and the Ministry of Health.

Following this consultation, a joint Inter-American Development Bank – World Bank team together with representatives of the United Kingdom (UK) Department For International Development (DFID), and the United Nation Development Programme (UNDP) conducted a Joint Scoping Mission. This IDB lead team visited Jamaica over the period 13th – 15th January 2010. The main purpose of the mission was to briefly introduce the objectives, structure and phases of the PPCR to key government agencies and ministries, as well as private sector interests; discuss and agree on the institutional arrangements necessary for the preparation and eventual implementation the PPCR in Jamaica; and to assist the government with the overall preparatory work for the development of the programme development.

The Scoping Mission team met members of the stakeholders group comprising of representatives of organisation engaged in issues related to climate change. These organisations included –the Environmental Management Division (EMD) of the Office of the Prime Minister (OPM), Ministry of Finance & the Public Service (MOF&PS), Office of Disaster Preparedness and Emergency Management (ODPEM), Ministry of Agriculture and Fisheries (MOA&F), Rural Agricultural Development Authority (RADA), Water Resources Authority (WRA), National Environment and Planning Agency (NEPA), Ministry of Tourism, Meteorological Service, Jamaica (MSJ), the Forestry Department, Ministry of Mining and Energy, Ministry of Health (MOH) and the Private Sector Organisation of Jamaica (PSOJ). See Annex I for a listing of the stakeholders consulted during the Scoping Mission.

Further discussions were also held with representatives of government agencies, international donor organisations, academia, and representatives of the private sector. Arising from the discussions, among other things, it was agreed to develop an action plan outlining the kind of assistance needed for the preparation of the Strategic Programme for Climate Resilience (SPCR). It was also agreed that the PIOJ would complete a draft of the PPCR Phase I financing proposal to access financing for the preparation of the SPCR. The Aide Memoire for the Scoping Mission is attached as Annex 2 (a).

The participatory process continued with a meeting of the PPCR Focal point with the key stakeholders on July 2nd, 2010, to identify priority sectors for attention under the PPCR and to identify a small program of activities to be carried out in the short term. Having achieved the objectives of that meeting, the process of consultation was further advanced when the first joint IADB/World Bank mission for the PPCR was held on 12th-16th July, 2010. The mission team which also included representatives of other donor agencies, such as the Canadian International Development Agency (CIDA), DFID, Japan International Cooperation Agency (JICA) and UNDP, held consultations with key stakeholders, including representatives of key government agencies, civil society, private sector and Caribbean-wide entities. The main objectives of the Mission included stocktaking on previous, ongoing and pipeline climate change projects and programmes; confirming the priority sectors previously identified, and possible preliminary actions and activities through consultation meetings. The objectives also included providing support to the GOJ in the formulation of the funding proposal for Phase 1. Among the issues discussed and agreed on were the extent to which Climate Change issues were mainstreamed in the policy and development plans at the sector level and nationally; the issues that needed to be addressed in order to enable greater resilience to climate change; the sectors to be given priority in use of PPCR funding and the thematic areas that were deemed to be most critical in the process of mainstreaming climate change in Jamaica. The Aide Memoire for the First Joint Mission (excluding some Annexes) is attached as Annex 2(b).

Subsequent to the Joint Mission, the PIOJ held consultations with a number of additional stakeholders to inform/update them on the PPCR and to ascertain initiatives being undertaken as well as initiatives planned with respect to climate resilience. These include the Disaster Risk Reduction Centre, the Institute of Sustainable Development of the UWI, the Environmental Foundation of Jamaica, the Tourism Enhancement Fund, the Forest Conservation Fund (FCF), Negril Coral Reef Preservation Society, Christian Aid, GEF Small Grant Programme, the Community Based Adaptation Programme, National works Agency, the Fisheries Division of the Ministry of Agriculture & Fisheries and the National Irrigation Commission.

The preparation of the SPCR will follow the participatory /consultative approach reported above. As outlined in Table 2 - The PPCR Implementation Plan below. A number of workshops will be held firstly of wide cross section of stakeholders from all relevant sectors, with participation from the private sector, the public sector, civil society, NGOs and CBOs, to agree the vision, goals, outcomes and strategy of the SPCR. Following this workshop, a number of sectoral workshops will be held to formulate the objectives, strategies, and strategic actions and outputs for the priority sectors for the period to 2030. The participatory process will be extended further to the parish/regional levels, where communities (including vulnerable communities), CBOs, farmers, local business operators, local development planning agencies and other interest groups will be able to contribute to the formulation of the SPCR.

The second Joint Mission will be held in April 2011 to review the draft SPCR and make the necessary adjustments. This will be done in a workshop setting where all the interest groups and agencies that participated in the formulation process will be given an opportunity to review and recommend desired adjustments that will result in a document that will be owned by all the key stakeholders.

2.4 Cooperation Arrangements with Development Partners

There is a high level of cooperation with the Development Partners, as evidenced by the level of support given to the country's broad development initiatives including climate change projects. In 2009 newly approved Official Development Assistance (ODA) totalled US\$1.2 billion. This was provided primarily to support the productive sector, promote fiscal stability and strengthen the country's economic infrastructure. Forty two percent of this newly approved ODA represented resources from the Peoples Republic of China. Bilateral partners and Multilateral Technical Cooperation agencies approved financial and technical assistance of US\$577.2 million in that same year.

In February of this year, the GOJ secured approval for a US\$1.27 billion Stand By Agreement with the IMF. Since then others of our major multilateral development partners, IADB, World Bank, CDB and the European Union have reaffirmed their cooperation and support by finalizing funding & technical assistance agreements. Annex 3 provides details of the range of climate change initiatives currently being funded by the country's development partners.

3.0 PPCR LINKAGE TO NATIONAL PROCESSES

GOJ and a number of community based organizations are presently implementing several activities in disaster risk reduction, including in risk identification, prevention and migration, financial risk management, preparedness and response and recovery. Recognizing that climate change has a number of implications for disaster risk management, GOJ proposes to, where appropriate; build upon DRR best practices in order to mitigate the impacts of climate change and as a strategy for improving climate resilient development. Of particular note are a number of small community based projects, or pilot projects being implemented in selected parishes, these have the potential to be scaled up under the PPCR as best practices are adopted and implemented. This is consistent with the approach of GOJ's Vision 2030 Jamaica: National Development Plan². In this plan the Government and people of Jamaica have outlined their priorities and actions with regard to climate change in the combined sector plan on Natural Resources and Environmental Management and Hazard Risk Reduction and Climate Change (2009). A primary focus of the GOJ is to adapt to climate change through mainstreaming climate risks into government policies and plans, identifying strategic priorities and adoption of best practice, as well as promoting greater public awareness of the issue. This general policy position will be built on by the PPCR as its implementation will assist in realization of the overall development objective of the Government and people of Jamaica.

Development of National Climate Change Policy & Action Plan – One of the primary goals of the national climate change policy now being developed is to identify Jamaica's vulnerability to the adverse effects of climate change, determine the measures that will be required to address climate change and then decide how to implement these measures in the short, medium and long term.

The policy when finalized and approved will set the national policy framework within which climate change adaptation, resilience and mitigation will be addressed. The PPCR will aid in expediting this process by:-

1. Data to be collected and analysed to facilitate better planning and the formulation of effective adaptation strategies.
2. Consultation with a wide cross-section of relevant institutions, in keeping with the national consultation code which stipulates the nature and extent of consultations required before any policy can be tabled for approval.
3. The provision of funding to enable the implementation of critical policy revision, development planning, institutional strengthening, and capacity development initiatives.

Given the similarity of the goal, the objectives, and the inputs to be utilized in the development of both the National Climate Change Policy and the SPCR, it is expected that the PPCR will facilitate the development and finalization of the Climate Change policy as well as the implementation of the Action Plan associated with the CC policy.

Additionally, the development of the SPCR will also draw on the extensive work embodied in the Draft Second National Communication which is now being finalized (a copy is posted at the MSJ website: www.metservice.gov.jm), as indicated earlier. It will also draw on other work done such as

² Vision 2030 Jamaica is posted on the website of the PIOJ: www.pioj.gov.jm.

'Development of a National Water Sector Adaptation Strategy to address Climate Change in Jamaica' (2008). This was prepared with support from the Caribbean Community Climate Change Centre.

The Public Sector Master Rationalization Plan - The Public Sector Transformation Unit, in keeping with its mandate to lead, monitor, evaluate and facilitate the implementation of the restructuring of the public sector for efficient, effective and economical Government; recently prepared a Public Sector Master Rationalization Plan. This plan sets out the initial recommendations for the rationalization of the public sector at the strategic level, and examines ministries and their respective department and agencies, in relation to their mandate and core functions.

This process of public sector rationalization and the related ongoing process of public service modernization, will facilitate the modernization and strengthening of the legislative framework, the organizational structure and the development of the capacity of those GOJ agencies with the mandate to formulate, monitor, and implement climate change policies, regulations. These processes will therefore provide opportunities to strengthen regulations and public sector as they also draw on capacity and institutional development work that will be implemented under the SPCR.

4.0 STRENGTHENING NATIONAL LEVEL CLIMATE RESILIENCE AND ENHANCING PPCR IMPLEMENTATION

In-keeping with the objectives of the PPCR and the existing areas of need, the consensus arising from the consultation process to date was that the GOJ should seek PPCR funding to finance initiatives under five broad thematic areas in the proposed SPCR, these are:

- a) Mainstreaming Climate Change into priority Sectors;
- b) Facilitating Sectoral Adaptation Measures;
- c) Strengthening Policy/Institutional Arrangements;
- d) Building Capacity for Planning and Forecasting and;
- e) Climate Change Education and Awareness.

The priority sectors for the application of these broad themes are:

- a) Water Resources;
- b) Agriculture and Food Security;
- c) Tourism;
- d) Human Health;
- e) Human Settlements and Coastal Resources.

Other sectors that will be considered in the strategic programme to ensure the comprehensiveness of the programme include:

- a) Terrestrial Resources and Terrestrial Biodiversity
- b) Financial Sector – in relation to risk insurance and comprehensive risk assessment of projects to be financed.

PPCR Implementation

The institutional arrangements for the development and oversight of climate change mitigation and adaptation policies and regulations falls under the Office of the Prime Minister with different agencies and division within this ministry having clearly defined roles See Annex 4 for further details. All of these agencies have been involved in the PPCR consultation process from the commencement of the consultation process in 2009.

The Meteorological Services, Jamaica, for example is the UNFCCC Focal Point for Climate change and has responsibility for preparing the National Communication documents and represents the country internationally, addressing the technical aspects of climate negotiations. The Environmental Management Division within the OPM has responsibility for environment, planning, and development and for addressing climate change policies and issues at the national and international levels. It works closely with the focal point on many climate change issues.

The PIOJ is strategically place to provide leadership in the development of the SPCR and generally in the implementation of the PPCR. It has as its mandate the responsibility to initiate and coordinate the development of plans and programs that will facilitate the sustainable

development of Jamaica. It is the National Focal Point for Vision 2030 Jamaica – National Development Plan, and it is the National Implementing Entity (NIE) for the Adaptation Fund and the Focal Point for PPCR. It also provides technical and administrative support to the Hazard Risk Reduction and Adaptation to Climate Change -TWG through its Vision 2030 Secretariat.

The PPCR is located in the Sustainable Development & Regional Planning Division of the PIOJ **which** has responsibility for its coordination and implementation. This division works closely with the Plan Development Unit of the PIOJ – with responsibility for development of Vision 2030 and medium term plans & framework; it also works closely with the Economic Cooperation & Management Division of the Institute, which has responsibility for liaising and negotiation with multilateral and bilateral funding agencies.

A very critical component of the institutional arrangements for climate change in Jamaica is the Hazard Risk Reduction and Adaptation to Climate Change Thematic Working Group (HRRACC-TWG). This Working Group, which consists of up to 25 organizations, will serve as the main mechanism for coordinating and monitoring activities related to the National Outcome Hazard Risk Reduction and Adaptation to Climate Change, under Vision 2030 Jamaica - National Development Plan (NDP) and successive Medium Term Socio-Economic Policy Frameworks (MTFs). Members are drawn from a cross-section of stakeholders with technical interest in and knowledge of hazards (natural and man-made), risk and climate change issues, including relevant government ministries, departments and agencies, private sector bodies, academia, civil society, key individuals and international development partners. The current membership of this multi-agency group includes - Ministry of Finance and the Public Service, Meteorological Services, Jamaica, Jamaica Red Cross, Jamaica Fire Brigade, Association of Development Agencies, Department of Local Government , Jamaica Defence Force, Environmental Foundation of Jamaica, DFID, Coast Guard, CIDA, World Bank, Water Resources Authority , UWI, UNDP, Social Development Commission, Planning Institute of Jamaica, PANOS, Office of the Prime Minister, Office of Disaster Preparedness and Emergency Management, National Works Agency, National Environment and Planning Agency, Ministry of Tourism and the Ministry of Health,

In order to ensure that the PPCR is appropriately fitted within the existing institutional framework for Climate Change, its steering committee with a clear Terms of Reference (see Annex 5), will have most of its membership drawn from the membership of the HRRACC-TWG. This PPCR Steering committee will be chaired by the GOJ PPCR Focal Point. The other members of the committee will be representatives drawn from: the Ministry of Finance; Plan Development Unit, PIOJ; MSJ; NEPA; Environment Management Division; ODPEM; UWI Climate Study Group; Disaster Risk Reduction Centre; ADA, PANOS, EFJ, IADB, and a Private Sector representative. All of these entities have been and will continue to be engaged in the PPCR consultative process.

5.0 OUTLINE OF KEY ACTION AREAS IN PREPARING THE REGIONAL TRACK AND THE JAMAICAN SPCR

5.1 THE REGIONAL FRAMEWORK FOR THE CARIBBEAN PPCR PHASE I

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 Caribbean countries are small island states with the majority of their populations and main commercial activities on, or near, the coastline and heavily dependent on fragile terrestrial and coastal resources.

The Caribbean has a strong history of collaboration on the issue of climate change with a significant amount of analytical work already done or underway in a range of areas, and especially on adaptation to climate change. 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 community that links many of these states, established a climate change center in 2005 (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. Under the aegis of their regional mandate, the Center developed a Regional Strategy for Achieving Development Resilience 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 objectives of the PPCR.

Overall, 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, form 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, namely Dominica, Grenada, Haiti, Jamaica, St. Lucia, and St. Vincent and the Grenadines; and (ii) region-wide activities that will support 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 formulation of the regional track will be coordinated with 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 cross-sectoral application in 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, climate change impact assessments, 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) capacity building to enable the Caribbean countries to integrate climate change into their development and budget planning.

The relationship between the regional and country track is presented in Annex 6

Approach of the development of the regional pilot

The development of the scope and activities of the Caribbean 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 2010 that brought together both regional organizations and participating countries. The purpose of the first regional joint mission was to bring together regional stakeholders to discuss and agree on the objectives, activities, timeline and funding of

the Caribbean Regional-track Strategic Program on Climate Resilience (Regional SPCR). As a result of this mission, 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 and related matters affecting the development of the Caribbean Regional-track PPCR Phase 1 program. Steering Committee members are representatives from: Grenada; Haiti; Jamaica; and Saint Lucia; DFID (representing bilateral donor agencies); UWI; CCCCC and CARICOM Secretariat. Part of the role of the CARICOM Secretariat as a member of the steering committee is to insure the interest of the non-PPCR participating countries from the region is represented. The IDB will act as secretariat for the Steering Committee.

Implementation of regional and country activities

Regional activities of the Caribbean pilot program will be implemented through identified regional organizations under the direction of the regional steering committee, guidance of the MDBs and supported by developmental partners. The implementation of country activities will be led by each government's designated agency in coordination with the national climate change focal point.

Developmental Partnerships

Under an agreed division of labour between the implementing Multilateral Development Banks (MDBs) the Inter-American 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. Additionally, the IFC and the private sector entities of the IDB will support the development of the private sector component of the program. All of these efforts are being supported by development partners in the region, including the Caribbean Development Bank, DFID, CIDA, JICA and UNDP.

Future activities

The PPCR Regional-Track phase 1 proposal and the regional SPCR are under development in close supervision and cooperation with the PPCR Caribbean Steering Committee. These proposals will be discussed and developed with the PPCR Caribbean participating and other CARICOM States, regional organizations, and development partners.

5.2 The PPCR Phase I for Jamaica

The PPCR Phase I Proposal will consist of the following components:

I. Climatological data assessment and more realistic projections

The preparation of a well reasoned evidence based strategic program for climate resilience is conditional upon:

- i) A comprehensive assessment of local weather and climatological data to ascertain the current knowledge with respect to climate norms and trends, and recent changes which have, or will yield climate change impacts.
- ii) Realistic projections of the likely future climate over the medium to long term for the island.

The services of the Climate Studies Group, at the UWI will be secured to lead this exercise of using local weather and climatological data to ascertain the current trends, and recent changes which have, or will yield climate change impacts, and to make realistic projections of the likely future climate over the medium to long term for the island. This exercise will require approximately forty man days of effort and support for this is being sought under the PPCR.

- II. Integrated, automated platform for climate data - During **this** phase technical and financial support is anticipated from the PPCR to secure and install twenty automated stations. These stations will contribute towards the establishment of an integrated automated platform which will be developed specifically for the Jamaican context, to provide improved climate data collection and timely dissemination of climate information as a strategy for Disaster Risk Reduction. The anticipated cost is US\$106,000.
- III. Review of development policies, regulations & plans - The mainstreaming of climate change into national, sectoral, spatial and local development plans, policies and regulations, will first require a review of the relevant documents to ascertain the extent of modification/revision required. This analysis will not only clarify the level of effort needed to ensure that the required climate change and related gender concerns are mainstreamed, but also provide an indication of the resources required for such an assignment. The outputs of this proposed exercise will play a key role in informing the development of the strategic program. It is anticipated that PPCR funding will be available to facilitate the acquisition of the necessary technical expertise for this exercise. This component is estimated to require approximately fifty man/days of consultancy effort.
- IV. Review of institutional capacity development need - There is a need to assess the extent of institutional capacity development required within the public sector. This assessment is needed to ascertain the gaps in the organisation structure and the capacity of institutions to mainstream climate change issues, as well as cross ministerial gaps, overlaps and resource gaps. The information gleaned will contribute substantially to the formulation of appropriate strategic actions in the SPCR to address institutional capacity issues. This task will require the engagement of a consultant for forty man/days.
- V. **Knowledge, Attitude & Practice (KAP) Survey and Communication Strategy** - A Knowledge, Attitudes and Practice survey was previously done in 2005. The information is now dated as KAP of the target groups and the general public has changed. The GOJ is now proposing to do another KAP survey to ascertain the current level of knowledge and awareness of climate change, as well as attitudes and practice. The findings of this survey will be critical for the development of

education & awareness goals, outcomes, strategies, actions, and an overall communications strategy. In addition to the development of a communication strategy it is proposed to develop promotional materials and commence the development of an awareness building program. It is estimated that this survey will cost US\$35,000.

- VI.** Climate Resilience Public awareness Initiatives – Arising from the proposed KAP survey and the communication strategy and action plan to be formulated, phase one of a public awareness programme will be developed for immediate implementation. The damage and loss experienced by Jamaicans from extreme weather events in recent years, highlight the fact that the poor and the vulnerable, especially those living in vulnerable communities tend to suffer most. Thus the initial public awareness efforts will focus on the poor, those living in vulnerable communities, as well as other vulnerable groups. The objective will be not only to increase awareness but also to encourage appropriate actions to reduce risk and promote resilience. This program is estimated to cost US\$50,000.
- VII.** Development of the SPCR and a climate change communication Strategy- A series of participatory, consensus building workshops will be held. They will be coordinated by the PPCR Program Management Unit, within the Sustainable Development & Regional Planning Division, utilizing the services of expert facilitators and other technical specialists. The main activities include:
 - i. The initial workshop will bring together all key stakeholders to secure their input and consensus on the formulation of overarching goal and outcomes for the SPCR; lower level goals and performance indicators for each priority sector and cross cutting thematic area; and the formulation of strategies to be adopted to achieve these goals.
 - ii. The execution of six additional workshops, four of which will be focused at the sector level, bringing together stakeholders into sectoral groupings and through a participatory and consensus building process, arrive at: the objectives and performance indicators for each priority sector with respect to climate resilience; the plan of action and targets to be pursued over the short, medium and long term to 2030; and the institutional arrangements and capacity development initiatives necessary for the effective implementation of the strategic program in each sector. Each sector workshop will also consider the cross cutting themes. After the sectoral workshops the outputs will be compiled to form the outline of a SPCR. This will then be presented at five parish/regional level workshops across the island for inputs from, local private sector and local government representatives, farmers, NGOs, CBOs, and other interest groups. After the parish /region level workshops, the outputs will be compiled. At a workshop bringing together representatives from various sectors, interest groups and organization types, the final outputs of all the sector and parish/regional workshops will be presented to arrive at a consensus on the key elements/components of the SPCR. The final workshop will consolidate the

outline of a communication strategy and action plan informed by deliberations during the previous workshops.

- iii. Collaborative initiatives to be carried out under the regional track o of the Caribbean Region PPCR.
- iv. Drafting of the full SPCR based on the inputs secured during the workshops and further detailed consultation carried out with technical groups and other organizations. This will be done over a five month period culminating in the submission of the SPCR to the PPCR Sub-Committee.
- v. The second Joint Mission will be carried out after the first draft of the SPCR is produced is produced to make the necessary improvement to the document before finalization by the GOJ.

VIII. **Project Preparation Activities for Projects to be Financed Under Phase 2** - Based on consultations with key stakeholders, some of projects to be implemented during Phase 2 of the PPCR have already been identified/or will be identified once the SPCR development process gets under way. These are investments /projects which are, or will generally be consistent with a number of the high priority initiatives for action that were highlighted by both the Second National Communication and the National Action Plan. In order to avoid delay in the process of securing or leveraging financing for these projects, the GOJ would like to have some of these proposals prepared while the SPCR is being prepared, so that they may be submitted along with the SPCR to the PPCR Sub- Committee for consideration. This approach it is hoped will expedite access to PPCR funding and other available donor funding, thus facilitating the expeditious implementation of these critical projects. Support is therefore being sought under the PPCR Phase I to finance the preparation of up to five such proposals.

- IX. **Coordination and Administrative Support for Coordination and facilitation of Phase I & II** - Given the resource limitations generally in the public sector and the PIOJ in particular, the coordination and implementation of Phase I & II of the PPCR will require additional technical and administrative assistance. Funding for this coordinating Unit is being sought under the PPCR. A Program Coordinator will be contracted to:
- i) Prepare detailed listing of climate change related project being implemented or to be implemented shortly.
 - ii) Develop a PPCR financing proposal.
 - iii) Coordinate the contracting and supervision of the technical specialists required to conduct necessary research and assessments needed to guide the development of the SPCR and coordinate support for the strengthening of the climate change data collection and management system.

- iv) Coordinate the development of a climate change communication strategy and commence implementation of climate resilience awareness raising program
- v) Coordinate the development of the SPCR through a participatory and consensus building process.
- vi) Coordinate the development of investment proposals for submission to the SPCR Sub-Committee along with the SPCR;

Additionally , in order to ensure the effective administration of the project - i) the services of an administrative assistant will be secured; ii) provision is made to cover other incremental project administrative expenses; iii) Computer hardware and software will also be secured to meet programme management and accounting needs of the project. As in the case of the program coordinator, the project proposes program management support for an eight months period. The first five of which will cover the implementation of Phase I and the remaining three months to cover program management cost for Phase II, to facilitate implementation of Phase II until Phase II funding is disbursed.

6.0 WORK PROGRAMME, TIMETABLE, FUNDING REQUIREMENTS (FOR PHASE I)

6.1 Main PPCR Implementation Risk in the Country

There is neither a significant political risk nor capacity risk as the government is in full support of this programme and the capacity can be secured for the effective implementation of the project. The PIOJ which was nominated to serve as the National Implementing Entity (NIE) for the Adaptation Fund, will be the implementing agency for the PPCR and as such, no significant challenges are expected. While there is the risk that there may be limited fiscal space to accommodate the PPCR, this risk may be minimised by ensuring that the anticipated PPCR grant expenditures are fully incorporated in the approved GOJ budget.

6.2 Implementation Modalities for Phase I

PIOJ will be the focal government body for coordinating the implementation of PPCR Phase 1 and 2 activities, with active participation from a number of government agencies and civil society groups with responsibility for implementing specific components of the PPCR. An interagency Steering Committee will be established as indicated earlier, comprising representatives from organisations with policy, regulatory, programme implementation, data management and forecasting roles, functions and expertise in the area of climate change. The main purpose of the Steering Committee will be to provide quality control, technical input and advice in support of the development and implementation of the SPCR. See Annex 5 for the details of the Terms of reference and composition of this committee.

THE GOJ Focal Point for PPCR, who is based in the Sustainable Development & Rural Planning Division of the PIOJ, will chair the Steering Committee and will also give oversight to the team that will be contracted to develop the SPCR. The team with responsibility for the day to day implementation of the PPCR will include a Consultant/ Program Coordinator, and an Administrative Assistant. Other required technical expertise will be contracted as required. The Consultant, who is already contracted, has responsibility for coordinating the development of the SPCR.

The PIOJ will be guided by the Standard Operating Procedures, Standard Procurement Manual and Standard Financial Manual, which have been all agreed with the Multilateral Development Banks. The required accounting personnel are in place and will fulfil the reporting requirements for the use of project funds.

MDB Responsibilities: The IADB and the World Bank would provide technical support and guidance to Phase 1 through Joint Missions and follow-up supervision and quality

control activities. A scoping and a joint mission have already taken place, and the Second Joint Mission is expected in the first quarter of 2011/12 financial year.

Administratively, the funds for Phase 1 would flow through the IADB as the executing agency for the PPCR for the Caribbean region.

Monitoring and Evaluation: PIOJ will have overall responsibility for monitoring and evaluation of the project. A results framework for Phase 1 activities will be developed with performance indicators, measurable target/outputs and outcomes. Bi-monthly monitoring reports will be provided by the Program Coordinator to the PPCR Focal Point. A joint review/evaluation will be carried out by the PIOJ, IADB, and representatives of civil society groups at the end of Phase I. Lessons learnt will be extracted and a report will be made to the key stakeholders as to the findings of the evaluation by August 2011..

6.3 Timetable of Activities and funding needs for Phase I Activities

Implementation Plan

The proposed work plan is outlined in Table 2 below. The first draft of the SPCR is expected in February 2010 and the final version by May 2011.

Table 2: PPCR Implementation Plan

SPCR DEVELOPMENT WORKPLAN	IMPLEMENTATION PERIOD October 2010 – May 2011								
	Lead Agency	Oct	No	Dec	Jan.	Feb	Ma	Apr	May
A. RESEARCH, ANALYSIS, CONSULTATIONS & WORKSHOPS									
1. Approval of financing proposal for PPCR Phase I	CIF		X						
2. Contract technical personnel to undertake assignments under Phase I of the project.	PIOJ		X	X					
3. Coordinate the conduct of critical research, survey and analytical work necessary for development of the SPCR.	PIOJ, UWI			X	X	X			
4. In collaboration with the OPM and the Workshop Facilitator, the PPCR consultant will organize and execute a workshop with representatives of key stakeholder organizations, to formulate an overarching SPCR goal and the outcomes, sub-goals and performance indicators for each of the key sectors/ cross cutting theme, and the strategies proposed to enable the achievement of these sub- goals.	PIOJ, OPM				X				

SPCR DEVELOPMENT WORKPLAN	IMPLEMENTATION PERIOD October 2010 – May 2011								
	Lead Agency	Oct	No	Dec	Jan.	Feb	Ma	Apr	May
5. Conduct a series of sectoral workshops to develop the sectoral components of SPCR –i.e. Objectives, strategic actions, outputs, performance indicators & timelines.	PIOJ - Consultant & Team				X	X			
6. Conduct parish/regional Workshop to secure inputs from stakeholders across the island	PIOJ- Team & Consultant					X	X		
7. Develop CC communication strategy & PPCR Promotional Plan & materials	Communication Specialist					X	X	X	
8. Coordinate the development of project proposals for funding under Phase 2, or for leveraging financing.	PPCR Consultant			X	X	X	X	X	
A. DRAFTING OF THE SPCR									
1. Develop first full draft of the SPCR.	PIOJ – PPCR consultant						X	X	
2. Circulate to the Steering Committee, the WB & the IADB for consideration and comments.	PIOJ							X	
3. Revise Draft.	PIOJ – PPCR Consultant							X	
4. Arrange 2nd Joint Mission & stakeholders meeting to present Draft SPCR and obtain feedback.	PIOJ -ECM							X	
5. Revise SPCR document in-keeping with accepted recommendations & circulate to key stakeholders for comments.	PIOJ- PPCR Consultant								X
6. Prepare final SPCR Document	PIOJ- PPCR Consultant								X
7. Submit to the PPCR Sub- Committee for endorsement and funding.	PIOJ- PPCR Consultant								X
8. Conduct evaluation of PPCR Phase I activities and extract lessons learnt	PIOJ, IADB, WB								X

Budget & Financing Plan

It is estimated that PPCR Phase I will cost an estimated US\$534,000 out lined in Table 3 below. Of this total, US\$507,000 is being sought as PPCR Phase I financing.

Table 3: Budget & Financing Plan

	ACTIVITY	CIF	GOJ	TOTAL
1	Research & studies required to development the SPCR	84,000	6,000	90,000
2	Consultants- Coordination & development of the PPCR, and developing investment proposals	130,000	0	130,000
3	SPCR & Communication strategy Workshops and Public Awareness Initiatives	115,100	9,000	115,100
4	Data Management System	106,000	0	106,000
5	Equipment	8,000	4,000	12,000
6	Administrative & accounting support; Evaluation	40,000	6,000	46,000
7	Office Equipment & Furnishings	8,000	2,000	10,000
9	Sub-Total	483,100	27,000	510,100
10	Contingency	23,900	0	23,900
11	TOTAL (US\$)	507,000	27,000	534,000

ANNEX I

List of Organizations and Representatives Interacted with during Scoping Mission

Name	Organizations
Barbara Scott, Claire Bernard, Hopeton Peterson, Reynaldo Thompson, Andrea Shepherd Stewart, Le-Anne Roper Elizabeth Emanuel, Winsome Miller	Planning Institute of Jamaica (PIOJ)
Leonie Barnaby	Office of the Prime Minister (OPM) – Environmental Management Division
Philbert Brown	OPM - Department of Local Government
Carol Nelson, Rose Lemonious-Stewart	Ministry of Finance and the Public Service
Pauline Brown	Office of Disaster Preparedness and Emergency Management (ODPEM)
Georgia Marks-Doman	Ministry of Agriculture & Fisheries
Anthony McKenzie, Peter Knight	National Environment and Planning Agency (NEPA)
Basil Fernandez, Geoffrey Marshall	Water Resources Authority (WRA)
Sylvia McGill, Jeffery Spooner, Clifford Mahlun	Meteorological Services Jamaica
Karen McDonald	Environmental Foundation of Jamaica (EFJ)
Marilyn Headley, Keith Porter	Forestry Department
Christopher Corbin	United Nations Environment Programme
Minh Pham, Akiko Fujii	United Nations Development Programme
Eistin McLean	Rural Agriculture Development Authority (RADA)
Jason Hazel, Nickolas Simmonds, Ann Hodges	Island Outpost
Omar Chedda	Private Sector Organization of Jamaica (PSOJ)
Patrick Rose, Mark Richards	National Works Agency (NWA)
Anthony Chen, Michael Taylor	University of the West Indies
Malden Miller	USAID

ANNEX 2 (A)

JAMAICA PILOT PROGRAMME FOR CLIMATE RESILIENCE

JOINT SCOPING MISSION, JANUARY 13- 15, 2010

AIDE MEMOIRE

1. Background

At the request of the Government of Jamaica (through the Planning Institute of Jamaica (PIOJ), a joint Inter-American Development Bank – World Bank team together with representatives of the UK Department for International Development and the United Nations Development Programme visited Jamaica from January 13th to January 15th, 2010, to conduct a scoping mission for the Pilot Program for Climate Resilience (PPCR). The main purpose of the mission was to briefly introduce the objectives, structure and phases of the PPCR to key government agencies and ministries as well as private sector interests; discuss and agree on the institutional arrangements necessary for the preparation and eventual implementation of the PPCR in Jamaica; and assist the government with the overall preparatory work for the development of the program. The terms of reference and mission composition are attached as Annex 1.

The mission initially met with members of the stakeholder group for the PPCR set up by PIOJ and comprising of representatives of the Office of the Prime Minister (OPM), Ministry of Finance (MOF&PS), Office of Disaster Preparedness and Emergency Management (ODPEM), Ministry of Agriculture and Fisheries (MOA&F), Water Resources Authority (WRA), National Environment and Planning Agency (NEPA), Meteorological Service Jamaica, Forestry Department, Ministry of Energy and Mining, Ministry of Health and the Private Sector Organization of Jamaica (PSOJ). More detailed meetings and consultations were held with the stakeholders including Government of Jamaica agencies, representatives of the private sector, academia and international donor organizations. The mission team wishes to express its gratitude to the PIOJ for their cooperation, assistance and hospitality. The full list of officials/stakeholders met during the mission and the mission schedule/program are provided in annexes 2 and 3 respectively.

The Aide Memoire summarizes the discussions and agreements reached between the Government of Jamaica, stakeholders and the project team, and the next steps required to ensure the overall effective development of the PPCR.

2. Summary of Main Discussions

- There is strong support for the implementation of the PPCR by stakeholders who recognize the urgent need to have a more coherent national strategy and coordinated effort in responding to the impacts of climate change in Jamaica.
- There is consensus that there is the need for greater dissemination of information to all stakeholders in Jamaica, including the importance of raising public awareness on the implications of climate change, which it was suggested should be one of the main components of the national as well as the regional program. A component of this process should involve local government entities (i.e. Parish Councils) as well as representatives of civil society. It was also noted that the information will have to be communicated in appropriate formats so as to increase its effectiveness and impact.
- A number of data and data management needs were identified. Among these was the need for: improved collection of primary data (both quality and quantity) for example, rainfall intensity data; up-to-date baseline spatial data to inform land use planning; expansion of the monitoring network; and increased spatial coverage. With respect to data management, the issues raised related to the uniform protocols for data sharing and transfer among the various government agencies, line ministries and other organizations involved in work related to climate change at the national, local and regional levels. There was optimism that the PPCR would provide an opportunity to improve on this situation, together with the development of the National Spatial Plan being led by OPM. Regional resources will complement the efforts on standardization and harmonization of data methodologies and definitions.
- **Institutional strengthening** and coordination including the governance structure, such as decision making process, were key concerns for stakeholders and they indicated that this would be an essential element for the successful implementation of the PPCR in Jamaica. This may require the establishment of a formal climate change unit with a clear mandate and authorization to coordinate the various climate change activities in Jamaica, ensure the integration of climate change considerations into relevant sectors and forge consensus for policy decisions beyond the PPCR both at the national and local levels.
- The discussions underscored the need to build upon, add value to, and exploit **potential synergies and partnerships with existing initiatives** in Jamaica. There are a number of activities related to the mainstreaming of climate change into the development process that are currently ongoing which will be relevant in considering the preparation of the PPCR Strategic Program on Climate Resilience (SPCR) ahead of the implementation phase of the PPCR. The Draft Second National Communication (SNC) to the United Nations Framework Convention on Climate Change is expected to be completed by the end of the first quarter of 2010. The document is linked to the Vision 2030 Jamaica

National Development Plan. Following preparation of the SNC a draft of an Action Plan for adaptation and mitigation activities in Jamaica is being developed by OPM and the Meteorological Service; A National Water Sector Adaptation Strategy and Plan of Action to address climate change was completed through the regional Mainstreaming Adaptation to Climate Change Project (MACC); NEPA is proposing a national climate change response strategy and has already prepared a draft document; the PIOJ has been nominated as the national implementing entity (NIE) for the UNFCCC Adaptation Fund and one project is being considered for submission to the Fund (the Negril adaptation project focusing on coral reefs and sea grass systems, beach replenishment and sea defenses).

- It was noted that there were potential significant **private sector opportunities** under the PPCR and some companies are more prepared than others to deal with the impacts of climate change. For example some hotels have already modified their building designs to adjust for increases in inundation as a result of sea level rise. However, as highlighted by PSOJ, many companies have not focused on the issue of climate change as yet and this represents a significant gap that should be addressed under the PPCR. With regard to the access of the loans in Phase 2 by the private sector, directing some of the loan component to the sector was intimated as an option that could be explored given tight fiscal space of the government. In addition the government was strongly in favor of the grant financing. The use of the SPCR as a broader investment platform was also discussed.
- The ODPEM highlighted the importance of **community-based initiatives** and the Environmental Foundation of Jamaica (EFJ), a national grant-making organization, suggested a number of community adaptation initiatives that could be scaled up and/or replicated. There are also a range of relevant activities underway or proposed, including a number of projects being taken forward by CIDA, DFID, OAS, USAID, UNDP and UNEP, that can help support the preparation and potentially the implementation of the SPCR. Some of these projects present key existing platforms in **capacity building, knowledge management, public awareness and policy interventions** that could be instrumental in supporting the PPCR. It was noted that the SPCR should both identify activities to be supported with PPCR resources during the implementation phases, as well as identify how other sources can be utilized to support implementation of identified priorities relating to climate resilience and adaptation.

3. Agreement

The following were agreed to with the Government of Jamaica. In this regard the PIOJ was tasked to:

- i. Develop an action plan outlining the kind of assistance needed for the preparation of the SPCR and an outline of a small program of activities related to climate change resilience to be carried out in parallel with the development of Phase 1. Funding for this small program is to be financed from other sources of funding other than those allocated for the PPCR. The formulation of the action plan will require discussions with relevant government stakeholders including the Meteorological Service and the OPM in particular, as well as the Multilateral Development Banks (MDBs) and the other multilateral and bilateral agencies. The PIOJ has indicated that it will require the assistance of a consultant for the preparation of the proposal to prepare the SPCR.
- ii. Engage the Ministry of Finance and the Public Service at a senior level with regard to the Ministry's involvement in the development and operation of the PPCR.
- iii. Complete the draft of the proposal for funding of Phase 1 for the preparation of the SPCR as soon as possible and provide a date for the first official joint mission.
- iv. It was also agreed that regardless of the highly concessional rates of interest, no GOJ activities on the loan component could be accommodated before Financial Year 2011/12.

4. Next Steps

1. The Government of Jamaica will review TORs for technical assistance and submit names of consultants to the project team to support the preparation of SPCR and joint missions by February 12, 2010.
2. There is a need for continuing wider and active consultations with relevant stakeholders even at this early stage of PPCR program development to help in defining the roles and responsibilities of all the key players including the role of civil society and non-governmental organizations in the implementation of the PPCR. These consultations are expected to take place under the guidance of PIOJ.
3. The Government of Jamaica will provide an outline of the small program that it would like to carry out during Phase 1 of the PPCR using resources of the IDB's Sustainable Energy and Climate Change Initiative (SECCI) and other available resources, so as to implement tangible projects that could be used to demonstrate climate resilience and help support PPCR activities.

4. The IDB will make information available as early as possible to the PIOJ of how and when pilot countries will be able to access the technical and human resources available through the regional organizations. This will be a topic of discussion at the meeting of the regional organizations scheduled to take place in early February.
5. It was agreed that the Government of Jamaica would request the first official Joint Mission of the PPCR as soon as possible.

Date: _____

For the Government of Jamaica:
Barbara Scott
Planning Institute of Jamaica

For the Inter-American Development Bank:
Mr. Gerard Alleng
Climate Change Specialist

For the World Bank:
Ms. Ellen Hamilton
Sr. Urban Planner

ANNEX 2 (B)

JAMAICA PILOT PROGRAMME FOR CLIMATE RESILIENCE

Joint Mission, July 12-16, 2010

AIDE MEMOIRE

1. Background

At the request of the Government of Jamaica (GoJ) (through the Planning Institute of Jamaica, PIOJ), a joint Inter-American Development Bank – World Bank team together with representatives of the United Nations Development Programme, UK Department for International Development and Canadian International Development Agency (CIDA) visited Jamaica from July 12-16, 2010, to conduct the first joint mission for the development of the Caribbean Pilot Program for Climate Resilience (PPCR) in Jamaica. The Mission team confirmed that there was a significant increase in the grant funding resources available under the PPCR (US \$60-75 million) for the regional pilots and that Jamaica could use as a baseline the amount of at least US\$12 million when developing its SPCR.

The objectives of the Mission were: (i) enhancing country ownership and responsibility through wider participation; (ii) stocktaking on previous, ongoing and pipeline activities; (iii) identifying priority sectors and possible preliminary actions and activities through desk review, consultation workshop/meetings, brainstorming session and field visits to the climate vulnerable hotspots, (iv) identifying necessary sector-specific adaptation activities with focus on project development and implementation, (v) support the GoJ in the formulation of a work program, timetable, roles and responsibilities for the development of the SPCR; (vi) and support the GoJ in the formulation of a funding proposal for Phase 1. The terms of reference and mission composition are attached as Annex 1. In addition, prior to the commencement of the joint mission, the PIOJ engaged a consultant to help provide leadership in the development of the proposal for financing for Phase I of the PPCR, and to help develop a small programme of activities to speedily implement tangible initiatives that will advance the climate resilience agenda and development of the Strategic Programme for Climate Resilience (SPCR).

Consultations were held with key stakeholders including representatives of key government agencies, civil society, private sector and Caribbean-wide entities. The team consulted with representatives from the focal point for the PPCR in Jamaica – the Planning Institute of Jamaica

(PIOJ), together with officials of the Office of the Prime Minister (OPM), Ministry of Finance (MOF&PS), Office of Disaster Preparedness and Emergency Management (ODPEM), Ministry of Agriculture and Fisheries (MOA&F), Rural Agricultural Development Authority (RADA), Water Resources Authority (WRA), National Environment and Planning Agency (NEPA), Ministry of Tourism, Meteorological Service, Forestry Department, Local Government, Ministry of Health and the Ministry of Water and Housing. Consultations were also held with the University of the West Indies (UWI), non-governmental organizations and private sector umbrella groups, the Association of Development Agencies (ADA), Civil Society Consulting Groups (ConSOC), the Private Sector Organization of Jamaica (PSOJ) and the Jamaica Chamber of Commerce to clarify initiatives been undertaken to promote climate change resilience. The mission team wishes to express its gratitude to the PIOJ for their cooperation, assistance and hospitality. The full list of officials/stakeholders met during the mission and the mission schedule/program are provided in Annexes 2 and 3 respectively.

The Aide Memoire summarizes the discussions and agreements reached between the Government of Jamaica, stakeholders and the Joint Mission team, and the next steps required to ensure the overall effective development of the PPCR.

2. Summary of Priorities

- There is general consensus among stakeholders on the priority areas and broad components identified for the development of the Strategic Program for Climate Resilience (SPCR) in Jamaica. The priority areas are – Water Resources; Agriculture and Food Security; Tourism; Health; and Human Settlements and Coastal Resources. The broad components were - Mainstreaming Climate Change into Sectors; Facilitating Sectoral Adaptation Measures; Strengthening Policy/Institutional Arrangements; Building Capacity for Planning and Forecasting and; Climate Change Education and Awareness.
- The development of the PPCR in Jamaica will be anchored in the Second National Communication (it is expected to be completed by October, 2010), the national action plan for climate change (currently in draft form but is expected to be revised) and Vision 2030 Jamaica - National Development Plan.
- A draft matrix of the priority areas, components and associated initiatives was developed and is provided in Annex 4. In the development of the matrix, it was determined that there are cross cutting issues and activities which apply to all areas of concern and have to be reflected in the development of the SPCR. These were identified as:
 - a. Data management

- b. Risk information platform – this will build upon existing and proposed information and systems such as the National Land Use Policy Framework. Hazard mapping is a tool that will be included.
 - c. Land Use Policy Framework – subsumed within the framework are the national land policy review, agriculture land use policy and the Sustainable Land Management project
 - d. Training, e.g. sectoral valuation of the impacts of climate change
 - e. Integration of disaster risk management in all sectors
 - f. Climate Change education and awareness communication strategy
 - g. Harmonization of national climate change strategies with the regional climate change strategy
 - h. Business continuity planning
 - i. National Climate Change Policy and Action Plan.
- The issue of data management for the effective mainstreaming of climate change into the development process continues to be a strong concern for stakeholders and this concern or component is expected to be strongly reflected in the SPCR. Similarly, public awareness / education on climate change is a major concern for all sectors and interests, including both private sector and civil society.
 - It was determined that the institutional arrangements for responding to climate change in Jamaica have to be clarified and these arrangements should be reflected in the SPCR. In this regard, it was suggested that there is need to sensitize the Public Sector Transformation Unit on the importance of having institutional arrangements for the mainstreaming of climate change in the public sector. Additionally, it was suggested that the PPCR could assist in the development of the country's climate change policy.

3. Agreements

The following were agreed to with the Government of Jamaica:

- v. There was general agreement on the priority areas and draft program matrix with the understanding that a few areas required some clarification, specifically those related to agriculture (irrigation and fisheries) and local government. Follow-up on the inputs of these two areas is needed, particularly to determine the implications of expected local government reform on the proposed activities within this area.
- vi. A draft of a small program of activities for early intervention related to climate change resilience is to be prepared by August 16, 2010.
- vii. The draft of the proposal for financing of the preparation of the Strategic Program for Climate Resilience (SPCR) will be prepared by August 31, 2010. The draft will be

circulated by PIOJ to relevant stakeholders for review and then submitted for comment to the IDB/WB and development partners by September 15, 2010.

4. Next Steps

6. Submission of the draft Aide Memoire by July 23, 2010.
7. The consultant will continue with the process of the stocktaking of climate change related initiatives; a draft is to be submitted by July 30, 2010
8. PIOJ will follow-up on the progress of the National Flood Control Legislation which has a direct bearing on the process and activities being considered under the PPCR.
9. The PIOJ will continue consultations with key stakeholders including civil society and private sector groups on the development of the PPCR. Consultation will also take place with the Disaster Risk Reduction Centre (DRRC) at the University of the West Indies, Mona.
10. Submission of financing proposal for the development of the SPCR to the PPCR Subcommittee by September 30, 2010.

July 21, 2010

Ms. Barbara Scott
Director
External Cooperation Management Division
Planning Institute of Jamaica

Mr. Gerard Alleng
Climate Change Specialist
Inter-American Development Bank

Mr. Enos Esikuri
Senior Environmental Specialist
World Bank

APPENDIX I

List of Organizations and Representatives Interacted with during Joint Mission

Name	Organizations
Barbara Scott, Claire Bernard, Hopeton Peterson, Reynaldo Thompson, Allison Richards, Andrea Shepherd Stewart, Le-Anne Roper, Albert Daley, Elizabeth Emanuel, Saskia Frater-Smith, Martin Philips	Planning Institute of Jamaica (PIOJ)
Leonie Barnaby	Office of the Prime Minister (OPM) – Environmental Management Division
Philbert Brown	OPM - Department of Local Government
Carol Nelson, Tracy-Ann Treasure	Ministry of Finance and the Public Service
Pauline Brown, Ronald Jackson	Office of Disaster Preparedness and Emergency Management (ODPEM)
Georgia Marks-Doman	Ministry of Agriculture & Fisheries
Anthony McKenzie	National Environment and Planning Agency (NEPA)
Basil Fernandez, Geoffrey Marshall	Water Resources Authority (WRA)
Sylvia McGill, Jeffery Spooner, Clifford Mahlung	Meteorological Services Jamaica
Tina Williams	Ministry of Tourism
Marilyn Headley, Keith Porter	Forestry Department
Sherine Huntley	Ministry of Health
Sandra Buchanan	Ministry of Water and Housing
Eistin McLean	Rural Agriculture Development Authority (RADA)
Amsale Maryam, G. Michael Thorney	Association of Development Agencies (ADA)
Morin M. Seymour	Civil Society Consulting Groups (ConSOC) / Kingston Restoration Company
Omar Chedda	Private Sector Organization of Jamaica (PSOJ)
Philmore Ogle, Laura Ogle	Jamaica Chamber of Commerce
Michael Taylor	University of the West Indies
Malden Miller, Raina Spence	USAID
Kineo Nishiyama, Lorna Wallace	Japan International Cooperation Agency (JICA)
Sekeywi Carruthers	Canada International Development Agency (CIDA)
Geraldine O’Callaghan	Department for International Development (DFID)

APPENDIX II

**Meeting Schedule
Pilot Programme for Climate Resilience
Identification Mission
July 12-16, 2010**

Mission Team:

IDB: Gerard Alleng, Cassandra Rogers, Laura Gaensly, Stefan Wright and Gregory Dunbar

World Bank: Enos E. Esikuri and Althea Spence

IFC: Kalim Shaw

DFID: Geraldine O’Callaghan

UNDP: Margaret Jones

CIDA: Sekeywi Carruthers

JICA: Kineo Nishiyama, Lorna Wallace

Day and Time	Topic	Participants	Venue
Monday, July 12, 2010			
9:00 a.m. – 11:00 a.m. (Confirmed)	<p>Opening Meeting</p> <ul style="list-style-type: none"> • Mission objectives • structure, and phases of the PPCR • Proposed timeline for development of Strategic Plan for climate resilience for Jamaica (Phase 1) • Implementation structure • Development of Climate resilience programme 	<p>Mission Team:</p> <p>OPM: Leonie Barnaby</p> <p>PIOJ: Barbara Scott, Claire Bernard, Elizabeth Emmanuel, Hopeton Peterson, Reynaldo Thompson, Le-Anne Roper, Andrea Shepard-Stewart</p> <p>MOF&PS: Rose Lemonious-Stewart, Carol Nelson</p> <p>ODPEM: Ronald Jackson, Pauline Brown</p> <p>MOA&F: Georgia Marks-Doman</p> <p>WRA: Basil Fernandez, Geoffrey Marshall</p> <p>NEPA: Anthony McKenzie</p> <p>Met Office: Sylvia McGill, Jeffery Spooner</p> <p>Forestry Dept.: Marilyn Headley</p> <p>Tourism: Tina Williams</p> <p>PSOJ: Omar Cheddar</p>	PIOJ (Board Room)

Day and Time	Topic	Participants	Venue
		MOH: Sherine Huntley ADA: Mariam Amsale	
2:00 p.m. - 4:00 p.m. (Confirmed)	Areas for collaboration	Mission Team: UNDP: Margaret Jones Williams JICA: Kineo Nishiyama USAID: Malden Miller, Clarke Hilliard PIOJ: Andrea Shepard-Stewart, Hopeton Peterson, Reynaldo Thompson	PIOJ (Lignum Vitae)
Tuesday, July 13, 2010			
9:00 a.m. – 1:00 p.m.	<ul style="list-style-type: none"> • Water sector adaptation • Role of MET Office in reducing vulnerability to climate change • Support for risk mitigation measures. • Watershed Management 	Met Office: Sylvia McGill, Jeffery Spooner Forestry Dept.: Marilyn Headley, Keith Porter WRA: Basil Fernandez, Geoffrey Marshall MOWH: Sandra Buchanan NEPA: Anthony McKenzie OPM: Leonie Barnaby	PIOJ (Lignum Vitae)
2:30 p.m. – 4:00 p.m. (Confirmed)	<ul style="list-style-type: none"> • Agriculture sector adaptation 	Mission Team, MOA&F: Georgia Marks-Doman NIC: Joseph Gile RADA: Phillip Chung PIOJ: Hopeton Peterson, Reynaldo Thompson	PIOJ (Lignum Vitae)
Wednesday, July 14, 2010			
9:00 a.m. – 1:00 p.m.	Meeting with Civil Society	Mission Team: Kgn Restoration Co.: Morin Seymour ADA: Michael Thorny PIOJ: Hopeton Peterson, Le-Anne Roper	
4:00 – 6:00 p.m.	<ul style="list-style-type: none"> • Private Sector Meeting 	Mission Team IDB (private sector): Mr. Stefan Wright, Ms Carina Cockburn	

Day and Time	Topic	Participants	Venue
		IFC: Kalim Shaw PIOJ: Albert Daley PSOJ: Omar Chedda Jamaica Chamber of Commerce: Philmore Ogle	
Thursday, July 15, 2010			
9:00 a.m. – 1:00 p.m. (Confirmed)	<ul style="list-style-type: none"> • Issues on climate change and impact on Jamaica. • Disaster risk reduction and climate change • Human Settlements 	Mission Team: UWI: Michael Taylor –Senior Lecturer – Physics Dept. Dept. of Local Govt.: Philbert Brown NWA: Patrick Rose NEPA: Peter Knight, Anthony McKenzie MOH: Sherine Huntley Tourism: Tina Williams ODPEM: Ronald Jackson, Pauline Brown PIOJ: Hopeton Peterson, Reynaldo Thompson	PIOJ (Lignum Vitae)
Friday, July 16, 2010			
9:00 a.m. – 11:00 a.m. (Confirmed)	Closing Meeting: Review and Finalizing Aide Memoire	Mission Team: OPM: Leonie Barnaby PIOJ: Claire Bernard, Elizabeth Emmanuel, Hopeton Peterson, Reynaldo Thompson, Le-Ann Roper, Andrea Shepard-Stewart MOF&PS: Carol Nelson	PIOJ (Clement Jackson)

APPENDIX III

Broad components and priority areas for the PPCR in Jamaica

Components	Priority Areas				
	Water Resources	Agriculture & Food Security	Tourism	Health	Human Settlements & Coastal Resources
1. Mainstreaming Climate Change (CC) into Sectors		1. Agricultural risk management as it relates to CC		1. Vulnerability assessment of the sector to climate related hazards	1. Integration of multiple climate related hazards into parish disaster plans.
Cross - Sectoral	National Climate Change Policy & Action Plan ; Disaster Risk Management				
2. Facilitating sectoral adaptation measures	1. Scaling up of rainwater harvesting program	1. Expansion of watershed management program. 2. Diversification of fisheries - increased promotion of freshwater fishery 3. Irrigation	1. Product diversification	1. Implementation of Water storage management program 2. Early Warning system – response mechanism to climate sensitive diseases; can be scaled up to regional level. 3. Renewable energy systems; enhanced response to disasters.	
3. Strengthening policy / institutional arrangements	1. Development of a flood master plan			1. Data management systems	1. Enhance strategic environmental assessment mechanisms
Cross -Sectoral	Development of a National Land Use Policy Framework				
4. Building capacity for planning and forecasting, including the use of appropriate tools	1. Enhanced water modeling capacity and monitoring e.g. replicate the Yallahs project 2. Quantification and quality analysis of water resources	1. Strengthening the capacity of community groups to adopt land management practices related to CC 2. Improved management of coastal and marine ecosystems that support fisheries	1. Increased institutional capacity within the ministry (and its entities) for tracking climate change issues.		1. Improvement to beach management – monitoring, implementing best practices, addressing setbacks, etc. 2. Strengthening of local authorities - a. Parish Disaster Comm.; Local Dev. Planning. 3. Strengthening national authorities for planning

Cross- Sectoral	National Risk Information Platform – hazard mapping; vulnerability and risk evaluation tools; business continuity planning; improved data management systems				
5. CC education and awareness		1. Increased use of demonstration plots	1. Translating CC information into language that is understood by all stakeholders		1. Increased support to on-going and potential programmes
Cross-Sectoral	Broad program of knowledge enhancement and awareness building across sectors and stakeholders including MOF and other GOJ staff; Climate change communication strategy; translation of climate change, Climate change related information into economic terms.				

Regional Linkage					
Data Management	Water Resources	Agriculture & Food Security	Human Settlements & Coastal Resources	Health	CC communication
6. Improvement in data modeling / monitoring	Formation of a water managers forum	Research on climate resilient crops – e.g. expand work of UWI/CARDI	UWI to look at climate resilient buildings	Early warning dengue platform - responsive mechanisms to climate sensitive diseases.	Dissemination of information to promote greater awareness and the use of best practices.

ANNEX 3

SELECTED COMPLEMENTARY CLIMATE CHANGE PROJECTS BEING IMPLEMENTED

	PROJECT TITLE	OBJECTIVE/DESCRIPTION	IMPLEMENTING AGENCY	FUNDING AGENCIES	STATUS
1.0	TERRESTRIAL RESOURCES				
1.1	Climate Change Adaptation and Disaster Risk Reduction	The project seeks to: rehabilitate and improve management of selected watersheds to reduce downstream run-off and associated pollution and health risks; restore and protect coastal ecosystems to enhance natural buffers and increase resilience; it seeks to integrate climate change mitigation and adaptation into relevant national policies and plans; enhance institutional (human and technical) capacity and facilitate awareness building amongst Jamaica's population to better adapt to climate change.	PIOJ	EU, UNEP, GOJ €4.5m	Implementation commenced, it will contribute to PPCR objectives & PPCR will build on its outputs.
1.2	Capacity Building for Sustainable Land Management in Jamaica	To enhance sustainable land management (SLM) by building capacities for SLM in appropriate government and civil society institutions and user groups and mainstreaming SLM into government planning and strategy development.	Forestry Department	GEF	Implementation commenced, it will contribute to PPCR objectives .
1.3	Hazard Mapping, Disaster Vulnerability & Risk Assessment: Caribbean Risk Atlas	The two main components of the project are; a) A regional Risk Atlas that contains spatial data on risk from hurricanes, and earthquake in the Caribbean. b) High Resolution risk maps for selected territories within the Caribbean. The project will also carry out training courses & workshops for professionals and others already employed in the field.	Disaster Risk Reduction Centre	World Bank	On- going; PPCR will build on this project, possibly developing on the Risk Atlas for Jamaica.
1.4	Reforestation and promotion of agro-forestry and best farming	These community based projects seek to address the problem of erosion, landslides and flood risks through mixed reforestation of	NGOs and Community based Organisations	FCF & Community Based Adaptation	On-going, potential for scaling up under PPCR

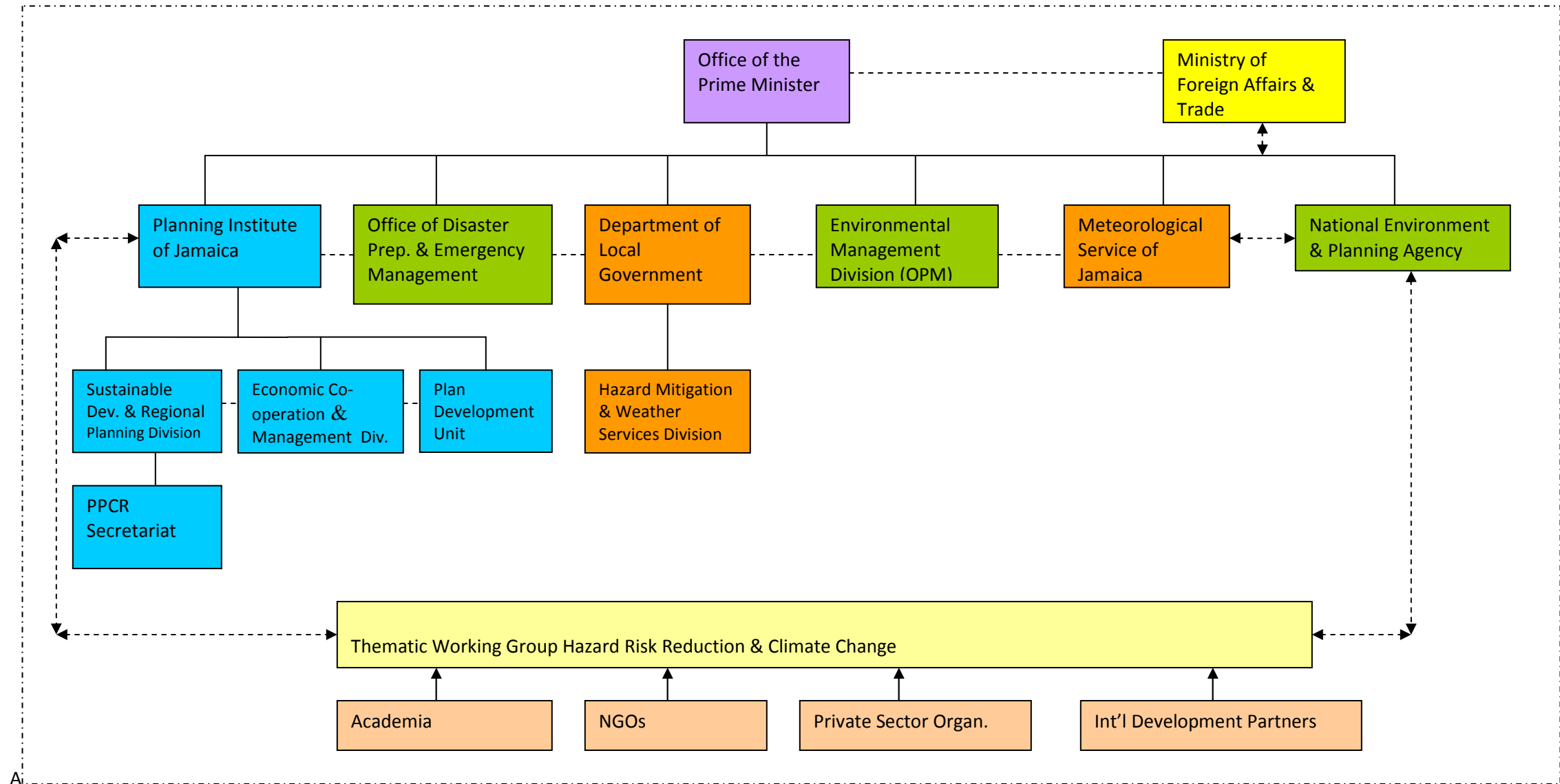
	PROJECT TITLE	OBJECTIVE/DESCRIPTION	IMPLEMENTING AGENCY	FUNDING AGENCIES	STATUS
	practices in watershed areas	erosion-prone areas, and the installation of slope stabilization mechanisms. They provide local farmers with training in best farming practices for hilly areas, as well as building of the capacity of the communities to carry out proper environmental stewardship.		Fund	
2.0	WATER RESOURCES				
2.1	Water Programme for Environmental Sustainability (WPA II): Towards Adaptation Measures to Human and Climate Change Impacts	This regional project will develop and implement a Groundwater Management Model to assess and manage the aquifer system on a continuous basis. It will make recommendations on best practices for the protection and development of those sites and other similar aquifer systems in the project countries, and within the Region using the opportunity to also build capacity. The demonstration project site in Jamaica will be in the Yallahs River Watershed.	Water Resources Authority	The Italian Government	On-going; potential for scaling up under the SPCR
3.0	AGRICULTURE & FOOD SECURITY				
3.1	FAO Technical Cooperation Programme on Promoting Rain Water Harvesting and Small Scale Irrigation in South St. Elizabeth.	The project will enhance food security and socio-economic well-being of farmers in South St. Elizabeth by promoting increased crop production through rain water harvesting, improved water management and introduction of small scale irrigation technology.	MOA&F, NIC	FAO	On-going; scope for wider application of lessons learnt island-wide.
4.0	TOURISM				
4.1	Caribbean Climate Change Tourism & Livelihoods: A Sectoral Approach to Vulnerability & Resilience	To strengthen, protect, and enhance the economies and livelihoods of Caribbean nations and sectoral stakeholders, who rely directly or indirectly on Caribbean tourism industry, and to strengthen, protect and enhance the natural and built assets, and sectors on which the	CCCCC	FCO, CCCCC	On-going; the PPCR will build on the outputs of this project.

	PROJECT TITLE	OBJECTIVE/DESCRIPTION	IMPLEMENTING AGENCY	FUNDING AGENCIES	STATUS
		industry is based. The Jamaican component of this regional project is focused primarily on assessing the vulnerability, resilience, and adaptive capacity of the tourism sector to climate change, in selected destinations in Jamaica. Vulnerability assessments of Long Bay- Negril and Rose Hall- Montego Bay are done. An assessment to be done on the institutional capacity of the tourism sector to adapt to Climate Change.			
5.0	HUMAN SETTLEMENTS & COASTAL RESOURCES				
5.1	Building Disaster Resilient Communities Project	Support the establishment of disaster resilient communities, empowered to minimize the impact of natural and man-made disasters on men and women on a sustainable basis, through effective Community Emergency Response Teams (CERTs).	ODPEM	CIDA	On-going
5.2	Natural Hazard Management in Urban Coastal Areas	The objective of this Technical Cooperation is to strengthen disaster risks management in towns and cities located in coastal areas in Jamaica. Activities include Improving Communities' Resilience; 28 communities risk plans will be developed, including Risk assessment for Black River, Savanna-la-mar & Ocho Rios.	ODPEM	IADB	On-going
5.3	Coastal Multi-Hazard Mapping & Vulnerability assessments towards Integrated Planning & Reduction of Vulnerability for Portland Cottage, Morant Bay & Manchioneal, Jamaica	This project aims to complete Multi-Hazard Assessment & develop multi-Hazard Maps; carry out vulnerability & risk assessments; Produce disaster/Risk Management plans for three communities in Jamaica - Portland Cottage, Morant Bay & Manchioneal.	PIOJ	World Bank	Project completed ; PPCR will build on the progress made under this project
5.4	The Palisadoes Peninsula Shoreline	Immediate repair and protection of the extensively degraded shoreline of the Palisadoes	National Works Agency	The Peoples Republic of China	On-going

	PROJECT TITLE	OBJECTIVE/DESCRIPTION	IMPLEMENTING AGENCY	FUNDING AGENCIES	STATUS
	Protection and Rehabilitation	Peninsula. This includes raising the road from its existing levels to 2.4 - 3.2 metres above sea level.			
6.0	Planning for Climate Change Adaptation & Increased knowledge and awareness of Climate Change				
6.1	Second National Communication to the United Nation Framework Convention on Climate Change	To prepare the Second National Communication, which among other things will suggest mechanisms and priorities for improving capacity, and prioritize the activities needed to address climate change issues, both in terms of mitigation, as well as adaptation and reduction of vulnerability. Capacity building elements will be incorporated in all proposed activities. The incorporation of climate change into national development policy, and a sustainable programme, to facilitate education and public awareness of climate change will be specially targeted.	Meteorological Services, Jamaica	GEF, GOJ, UNDP	The draft document is now prepared. The SPCR will build on it, and the PPCR will facilitate the implementation of key elements.
6.2	The Risk and Vulnerability Methodology Project (RiVAMP)	This project sought to assist decision-makers at the national and local levels to consider risks in future planning, paying particular attention to the potential threats posed by climate change. The project was completed and lessons extracted	PIOJ	UNEP	Consideration is now being given for training of regional professional in the use of the methodology.
6.3	Voices for Climate Education: A national climate change communication strategy	To develop and implement a national communication strategy on issues related to climate change. Activities will focus on public awareness, on the threats posed by climate change, and strategies to reduce social and economic impact. The communication strategy will utilize popular artists, and sectoral workshops, targeting sectors such as tourism, insurance, agriculture and health.	NEEC, Panos,	EFJ, UNDP	On-going. PPCR will seek to further develop and implement a national communication strategy for CC.

ANNEX 4 (A)

ORGANOGRAM OF AGENCIES PROVIDING LEADERSHIP IN CLIMATE CHANGE INITIATIVES



ANNEX 4(B)

CORE FUNCTION OF ORGANISATIONS INVOLVED IN CLIMATE CHANGE RELATED PROJECTS, PROGRAMMES & INITIATIVES

Office of the Prime Minister (OPM)

The mandate of the OPM is to provide quality leadership, promote good governance and build an inclusive, enabling environment conducive to the development, articulation and implementation of sound policies and programmes consistent with our shared goals and values, as a people.

Planning Institute of Jamaica (PIOJ) – The mandate of the PIOJ is to initiate and coordinate the development of plans and programmes that will facilitate sustainable development of Jamaica. It is the National Focal Point for Vision 2030 Jamaica – National Development Plan; the National Implementing Entity (NIE) for the Adaptation Fund and the Focal Point for PPCR. It also provides technical and administrative support to the Hazard Risk Reduction and Adaptation to Climate Change -TWG through its Technical Secretariat. The technical support being offered includes:

1. Analysis and interpretation data and information aligned to the themes of hazard risk and climate change
2. The conduct of ongoing and systematic monitoring and reporting on the various thematic areas as well as maintain ongoing and frequent liaisons with MDAs and other key data sources.
3. Consolidation of information submitted by sectoral and other interests into quarterly progress and annual reports.

Hazard Risk Reduction and Adaptation to Climate Change Thematic Working Group (HRRACC-TWG).

This group consists of up to 25 organisations and key individuals appointed by the chair under the advice of the PIOJ. Members are drawn from a cross section of stakeholders with technical interest in and knowledge of hazards, risk and climate change issues. The HRRACC-TWG will serve as the main mechanism for coordinating and monitoring activities related to the National Outcome Hazard Risk Reduction and Adaptation to Climate Change under Vision 2030 Jamaica - National Development Plan (NDP) and successive Medium Term Socio-Economic Policy Frameworks (MTFs).

Environmental Management Division – This Division of the OPM has responsibility for environment, planning and development and for addressing climate change issues at the national and international levels. It works closely with the focal point on many climate change issues.

Department of Local Government

The primary objective of the Department is to accelerate the pace of reform and capacity building within the Ministry and its Agencies and provide sound and clear policy direction, technical support and to monitor our Agencies and Local Authorities, in a timely manner, enabling the delivery of high-quality services, good local governance and sustainable development for the benefit of our citizens.

Hazard Mitigation & Weather Services Division – this division of the OPM has responsibility for monitoring the implementation of climate change adaptation and hazard mitigation policies and initiatives at the local government development and planning levels.

Meteorological Services, Jamaica (MSJ) is a Department of the Office of the Prime Minister which handles this very important business of meteorology. It is concerned with the observation and forecasting of weather conditions over and around the island; it maintains a continuous Hurricane Watch during the hurricane season and is responsible for the issuance of severe weather warnings. The MSJ is also responsible for maintaining a current database of the climate of Jamaica and for the utilization of this data in informing productive sectors of the country. This organisation which is a member of the Adaptation Fund's Board, is the national UNFCCC focal point for Jamaica and is responsible for the preparation of the National Communication for climate change.

National Environment and Planning Agency (NEPA) is an Executive Agency under the Office of the Prime Minister. NEPA represents a merger between the Natural Resources Conservation Authority (NRCA), the Town Planning Department (TPD) and the Land Development and Utilization Commission (LDUC). The aim of the merger is to integrate environmental, planning and sustainable development policies and programmes and to improve customer service. The overall aim of the organisation is to promote sustainable development by ensuring protection of the environment and orderly development in Jamaica. This includes responsibility for implementing measures to support the increase in the natural resilience of coastal ecosystems and biodiversity.

Office of Disaster Preparedness and Emergency Management (ODPEM) is the National Disaster Organization, with responsibility for disaster management in Jamaica. It has responsibility for taking action to reduce the impact of disasters and emergencies on the Jamaican population and its economy. It plays a coordinating role in the execution of emergency response and relief operations in major disaster events.

Ministry of Foreign Affairs & Foreign Trade

The Foreign Service is responsible for the implementation of Jamaica's foreign policy, the management of Jamaica's international relations and the promotion of its interests overseas. Among its foreign policy priorities, is that of promotion of Jamaica's interests and the interests of Small Island Developing States (SIDS) in the areas of climate change, sustainable development and global environmental governance;

ANNEX 5

TERMS OF REFERENCE PILOT PROGRAMME FOR CLIMATE RESILIENCE STEERING COMMITTEE (PPCR-ST)

Background

In May 2009, Jamaica, accepted the offer extended by the Sub-Committee of the Pilot Program for Climate Resilience (PPCR) to participate in the Pilot Program for Climate Resilience (PPCR), as one of the six countries in the Caribbean regional pilot program. The other five countries are Grenada, St. Vincent, St. Lucia, Dominica, and Haiti.

The PPCR aims to pilot and demonstrate ways in which climate risk and resilience may be integrated into core development policies, planning and implementation. It seeks to provide incentives for the scaling up of climate resilient actions, building on other ongoing initiatives and the initiation of transformational change.

The pilot programs and projects to be implemented under the PPCR in Jamaica will be led by the Planning Institute of Jamaica, a statutory body within the Office of the Prime Minister. The PPCR will build on the Hazard Risk Reduction and Climate Change Adaptation component of the Jamaica National Development Plan, Vision 2030 Jamaica; the Jamaica National Climate Change Policy and Action Plan which is now being finalized by the Office of the Prime Minister, and the Second National Communication.

At the end of Phase I of the PPCR Jamaica will have a fully developed Strategic Program for Climate Resilience covering the period to 2030. This program which will be consistent with proposed regional activities, will be presented to the PPCR Sub- Committee at the end of this Phase. The indicative period for the completion of Phase I is eight to ten months. Phase II will focus on the implementation of the strategic program developed in Phase I, through actions such as support to the integrating of climate risk and resilience into development policies, planning and implementation, institutional capacity building, and scaling up of other investments in key sectors.

Overall responsibility:

The PPCR Steering Committee will serve as the main mechanism for the provision of technical advice and oversight to the programme management team with responsibility for the implementation of the PPCR. It will seek to ensure that the program is effectively and expeditiously implemented in keeping the agreed goals, objectives, outputs and outcomes.

Specific responsibilities:

The responsibilities of the PPCR-ST are as follows:

- a. Provide technical advice to the program management team to ensure the effective implementation of the PPCR in keeping with program goal, objectives, outputs and outcomes, budget and implementation schedule.
- b. Assist with resolving inter-agency and strategic level issues and risks that adversely affect the implementation of the program.

- c. Receive report on program implementation and report to Hazard Risk reduction and Climate Change Thematic Working Group (HRRACC-TWG) on progress being towards agreed indicators and targets and constraints to this progress.
- d. Use knowledge, influence, authority and resources available to member organizations, to assist the program in achieving its outputs and outcomes.
- e. The PPCR-ST will provide input for the finalization of the SPCR and other important strategy or policy related documents prepared under the PPCR.
- f. Review, make input as appropriate, and endorse program deliverables that meet program specifications.

Procedures:

Chair

The PPCR-ST will be chaired by the PPCR Focal Point

Term Duration

The execution of the programme will be over a four to five years period. Membership of this PPCR-ST will be reviewed after the first two years of its establishment by the PIOJ.

Meeting schedule

The PPCR Steering Committee will meet quarterly or when necessary to perform their duties. An annual calendar of meetings will guide the convening of meetings.

Composition and Participation

1. The PPCR-ST will consist of representatives from thirteen organizations appointed by the Planning Institute of Jamaica.
2. Members shall be drawn from a cross-section of stakeholders with technical interest in and knowledge of natural hazards, risk and climate change issues, including relevant government ministries, departments and agencies, private sector bodies, academia, civil society, and international development partners.
3. The membership of the steering committee will include: Ministry of Finance and the Public Service; Meteorological services, Jamaica; Association of Development Agencies; Environmental Foundation of Jamaica, UWI –Disaster Risk Reduction Centre, & The Climate Study Group; Planning Institute of Jamaica – Plan Development Unit & PPCR Focal Point; PANOS; Office of the Prime Minister; Office of Disaster Preparedness and Emergency Management, National Environment and Planning Agency, a private sector umbrella organization, and the IADB.
4. The Committee may invite the participation of any person(s) not a member(s) but whose participation may be critical to any agenda item.
5. Members should be willing to share information with other members about potential resources and opportunities related to the advancement of the SPCR and adaptation to climate change generally.

Decision-making

1. The quorum to take decisions should comprise seven (7) organisational representatives, inclusive of the chair and/or vice-chair.
2. Decisions of the PPCR-ST will be determined by majority vote. In the event that there is a split vote the Chair has the deciding vote.

Use of Sub-committees/Technical Working Groups

1. Small sub-committees/technical working groups may be convened by the chair as deemed appropriate to carry out the work of the PPCR-ST.
2. Provisions will be made for persons with special expertise/information to be co-opted from time to time to contribute to the work of these groups.
3. Sub-committees/technical working groups will be disbanded by the chair following successful completion of their work.

Records

1. Detailed Minutes shall be kept of each meeting. This shall include a record of persons present, a concise summary of matters discussed, conclusions reached, timelines for actions and the person responsible for implementing the decision. The PPCR-ST Chair, Working Group Chairs and the PPCR Secretariat shall ensure the accuracy of the Minutes prepared.
2. The records of the PPCR-ST shall consist of all papers and documents pertinent to its operations, including the Terms of Reference, agendas, minutes, reports, and determinations for its proceedings. All unclassified records shall be made available by the PPCR Secretariat for public inspection to the extent required by the Access to Information Act.

Administrative Support to the PPCR-ST

The team contracted by the Planning Institute of Jamaica to undertake the day to day responsibility for program implementation, will provide the administrative support to the PPCR-ST. This includes:

1. Disseminating notifications (regarding meetings, etc) to members of the PPCR-ST.
2. Drafting Agenda for PPCR-ST meetings in consultation with chair; and circulate accordingly
3. Preparing and circulating Minutes of all PPCR-ST meetings on a timely basis (determine timeframe)
4. Circulating working papers for meetings prior to the date of the meetings (determine timeframe)
5. Provide quality control of all technical reports prior to submission to the PPCR-ST.
6. Provide regular updates on activities and appropriate follow-up support (determine timeframe).
7. Maintain communications with the PPCR-ST members and other stakeholders through email etc.

Reporting

The PPCR-ST reports to the HRRACC-TWG and frequently liaises with PPCR Implementation Team . The PPCR Quarterly Progress Report prepared by the Program Implementation Team shall be circulated for the consideration of the PPCR-ST at least one week prior to each scheduled quarterly meeting.

ANNEX 6: 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.

<p style="text-align: center;"><u>Haiti</u></p> <ul style="list-style-type: none"> • Agriculture and food security • coastal zone management • reconstruction • tourism • infrastructure and land planning • data management 	<p style="text-align: center;"><u>Jamaica</u></p> <ul style="list-style-type: none"> • Water Resources • Agriculture and Food Security • Tourism • Human Health • Human Settlements • Coastal Resources 	<p style="text-align: center;"><u>Saint Lucia</u></p> <ul style="list-style-type: none"> • Promotion of private investments in data capture and sharing as well as risk modeling for climate resilience • Training and investments for understanding and interpreting climate impact models and assessments • Identification and analysis of knowledge and research gaps that exist and institutional capacity needs for the implementation of the PPCR • National level-specific infrastructure investments 	<p style="text-align: center;"><u>Grenada</u></p> <ul style="list-style-type: none"> • Expand on the foundation set forth by the National Climate Change Policy and Action Plan • Training and investments for improved data capture, collection, and management, for climate change impact assessments and interpretation purposes in collaboration with the private sector/quasi-government • National level-specific infrastructure investments 	<p style="text-align: center;"><u>Saint Vincent & the Grenadines</u></p> <ul style="list-style-type: none"> • 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 • National level-specific infrastructure investments 	<p style="text-align: center;"><u>Dominica</u> (To be determined)</p>	<p style="text-align: center;"><u>CARICOM</u> Priority Actions of CARICOM's Regional Strategy for Achieving Development Resilient to Climate Change, 2009 - 2015</p>
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