

**Terms of Reference
First Joint Mission
Pilot Programme for Climate Resilience (PPCR)
in
Dominica**



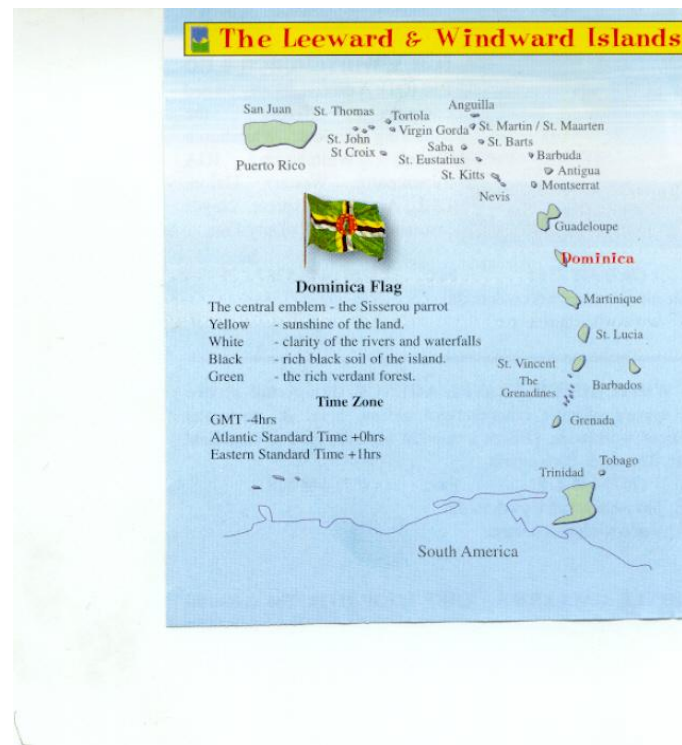
July 20-22, 2011

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BACKGROUND

The Commonwealth of Dominica is a small island developing state within the Organization of Eastern Caribbean States (OECS). It is located at about 15° N and 65° W, between the French dependencies of Martinique to the South and Guadeloupe to the North. It is the largest of the member states, measuring 47 Km in length by 25 Km wide and occupies an area of 750 square kilometres (290 square miles/195,000 acres). **Figure 1.1**



Current Climate: General Features

The combination of its size and location results in the climate of Dominica being strongly influenced by features of the north tropical Atlantic. There is modulation by the annual migration of the north Atlantic subtropical high, the eastward spreading of the tropical Atlantic warm pool, the fairly steady easterly trades, and the passage of tropical waves, depressions, storms and hurricanes. The resulting climate regime is described as humid tropical marine and is characterized by a dry winter-wet summer pattern and high and fairly uniform temperatures year-round. The rugged topography of Dominica's interior also results in micro-climatic variability within very short distances on the island.

Rainfall

The country is among the wettest in the eastern Caribbean. Dominica receives, on average, between 250 and 380 cm of rain each year. The rainfall climatology shows a dry season from January through April and a primary wet season from September through November. More than half the rainfall received in the course of the year, occurs in the primary rainfall season which coincides with peak tropical storm activity in the tropical Atlantic. There is bimodality in the rainfall climatology as May is a wetter month prior to the onset of the main rainy season. The mountainous interior produces a rainfall shadow on the western Caribbean coast, where average rainfall falls below 200 cm per year. In contrast, rainfall in the mountainous inland regions can reach as high as 500 cm per year.

Temperature

The annual variation in maximum, minimum and mean temperatures has been analysed. The annual range is small for the mean temperature (~3 degrees), with peak temperature values occurring between July and August. Maximum temperature values may reach as high as 31 degrees C and peak slightly later in the year, while minimum temperature values may drop to less than 22 degrees C in the mean in January/February. Diurnal ranges are usually no greater than 3°C in most places. The steep interior slopes of Dominica also alter temperatures. During the warmest period of the year a maximum of 33 degrees C may be observed along the coast compared to 27 degrees C in the mountains. In the nights, minimum temperatures of 18 degrees C and 13°C respectively are not uncommon.

The climate is classified as “humid tropical marine”, which is characterized by little seasonal or diurnal variation with strong and steady trade winds. There is a distinct “dry” season (between February and June) and the “wet” season (between July and December). In this connection, the lush forested interior enjoys an average annual rainfall in excess of 10,000mm (400 inches) at the central peaks, which rise to over 1300m. This reduces to an average of about 50 inches per annum along the central portion of the west coast, which tends to be the driest section of the island. Average temperature values range from 27 degrees Celsius on the coast to approximately 21 degrees at the highest elevations and there is little seasonal fluctuation, generally less than two degrees Celsius. These realities make the Pilot Programme for Climate Resilience (PPCR) pilot project for Dominica both timely and beneficial. The PPCR pilot project will afford the island the opportunity to build on a number of climate change project and programme activities, which are aimed at building Dominica’s resilience to climate change.

Economy

The economy of Dominica is described as being small, open and primarily agricultural-based. Export dependent with commodity and market concentration, the island has always been in a vulnerable position economically, socially, culturally, and environmentally. Economic developments, in particular, are significantly affected by both natural and man-made external factors as is increasingly evidenced by the negative impact on the local economy of changes associated with such international phenomenon as globalization and trade liberalization.

The agricultural sector is the main determinant of economic growth and the main source of food and income for most of the population. In this regard, for the period 1992 – 1999, agriculture accounted for, an average **25%** of GDP, **70%** of total export earnings and **60%** of foreign exchange. Moreover, it supplied **60%** of the food requirements of the population and employed **30%** of the labour force (CSO, 1999). In this situation, the small domestic market makes economic growth highly dependent on exports. Over the last five years (1995 – 1999) real growth average 2.0% per annum and growth is estimated at less than 1% for the year 1999. Decline and stagnation characterized the major productive sectors, agriculture and manufacturing and tourism between the period 1995 – 1999.

FIRST JOINT MISSION

Timeframe

The First Joint Mission for Dominica's PPCR pilot is scheduled for the period **July 20th to 22nd, 2011**. Dominica is requesting a three day joint mission - as much of the groundwork has already been done, including a Joint Scoping Mission held in 2009, and the timeframe of three days is seen as ideal for conducting the activities necessary to make the joint mission a success.

Mission Objectives

Dominica would like the objectives of the joint mission to be:

1. Undertake stakeholder stocktaking on climate change risks and impacts in Dominica to identify gaps in information that can be addressed during Phase 1 - activities include critical review of ***Dominica's Climate Change Adaptation Policy and Action Plan*** (2002);
2. Provision of technical guidance concerning – (a) the level and conditions of PPCR funding (grant and loans) available to Dominica, (b) process and timing for the finalization of SPCR proposal to ensure rapid approval and release of funds;
3. Agreement on proposed Work Program to develop Dominica's SPCR;
4. Provision of technical guidance and input for the development of an Investment Plan that will include Dominica's Private Sector and IFC;
5. Identification of and agreement on modalities for engaging key development partners in the design of the SPCR;
6. Identification of and agreement on mechanisms for integration Dominica's Phase 1 activities or SPCR into the Caribbean Regional PPCR program;
7. Agreement on a public outreach program that will increase awareness and understanding of the PPCR project;
8. Preparation of an aide-memoire on activities undertaken, with details of consultations held, and agreements concluded, prepared jointly by the World Bank and the Government of Dominica.

Scope of Work

The PPCR aims to build a partnership framework for integrating climate resilience into national processes, including those that engage other development partners. The main activities to be conducted during this joint mission include:

- (1) Country stocktaking on climate change risks and impacts in Dominica to identify gaps in information that can be addressed during Phase 1 activities – possibly with support from the Caribbean Community Climate Change Centre (CCCCC) under the Regional PPCR;
- (2) Broaden engagement with key stakeholders and development partners;

- (3) Launch of PPCR public outreach program;
- (4) Formulation of work program to develop Dominica's SPCR.

Country Stocktaking on Climate Change Risks and Impacts

Since 2001, Dominica has participated in a number of climate change projects and activities. During the joint mission, it is anticipated that the team will take stock of ongoing and upcoming country climate change and related activities on the island in order to identify gaps in information concerning climate change risks or impacts affecting Dominica. An initial assessment of climate change risks and impacts affecting Dominica was presented in ***Dominica's Climate Change Adaptation Policy and Action Plan*** (2002). This assessment of risks and impacts has been updated in the *Second National Communication* to the United Nations Framework Convention on Climate Change (UNFCCC-SNC), while site-specific risks have been identified during the *Special Programme for Adaptation to Climate Change* (SPACC), and the *Sustainable Land Management* (SLM) Project. Resource-specific risks from climate change have been identified in *Dominica's Biodiversity Strategy and Action Plan* and as part of the process to develop the *Policy for Sustainable Water Resource Management Plan*.

Based on Dominica's UNFCCC-SNC vulnerability and adaptation (V&A) process, the following sectors have been identified as priority sectors:

- Agriculture (Food Security)
- Water Resources
- Coastal and Marine Resources
- Forestry
- Human Health
- Tourism
- Infrastructure (transport links (roads and airport), telecommunications systems; electricity network (hydropower))

The UNFCCC-SNC (V&A) process has revealed a number of interesting findings from the various sector reports. Review of these documents would be essential in obtaining stakeholder consensus concerning the nature and scope of climate change risks and impacts affecting Dominica which will guide the formulation of the SPCR.

During the stocktaking which shall be undertaken in the form of a National Consultative Workshop on day 2 of the Joint Mission, stakeholders shall identify:

- (a) gaps in information concerning climate change risks or impacts affecting Dominica - In light of the limited information available in Dominica and other Caribbean PPCR countries which have highlighted agriculture as a key focus (Haiti and Jamaica) concerning the impacts of climate change and increased global carbon levels on agricultural productivity and plant growth, assistance will be sought from the Regional PPCR to support and provide improved analysis in

these areas to as to support the risk assessment process which will undertaken as part of Dominica's PPCR Phase 1 analysis;

- (b) Modalities for addressing any gaps in information concerning climate change vulnerability or risks affecting Dominica identified through this stocktaking which can be addressed during Phase 1 activities – possibly with support from the Caribbean Community Climate Change Centre (CCCCC) under the Regional PPCR.

Broaden Engagement with Key Stakeholders and Development Partners

Broad-based engagement and consultations with key stakeholders and development partners has been initiated during the preparation of the PPCR proposal, and will be broadened to facilitate the development of Dominica's SPCR. During this process, representatives from the multi-lateral development banks (MDBs) will interact with national stakeholders, including the Cabinet-appointed *National Climate Change Committee* (NCCC), which was established in 1998 and reconstituted in 2010, The *National Climate Change Committee* will perform an advisory role for the PPCR program. The members comprise: Environmental Coordinating Unit; Division of Agriculture; Fisheries Division; Department of Forestry, Wildlife and Parks; Dominica Meteorological Services; Ministry of Finance; Ministry of Tourism; Office of Disaster Management; Physical Planning Department; Environmental Health Department of the Ministry of Health; Ministry of Public Works, Energy and Ports; Dominica Solid Waste Management Corporation; Dominica Water and Sewerage Company; Discover and Invest Dominica Authority; Dominica Bureau of Standards; National Youth in Agriculture; Local Government Authority and NANGO.

Other stakeholders will be engaged in the process to formulate Dominica's SPCR including but not limited to representatives from the Dominica State College, University of the West Indies Dominica Open Campus, LIME Dominica, Dominica Electricity Services, Digicell and Marpin, Dominica Association of Industry and Commerce (seeking to have representatives of the farming and agricultural sector as well as Tourism and Hotel Association), and the Bankers' Association. The Office for Kalinago (Indigenous) People, Dominica Association for Women, the National Youth Environment Network, Waitikubuli Ecological Foundation, and Representative from the Bankers Association. Participants involved in the Joint Mission will provide input into the design of an appropriate process to engage key stakeholders (including women, youth, civil society) and development partners to ensure their input into the design of Dominica's SPCR. It is anticipated that this process will also allow the Ministry of Environment, Natural Resources, Physical Planning and Fisheries to obtain a better understanding of the island's knowledge gaps and information needs with regard to climate change that will guide the PPCR Public Outreach Program.

Co-operation arrangements with development/investment partners are still evolving. This will become more defined as the SPCR and Investment Plan are developed. It is anticipated that Joint PPCR missions of the World Bank Group will include representatives from interested key donor agencies and other partners to assist in the preparation of the SPCR. The PPCR process will also seek to build on existing partnerships with development partners, including:

- United Nations Development Programme (UNDP) (Contact: Dr. Reynold Murray, UNDP Barbados) - Second National Communications Project (UNDP-SNC) , Sustainable land Management (SLM) project), and Investment and Financial Flows Project (UNDP-IFF)
- World Bank (WB) and the Caribbean Community Climate Change Centre (CCCCC) - Special Adaptation to Climate Change Project (SPACC);

- United Nations Economic Commission for Latin America and the Caribbean – Review of Economics of Climate Change Project(UNECLAC-RECC);
- United Nations Environment Programme (UNEP) (Contact Dr. Mark Griffith, UNEP, Panama) and United Nations Food and Agricultural Organisation (FAO) – Organic Dominica Project.

Dominica has limited engagement with the IFC but considers a key area to be addressed in the SPCR will be to build climate resilience in the agriculture sector which is dominated by the private sector. Provision of technical guidance and input for the development of an Investment Plan that will include Dominica's Private Sector will be sought from the IFC during the Joint Mission. A break-out consultation on agriculture specifically, bringing together relevant government agencies, farmer and agriculture sector associations (including suppliers of inputs to farmers, especially seeds and agricultural chemicals; agricultural processors and exporters), banks, and other companies in the supply chain, may be the best way to understand the current state of knowledge and identify potential opportunities in order to develop an initial action/work plan.

Other potential partners that may be able to provide input and support in the development of Dominica's SPCR include, but are not limited to:

- Caribbean Development Bank (CDB)
- United States Agency for International Development (USAID)
- United Nations Environment Programme-Caribbean Environment Programme (UNEP-CEP)
- OECS-Environment and Sustainable Development Unit(ESDU)

Identification of and agreement on modalities for engaging key development partners in the design of the SPCR will be sought during the Joint Mission.

Finally, expertise and information on undertaking costs-benefit analysis for Dominica's SPCR will be sought from the CCCCC under the Regional Track PPCR Phase 1, and possible synergies with the *Caribbean Programme for Development Resilient to Climate Change* endorsed by CARICOM Heads of Government in June of 2009 and *Regional Programme for Implementation* (under development) will be clarified.

Launch of PPCR Public Outreach Program

- (c) Climate change will affect all sectors of society and many livelihoods, particularly members of the farming community which constitutes one of the country's principal productive sectors. However, certain groups, such as women, the poor and children are also likely to be severely affected due to their particular vulnerability and their limited ability to cope. Climate change affects women and men differently, depending on their respective status and roles in society. There is a need to ensure that the concerns and requirements of particular groups and segments are considered in the development of Dominica's SPCR. This will require education and empowering vulnerable groups, such as farmers, women and the youth to allow them to participate fully in building a climate resilient Dominica. It is anticipated that the PPCR outreach program would include capacity-building, where appropriate, in order to ensure that these vulnerable groups and segments are able to participate, to the fullest extent possible, in the design of the SPCR. Stakeholders participating in the Joint Mission will assist in the design of a PPCR public outreach program that will engage these constituent groups and ensure their active participation and involvement in the SPCR planning process. Additionally, during the Joint Mission, the PPCR website that is

to be developed in Dominica during Phase 1 will be linked to and draw upon the information sharing modalities established under the Regional Track Phase 1, while best practices in developing Dominica's SPCR and undertaking the cost-benefit analysis to be undertaken during SPCR preparation will be sought from the CCCCC. Lessons learned from undertaking this analysis will be shared for dissemination with the Regional Track Phase 1.

Formulation of work program to develop Dominica's SPCR

Based on the work conducted during the Joint Mission and the work which preceded the joint mission by the project team, it is anticipated that shortly thereafter, a detailed work program to develop Dominica's SPCR will be concluded for inclusion in the aide-memoire that shall report on activities undertaken, with details of consultations held, and agreements concluded.

The work program will be developed with the intention to submit Dominica's SPCR to the PPCR Sub-Committee's for endorsement by February 2012.

Mission Outcome

The outcomes of the Joint Missions are anticipated to be as follows:

1. Identification of and consensus on climate change risks and impacts in Dominica that will guide the development of the SPCR;
2. Identification of gaps in information concerning climate change risks and impacts in Dominica that can be addressed during Phase 1;
3. Improved understanding within the Government of Dominica concerning – (a) the level and conditions of PPCR funding (grant and loans) available to Dominica, (b) process and timing for the finalization of SPCR proposal to ensure rapid approval and release of funds, (c) mechanisms for integration Dominica's Phase 1 activities or SPCR into the Regional PPCR program, (d) modalities for engaging key development partners and stakeholders (including civil society) in the design of the SPCR.
4. Agreement on and launch of public outreach program that will increase awareness and understanding of climate change risks and impacts in Dominica and the PPCR project;
5. An aide-memoire on activities undertaken, with details of consultations held, and agreements concluded, prepared jointly by the World Bank and the Government of Dominica.

Mission Composition

Dominica requests that technical expertise for the first joint mission is consistent with the activities outlined above and will give consideration to ensuring the active participation of national expertise as an integral component of capacity building and country ownership of the PPCR.

In light of past or ongoing engagement with Dominica in related programs and potential for broadening development-partner engagement in the formulation of Dominica's SPCR, it is

expected that representatives from the following organisations will be invited to participate in the Joint Mission:

- United Nations Development Programme (UNDP) (Contact: Dr. Reynold Murray, UNDP Barbados) - Second National Communications Project (UNDP-SNC) , Sustainable land Management (SLM) project), and Investment and Financial Flows Project (UNDP-IFF);
- World Bank (WB) Group (World Bank Task Team and International Finance Corporation)¹ and the Caribbean Community Climate Change Centre (CCCCC) - Special Adaptation to Climate Change Project (SPACC);
- United Nations Economic Commission for Latin America and the Caribbean – Review of Economics of Climate Change Project (UNECLAC-RECC);
- United Nations Environment Programme (UNEP) (Contact Dr. Mark Griffith, UNEP, Panama) and United Nations Food and Agricultural Organisation (FAO) – Organic Dominica Project.

Multi-Lateral Development Bank Mission Composition. The World Bank Group delegation will be led by Mr. Niels Holm-Nielsen (email: nholmnielsen@worldbank.org), Senior Disaster Risk Management Specialist/Task Team Leader. He will be accompanied by: Mr. Justin Locke, Disaster Risk Management Specialist who will also address gender and social issues related to disaster risk management and climate change adaptation; Ms. Nancy Chaarani Meza, Operations Analyst who will be responsible for providing technical guidance to Dominica on the Climate Investment Funds requirements concerning the level and conditions of PPCR funding (grant and loans) available and process / timing for the finalization of the SPCR and Investment Plan; and Mr. Jerry Meier, GIS/Technical Specialist who will be responsible for providing technical guidance to the Bank team, and co-lead technical discussions with the relevant line ministries in Dominica. The International Finance Corporation will be represented by Mr. Marco Giussani, Operations Officer. The IDB consultant for the PPCR Caribbean Regional track, Pat Mendoza, will also join the mission to ensure the linkages between the regional and national tracks

Government of Dominica Mission Focal Points. The Government of Dominica PPCR Focal Points for the Joint Mission are Mr. Lloyd Pascal (email: ecu@dominica.gov.dm), Director, Environmental Coordinating Unit, Ministry of Environment, Natural Resources, Physical Planning and Fisheries and Mr. Collin Guiste (email: collinguiste@hotmail.com), PPCR National Coordinator.

¹ The World Bank Group delegation will consist of: Niels Holm-Nielsen, Senior Disaster Risk Management Specialist/TTL; Justin Locke, Disaster Risk Management Specialist; Nancy Chaarani Meza, Operations Analyst; Jerry Meier, GIS/Operations Consultant; Marco Giussani, Operations Office - IFC

Annex 1: Mission Agenda

DOMINICA

PILOT PROGRAM FOR CLIMATE RESILIENCE (PPCR)

First Joint Mission

July 20th -22nd, 2011

AGENDA

Wednesday July 20th	
Day 1	PPCR Phase 1 Launch(Fort Young Hotel)
Purpose	To Launch the PPCR Phase 1 Process in Dominica & Identify initial priority areas and initiatives for the SPCR and Investment Plan
Time	Session
09:00-09:10	Welcome and Introduction
09:10-09:20	Presentation on Climate Change in Dominica: National Coordinator
09:20-09:40	Presentation on Overview Global PPCR and Process: World Bank
	Presentation on Caribbean Regional Track SPCR: IDB
09:40-09:50	Presentation on PPCR and the Private Sector: IFC
09:50-10:00	Key Note Address: Minister of Environment
10:00-10:30	BREAK
10:30-10:45	Presentation of Phase 1 Proposal:-Priority Areas: PPCR Team Leader
10:45-11:00	Presentation and Questions: Agriculture and Food Security
11:00-11:20	Presentation and Questions: Water Resource Management
11:20-11:35	Presentation and Questions: Data Management

11:35-12:00	Presentation and Question: Economics of Climate Change
12:00:-12:30	Presentation and Questions: Private Sector Role in Climate Change Adaptation
12:30-02:00	LUNCH
02:00-02:30	Break Out Sessions: Review of Phase 1 Proposal and Recommendations
02:30-03:00	Group Presentations
03:00-03:30	Discussion on needs and priorities for Phase 1 and Phase 2
03:30-04:00	Next Steps and Closure: Team Leader

Thursday July 21st	
Day 2	Meeting with World Bank Team
Time	Session
09:00 - 09:15	Overview of PPCR Launch Meeting
09:15 - 09:30	Feedback on PPCR Launch Meeting
09:30 - 10:30	Discussion on Activities for Phase 1 and Timelines
10:30 - 11:30	Next Steps and Closure
	AFTERNOON SESSION
	Meeting with Office of Disaster Management and Meteorological Office on Water, Agriculture and Energy.

Friday July 22nd	
Day 3	Meeting with World Bank Team
	Morning Session
	Ministry of Finance and World Bank Team