

# CLIMATE INVESTMENT FUNDS

PPCR/SC.9/CRP.2  
November 2, 2011

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Meeting of the PPCR Sub-Committee  
Washington, D.C.  
November 2, 2011

**GOVERNMENT OF JAMAICA'S RESPONSE TO INDEPENDENT REVIEWERS COMMENTS  
ON STRATEGIC PROGRAM FOR CLIMATE RESILIENCE FOR JAMAICA**

**JAMAICA  
STRATEGIC PROGRAMME FOR CLIMATE RESILIENCE**

**Response to Reviewers Comments**

**Reviewer's Comment 1**

**1.) No Reference made to Jamaica's involvement in a number of regional projects "Caribbean Planning for Adaptation to Global Climate Change" (CPACC, 1997-2001), "Adaptation to Climate Change in the Caribbean" (ACCC, 2001-2004) and Mainstreaming Adaptation to Climate Change in the Caribbean" (MACC, 2004-2008).**

**The reviewer considers that it would be helpful to learn how the Government of Jamaica intends to (a) build on these earlier activities and (b) use the experiences gained from these initiatives to enhance the design and execution of the SPCR.**

**Response**

Jamaica's SPCR will build on and benefit from the achievements of a number of landmark regional climate change projects. Some of these projects include:

Caribbean Planning for Adaptation to Climate Change (CPACC) – the goal of CPACC project was to build capacity in the Caribbean region for adaptation to climate change impacts, particularly sea level rise. This was accomplished through the completion of vulnerability assessments, adaptation planning, and capacity building activities. Under this project Jamaica piloted a project for coral reef monitoring for climate change. The methodology for vulnerability assessment will be reviewed and strengthened to address the weaknesses identified. Special attention will be paid to the policy options and instruments proposed for long term adaptation and to promote political buy-in.

Mainstreaming Adaptation to Climate Change (MACC) – The main objective of this project was to mainstream climate change adaptation strategies into sustainable development agendas of small islands and low-lying states of CARICOM. MACC adopted a learning by doing approach to capacity building, consolidating the achievements of CPACC. The learning by doing approach will be particularly relevant in determining the strategies for mainstreaming. The work done in the water sector will be used to advance mainstreaming activities in the sector, particularly in the river basin targeted under this project.

Caribbean Climate Change Tourism and Livelihoods: A sectoral approach to Vulnerability & Resilience: The project aims 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 industry is based. The Jamaica component of this project will involve vulnerability assessments of Long Bay-Negril and Rose Hall-Montego Bay. An assessment will also be done on the institutional capacity of the tourism sector to adapt to climate change.

Synergies will be explored between the livelihoods component of this project and the SPCR. This will be particularly relevant if SPCR outcomes are to be scaled-up to other sectors, areas and to the region. Information from the risk assessment can also be incorporated into the Climate Information Platform under Investment Project 1.

### **Reviewer's Comment 2**

**The conspicuous absence of any clearly defined pilot projects or other activities specific to the coastal and marine resources and tourism sectors in light of the observations set out. A very compelling case can be made for the inclusion of these sectors in component 2 of investment project 2, which proposes the conduct of detailed vulnerability assessments and identification of appropriate adaptation strategies (See Table 23 of draft SPCR).**

**Even if the omission is intentional, the Government of Jamaica should be invited to provide a sound and acceptable rationale for the decision. Similarly, if the coastal resources and tourism sectors are the focus of other complementary projects (either presently under execution or contemplated in the near future), such information ought to be communicated in the draft SPCR, so that stakeholders can better evaluate the extent to which resources being sought under the CIF are being optimized.**

### Response

The coastal and marine resources sector has been identified as one of the priority areas to be addressed under the Jamaica Second National Communication on Climate Change as well as the Five-year Strategic Programme for Climate Resilience. Based on extensive consultations with stakeholders, agreement was arrived at to use resources obtained under various climate change adaptation programmes to address different priorities and efforts made to complement these programmes where possible.

While the SPCR has not intervention directly targeted at C&MV the sector will benefit from IP2: **Mainstreaming climate change adaptation and disaster risk reduction at national, sectoral, and local levels.** This will involve the use of the climate scenarios developed in IP1 to conduct vulnerable assessment of the coastal and marine resources sectors as part of efforts to mainstream climate change adaptation into the sector.

More fundamentally, climate change issues affecting coastal areas are being addressed through two other projects, namely the Climate Change Adaptation and Disaster Risk Reduction Project (CCADRR) which seeks to restore and protect coastal ecosystems to enhance natural buffers and increase resilience (Page 58 of SPCR) and the Adaptation Fund Programme which seeks to increase the climate resilience of the Negril coastline (See Page 58 of SPCR (3.6.2 Progs and projects))

### **Reviewer's Comment 3**

**Consideration might also be given to the establishment of a climate-related agricultural insurance scheme for crop as well as non-crop agriculture. Such an initiative would complement components 1 and 2 of investment project 3, and increase the likelihood of achieving objectives 1 and 2 as stated (refer to Table 24 of draft SPCR). If the Government of Jamaica determines that the recommendation is worth further consideration, there are existing models that can provide guidance for such a scheme.**

### **Response**

Recommendation accepted. Commitment made on page 106 to explore feasibility of establishing Crop insurance during the development phase of IP 3. The issue could also be addressed under the Line of Credit facility under the DBJ and PCB network as the former is currently exploring the issue.

### **Reviewer's Comment 4**

**Considerable emphasis is appropriately placed on the goal of “Mainstreaming climate change in national, sectoral and spatial development planning and ensuring that impacts on vulnerable groups and women are prioritized in plans” (Section 7.3, SPCR General Strategies, p. 42)... So while there is no expectation that the draft SPCR could at this stage provide all the specific details of the process, a clearly enunciated *methodology* or *strategy* for implementing the task of mainstreaming would be most helpful. This could be presented in any format which the Government of Jamaica finds appropriate, including a simple conceptual model or a set of well thought-out principles which would provide guidance for the process. Such a platform could provide a useful initial basis for early national stakeholder consultations on the process, so that a clear consensus about the objectives, strategies and expectations of mainstreaming can emerge. Mainstreaming is a *cross-cutting* as well as *overarching* goal of the PPCR initiative<sup>2</sup>, and therefore the extent to which mainstreaming is ultimately achieved must surely be one of the key indicators of success of Jamaica's SPCR. The SPCR therefore affords an excellent opportunity for ensuring that mainstreaming is not relegated to the realm of an intangible appendage of the project.**

## Response

Recommendation acknowledged – The proposal has however indicated awareness of these concerns and an intent to address this concern as reflected at page 96 and outlined below.

### **B.1 Mainstreaming climate change adaptation (CCA) and disaster risk reduction (DRR) at national, sectoral, and local levels.**

Although the need for mainstreaming climate has been recognized as a priority by GOJ as well as stakeholders, it is also accepted as being potentially complex, involving mind-set and structural changes. As such it is proposed to conduct workshops specifically to get a national consensus on how best to proceed with climate change mainstreaming in Jamaica. The climate change mainstreaming workshops will be conducted as part of SPCR Phase 1 activities with specific objectives to:

- (a) Identify concrete ways to mainstream climate change considerations into the policies, plans, regulations, and legislation; and
- (b) Develop indicators for monitoring the climate change mainstreaming efforts

In the SPCR, mainstreaming will be addressed through two activities as follows:

- (i) Using the methodologies developed under Investment 1 to mainstream climate change concerns in development planning processes, and the local, sectoral and national plans formulated. This includes incorporating climate change considerations in investment and infrastructure design standards. Utilizing climate scenarios developed, and based on expected climate change impacts, the PPCR will assist in the mainstreaming of climate change in development policies, regulations and legislation. The EU/UNEP/GOJ Adaptation and Risk Reduction project will play the lead role in this area; and
- (ii) Conducting training, or other capacity development initiatives necessary to develop expertise and ensure effectiveness and sustainability in integrating climate resilient measures in the development planning processes.

### **Reviewer's Comment 5**

**The proposal to pilot a managed artificial aquifer recharge scheme** in the Rio Minho hydrologic basin is innovative, and if successful could be beneficially replicated at other appropriate sites across the country. Notwithstanding, the draft SPCR provides no information on the process which led to the selection of this site. Consequently, the impression is given (very likely unintentionally) that the decision was taken in an *a priori* manner. While this is not an unimportant consideration, the Government of Jamaica should be invited to include in the draft SPCR the full suite of criteria that were applied in the screening of potential candidates for the experiment. This ought not to be burdensome requirement, as there are indications that the information exists, but for reasons not clearly understood, was not included in the document.

### **Response**

Management artificial water recharge is a key water resources adaptation strategy being promoted by the GOJ. The Rio Minho River Basin was one of three potential candidates for a managed artificial recharge scheme, the others being the Rio Cobre hydrologic Basin and the Kingston and St. Andrew hydrologic basin. All three basins are located along the south coast of the island in the rain shadow area which receives less than 1500mm of rainfall per year. The underground resources in Kingston and St. Andrew are highly polluted, and thus that aquifer would not be a good candidate for artificial water recharge. Of the remaining two basins, the Rio Minho aquifer was selected for piloting under the SPCR because an artificial aquifer recharge project will be supported in the Rio Cobre Basin under the NWC/IDB Kingston Metropolitan Area Water Supply Improvement Project Programme.

The selection of the Rio Minho hydrologic basin is further justified on the following factors:

#### **(i) Contribution to agricultural production/water supply**

The basin historically has been a major agricultural area with large public and private irrigation systems. The groundwater flow is to the south where the water is needed (reservoir area with wells) but where the salinity is elevated

#### **(ii) Current Status**

The basin was over-pumped in the pre-1961 period when no legislation governing the level of abstraction was in place. The over abstraction has led to significant seawater intrusion into the limestone aquifer of the basin with the closure of several wells.

#### **(iii) Water demand**

Due to demographic changes, water demand within the basin is increasing and by 2025

the basin will be in stress as the large and increasing withdrawal of groundwater is unsustainable. The Rio Minho now recharges the aquifer in the low to medium flow rate periods, but in the rainy seasons there are significant high flows that flow directly to the sea. Trapping a part of these high flows for recharge will lead to increased groundwater storage and improved water quality.

#### **(iv) Availability of land**

The proposed site has sufficient land for implementing the project and the river flows less than 100m to the east of the site.

The WRA has indicated that recharge water will undergo treatment prior to injection in the aquifer for turbidity and bacterial contamination. Additionally there are no major industries that are located up gradient of the site to contaminate the river flow. The high river flows carry a high sediment load from the upper watershed which is in a degraded condition due to poor farming practices and informal settlement with the clearing of land. The preliminary design of the MAR system includes a settlement basin where the water will be treated with Alum to remove the particulate material and with granular chlorine to kill the bacteria before injection. It is not expected that any bacteria remaining after chlorination and entering the aquifer will survive in the anaerobic conditions that exist in the aquifer. Water quality conditions will be maintained at a high level to avoid clogging the aquifer and contaminating the existing groundwater resources.

PPCR resources will be used to conduct test drilling to determine the most appropriate siting of the artificial aquifer within the designated area.

#### **Reviewer's Comment 6**

**It is also noted that Jamaica is currently in the process of finalizing a request for project funding to the Secretariat of the Adaptation Fund Board titled "Enhancing the resilience of the agriculture sector and coastal areas to protect livelihoods and improve food security". One sub-component – "Enhancing the climate resilience of the agricultural sector by improving water and land management in select communities" appears to mirror activities that show some similarity with certain items identified in the draft SPCR. Among the expected outcomes of this component are: establishment of a micro-dam, rehabilitation of a reservoir, implementation of rainwater harvesting and a small scale, gravity irrigation programme, rehabilitation and development of flood mitigation (climate change) resilient infrastructure, and the establishment and rehabilitation of soil conservation and water catchments infrastructure. The proposal to be executed under the Adaptation Fund targets locations in Northern Manchester, Clarendon (South Clarendon and Rio Minho Watershed), and Caymanas, St. Catherine.**

The reviewer considers that there is considerable potential for overlap between the SPCR and the Adaptation Fund proposal. While all potential synergies should be optimized and encouraged, every effort must be made to ensure that the projects are aligned in a manner that avoids duplication of resources as well as effort. More specifically, the Government of Jamaica should be invited to make explicitly clear in the draft SPCR (a) how it intends to integrate these two programmes (b) which specific elements of the potentially overlapping activities will be tackled in each project and why, i.e. the rationale for the allocation, and (c) the deliverables from each project that are expected to serve as inputs to the other. Fortunately, the Planning Institute of Jamaica (PIOJ) is Government's executing agency for the two programmes, and the World Bank is providing resources for both. This coincidence of circumstances should provide an efficient mechanism for focused coordination with the other major players, i.e. the Inter-American Development Bank and the United Nations Development Programme, to promote cross fertilization while eliminating redundancy. From an operational perspective, it might also be helpful to learn whether it is intended that the two programmes will be executed simultaneously or in sequence. If the former is likely, then the Government of Jamaica may wish to provide clear assurance that the PIOJ will have the required resources to implement both initiatives concurrently.

### **Response**

Pages 33-34 of the SPCR address the concern of the Reviewer regarding the possible overlapping of the PPCR Investment Programme II and the proposed Adaptation Fund Project. Additionally, the PIOJ as the executing agency for both projects will ensure that the programmes complement rather than duplicate them. Furthermore, integration in the design stage will be facilitated at three levels as follows:

- 1) programme execution level** - the Sustainable Development and Regional Planning Division (SDRPD) of the PIOJ, which has oversight for both programmes will ensure cross project steering committee membership, that is, representation of each project on the steering committee of the other
- 2) operational** - the Ministry of Agriculture, and Fisheries (MOAF) through the office of the Principal Director, Policy and Planning, will ensure that the agencies of the ministry with lead roles in the implementation of the agricultural, land management and water management and conservation components of each project will collaborate together in the implementation of their roles in both projects.
- 3) Community level:** The local project implementation or advisory committees for each project will include representation from the local communities in their programme management framework to ensure maximization of the use of resources for the entire project area.

It should be noted that PIOJ has the institutional framework to effectively execute projects of this nature. Where necessary, it will, as part of the programme management arrangement, acquire additional human and other resources, to ensure the timely



implementation of projects and programmes for which it has overall responsibility.

### **Reviewer's Comment 7**

**The reviewer considers that the document would be further enhanced with the inclusion of a brief section that explicitly seeks to demonstrate how the anticipated outcomes of SPCR investment projects are likely to increase the resilience of poor and marginalized groups**

### **Response**

The outcomes of the three investment components in a general way speak to the impact of the investments on all beneficiaries, including the vulnerable. The impacts however could be made more explicit as suggested by the reviewer and is addressed in Section 6.2.1.

#### 6.2.1 The SPCR and Resilience Building

At a macro level, the goal of the programme “Enhanced resilience to the impacts of climate change at all levels in Jamaica” addresses building resilience from the policy/institutional, national and sectoral perspectives. In this regard, emphasis is placed on building awareness to improve knowledge, attitudes and practices; and improve decision making capabilities through the use of climate scenarios etc. which should redound to better planning and better results on the ground.

Within the selected river basin (geographic level), programme impacts will be both direct and indirect for families in the project communities and extend to the wider community by way of increased availability of crops, lower price of products and reduced downstream effects of environmental degradation for example, during site visit . Economically, the positive impacts are predicated on increased agricultural output influenced by greater access to and more efficient use of water; better land management practices and resultant improved soil fertility; appropriate crop selection and planting time; and general training. The expectation is that these will aid in reversing the 50-70% decline in agricultural production recorded in 2010 and reduce the poverty incidence.

Exposing the communities to alternative livelihood opportunities such as aquaponics and extracting economic value from the vetiver and lemon grasses is another feature of expanding the economic resilience. The former can be used to make craft items and perfumes and the latter contains essential oils that can be used to make a wide variety of cosmetics and beverages. These strategies will not only increase income but also help to diversify and increase the robustness of the economy in the treatment communities. The

medium to long term outcome expected to be a decline in the poverty incidence, and change in development indicators such as school enrolment and health status.

The rehabilitation of the physical environment (green gullies etc.) and the benefits derived from improved land use management, will directly contribute to building resilience in the natural environment. Attention to disaster risk reduction under the capacity building and training programmes will yield both environmental and economic benefits deriving especially from improved preparedness and reduction in losses due to disaster impact.

The establishment of the Trust Fund and facilitating the access of community based organization to resources for investment in the watersheds is designed as part of the sustainability feature. The intention is that these resources can be used to scale up implementation of the adaptation plans prepared for the communities.