| Cover Page for Project/Program Approval Request | | | | | | | | |
|---|--------------------------------|--|-----------------|-------------|-----------------------------|--|--|--|
| 1. | Country/Region: | Jamaica | 2. CIF P | roject ID#: | (Trustee will assign ID) | | | |
| 3. | Source of Funding: | □ FIP | ☑ PPCR | | □ SREP | | | |
| 4. | Project/Program Title: | Improving Climate Data and Information Management Project | | | | | | |
| 5. | Type of CIF Investment: | ☑ Public | □ Private | ; | □ Mixed | | | |
| 6. | Funding Request in | Grant: USD 6.8 million Non-Grant: N/A | | · N/A | | | | |
| | million USD equivalent: | | | | | | | |
| 7. | Implementing MDB(s): | The World Bank | | | | | | |
| 8. | National Implementing | Executing Agency: The Planning Institute of Jamaica (PIOJ) | | | | | | |
| | Agency: | Implementing Agencies: Ministry of Water, Environment, Lands | | | | | | |
| | | and Climate Change and Ministry of Agriculture and Fisheries | | | | | | |
| 9. | MDB Focal Point and | Headquarters- Foca | l Point: | TTL: Enos I | E. Esikuri, Sr. | | | |
| | Project/Program Task | Kanta Rigaud, Lead | | Environmen | tal Specialist | | | |
| | Team Leader (TTL): | Environmental Spec | ialist | | | | | |
| 10. Project/Program Description (including objectives and expected outcomes): | | | | | | | | |

The Project Development Objective (PDO) is **to improve the quality and use of climate related data and information for effective planning and action at local and national levels**. The Project aims to (i) upgrade hydro-meteorological data collection, processing and forecasting systems; (ii) improve climate resilient planning and hydro-meteorological information services; and (iii) support climate change education, awareness towards behavior change.

Component 1: Upgrading Hydro-Meteorological Data Collection, Processing and Forecasting Systems (US\$3.899 million). This component will support investments for upgrading and providing critically needed new equipment, systems, and operator training for data collection, and processing for improved hydro-meteorological and agro-meteorological forecasts in order to ultimately enhance the availability and reliability of data for climate change scenario modelling, risk analysis and warning systems, and knowledge sharing. The investments will include: (a) acquisition of sea-level monitoring and hydro- and agro-meteorological equipment, including installation, spare parts and training of MSJ, WRA and RADA staff; (b) replacing the outdated weather Doppler radar, including rehabilitation of the Cooper's Hill station facility; (c) providing training and technical assistance to improve hydro-meteorological data management and quality assurance of data collections and processing.

Component 2: Climate Resilient Planning and Hydro-meteorological Information Services (US\$1.323 million). This component will provide technical assistance support to promote Jamaica's readiness for climate events through: (a) updating statistically downscaled high resolution climate change scenarios to prepare the State of Jamaica 2015 report and to develop training in sector specific climate resilient planning based on said scenarios; (b) preparing national vulnerability assessments in selected priority sectors; (c) preparing a detailed health sector vulnerability assessment and costed resilience strengthening plan for climate-proofing Jamaica's health facilities and operations; (d) carrying out community risk profiling and developing targeted early warning messaging for vulnerable groups; (e) upgrading the multi-agency climate and natural risk data and information sharing system and clearing-house with public access.

Component 3: Climate Change Education and Awareness towards Behavior Change (US\$0.721 million). Component 3 will provide technical assistance support to (a) carrying out the climate change information, education and communication (IECC) initiative, and (b) implementing targeted attitude and behavior change campaigns to address climate change adaptation needs and influence behavioral change of targeted groups, as part of the Communications Strategy Action Plan developed under the PPCR Phase 1. Campaigns are aimed at influencing and bringing about changes in attitudes and behavioral practices to assist targeted groups to adopt practical means of coping with severe weather events, climate variability and climate change.

Component 4: Project Management, Monitoring and Evaluation (US\$0.857 million). This component will provide support to carrying out the Project, including overall technical management, financial management, procurement, compliance with environmental and social safeguards, monitoring and evaluation of data collection, supervision of works through the provision of consulting services and Operating Costs.

The expected outcomes are:

- Improved climate data and information services to strengthen adaptive capacities;
- Climate data and information products are integrated into the health sector plan; and
- Increased number of people (disaggregated by gender) are supported by the Project to cope with climate change and risks, specifically through targeted early warning systems for vulnerable groups and other measures.

(See PAD pages 6-7.)

11. Consistency with Investment Criteria:

The Project objective is aligned with the PPCR's objective to pilot and demonstrate ways in which climate risks reduction and resilience building may be integrated into core development policies and plan at the national and local levels. The proposed activities are also in concert with the five thematic areas of the Jamaica SPCR, namely (i) mainstreaming climate change into Jamaica's planning and policy formulation processes; (ii) strengthening institutional arrangements to ensure the effective mainstreaming of climate change; (iii) building capacity for climate data management, forecasting and planning; (iv) facilitating sectoral adaptation measures; and (v) climate change education and awareness. The Project's awareness program will use proven innovative approaches including the use of demonstration projects and the creative music/arts. The PPCR financing will cover the additional costs of "public good" benefits from the proposed activities to update and rehabilitation of hydromet networks, flood & drought early warning systems, and strategic sector planning to pre-emptive humanitarian responses.

The Project's goal to help the country transform to a climate resilient development path is consistent with the PPCR objective and the WB's twin goals to end extreme poverty within a generation and boost shared prosperity in a sustainable manner by directly supporting the vulnerable groups of Jamaican population to be able to utilize improved climate and weather information and to adapt current and future livelihood activities to the variability brought about by climate change. Those groups include the rural population including farmers whose economic productivity are weather-dependent, providing the bulk of labor in food production activities and are most likely to be directly impacted by food security issues. Also a large population of the poor living in coastal areas is exposed to risks of hurricanes and storm surges, and those living in watersheds are prone to water shortage or flooding. Moreover, poor areas have lower levels of protective infrastructure, and housing is of low quality and is much less likely to withstand a flood or cyclone. Climate-related disasters and climate change impacts will likely exacerbate existing gender inequalities as poor women are amongst the hardest hit by the effects.

The proposed Project is consistent with the World Bank Group Country Partnership Strategy (CPS) for Jamaica FY2014-2017 (Report No. 85158-JM, discussed by the Executive Directors on April 29, 2014) that underscores the need to addressing climate change vulnerabilities as conditions for fostering sustained improvements in shared prosperity. The proposed Project would contribute to achieving the CPS' Theme 3: Social and Climate Resilience, Outcome 8: Improved institutional capacity to plan and respond to climate change events and natural disasters, in particular (i) building institutional capacities to identify, assess and understand disaster and climate risks in terms of their economic and fiscal impacts.

(See PAD page 5.)

12. Stakeholder engagement:

During Project preparation, consultations took place with all of the implementing agencies (generators of data and providers of information) and the National Environment and Planning Agency (NEPA) and site inspections were made to the replacement radar equipment (Cooper's Hill) and replacement tidal gauge (Port Royal) locations, as well as select hydromet monitoring stations.

Also knowledge, attitudes and practices (KAP) survey was carried out in 2005 and 2012 to ascertain knowledge and views in Jamaica regarding the causes and impacts of climate change and the measures people could take in their own lives to adapt. The KAP 2005 baseline survey involved the completion of 1700 household interviews with an additional 300 done among representatives of the public private sectors, media, international donor agencies and children. A subsequent KAP longitudinal survey was carried out in 2012 under Phase 1 of the PPCR. It encompassed a national survey of households (N = 1,484); a survey of online users of climate information (N = 503); and a focus-group based sector survey (N = 276) targeting agencies and specialists in the sectors of agriculture, construction (built environment and human settlements), energy, health, tourism and water.

(See PAD page 9 and 13.)

13. Gender considerations:

Most of Jamaican society is vulnerable to the extreme weather events associated with climate change. Whilst "gender" does not only refer to women, because of the fact that in many societies women have less power and fewer opportunities than men, there has been an explicit attention to women's empowerment and engagement in the design of project activities. In Jamaica, men and women play different roles within the private and public spheres and have different priorities and perspectives. Given the role that men play in agriculture, the targeted messages would need to target both men and women and be tailored specifically for that purpose.

Among the rural population (47% of total), poverty remains relatively high (17.6% in 2010) and women, who make up 47.8% of the rural poor, provide the bulk of labor in food production activities, are the primary vendors of crops and of fish and are most likely to be directly impacted by food security issues. Climate-related disasters and climate change impacts will likely exacerbate existing gender inequalities as poor women are amongst the hardest hit by the effects. Improvement in the database and institutional mechanisms for early warning systems and agricultural knowledge and adaptation interventions will assist poverty reduction and food security issues and by extension, be of direct benefit to female-headed households and female agricultural workers and fishers/fish vendors.

Dissemination of information and the reporting of the core indicators will be gender disaggregated and, in the case of the latter, used to specifically track, monitor and positively influence the gender impact of the project.

(See PAD page 40.)

| 14. Indicators and Targets (consistent with results framework): | | | | |
|---|--------|--|--|--|
| Core Indicator | Target | | | |

| | | 1000/ |
|---|-----------------------------------|---------------|
| (a) Increased access and satisfaction of the users of | Baseline (Year 3) +100% | |
| improved climate data and information services ¹ | | |
| (b) Integration of climate data and information into a | Phased and costed investment plan | |
| health sector plan ² | developed | |
| (c) Number of people (disaggregated by gender) supported | TBD (of which 30% is women) | |
| by the Project to cope with climate change and risks, | through xx community data access | |
| specifically through targeted early warning systems for | points established | |
| vulnerable groups and other measures ³ | 1 | |
| Development Indicator(s): | 0.65 (Average score for main | |
| (d) Improved quality (i.e. accuracy, timeliness and | parishes) | |
| coverage) of extreme weather forecasts ⁴ | | |
| (e) Improved quality (i.e. data from weather stations | Baseline + 50% | |
| reaching data processing center in line with performance | | |
| standard) of climate recording network and data collection | | |
| instruments ⁵ | | |
| (f) High resolution national and sectoral climate change | High resolution CC scenarios for | |
| scenarios developed ⁶ | 2030, 2050 and 2080 available | |
| (g) Early warning systems for target vulnerable groups | TBD | |
| established and operating ⁷ | | |
| (h) % increase in climate change knowledge, attitude and | Baseline +75% | |
| practice (KAP) ⁸ | | |
| | | |
| 15. Co-Financing: | | - • |
| | Amount (in | Type of |
| | USD million): | contribution: |
| • Government | 0.68 | In-kind |
| Co-Financing Total: | 0.68 | |
| Parallel Financing | | |

¹ This contributes to PPCR Core Indicator 4: Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability or climate change.

² This contributes to PPCR Core Indicator 1: Degree of integration of climate change in national, including sector, planning.

³ This contributes to PPCR Core Indicator 5: Number of people supported by the PPCR to cope with the effects of climate change, as well as WB Core Sector Indicator of Project Beneficiaries: Direct project beneficiaries (number), of which female (percentage).

⁴ This contributes to PPCR Core Indicator 3: Quality and extent to which climate responsive instruments/ investment models are developed and tested.

⁵ This contributes to PPCR Core Indicator 3: Quality and extent to which climate responsive instruments/ investment models are developed and tested.

⁶ This contributes to PPCR Core Indicator 3: Quality and extent to which climate responsive instruments/ investment models are developed and tested.

⁷ This contributes to PPCR Core Indicator 3: Quality and extent to which climate responsive instruments/ investment models are developed and tested.

⁸ This contributes to PPCR Core Indicator 4: Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability or climate change

| Adaptation Fund - Enhancing the Resilience of the Agriculture Sector and Coastal Areas to Protect Livelihoods and Improve Food Security" | 9.97 | Cash | | | |
|--|-------|------|--|--|--|
| WB Loan - Disaster Vulnerability Reduction Project | 6.3 | Cash | | | |
| • PPCR - Institutional Mainstreaming and Sectoral Adaptation Project | 11.3 | Cash | | | |
| PPCR - Climate Change Adaptation and Disaster Risk Reduction Financing Project | 6.4 | Cash | | | |
| PPCR - Promoting Climate Resilience in the Fisheries Sector | 5 | Cash | | | |
| Parallel Financing Total: | 38.97 | | | | |
| 16. Expected Board/MDB Management approval date: | | | | | |
| July 24, 2015 | | | | | |

FINAL Version February 26, 2013