

PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC4033

Project Name	Jamaica Disaster Vulnerability Reduction Project (P146965)
Region	LATIN AMERICA AND CARIBBEAN
Country	Jamaica
Sector(s)	General public administration sector (30%), Rural and Inter-Urban Roads and Highways (30%), Flood protection (40%)
Theme(s)	Natural disaster management (60%), Climate change (40%)
Lending Instrument	Investment Project Financing
Project ID	P146965
Borrower(s)	Ministry of Finance and Planning
Implementing Agency	Jamaica Social Investment Fund
Environmental Category	B-Partial Assessment
Date PID Prepared/ Updated	19-Mar-2014
Date PID Approved/ Disclosed	19-Mar-2014
Estimated Date of Appraisal Completion	03-Oct-2014
Estimated Date of Board Approval	19-Nov-2014
Concept Review Decision	Track II - The review did authorize the preparation to continue

I. Introduction and Context Country Context

1. Jamaica, the largest English speaking country in the Caribbean with a population of 2.7 million (2011), is an upper middle income country with a long history of low growth and high public debt. The country's progress on poverty reduction and shared prosperity has been hampered in the recent past due largely to economic shocks that were amplified by structural weaknesses in the economy. For the past 30 years real per capita Gross Domestic Product (GDP) increased at an average of just one percent per annum, making Jamaica one of the slowest growing economies in the world. Nevertheless Jamaica made significant progress in poverty reduction during the early part of the past decade. Between 1997 and 2007 the poverty rate fell from 19.9 to 9.9 percent, and while overall inequality remains relatively low compared to the rest of the region, people at the bottom 40 percent of the income distribution have suffered more than the average household in recent years. Nonetheless, erosions of these earlier gains in poverty reduction have been registered with rising inequality and poverty sharply increasing to 17.6 percent in 2010.

2. In the current environment of fiscal restrictions, Jamaica faces several important challenges to reverse the recent surge in poverty levels and ultimately eradicate extreme poverty and boost shared prosperity. Committed to restoring growth and building an inclusive prosperous Jamaica, the Government of Jamaica (GoJ) prepared and garnered local and international support for a comprehensive program of fiscal adjustment and structural reforms. In May 2013, the GoJ embarked on an ambitious reform program that obtained the support of the International Monetary Fund (IMF). Since that time the GoJ has continued to demonstrate a clear commitment to reforms and showed that overall policy implementation under the program is strong.

Sectoral and Institutional Context

3. Jamaica is one of the most at risk countries in the world with high percentages of GDP and population at risk to two or more hazards. The primary risks are linked to natural hazards including hurricanes, floods, droughts, earthquakes, storm surges, and landslides. High exposure to climate-related hazards can be attributed to its geographical location on the Atlantic Hurricane Belt, and geophysical orientation with low-lying coastal zones and mountainous topography. The Jamaican territory is also crossed by five major fault lines, noting in particular the Plantain Garden Fault Zone that triggered the 2010 Haitian earthquake.

4. Recorded disasters in Jamaica between 2001 and 2010 were triple compared to any other decade. During this period there were 10 major events with far-reaching impacts affecting approximately two million people and causing approximately \$1.21 billion (US, 2010) in damages. Hurricane Ivan in 2005 alone resulted in over \$351 million (US, 2010) in damages (see Figure 1). From a sectoral perspective, infrastructure bore the highest economic impact at 45 percent of the overall costs, and the transportation sub-sector (roads and bridges) bearing the brunt at 85 percent. From a social perspective, approximately 82 percent of Jamaica's population lives within five kilometers of the coast which exacerbates the relative vulnerability to natural hazards of residents and the housing stock, due to insufficient land use planning, environmental management practices and enforcement of building codes. Adverse natural events in Jamaica regularly impact livelihoods, destroy infrastructure and disrupt the provision of essential services. With a growing share of national budget required for response and reconstruction efforts resulting from disasters, the sustained and adequate allocation of resources to government programs targeting poverty reduction and the promotion of shared prosperity is regularly hindered.

5. Climate change models project that Jamaica could be impacted by an increased frequency of catastrophic natural events as a result of heightened surface temperatures and global sea level rise. The Intergovernmental Panel on Climate Change (IPCC) reports suggest that Jamaica will undergo a warming and drying trend and endure more frequent heat waves and droughts, rainfalls and hurricanes with increased intensity, and heightened storm surge. According to the World Bank study, "Sea Level Rise and Storm Surges", the impact of sea level rise and intensified storm surges in Latin America and the Caribbean will be highest in Jamaica – noting an increase of 56.8 percent - with 28.49 percent of the coastal population exposed and potential losses of coastal GDP projected to exceed 26.62 percent. Furthermore, the inundation risk in Jamaica from storm surges could affect 36.55 percent of the coastal wetlands. With climate change threatening to heighten the impacts of hydro-meteorological hazards, the result in the decades to come may be an increase in the burden of weather-related disasters that can threaten the sustainability of Jamaica's development processes.

6. Natural disasters represent a significant contingent liability for Jamaica comparable to

others such as commodity price fluctuations and exchange rate volatility. Using simulated data from the Caribbean Catastrophe Risk Insurance Facility (CCRIF) as of August 2013, the fiscal cost (e.g. explicit public sector liabilities) of natural disasters in Jamaica is approximately US \$120 million for hurricanes (wind), US \$62 million for floods and US \$42 million on average per year for earthquakes (Average Annual Loss). The probable maximum loss for a 100 year hurricane (i.e. 0.01% likelihood of occurring in any given year) could be in the region of 20% of GDP. An extreme earthquake or hurricane event in Jamaica could produce losses estimated in US\$7-10 billion.

7. The Government of Jamaica is committed to reducing Jamaica's vulnerability to disasters and has developed strategies and policies to promote more resilient development planning. These include the National Preparedness Act (1993), National Disaster Plan (1997), and Hazard Mitigation Policy (2005), draft Disaster Risk Management Bill (2013), and draft Building Code Bill (2013). The current National Development Plan, "Vision 2030" identifies Hazard Risk Reduction and Adaptation to Climate Change as a key outcome. Four main strategies are identified; (i) improve resilience to all forms of hazards; (ii) improve emergency response capability; (iii) develop measures to adapt to climate change; and (iv) contribute to the effort to reduce the global rate of climate change. Finally, the GoJ has also established a National Disaster Fund to finance emergency response and rehabilitation activities after a disaster which complements their participation in the Caribbean Catastrophic Risk Insurance Facility (CCRIF). At the international level Jamaica has adopted the Hyogo Framework for Action 2005-2015, and under the Pilot Program for Climate Resilience (PPCR) the country developed its Strategic Program for Climate Resilience (SPCR).

8. The proposed operation supports the government with implementing a program that supports disaster risk management in the wider context of sustainable development. This will be achieved through: (i) improving the capacity of government institutions and Parish governments to use hazard and risk information to shape local and national development; (ii) reducing disaster and climate vulnerability by making infrastructure more resilient; (iii) enhancing the country's planning instruments for disaster risk management; and (iv) assisting the GoJ manage its fiscal liabilities associated with disasters to work towards an ex-ante risk financing strategy.

9. The Project directly supports the World Bank's objectives of reducing poverty and boosting shared prosperity. As noted, Vision 2030 identifies natural hazards as one of the external factors that most affects economic development. Climate change and adverse natural events are recognized to have the greatest impact on the poorest populations who generally live in higher-risk areas and have a diminished capacity to recover from disaster. In the case of Jamaica, even frequent, low-intensity events such as a heavy rainfall can have crippling and cumulative effects on livelihoods and communities. Impediments to development gains as a result of climate hazards particularly impacting the poorest communities can be minimized by reducing the exposure to hazard events and by decreasing the vulnerability of the poor to climate disturbances.

Relationship to CAS

10. The proposed operation is fully aligned with the Bank's strategic engagement with Jamaica. The DVRP supports the objectives in the Country Partnership Strategy (CPS) 2010-2013, and is informed by ongoing consultations of the CPS 2014-2017 currently under preparation. Under the CPS 2010-2013 this operation supports Results Area 6: Climate Resilience and Vulnerability Reduction under Pillar III, Promoting Sustained Growth. In the new CPS 2014-2017, which provisionally aims to support Jamaica in laying the foundations for sustainable inclusive growth, the

DVRP falls under Outcome 6 of the Sustainability Pillar, Increased Resilience to Climate Change and Natural Disasters.

II. Proposed Development Objective(s)

Proposed Development Objective(s) (From PCN)

11. The proposed Development Objective is to enhance the country's resilience to natural hazards, including its response capacity to adverse natural events. This would be achieved through investments in resilient infrastructure, improved hazard data collection and monitoring systems to better inform future investment decisions, and institutional strengthening for disaster risk management.

Key Results (From PCN)

12. Key results achieved through the implementation of the proposed operation will include measurable improvements in the resilience of the built environment to natural hazards, and the consolidation of technical capacities to reduce disaster vulnerability across key national agencies and ministries; specific emphasis will be placed on strengthening the institutional capacity of the Office of Disaster Preparedness and Emergency Response (ODPEM) to coordinate, monitor, and evaluate Jamaica's agenda on disaster risk management.

Table 1: Key Results and Monitoring Indicators

Result 1: Increased application of risk information in public policy and investment planning

Result 2: Residents and national infrastructure better protected by vulnerability reduction measures

Result 3: Improvements to budgetary mechanisms to appropriate or execute resources in case of disasters

Result 4: Enhanced institutional capacity and improved planning to implement disaster preparedness and response programs

III. Preliminary Description

Concept Description

13. The project components are a result of a participatory planning workshop held in early 2014, involving 12 government agencies represented by over 40 people. The operation will continue to be designed in this participatory manner, through consultations with multiple government agencies, local governments, and other partners. The proposed project will finance six components, which will be implemented over a period of six years

14. Component 1: Understanding Risk (~USD \$8.8M). In order to improve the ability of government officials to use hazard and risk information for decision making and policy development, this component will finance activities relating to the generation and application of disaster risk management data, the strengthening of Jamaica's government entities and associated planning instruments for disaster risk management, and the use of available tools relating to disaster risk financing and insurance. The sub-components and activities to be financed under this component relate to:

1.1 Risk Identification

- Instrumentation: Spatial Data Infrastructure platform to influence decision making relating to risk reduction and the national emergency protocols, communications and information network/platform to enhance disaster preparedness and response; strengthening the seismic and hydrometeorological monitoring network and associated protocol and communication mediums for early warning systems (in concert with the Improving Climate Data and Information Management Project, P129633).
- Coastal Management: Coastal vulnerability studies.
- Seismic Risk Assessments: Seismic risk assessment of critical infrastructure in the Kingston Metropolitan Area, and other priority urban areas, and accompanying micro-zonation studies.

1.2 Governance Enhancement

- Policy Development for Disaster Risk Management: Support to the GoJ on advancement of priority policy development relating to, amongst others; Watershed Management Policy, Beach Control Act, Setback Limits Policy, Disaster Risk Management Act, Water Resources/Flood Control Act, No Build Zone Legislation.
- Building Code Enforcement: Development of a framework for an oversight and enforcement mechanism relating to the proposed Building Code Bill, and the development and delivery of related training for its implementation.
- Preventative Resettlement: Preparation of a standardized strategy for the GoJ relating to preventative resettlement for areas of high-risk that cannot be mitigated.
- Preparation of Beach Restoration Guidelines: Development of these guidelines will complement sub-activities related to coastal management and coastal protection.

1.3 Financial Protection

- Identification and Understanding of Fiscal Risk to Disasters: Quantification of implicit and explicit contingent liabilities of the state to disaster risk by assessing the associated economic and fiscal impacts and analysis of legal responsibilities.
- Financial Management of Disaster Risk and Use of Financial Instruments: Analysis of approaches and tools to manage direct and indirect contingent liabilities to disasters, and preparation of a national disaster risk financing and insurance strategy; identification of short-term resource gaps to finance post-disaster emergency and early recovery as well as longer-term resource gaps to finance post-disaster reconstruction.
- Catastrophe Risk Insurance for Public Assets: Assessment of public infrastructure and buildings relating to existing insurance policies, and property catastrophe risk insurance markets in the country.

15. Component 2: Risk Reduction (~USD \$36.2M). To reduce Jamaica's physical vulnerability to adverse natural events, this component will finance structural mitigation measures. The sub-components and activities to be financed under this component relate to:

2.1 Rehabilitation/Reconstruction of National Infrastructure: The GoJ has furnished to the Bank a preliminary list of investments relating to urban drainage channels, shoreline protection, and critical bridges.

2.2 Rehabilitation/Reconstruction of Critical Public Facilities: In order to increase the proportion of public buildings in the Kingston Metropolitan Area that comply with Jamaica's Building Code, investments for physical upgrading would be made in critical public facilities including, but not limited to, police stations, fire stations, schools, and health centers. This would

equally in-line with the completed Rapid Visual Screening of Buildings for Potential Seismic Hazard , and the seismic risk assessments to be carried out under sub-component 1.1.

2.3 Landslide Reduction: Preliminary technical assessments procured by the World Bank have identified vulnerable sections along Jamaica’s primary road network which would require a mixture of slope stabilization, reforestation, terracing and/or meshing.

2.4 Coastal Protection: Coastal management measures through control of beach erosion and beach restoration in priority areas for the tourism sector, strengthening coastal defenses through sea walls, coral reef rehabilitation, artificial reef installation, and sea grass planting.

16. Component 3: Contingent Emergency Response (~USD \$0M). The proposed operation will include a contingent component, which in the event of a disaster will enable the government to reallocate project funds to disaster response. This provisional “zero component” is designed as a mechanism that would allow rapid access to project funds for response and recovery purposes under streamlined procedures during an emergency. Following an adverse natural event, the Government’s declaration of disaster in accordance with national law, and subject to the Bank’s activation policy, the contingent component would be implemented according to the rapid response procedures governed by OP/BP 8.00. Rapid Response to Crises and Emergencies .

17. Component 4: Project Administration (~USD \$5M). This component will finance costs associated with program management, including project-related audits, monitoring, mid-term and end-of-project evaluation, equipment and training to strengthen the Project Implementation Unit (PIU), as well as individual consultants and operating costs. This component will also finance workshops to promote public awareness raising relating to disaster risk management. The component will also finance the core professional and technical staff for project management, including a Program Manager, Supervision Engineers and specialists in the areas of disaster risk management, safeguards compliance, finance, procurement and related project management areas. Core staff will be recruited on time-bound basis.

IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04	x		
Forests OP/BP 4.36			x
Pest Management OP 4.09			x
Physical Cultural Resources OP/BP 4.11	x		
Indigenous Peoples OP/BP 4.10		x	
Involuntary Resettlement OP/BP 4.12	x		
Safety of Dams OP/BP 4.37			x
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

V. Financing (in USD Million)

Total Project Cost:	50.00	Total Bank Financing:	50.00
Financing Gap:	0.00		

Financing Source	Amount
Borrower	0.00
International Bank for Reconstruction and Development	50.00
Total	50.00

VI. Contact point

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