

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK
MULTILATERAL INVESTMENT FUND

JAMAICA

FINANCING WATER ADAPTATION IN JAMAICA'S NEW HOUSING SECTOR

(JA-M1034)

DONORS MEMORANDUM

DRAFT

This document was prepared by the project team comprised of: Steven Wilson (MIF/ABG), Team Leader, Gerard Alleng (INE/CCS), Co-Team Leader, Carlos Sanchez (MIF/ABG), Wayne Beecher (MIF/CJA), Erica Haughton (MIF/CJA), Graham Williams (FMP/CJA), Zachary Levey (MIF/ABG), Fernando Campero (MIF/ATF), Ruben Doboïn (MIF/MIF), Laura Torá Carod (MIF/MIF), Sara Valero Freitag (INE/CCS), Anaitée Mills (INE/CCS), and Brian Muraresku (LEG/NSG).

TABLE OF CONTENTS

PROJECT SUMMARY

1.	BACKGROUND AND JUSTIFICATION
2.	PROJECT DESCRIPTION.....
3.	MONITORING AND EVALUATION STRATEGY
4.	COST AND FINANCING
5.	EXECUTING AGENCY
6.	PROJECT RISKS.....
7.	ENVIRONMENTAL AND SOCIAL EFFECTS
8.	COMPLIANCE WITH MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS.....
9.	INFORMATION DISCLOSURE AND INTELLECTUAL PROPERTY

PROJECT SUMMARY

FINANCING WATER ADAPTATION IN JAMAICA'S NEW HOUSING SECTOR

(JA-M1034)

Few households in Jamaica are able to obtain dedicated finance for water efficient products, either in newly built residential properties or in existing homes. This financing gap is becoming acute as climate change threatens the water security of a growing number of households in Jamaica. Drought and shifting patterns of rainfall are driving up water prices across the country and aggravating the strain on the water supply caused by other factors, including population growth, urbanization, environmental degradation, aging infrastructure and budgetary constraints. The water supply situation has deteriorated to the point that the Jamaican National Water Commission (NWC) now suspends service with periodic 'lock-offs.' Service reliability now averages 19 hours per day and many customers must buy very expensive trucked water from private vendors. The objectives of the project will contribute to the operations of the NWC by reducing the individual average pressure on the system.

This pilot project will leverage a \$5.75 million reimbursable loan, together with non-reimbursable financing in the form of technical assistance (\$1,179,400, including local counterpart resources) to promote the integration of water adaptation measures into new homes in Jamaica, to foster new business opportunities in water efficient products and services for MSMEs in Jamaica, and to support entrepreneurship in private solutions for climate resilience. The loan operation would be funded by resources from the Pilot Program for Climate Resilience (PPCR), one of three programs under the Strategic Climate Fund (SCX) – a trust fund under the Climate Investment Funds. The PROADAPT Facility of the Multilateral Investment Fund (PROADAPT) would fund the technical assistance for this project with up to \$644,600 of MIF resources, with counterpart resources provided by the Jamaica National Foundation. PROADAPT is co-financed by the Nordic Development Fund (NDF), and supports private solutions for climate resilience in micro, small and medium-sized enterprises, in anchor firms and their supply chains, and promotes business opportunities in climate resilience. An additional \$100,000 of technical assistance activities would be co-financed by NDF funds from PROADAPT.

The Borrower of the PPCR loan is the Jamaica National Building Society ("JNBS"), and the Executing Agency for the technical assistance is the Jamaica National Foundation, a non-profit foundation that promotes social and sustainable development in Jamaica. JNBS will on-lend PPCR resources to housing developers and construction companies for water efficient products and measures. The investments financed will improve water availability and reduce the risk of water disruptions during increased periods of drought that result from climate change. Investments will also yield economic co-benefits by reducing household water bills. PROADAPT technical assistance resources will (a)

demonstrate the business case for water efficiency for developers and construction companies, and the financial case for water adaptation in households, (b) build local capacity to design and install water adaptation measures, (c) support a climate resilience entrepreneurship program, and (d) raise awareness of the threats of climate change and the related opportunities presented by water efficiency by local businesses, financial institutions, civil society and the Government of Jamaica.

ANNEXES

ANNEX I	Logical Framework
ANNEX II	Budget Summary
ANNEX III	Quality for Effectiveness in Development (QED)

INFORMATION AVAILABLE IN THE TECHNICAL DOCUMENTS SECTION OF MIF PROJECT INFORMATION SYSTEM

ANNEX IV	Detailed Budget
ANNEX V	Preliminary List of Milestones
ANNEX VI	Diagnostic of Needs of the Executing Agency (DNA)
ANNEX VII	Project Status Reports (PSR), Compliance with Milestones, Fiduciary Arrangements and Integrity Due Diligence
ANNEX VIII	Procurement and Contracting Plan
ANNEX IX	Project Activities Schedule
ANNEX X	Operating Regulations
ANNEX XI	Terms of Reference of the Project Coordinator
ANNEX XII	Monitoring and Evaluation Plan for Impact Evaluations
ANNEX XIII	Representative List of Water Efficient Products and Measures
ANNEX XIV	Indicative Term Sheet

ACRONYMS AND ABBREVIATIONS

AOP	Annual Operating Plan
DNA	Diagnostic of Executing Agency Needs
IDB	Inter-American Development Bank
JNBS	Jamaica National Building Society (JNBS)
JNF	Jamaica National Foundation
MIF	Multilateral Investment Fund
NWC	National Water Commission
OR	Operating Regulations
PCU	Project Coordination Unit
QED	Quality for Effectiveness in Development
TOR	Terms of Reference

PROJECT INFORMATION
FINANCING WATER ADAPTATION IN JAMAICA’S NEW HOUSING SECTOR
(JA-M1034)

Country and Geographic Location:	JAMAICA		
Executing Agency:	Jamaica National Foundation (JNF) (Technical Assistance) Jamaica National Building Society (JNBS) (Loan)		
Access Area:	Access to Basic Services and Green Growth		
Agenda:	Adaptation to Climate Change		
Coordination with Other Donors/Bank Operations:	INE/CCS		
Direct Beneficiaries:	Housing development and construction companies in Jamaica, (the majority of which are small and locally owned).		
Indirect Beneficiaries:	Technical professionals directly involved in the design and specification of new-build homes Water adaptation technology suppliers and installers Jamaican householders (national) The National Water Commission of Jamaica The Government of Jamaica		
Financing: (US\$)	Total MIF Non-Reimbursable:	US\$ 644,600	9%
	Counterpart:	US\$ 449,300	6%
	Co-financing:	US\$ 100,000	2%
	PPCR Reimbursable Loan ¹	US\$ 5,750,000	83%
	Total Project Budget	US\$ 6,943,900	100%
Execution and Disbursement Period:	The execution period for technical assistance in this project is up to 48 months, with 50 months of disbursement. The tenor of the Loan will be up to 84 months (seven years).		
Loan Conditions:	<ul style="list-style-type: none"> • Interest Rate: 5% (five percent). • Term: The Loan will have a term of up to seven (7) years, including a grace period on principal repayments of up to 12 (twelve) months • Disbursement Period: All disbursements would have to be completed one year following the Closing. • Disbursement Amounts and Procedure: The Loan will be 		

¹ PPCR resources will be provided to the IDB from the World Bank, in its capacity as trustee of the Strategic Climate Fund (SCX). See footnote 4.

	<p>disbursed in three or four instalments. Each drawdown will be of no less than \$750,000 and no more than a maximum of \$2,500,000. Disbursements would be limited to one per quarter.</p>
<p>Special Contractual Conditions:</p>	<p>a) Prior to the first disbursement of grant resources, JNF and JNBS will (i) hire a project manager and establishment of a project executing unit, (ii) prepare an Operations Plan and Operational Regulations, and (iii) establish a Project Steering Committee comprised of key stakeholders</p> <p>b) JNBS and the IDB team will agree in writing to the specific use of proceeds of the Loan resources in this project prior to signature, including (a) the Credit Regulations outlining the specific terms and conditions, client eligibility, relevant procedures, etc. that govern the use of this Loan, including the percentage of this Loan that may be lent to subsidiaries or related companies, and (b) a specified set of water saving technologies, products, and measures that will be eligible for the reimbursable component of this project. [Prior to the second and following disbursements of the Loan, JNBS shall provide satisfactory reporting of the use of the proceeds of previous disbursements, such as audited financials, budget or business plans.</p>
<p>Environmental and Social Impact Review:</p>	<p>This operation was screened and classified as required by the IDB's safeguard policy (OP-703). Given the limited impacts and risks, the proposed category for the project is C.</p>
<p>Unit with Disbursement Responsibility:</p>	<p>MIF/CJA</p>

1. BACKGROUND AND JUSTIFICATION

A. Diagnosis of the Problem to be addressed by the Project

- 1.1 **Climate change in Jamaica exacerbates already serious challenges facing the country's water supply and distribution system.** These include capital and operational budgetary constraints, aging assets, population growth, urbanization and environmental degradation. During periods of drought, the National Water Commission (NWC) often enforces 'lock offs', or forced service interruptions to homes due to limited water supply and storage facilities. While the NWC provides backup water supplies to some customers via truck, others must buy very expensive water from private companies during prolonged lock offs. Further complicating matters, the rainy season is projected to shorten while the dry season is forecast to lengthen, thereby intensifying drought conditions and driving further increases in the price of water.
- 1.2 Jamaica's Strategic Program for Climate Resilience (SPCR) investment plan (2011)², developed in accordance with World Bank procedures governing the use of PPCR resources, identifies climate change as a significant threat to vulnerable human settlements across the country and therefore seeks to provide support to the country for strategic interventions and investments that strengthen Jamaica's climate resilience. Further, Jamaica's urban population continues to grow, with 54% of the country's citizen in urban areas, where unplanned development, poor physical infrastructure, inadequate waste management and environmental degradation exert further pressure on water supply and distribution.
- 1.3 **Inconsistent water supply challenges the business models of developers and construction companies and threatens local communities.** To date, private actors have responded to water scarcity with limited measures, such as installing water storage tanks and various types of pumps. While water storage is commonplace in Jamaican housing, the integration of a broader range of water adaptation measures is not typical, regardless of the price point. For instance, rainwater harvesting, a useful practice in a time of shifting precipitation, is not widely practiced in Jamaica. This leads to lower water availability during periods of drought and dangerous runoff during rainy periods that cause dangerous flooding on nearby roads.
- 1.4 **Limited financing and an uncertain business case for water adaptation are main barriers to the uptake of water efficient measures by developers and**

² <http://www.climateinvestmentfunds.org/cif/node/5136>

construction companies. A further concern is that the additional costs of water efficiency might reduce the mortgage eligibility of lower income buyers. In addition, **current regulations and guidelines are insufficient to promote the uptake of water efficient measures and practices.** For instance, a draft Rainwater Harvesting Policy under the Ministry of Water, Land, Environment and Climate Change (MWLECC) could be an important private sector incentive, but has not yet been adopted. The National Environmental Planning Authority (NEPA) recommends rainwater harvesting when possible, but this is not yet mandatory. However, Jamaica's Strategic Program for Climate Resilience investment plan recognizes private financing gaps in climate adaptation and includes the objective to 'institutionalize financing mechanisms for climate change adaptation initiatives by the private sector.'

B. Project Beneficiaries

- 1.5 The project beneficiaries have been selected based on their important role and contribution to the creation of a stronger market in the Jamaica housing sector for goods and services that protect livelihoods from the impacts of climate change.

Direct beneficiaries of this project include:

- (i) Householders who will benefit from water savings and greater water security in their properties;
- (ii) Small local businesses and technicians that supply water efficient solutions;
- (iii) Housing developers and construction companies, independently from their membership status within JNBS, that receive loans from the Jamaica National Building Society to incorporate water efficient technologies in new properties;
- (iv) Young Jamaican entrepreneurs, including young women, who will receive training on business opportunities related to water efficient measures and other emerging opportunities driven by climate risks; and
- (v) The Jamaican National Building Society (JNBS), which will receive capacity building to incorporate climate resilience and gender considerations into the successful delivery of the loan scheme.

- 1.6 Indirect beneficiaries of the project include:
- (i) technical professionals involved in the design and specification of new home construction, the majority of which are micro or small enterprises;
 - (ii) the National Water Commission, which will benefit from greater residential water efficiency, as 21% of total water consumption in Jamaica comes from this sector; and
 - (iii) other households in Jamaica that indirectly benefit from reduced stress on the water supply.

C. Contribution to MIF Mandate, Access Framework and IDB Strategy

- 1.7 This project contributes to the MIF Mandate, Access Framework and IDB Strategy by working with MSMEs and local financial institutions to foster private sector climate adaptation and resilience that generates growth, local business opportunities and new business models for MSMEs and innovative financial products. This project supports economic growth in Jamaica by (i) stimulating the demand for water adaptation and generating business opportunities for designing, installing and supplying these tools and practices, (ii) by stimulating credit for these measures in new residential construction, (iii) by helping householders to reduce water bills, to free up resources for spending in other concepts, and (iv) broadening the market for financial services associated with climate resilience.

D. Poverty Reduction

- 1.8 This project is not primarily focused on poverty reduction, but will generate cost savings and enhance water security for households in all segments of Jamaican society. Almost one half (47%) of Jamaican households are female-headed, and these account for two-thirds of households in poverty in the country. Water savings associated with greater efficiency are non-trivial: during lock-offs the price of water by truck is over 10 times that of piped water from the NWC.

E. Link to the Agenda

- 1.9 This operation is linked to the MIF Agenda “Adaptation to Climate Change.” This Agenda aims to assist MSMEs, micro finance and other financial institutions, and low-income populations in the region to become more resilient and better manage the risks of climate variability and change. This project proposes to use resources from the MIF PROADAPT Facility, which is aimed at building climate resilience in MSMEs and accessing business opportunities related to climate resilience. PROADAPT is co-financed by the Nordic Development Fund.
- 1.10 This project seeks to address knowledge gaps in the following areas: (i) The mechanisms by which MSMEs contribute to water efficiency solutions and build climate resilience in the housing sector, (ii) The financial methodologies and products with the greatest potential to facilitate the uptake of measures needed to increase climate resilience, and (iii) The business potential of climate resilient products and services for MSMEs.

- 1.11 Jamaica is highly vulnerable to climate change, and increasing periods of drought are disrupting economic, social and environmental systems and driving greater water scarcity and higher prices. A range of climate models and scenarios indicate temperature increases of between 0.7° and 1.8° Celsius by the 2050s across all seasons in Jamaica, with an 8% decrease in the length of the rainy season. Jamaica is also vulnerable to extreme weather events, with episodes of heavy rainfall becoming more frequent and projected to increase in frequency and intensity.
- 1.12 The project also aligns with Jamaica's long-term national development plan, Vision 2030 Jamaica, which recognizes the importance of climate change adaptation. It addresses gaps identified in Jamaica's Second National Communication to the United Nations Framework Convention on Climate Change, and specifically recommends support for a fund to increase water adaptation measures across all water use sectors.

F. Collaboration with the Bank Group

- 1.13 The proposed project will be implemented with resources from the Pilot Program for Climate Resilience (PPCR) program of the Climate Investment Funds.³ The PPCR was approved in 2008 as one of three programs under the Strategic Climate Fund (SCX), a trust fund under the Climate Investment Funds which is implemented by various Multilateral Development Banks (MDBs). The PPCR is executed globally through a number of regional and national programs and is intended to (i) pilot approaches for integrating climate risk and resilience into development policies and planning, (ii) strengthen capacities at national levels needed to integrate climate resilience into development planning, (iii) scale up and leverage climate resilient investment, especially by scaling and/or replicating initiatives, (iv) enable learning by doing and lesson sharing at the country, regional and global levels, and to (v) strengthen cooperation and capacity at the regional level for integrating climate resilience in national and regional development planning and processes.
- 1.14 The execution of projects involving PPCR resources occurs in two phases. In the first phase, a multi-year strategic program for climate resilience (SPCR) and relevant investment plan is designed. Once endorsed by the PPCR Sub-Committee, this SPCR is implemented over a second phase of four to five years in each of the participating countries and regions. In the case of the Caribbean

³ The Climate Investment Funds (CIF) are disbursed through the Multilateral Development Banks (MDBs) to support effective and flexible implementation of country-led programs and investments. Fourteen contributor countries have pledged a total of US\$ 8.1 billion to the CIF, which is expected to leverage an additional US\$ 57 billion from other sources.

Region, six countries (Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Dominica and Grenada) accepted an invitation to participate in the Caribbean regional PPCR in May 2009. The Caribbean PPCR is comprised of a combination of six national pilots in each of these six countries, as well as a regional track. First phase activities for the design of the SPCR were completed for each of the national and regional track pilots. In the case of Jamaica, the IDB is leading the MDB effort. As such, the IDB is responsible for the implementation, in collaboration with the government of Jamaica, of two of the three components that comprise the Jamaican PPCR Investment Plan that was approved in October 2011. The third component is being implemented by the World Bank.

This Investment Plan was designed under the leadership of the Jamaican government in coordination with the IDB, members of the World Bank Group, other development partners, and key Jamaican stakeholders.

- 1.15 This particular project is led by the Multilateral Investment Fund and co-led by the Climate Change and Sustainability Division (INE/CCS) of the IDB. The INE/CCS Division is responsible for coordinating the implementation of Bank activities and projects related to the Climate Investment Funds, including the PPCR. INE/CCS and the MIF cooperate on several climate-related initiatives and co-led an operation in Mexico in support of Forest Investment Program (FIP), “Support for Forest Related MSMEs in Ejidos–Implementation of the Forest Investment Program in Mexico” (ME-M1079). INE/CCS is implementing both national programs in Jamaica that are mainstreaming climate change adaptation in various sectors, including the use of water conservation and water harvesting measures, and a Caribbean regional track PPCR public sector Investment Plan that includes rainwater harvesting across the region. This operation will share information and lessons with both the Jamaica public sector program and the Caribbean regional track program.

2. PROJECT DESCRIPTION

A. Objectives

- 2.1 The objective of this project is to: (i) facilitate the uptake of water adaptation measures in the housing sector across Jamaica, including the use of rain water harvesting systems, water efficient taps and showers, low-flush toilets, efficient irrigation systems, greywater recycling facilities, among other appropriate efficiency measures; (ii) to increase climate resilient housing in Jamaica, through greater awareness of the business and financial cases for developing and building homes with water efficient measures; and (iii) to increase the efficiency

in the use of water by Jamaican homes, improve the reliability of water supply and thereby enhance Jamaica's water security and climate resilience.

B. Description of Model/Solution/Intervention

- 2.2 This operation comprises a PPCR loan with a technical assistance project funded by the MIF PROADAPT Facility. These are intended to be complementary and facilitate the uptake of water adaptation measures in newly built homes in Jamaica. The Loan will facilitate the competitive financing needed by housing developers and construction companies to integrate water adaptation solutions into new housing developments. This will allow housing developers and construction companies to expand the uptake of water efficient measures and to send a strong market signal through enhanced sales and/or bottom lines (see paragraph 2.7 below).
- 2.3 PROADAPT grant resources would fund the technical assistance portion of the model that supports capacity building and generates the evidence needed to make the business and financial case for water adaptation for developers, construction companies and householders. Further, PROADAPT funding will facilitate the successful integration of water adaptation measures into the housing sector, and stimulate the creativity of local entrepreneurs in providing solutions for water efficiency and other climate resilience products and services.

C. Components

Component I: Stakeholder Consultation, Project Launch and Preparation of the Business Case for Water Efficiency (MIF: US\$50,500; Counterpart: US\$38,000; NDF Co-financing: US\$40,000)

Executing Agency: JN Foundation

- 2.4 The objective of this component is to launch the project, engage stakeholders and to make the business and financial case for water efficiency to housing developers, construction companies and to home buyers. This component will fund two separate sets of activities. The first is the launch of the project, including stakeholder consultation and awareness-raising through industry and press events in Kingston and Montego Bay. This set of activities includes the dissemination of promotional material that explains the Loan and the technical assistance program, and introduces cost effective water efficient devices.
- 2.5 A second set of activities under Component I includes (i) the preparation of business cases and benefit-cost analyses for housing developers and construction companies that demonstrate the value of water adaptation/climate resilient measures installed in new build homes; (ii) the presentation of financial cases that address the advantages of water efficiency for home buyers, (iii) a

pilot study on water adaptation measures in Jamaica, in which water use and associated costs can be compared in control homes and homes where water adaptation measures are fitted, (iv) an examination of other high potential opportunities related to climate resilience in Jamaica, and (v) the presentation of a report on the findings of the pilot study. The Jamaican Ministry of Water, Land, Environment and Climate Change (MWLECC) will be invited to actively participate in these activities and related analyses. The relationship of the project with the MWLECC will be coordinated by the Planning Institute of Jamaica, focal point of the PPCR.

Component II: On-Lending for the Integration of Water Adaptation Measures in New Jamaican Housing (PPCR: US\$5,750,000)⁴
Executing Agency: Jamaica National Building Society

2.6 The objective of this component is to integrate water adaptation measures into newly built homes. The Jamaica National Building Society will be the Borrower of the Loan to be funded by the PPCR, and will on-lend to housing developers and construction companies. Loans will facilitate the installation of water saving measures and technologies that would not otherwise have been purchased. These will reduce water demand and improve supply, thereby allowing householders to save on their water bills and build climate resilience. A baseline in terms of efficiency in the use of water will be created in advance of deploying these loans. Decisions regarding specific water efficiency systems will be made by developers or construction companies. Eligible water adaptation measures include water efficient toilets, showers, taps, washing machines, dishwashers, baths, and rainwater harvesting systems, grey water recovery and re-use systems, and outdoor water saving technologies (see Appendix XIII).

⁴ The PPCR sub-committee approved the use of PPCR funds as described within the Project. The IDB is an Implementing Entity of the Strategic Climate Fund (SCX), as outlined in GN-2604. Paragraphs 3.13-3.16 of GN-2604 define the principles of use of SCX funds for NSG operations; Paragraph 3.20 of GN-2604 expressly indicates that all NSG windows of IDB Group will have access to SCX resources. PPCR resources will be provided to the IDB from the World Bank, in its capacity as trustee of the SCX. PPCR resources will be administered by the IDB pursuant to the terms of a Financial Procedures Agreement (FPA) signed between the IDB and the World Bank, as authorized by the Board of Executive Directors in Resolution DE-9/11 (as amended in 2012). The Office of the MIF will be responsible for actively collaborating with other IDB departments (such as ORP/GCM, FIN and LEG) in complying with the fiduciary, reporting, administration and other legal requirements established in the FPA, to ensure that IDB can comply with such obligations on a timely fashion. Furthermore, as stipulated in the FPA, the use of PPCR resources should be consistent with the approvals granted by SCX governing bodies for this project and the applicable policies and guidelines issued by the SCX. Pursuant to such policies and guidelines, PPCR resources include certain fees to assist in the defrayment of project costs for implementation and supervision for an amount in the aggregate of up to US\$ 600,000.

- 2.7 The Project Concept Note for the Use of Resources from the PPCR Private Sector Set-Aside sub-program, titled “Financing Water Adaptation in Jamaica’s New Urban Housing Sector,” was approved by the private sector sub-committee of the PPCR in November 2013. This project pursues the following primary objectives: (i) to facilitate the introduction of water adaptation measures in new private sector housing development and construction across Jamaica, (ii) to increase awareness in the private housing market of the competitive advantages of climate resilience housing, (iii) to improve a more resilient housing stock with improved water infrastructure, and (iv) to increase Jamaica’s water security and climate resilience. The Loan will be on-lent by the Borrower to housing developers and construction companies to finance the implementation of technologies for increasing water efficiency, reducing water insecurity and building climate resilience in residential housing. These technologies include water efficient toilets, taps, showers, fittings, local water storage tanks, rain water harvesting facilities, water recycling facilities and other water efficient measures in residential housing.

A. Terms and Condition of the Loan

- 2.8 The PPCR will fund the senior loan with US\$ 5,750,000, repayable in seven years (the Loan). The Loan will be repayable in local currency, with conversion of currency. Any amounts owed to the Bank by the Borrower shall be payable at the rate of exchange between US Dollars and Jamaican Dollars, as published in the relevant page of “Bloomberg Financial Markets Service” on the date of any relevant Disbursement.

If, for any repayment period, the Bank concludes in its discretion that it cannot determine the exchange rate by reference to such service, the Bank shall notify the Borrower and instead determine the rate by applying another service selected by the Bank in its absolute discretion.

The Loan will be unsecured. MIF will lend make this loan in local currency, Jamaican dollars, and pending approval of the PPCR, the PPCR will assume the currency risk of this loan.

- 2.9 The Loan will be utilized to increase JNBS’ funding and financial capabilities to extend loans to housing developers and construction companies. The end-use of the proceeds of the Loan will be for implementing technologies for increasing water efficiency, reducing water insecurity and building climate resilience.
- 2.10 All disbursements would have to be made within one year following the date of signature of legal agreements (Closing Date). The Loan will be disbursed in three or four installments. A grace period on principal repayments of up to 12 months

may be granted (Grace Period). Loan amortization will not start prior to the end of the disbursement period.

- 2.11 The Loan will have a yearly base interest rate of 5%. There will be no other fees paid by the Borrower.
- 2.12 The MIF will be able to suspend the right of the Borrower to request disbursements, cancel all or any portion of the undisbursed balance of the Loan and ask for immediate repayment if any event of default occurs.
- 2.13 The Borrower will provide usual and customary information, including audited and non-audited financial statements, budgets, business plan, etc. In addition, specific and detailed narrative and financial reports on the use of the PPCR resources shall be sent on a quarterly basis, based on a template of report to be provided by the MIF to ensure standardization and completeness of information received.

B. Supervision

- 2.14 The MIF will supervise the Loan in accordance with its customary practice for loans to financial institutions. Funds ~~[financial or in-kind resources?]~~ provided by the PPCR to the MDBs which act as implementing entities, specifically for the administration of loans, will support the supervision of this loan component.

C. Origins and organization

- 2.15 The Jamaica National Building Society was founded on the principle of mutuality which has guided the JNBS' progress and conduct throughout its 139 years of existence. JNBS is the product of a series of mergers pioneered by the Westmoreland Building Society.
- 2.16 JNBS is a licensed deposit-taking institution under the Bank of Jamaica (Building Societies) Regulations. Building societies offer banking and related financial services, especially savings and mortgage lending. Jamaica National is ranked among Jamaica's largest financial institutions offering a blend of financial services and mortgage plans to customers living in Jamaica and abroad.
- 2.17 **Activities and services.** As a building society, JNBS is primarily active in mortgage financing. JNBS maintains its position as the leading mortgage provider among building societies in Jamaica, with 51 % of the market share in mortgage loans. Moreover, JNBS constitutes currently the largest mortgage lender in the Caribbean region. As a building society and not a commercial bank, JNBS cannot offer current accounts / checking accounts to its members. In addition, JNBS is not active in consumer loans (car loans, loans to purchase

- appliances and electronics, etc.), large corporate loans or corporate lines of credit.
- 2.18 Late in 2013, JNBS re-applied for a formal banking license to the Bank of Jamaica (BoJ). Other among key benefits, JNBS would be allowed to issue checking accounts and credit cards to their clients, in addition to cater to the consumer/personal loan markets. This application is still active, but to date the license has not been granted.
- 2.19 JNBS owns nine subsidiaries (insurance companies, a money services company, etc.), partly or fully owns a few real estate companies, and is founder of the JN Foundation. JNBS has a staff of 995 persons, segregated between a permanent staff of 633, plus 362 persons working on a contractual basis.
- 2.20 **Funding cost.** With regards to long-term borrowings, seven or eight of the most recent loans granted to JNBS by the Development Bank of Jamaica were at a rate of 10 % p.a. JNBS has also received funding from the National Insurance Fund at a 4 % interest rate, and has received commercial lending at rates ranging from 9% to 10 %.
- 2.21 **Governance structure.** The JNBS governance structure is comprised of the Board of Directors and four Board sub-committees (Executive Committee, Audit, Finance and Compensation Committees). The Risk Management and Internal Audit Units are also included as part of the internal governance structure.
- 2.23 The majority of the Board is made up of independent directors. The company currently has a Board of Directors of 12 members. In 2014, new Board Committees were created with new oversight responsibilities to ensure that risks are identified and managed on a proactive basis.

Directors	Title/ Years on Board
Hon. Oliver F. Clarke	Chairman/ 20 + 12 years
Dr. Dhiru Tanna	Deputy Chairman/ 12 years
Mr. Earl Jarrett	Member/ 12 years (<i>GM of JNBS</i>)
Hon. Dorothy Pine-McLarty	Member/ 16 years
Mr. Parris Lyew-Ayee	Member/ 8 years
Ms. Jennifer Martin	Member/ 14 years
Mr. William Mahfood	Member/ 9 years
Mr. Peter Morris	Member/ 21 years
Mr. John Small	Member/ 16 years
Mr. Raphael Gordon	Member/ 5 years
Ms. Kathleen Moss	Member/ 2 years

Ms. Jacqueline Robotham	Member/ 1 year
-------------------------	----------------

D. Financial Analysis

- 2.24 **Portfolio.** JNBS's portfolio is largely comprised of mortgage loans: housing financing represents over 95% of JNBS' loan book. As would be expected, over 92% of the portfolio's term is for 5 years or more.
- 2.25 **PAR and provisioning.** The provision for loan losses in the balance sheet totalled US\$ 22.4 million at the end of March 2014. This provision represented 4.6% of the gross portfolio. Loans over 90 days overdue totalled 10.3 % of the gross portfolio as of March 2014. This ratio improved during the 2013-14 financial year, from 11.9 % in March 2013.
- 2.26 **Historical Results.** The following tables present the historical figures of JNBS and key ratio analysis over the last three full financial exercises, plus the nine-month period to December 2014.

<i>Amounts in Million USD</i>	<i>JNBS Society Only - Historical Figures</i>			
SUMMARY OF RESULTS	March 2012	March 2013	March 2014	Dec 2014
<u>Balance Sheet</u>				
Current assets	580,5	548,9	579,3	574,6
Net portfolio	488,3	482,1	468,1	469,7
Other assets	39,4	37,9	43,2	34,1
Fixed assets	21,8	20,3	19,4	22,6
Total assets	1 130,0	1 089,1	1 109,9	1 101,0
Savings	814,4	784,9	763,7	751,2
Other liabilities	126,6	133,6	178,5	181,1
Total liabilities	941,0	918,5	942,2	932,2
Capital base	144,8	129,5	135,4	NA
Accum prof/ (losses) + reserve	44,2	41,1	32,4	NA
Net equity	189,0	170,6	167,8	168,7
Total liabilities and equity	1 130,0	1 089,1	1 109,9	1 101,0
<u>Income Statement</u>				
Interest revenues	81,8	74,0	69,7	56,2
Interest expenses	-18,2	-17,1	-12,7	-11,7
Net interest revenue	63,7	56,8	57,0	44,6
Other operating income	21,5	23,6	26,3	14,5
Operating expenses	-67,9	-69,1	-63,4	-49,8
Net operating income	17,2	11,3	19,9	9,3
Non oper income/ (loss)	5,2	-4,0	3,6	2,9
Taxes	-6,0	-4,2	-6,6	-3,1
Net surplus	16,4	3,1	16,9	9,2
<u>Financial Structure</u>				

Net portfolio/ total assets	43,2%	44,3%	42,2%	42,7%
Reserve/ gross portfolio	3,6%	4,5%	4,6%	NA
Debt ratio	4,98	5,38	5,62	5,53
<u>Productivity</u>				
Interest rev/ avr assets		7,0%	6,7%	-
Net int rev/ avr assets		5,4%	5,5%	-
<u>Costs</u>				
Int expenses/ avr liabilities		1,9%	1,4%	-
Operating exp/ avr assets		6,6%	6,1%	-
<u>Profitability</u>				
Net interest margin	77,8%	76,8%	81,8%	79,2%
Operating margin	16,6%	11,6%	20,7%	13,2%
Net margin	15,9%	3,2%	17,6%	13,0%
<u>Sustainability</u>				
ROA- Oper income/ avr assets		1,1%	1,9%	-
ROE- Net income/ avr equity		1,9%	10,6%	-

- 2.27 JNBS represents, in asset terms, over 73% of the JN Group. The remaining assets are shared among the rest of subsidiaries: JN General Insurance, JN Life Insurance Company Limited, JN Foundation, Jamaica Automobile Association, JN Fund Managers Ltd., JN Small Business Loans and JN Money Services. The loan portfolio accounted for only 42% of the total assets in March 2014. In other words, JNBS is as much an investment company, investing the savings of its members in low-risk bonds and government papers, as a financial intermediary focusing on on-lending.
- 2.28 Therefore, the financial revenues of the Group and the JNBS are derived as much from income from investments as from interest and commission on its loan portfolio. As at March 2014, 42% of the Group's financial income came from these investments; for JNBS, this ratio was a bit lower, but still significant at 36%.
- 2.29 JNBS has shown overall profitability over the last three financial years and for the nine-month period ending in December 2014. Its solvency level is good, with a debt ratio of 5.5 (total debts on net equity) and a capitalization ratio of 15.3 % in December 2014 (15.1 % in March 2014).
- 2.30 **External audit.** JNBS has been audited by KPMG for decades. The financial statements of JNBS are prepared in accordance with the International Financial Reporting Standards (IFRS), as issued by the IASB. The 2014 annual audit report provides an unqualified opinion of the audit firm on the financial statements. KPMG was also reappointed as external auditor for the financial year 2015.

Component III: Building Professional Technical Capacity in Water Adaptation (MIF: US\$61,700; Counterpart: \$8,500; NDF Co-financing: US\$30,000)

Executing Agency: JN Foundation

2.31 The objective of this component is to build the capacity needed to integrate water adaptation measures in new homes, including those financed by the loans to be provided by JNBS. This component will support the following activities: (i) the preparation of water adaptation guidelines for technical professionals who are involved in the design and specification of new homes (architects, drainage engineers and planners); (ii) an industry training event on these guidelines; (iii) a 35-hour training module on the installation of rainwater harvesting and grey water recycling systems; (iv) a ‘Training of Trainers’ event for this module; and (v) training for Jamaican National Building Society staff and loan officers on the importance of climate change and resilience and on new incentives put in place by JNBS to encourage loan officers to highlight water efficiency to their customers.

Component IV. Fostering Entrepreneurship in Climate Resilience (MIF: US\$46,400; Counterpart: US\$5,000; NDF Co-financing: US\$30,000)

Executing Agency: JN Foundation

2.32 Climate risks associated with anthropogenic climate change drive an increasing demand for a wide range of products and services that protect property, households and businesses. These risks include flooding, drought, heat waves, extreme wind, sea level rise, variable precipitation and opportunistic pests, among other climate-related threats. The objective of this component is to increase market awareness of this demand and of the related business opportunities for MSMEs in Jamaica, and to help firms exploit these opportunities by incorporating climate resilience into their business models. The Jamaican National Foundation has extensive experience working with smaller enterprises through its USAID-supported “SEBI” Program, which includes support for business start-ups, development and incubators. JNF will conduct a survey of firms that supply water efficiency solutions in Jamaica, as well as a sample of firms from other sectors that produce climate resilience solutions (e.g. in agriculture, building and construction, tourism etc.), and launch a Climate Resilience Innovation Challenge to identify promising MSMEs that deliver climate resilient solutions, including in water adaptation. This Challenge will solicit a call for proposals, a two day ‘boot camp,’ for those proposals that are accepted, and then the selection of 2-3 winners to be awarded a grant for their business and a mentoring program.

Component V: Knowledge Management and Communications Strategy (MIF: US\$175,000; Counterpart: US\$22,000)

Executing Agency: JN Foundation

- 2.33 The objective of this component is to disseminate the lessons and knowledge generated in this project and to underscore the need for broader water adaptation systems in housing. This project fits into knowledge sharing and dissemination strategy of the PROADAPT Facility, by generating new market information and supporting business models related to climate resilience, and by sharing lessons learned both inside Jamaica and among outside stakeholders, using a variety of knowledge products and events. The target audience of this component includes housing developers and construction companies, households, housing designers, suppliers of water adaptation systems, financial institutions and public institutions such as the Ministry of Water, Land, Environment and Climate Change and the National Water Commission
- 2.34 The main activities of this component are (i) the development of a home owners' guide to water management, (ii) the creation of an online knowledge platform to document knowledge generated by the project, (iii) the design of a communications strategy, including awareness-raising events to present the business and financial cases to multiple stakeholders, (iv) the launch of the Climate Resilience Innovation Challenge, and (v) the hosting of a Climate Change, Sustainability and Innovation Summit at the end of the project.

E. Project Governance and Execution Mechanism

- 2.35 The Executing Agency for this PROADAPT technical assistance project is the Jamaica National Foundation (JNF), an approved charitable organization funded by contributions from Jamaica National Building Society (JNBS) and others. The JNF has successfully executed a previous MIF project (JA-M1019) on the financial mainstreaming of migrant remittances in Jamaica. The JNBS is the Borrower of the \$5.75 million Loan. JNBS is one of Jamaica's largest financial institutions offering a range of products including savings, loans, insurance, remittances, pension funds, retirement schemes and foreign currency exchange. JNBS is primarily active in mortgage financing (residential mortgage loans account for over 95% of its portfolio) and is currently the largest mortgage lender in the Caribbean region. JNBS also offers commercial mortgages to commercial real estate clients, to expand business premises and to construct condominiums and higher density residential properties. JNBS and JNF will liaise closely to ensure effective sequencing of activities, delivery and monitoring and evaluation.

F. Sustainability

- 2.36 Sustainability for this project means that water adaptation and efficiency measures will become integrated into new housing in Jamaica and retrofitted into existing houses, with a market demand for such measures that is met largely by local suppliers of products and services. Achieving this will require (i) a demonstration of the business and financial cases for integrated water adaptation measures for housing developers, construction companies and home buyers; (ii) greater technical capability among (a) professionals who design new homes, (b) suppliers and installers of relevant efficiency measures, and (c) loan officers and others in financial institutions, such as JNBS, providing more climate resilience focused loans; and (iii) the development of incentives to encourage retrofitting in existing dwellings.

G. Experience and Lessons Learned from MIF or other Institutions

- 2.37 The project team has incorporated lessons learned from several Bank initiatives, including the IDB Water and Sanitation Initiative, the 100 Cities Program, the Aguas Andinas case, and Bank-funded knowledge products such as Challenges and Opportunities for Water-Based Adaptation to Climate Change: Elements for a Regional Agenda. Important lessons learned include the various ways that drought can affect water provision. In Jamaica, the design team has learned about important aspects of water supply from the Bank project, Integrated Management of the Yallahs-Hope Watershed Management Area (JA-G1001), particularly regarding the complexity of communications between private and public stakeholders.

H. MIF Additionality

- 2.39 Financial Additionality. The MIF contribution is critical to the outcome of this project because housing developers and construction companies would not otherwise have access to targeted financing for water efficiency in new build housing.
- 2.40 Non-Financial Additionality. MIF offers non-financial additionality through its convening power with different stakeholders, its regional and global networks for the dissemination of results and sharing knowledge, and its ability to attract and leverage financial and non-financial support from additional donors and organizations.

I. Project Results

- 2.41 This project expects to affect changes in the behavior of market participants in Jamaica with respect to lending, borrowing, purchasing and installing water efficient solutions in residential homes. Toward this end, the project employs several results indicators to assess changes caused by this project, including: (i) greater interest among developers and construction companies in loans targeted on water adaptation, (ii) the number of persons skilled in rainwater harvesting and greywater recycling techniques, (iii) the number of new homes accessing water efficient products, and (iv) the number of water efficient products and measures in place per home.

J. Project Impact

- 2.42 This project aims to achieve wide impact by demonstrating the business case for water adaptation measures in new home construction, and the financial case for prospective buyers of these solutions. Such demonstrations will in turn generate business opportunities for the local suppliers of water efficient products and services, while lowering water costs to homeowners and improving water security in Jamaica.

K. Systemic Impact

- 2.43 This project addresses the growing need for private sector participation in building climate resilience in the Caribbean Basin, Central America, and other areas in Latin America. This project is a private sector pilot, which if successful has a high potential for scale and replication across the LAC region and in similar markets facing climatic challenges to water security. JNBS, the Borrower of the Loan, is the largest mortgage lender in the Caribbean Basin and has expressed interest in expanding its portfolio of water adaptation loan products to other markets in the region.

3. MONITORING AND EVALUATION STRATEGY

- 3.1 Baseline: A baseline will be established in first six months of the project. At the project inception the log frame will be confirmed and required baseline data will be collated. This will include, for example, various metrics of water usage and cost, by public and private (i.e. trucked) provision. The baseline will reflect the results and impact indicators of the logical framework.

- 3.2 **Monitoring:** JNF will be responsible for coordinating and tracking data collection and monitoring and will report to the MIF using the Project Status Report (PSR) system, under the supervision of the MIF Supervision Team Leader.
- 3.3 **Evaluation:** The project will undergo a midterm and a final evaluation. The midterm evaluation will be undertaken half-way through the project (either upon reaching 50% of disbursements or 50% of the execution period, whichever occurs first). In addition, the achievement of any results or impacts will be assessed and will be informed by the tracking of the indicators. The midterm evaluation will be used primarily for immediate feedback, recommendations or lessons learned to the project team. The final evaluation will be conducted after the execution of the project and will focus primarily on the extent to which the project beneficiaries received the intended results and impacts.
- 3.4 **Closing Workshop.** The MIF, the JN Foundation, JNBS and other stakeholders will organize a closing workshop to assess outcomes achieved, identify additional tasks to guarantee sustainability and to identify and disseminate lessons learned and best practices.

4. COST AND FINANCING

- 4.1 The project has a total cost of US\$6,943,900 of which US\$5,750,000 (83%) will be provided by the PPCR, US\$744,600 (11%) by the MIF and US\$449,300 (6%) by JNF as counterpart resources. The tenor of the Loan (Component II) will be up to 84 months (seven years). The Loan may be disbursed in three to five instalments. The execution period for the technical assistance (Components I, III, IV and V) will be 48 months and the disbursement period will be 50 months.

	PPCR (US\$)	MIF (US\$)	Counterpart (US\$)	Co-financing	Total (US\$)
Project Components					
Component I: Stakeholder Consultation, Project Launch and Preparation of the Business Case for Water Efficiency	0	50,500	38,000	40,000	128,500
Component II: On-Lending for the Integration of Water Adaptation Measures in New Jamaican Housing	5,750,000	0	0		5,750,000
Component III: Building Professional Technical Capacity in Water Adaptation	0	61,700	8,500	30,000	100,200
Component IV: Fostering Entrepreneurship in Climate Resilience	0	46,400	5,000	30,000	81,400
Component V: Knowledge Management and Communications Strategy	0	175,500	22,000		197,500
Execution and Supervision Components					
Project Manager	0	156,000	175,000		331,000

Administrator	0	0	186,400		186,400
Baseline	0	10,000	0		10,000
Monitoring System	0	0	14,400		14,400
Mid-Term Evaluation	0	20,000	0		20,000
Final Evaluation	0	20,000	0		20,000
Ex post reviews	0	20,000	0		20,000
Contingencies	0	30,000	0		30,000
Sub-total	5,750,000	590,100	449,300	100,000	6,889,400
% of Financing	0	0	0		0
Impact Evaluation Account	0	34,500	0		34,500
Agenda Account	0	20,000	0		20,000
Grand Total	5,750,000	644,600	449,300	100,000	6,943,900

5. EXECUTING AGENCY

5.1 The Executing Agency for this project is the Jamaica National Foundation (JNF), an approved charitable organization funded by contributions from JNBS and its subsidiaries. The Jamaica National Building Society is the Borrower of the \$5.75 million Loan. JNBS is the leading mortgage provider among building societies in Jamaica, and is currently the largest mortgage lender in the Caribbean region. The JNF has successfully executed a previous MIF project (MIF/AT-1022) on financial mainstreaming of migrant remittances in Jamaica. The JNF, in collaboration with USAID, launched the SEBI-Social Enterprise Boost Initiative program in 2013. The major goals of SEBI are to foster and encourage the growth and development of social enterprises. The beneficiaries of this program will be equipped with the knowledge, mind set and tools to operate and sustain profitable businesses while realizing the social missions of their companies. This aligns with the project's commitment to creating business opportunities for water adaptation measure designers, suppliers and installers, many of whom are MSMEs.

6. PROJECT RISKS

- 6.1 Risks specific to this project include:
- i. **Low Loan Uptake** - Housing developers and construction companies decline to borrow for water adaptation measures; Mitigation Action: The Project Team has implemented three design missions with the objective, among others, to assess the demand for these investments within housing developers in Jamaica. These consultations were very positive with respect to the potential demand for these technologies. In addition, technical assistance will provide the business case and benefits of the project, along with awareness-raising and capacity building in developers and construction companies;

- ii. **Demand Risks** - Low Demand by homeowners for water efficiency; Mitigating Action: Technical assistance that builds the financial case for householders as to the cost and benefits of water efficient products and practices, and raising awareness among householders on climate change and water security;
- iii. **Technology Risks** - Poor Installation or maintenance could cause product failure – a leading cause of failure in similar programs; Mitigating Action: The development of guidance and training modules on installation and basic maintenance of water adaptation measures;
- iv. **Environmental/Climate Risks** - Rainwater harvesting depends on frequency and amount of rainfall and is ineffective in prolonged drought; Mitigating Action: The ultimate objective of the project is to reduce this risk by building capacities related climate resilience and introducing specific resilient technologies and practices;
- v. **Credit risks** - Household borrowers could assume imprudent levels of debt when buying water efficient measures; Mitigating Actions - Stringent credit scoring, portfolio management and strong client focus by JNBS will mitigate this risk.
- vi. **High level of arrears** – This risk is identified in the due diligence report. The high level of arrears refers to the mortgage market of JNBS, which represents 95% of the net portfolio. For commercial loans, the level of arrears is much lower. Mitigating Action: Stringent portfolio management and risk assessment of commercial clients.
- vii. **Reputational risk** - JNBS owns a money transfer business, JN Money Services. This poses the potential for reputational and operational risks in that such types of businesses can be a vehicle for money laundering. The JN Group is well aware of this risk and has stepped up vigilance at the level of internal audits. Suspicious transactions have been cancelled and a few staff have been removed for wrongdoing. Mitigating Action: Proper auditing provisions and control will be in place to minimize this risk.
Currency risk – An adverse move in the Jamaican dollar could undermine the ability of JNBS to repay the Loan. Mitigating factor: The Loan would be repayable in local currency, Jamaican dollars.

7. ENVIRONMENTAL AND SOCIAL EFFECTS

- 7.1 This project aims to improve climate resilience of the housing sector in Jamaica while delivering a number of positive environmental, social effects and economic outcomes. No negative environmental impacts are foreseen in the execution of this project.

8. COMPLIANCE WITH MILESTONES AND SPECIAL FIDUCIARY ARRANGEMENTS

- 8.1 **Disbursement by Results and Fiduciary Arrangements.** The Executing Agency will adhere to the standard MIF disbursement by results, procurement and

financial management arrangements specified in Annex VIII related to the technical cooperation.

9. INFORMATION DISCLOSURE AND INTELLECTUAL PROPERTY

- 9.1 **Information Disclosure.** Project information is confidential in accordance with the Bank's Access to Information Policy.
- 9.2 **Intellectual Property.** The Inter-American Development Bank will own relevant IP rights related to the project.

References

CCCCC (2009). Development of a national water sector adaptation strategy to address climate change in Jamaica.

CEHI (2009). Rainwater: Catch It While You Can: A Handbook on Rainwater Harvesting in the Caribbean.

CSGM (Climate Studies Group, Mona) (2012). State of the Jamaican Climate 2012: Information for Resilience Building (Full Report). Produced for the Planning Institute of Jamaica (PIOJ), Kingston Jamaica.

Department for Environment Food and Rural Affairs (Defra) (2014). Enhanced capital allowance scheme for water: Water Technology Criteria List. Defra
Environmental Protection Agency (EPA) of the United States, WaterSense (2015). Water-efficient toilets. EPA. Available from:
<http://www.epa.gov/WaterSense/products/toilets.html>.

Government of Jamaica (2011a). Jamaica Strategic Program for Climate Resilience. Prepared for the Pilot Program for Climate Resilience.

Government of Jamaica (2011b). The Second National Communication of Jamaica to the UNFCCC. Government of Jamaica.

IDB Mission Report (2015). Consultancy to Support the Pilot Programs for Climate Resilience in Jamaica and Saint Lucia – Private Sector Set Aside for PPCR.

IDB Financial Market Analysis (2015b). Consultancy to Support the Pilot Programs for Climate Resilience in Jamaica and Saint Lucia – Private Sector Set Aside for PPCR.

Ministry of Transport Works and Housing (2014). JAMAICA Habitat III National Report 2014. Third United Nations Conference on Housing and Sustainable Urban Development (HABITAT III).

Paquin, JF (2015). Operational and Financial Due Diligence and Review of Activities Report. Consultancy to Support the Pilot Program for Climate Resilience in Jamaica– Private Sector Set Aside for PPCR.

Planning Institute of Jamaica (2013). Economic and Social Survey Jamaica 2013.

Statistical Institute of Jamaica (2011). Population Census of Jamaica 2011. Available from: <http://statinja.gov.jm/Census/PopCensus/Popcensus2011Index.aspx>

UN Water (2013). What is Water Security? Available from: http://www.unwater.org/fileadmin/user_upload/unwater_new/docs/water_security_poster_Oct2013.pdf

World Bank (2004). The Road to Sustained Growth in Jamaica. World Bank Country Study Series.

Annex I Logical Framework



Financing water adaptation in Jamaica’s new housing sector
(JA- M1034)

IMPACT						RISKS	
<p>Housing developers and construction companies report improved business through inclusion of water adaptation measures in new build homes. There is growth in the market for supply and installation of water adaptation goods and services. Jamaican householders have reduced water costs.</p>	<p>Indicator 1</p>	<p>Month 0 Baseline</p>	<p>Month 12</p>	<p>Month 24 (Cumulative)</p>	<p>Month 36 (Cumulative)</p>	<p>Month 48 (Cumulative)</p>	<p>The project does not incentivize housing developers and construction companies to take loans to integrate water adaptation measures into homes. New businesses are not incentivised to supply/install water adaptation measures. There is limited demand from prospective homeowners for water adaptation measures due to financial constraints or lack of a financial case having been made.</p>
	<p>Number of housing development/construction firms reporting being able to sell new build homes (including water adaptation measures) at a premium price and/or with an enhanced marketing capability that differentiates their property from others. There will be disaggregation by gender.</p>	<p>0</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>77</p>	
	<p>Formula/Definition</p>						
	<p>Selling homes with water adaptation measures installed at a premium price and/or with an enhanced marketing capability demonstrates the business case has been made for housing developers and construction companies to deliver water adaptation in Jamaica. Reporting will be conducted through communications with loan officers.</p>	<p>Source: Loan monitoring reports. <i>It is assumed that each firm accessing credit will fit approximately 50 homes with water adaptation measures costing \$1500; thus 77 firms will fit 3850 homes at a value of \$5,750,000. Assumption that all firms report improved business through involvement in loan scheme.</i></p>					
	<p>Indicator 2</p>	<p>Month 0 Baseline</p>	<p>Month 12</p>	<p>Month 24 (Cumulative)</p>	<p>Month 36 (Cumulative)</p>	<p>Month 48 (Cumulative)</p>	
	<p>Percentage of suppliers and installers of water adaptation goods</p>	<p>0</p>	<p>NA</p>	<p>10%</p>	<p>NA</p>	<p>50%</p>	

and services reporting sales growth.					
Formula/Definition					
Increasing sales of water adaptation goods and services (reported through the TC survey) demonstrates growth in the market for water adaptation in Jamaica.	Source: Baseline and update assessment of water adaptation suppliers and installers.				
Indicator 3	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Average of householders' reduction in annual water costs.	0	NA	30%		
Formula/Definition					
Reductions in the cost of water resulting from water adaptation measures demonstrate that the financial case for water adaptation has been strengthened in Jamaica.	Source: Pilot study monitoring report. <i>It is assumed that all householders that have water adaptation measures fitted under the pilot study will experience a reduction in their annual water costs compared with control households.</i>				
Indicator 4	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Number of households with reduced annual water costs. There will be disaggregation by women and men-headed households.	0	383	958	1917	3833
Formula/Definition					
Reduced water costs as a result of fitting water adaptation measures would demonstrate that the financial case for water adaptation has been strengthened in Jamaica.	Source: Pilot study monitoring report; Loan monitoring reports (making extrapolations from pilot study monitoring reports). <i>It is assumed that the percentage of householders that have reduced water costs after fitting water adaptation measures under the pilot study equals the percentage of householders that have reduced water costs after fitting water adaptation measures under the loan scheme. It is assumed that 10%, 25%, 50% and 100% of loans are dispersed over Years 1, 2, 3 and 4 respectively, and that all fitted homes experience cost reductions.</i>				
Indicator 5	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>

	Number of households with reduced piped/ trucked water use, and reduced negative impact during water lock offs. There will be disaggregation by women and men-headed households.	0	383	958	1917	3833	
	Formula/Definition						
	Reduced reliance on piped and trucked water, and reduced negative impacts during water locks offs (i.e. reduced impact on water availability) demonstrates improved water security.	Source: Pilot study monitoring report; Loan monitoring reports (making extrapolations from pilot study monitoring reports). It is assumed that the percentage of householders that have reduced piped/ trucked water and reduced negative impacts from locks offs under the pilot study equals the percentage of householders that have reduced piped/ trucked water and reduced negative impact from locks offs under the loan program. Assumptions that all homes covered under the loan scheme experience these benefits.					
	<i>Spare for editing</i>	<i>Month 0 Baseline</i>	<i>Month X</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>	
	Formula/Definition						
		Source:					
RESULTS							RISKS
Housing developers and construction companies express interest in accessing water adaptation loans under this scheme and in future. The number of persons skilled in rainwater harvesting and grey water recycling installation	Indicator 1	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>	The project does not incentivize housing developers and construction companies to take loans to integrate water adaptation measures into homes.
	Number of housing development/construction firms expressing interest in accessing water adaptation loans.	0	21	57	117	231	
	Formula/Definition						
	Expressions of interest in the loan scheme demonstrate a positive attitude towards building water resilience in Jamaica's housing sector.	Source: Loan monitoring reports. (Loan officers to record number of expressions of interest in water adaptation loans via email, telephone, one-to-one meeting). It is assumed that there is approximately a 3:1 ratio of those expressing interest to those accessing the loan.					

increases. The number of new build homes with access to water adaptation measures increases.	Indicator 2	<i>Month 0 Baseline</i>	<i>Month 48</i>			
	Number of persons skilled in rainwater harvesting and grey water recycling techniques installation as a result of this scheme. This will be disaggregated by gender	0	50			
	Formula/Definition					
	An increase in the number of persons skilled in rainwater harvesting and grey water recycling techniques demonstrates increased capacity to deliver water adaptation in Jamaica.	Source: Project progress report (post Training of Trainers)				
	Indicator 3	<i>Month 0 Baseline</i>	<i>Month 24</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>	<i>Month 60 (Cumulative)</i>
	Number of new homes (Disaggregated by women and men headed households)that have access to water adaptation measures as a result of this scheme.	0	350	950	1950	3850
	Formula/Definition					
	Access to water adaptation measures demonstrates increased climate resilience.	Source: Loan monitoring reports. <i>It is assumed that each firm seeking credit will fit approximately 50 homes with water adaptation measures costing \$1500, and that there is a one year time lag between loan disbursement and construction completion. A home is defined as a single unit.</i>				
	Indicator 4	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
	Number of water adaptation measures accessed by householders as a result of this scheme.	0	1050	2850	5850	11550
Formula/Definition						
Access to water adaptation	Source: Loan monitoring reports.					

measures demonstrates increased climate resilience.	<i>It is assumed that each home is fitted with three measures on average.</i>				
Indicator 5	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Range of water adaptation measures accessed per home.	0	2	2	4	4
Formula/Definition					
Installation of an increased number of water adaptation measures per home demonstrates strengthening appetite for climate resilience. Average number of water adaptation measures installed per home.	Source: <i>Loan monitoring reports. (Breakdown of which measures are installed should be reported).</i>				
<i>Spare for editing</i>	<i>Month 0 Baseline</i>	<i>Month X</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>
Formula/Definition					
	Source:				

COMPONENT I: Loan for the integration of water adaptation measures in Jamaican housing

RISKS

Loans are utilized by housing developers and construction companies to integrate water adaptation measures into new build homes.

Indicator 1	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Total deployed amount (value) of credit for housing development/ construction firms under the context of this project.	\$0	\$575,000	\$1,437,500	\$2,875,000	\$5,750,000
Formula/Definition					
	Source: <i>Loan monitoring reports. It is assumed that the full loan value of \$5,750,000 is deployed. 10%, 25%, 50% and 100% of loans are dispersed over Years 1, 2, 3 and 4 respectively.</i>				
Indicator 2	<i>Month 0 Baseline</i>	<i>Month 84</i>			
Total repaid amount (value) of credit	\$0	\$5,750,000			

The project does not incentivize housing developers and construction companies to take loans to integrate water adaptation measures into homes.

	by housing development/ construction firms under the context of this project.								
	Formula/Definition								
	Source: Loan monitoring reports. It is assumed that the full loan value of \$5,750,000 is repaid.								
	Indicator 3	Month 0 Baseline	Month 12	Month 24 (Cumulative)	Month 36 (Cumulative)	Month 48 (Cumulative)			
	Number of housing development/ construction firms (Disaggregated by women and men-led companies) accessing credit through the loan project.	0	7	19	39	77			
	Formula/Definition								
	Source: Loan monitoring reports. It is assumed that each housing development/ construction firm seeking credit will fit approximately 50 homes with water adaptation measures, each costing \$1500 (average total loan size = \$75,000). 10%, 25%, 50% and 100% of loans are dispersed over Years 1, 2, 3 and 4 respectively.								
COMPONENT II: TA/ Subcomponent 1: Launch; development and roll out the business and financial case for climate resilient investments								RISKS	
Launch; development and roll out the business and financial case for climate resilient investments	Indicator 1	Month 0 Baseline	Month 6					Project stakeholders do not provide input data required to build business and financial cases.	
	Number of launch events hosted.	0	2						
	Formula/Definition								
	Source: Project progress report.								
	Indicator 2	Month 0 Baseline	Month 12						
	Number of business and financial cases for water and climate resilient technologies prepared.	0	15						
	Formula/Definition								
	Source: Project progress report; business & financial case report and spreadsheets.								

	Indicator 3	<i>Month 0 Baseline</i>	<i>Month 24</i>					
	Number of pilot study households that report reductions in annual water costs, reduced use of piped and trucked water and reduced negative impact from water locks offs.	0	6					
	Formula/Definition							
	All 'fitted' households report these benefits.	Source: Pilot study monitoring reports.						
	<i>Spare for editing</i>	<i>Month 0 Baseline</i>	<i>Month X</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>	<i>Month X (Cumulative)</i>		
	Formula/Definition							
		Source:						
COMPONENT II: TA/ Subcomponent 2: Building technical capacity (guidance, training and mentoring on water adaptation in the home)							RISKS	
Building technical capacity (guidance, training and mentoring on water adaptation in the home)	Indicator 1	<i>Month 0 Baseline</i>	<i>Month 24</i>				Training does not attract relevant stakeholders.	
	Number of water adaptation guidelines for architects, drainage engineers and planners developed.	0	1					
	Formula/Definition							
		Source: Water adaptation guidelines for architects, drainage engineers and planners.						
	Indicator 2	<i>Month 0 Baseline</i>	<i>Month 24</i>					
Number of architects, drainage engineers and planners (Disaggregated by women and men-led companies) trained in the guidelines.	0	50						
	Formula/Definition							

		Source: Training register.				
Indicator 3	Month 0 Baseline	Month 24				
Number of training modules on rainwater harvesting and grey water recycling techniques developed.	0	1				
Formula/Definition						
	Source: Training slide packs and guidance for the 35 hour 'customised course' module on rainwater harvesting and grey water recycling systems.					
Indicator 4	Month 0 Baseline	Month 24				
Number of 'trainers' (Disaggregated by women and men-led companies) that receive rainwater harvesting and grey water recycling systems 'Training of Trainers'.	0	20				
Formula/Definition						
	Source: Training register.					
Indicator 5	Month 0 Baseline	Month 12	Month 24 (Cumulative)	Month 36 (Cumulative)	Month 48 (Cumulative)	
Number of internal JNBS climate change awareness-raising events hosted.	0	1	2	3	4	
Formula/Definition						
	Source: Training register.					
Spare for editing	Month 0 Baseline	Month X				
Formula/Definition						
	Source:					
COMPONENT II: TA/ Subcomponent 3: Resilience Entrepreneurship Program						RISKS
Resilience Entrepreneurship	Indicator 1	Month 0 Baseline	Month 24			
						Resilience Innovation Challenge does not attract

Program	Number of Resilience Innovation Challenge applicants.	0	60				relevant stakeholders.	
	Formula/Definition							
	Source: Resilience Innovation Challenge report.							
	Indicator 2	<i>Month 0 Baseline</i>	<i>Month 24</i>					
	Number of Resilience Innovation Challenge Boot Camp attendees.	0	30					
	Formula/Definition							
	Source: Resilience Innovation Challenge report.							
	Indicator 3	<i>Month 0 Baseline</i>	<i>Month 48</i>					
	Number of Resilience Innovation Challenge winners reporting intention to market climate resilient measures in Jamaica.	0	3					
	Formula/Definition							
Source: Resilience Innovation Challenge report.								
<i>Spare for editing</i>	<i>Month 0 Baseline</i>	<i>Month X</i>						
Formula/Definition								
Source:								
COMPONENT II: TA/ Subcomponent 4: Knowledge management and communications strategy							RISKS	
Knowledge management and communications strategy	Indicator 1	<i>Month 0 Baseline</i>	<i>Month 6</i>				Key stakeholder groups are not reached through outreach activities.	
	Number of home owners' guides to water management developed.	0	1					
	Formula/Definition							
	Source: Project progress report.							
Indicator 2	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>			
Number of times that the Online	0	1200	2400	3600	4800			

Platform is accessed.					
Formula/Definition					
100 hits per month assumed.	Source: Project progress report. Google Analytics.				
Indicator 3	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Number of times that the water/costs savings calculator is used on the Online Platform.	0	NA	120	240	360
Formula/Definition					
10 hits per month once Platform is operational in Year 2.	Source: Project progress report. Google Analytics.				
Indicator 4	<i>Month 0 Baseline</i>	<i>Month 12</i>	<i>Month 24 (Cumulative)</i>	<i>Month 36 (Cumulative)</i>	<i>Month 48 (Cumulative)</i>
Number of awareness-raising events hosted.	0	3	6	9	12
Formula/Definition					
	Source: Project progress reports.				
<i>Spare for editing</i>	<i>Month 0 Baseline</i>	<i>Month X</i>			
Formula/Definition					
	Source:				

Annex II Budget Summary

PROADAPT JAMAICA: FINANCING WATER ADAPTATION IN JAMAICA'S NEW HOUSING SECTOR	MIF + NDF Co-financing	Counterpart	TOTAL
Component I: Stakeholder Consultation, Project Launch and Preparation of the Business Case for Water Efficiency	\$ 90,500	\$ 38,000	\$ 128,500
1.1 Launch and awareness-raising	30,500	3,500	34,000
1.2 Development of business cases and benefit-cost analyses	47,000	3,000	50,000
1.3 Pilot study on water adaptation measures in Jamaica	3,000	27,000	30,000
1.4 Presentation of pilot study report and findings	10,000	4,500	14,500
Component II: Building Professional Technical Capacity in Water Adaptation	\$ 91,700	\$ 8,500	\$ 100,200
2.1 Preparation of water adaptation guidelines for technical professionals	17,500	-	17,500
2.2 Industry training event on these guidelines	15,000	1,000	16,000
2.3 Training on the installation of rainwater harvesting and grey water recycling systems	15,000	-	15,000
2.4 'Training of Trainers' event for the module on the installation of water systems	35,000	-	35,000
2.5 Training JNBS staff and loan officers on the importance of climate resilience	9,200	7,500	16,700
Component III: Fostering Entrepreneurship in Climate Resilience	\$ 76,400	\$ 5,000	\$ 81,400
3.1 Survey of firms that are supplying water adaptation solutions in Jamaica	2,000	-	2,000
3.2 Climate Resilience Innovation Challenge	74,400	5,000	79,400
Component IV: Knowledge Management and Communications Strategy	\$ 175,500	\$ 22,000	\$ 197,500
4.1 Development of a home owners' guide to water management	10,000	-	10,000
4.2 Creation of an online knowledge platform	46,000	-	46,000
4.3 Designing a communications strategy	43,000	15,000	58,000
4.4 Launch the Resilience Innovation Challenge	11,500	1,000	12,500
4.5 Launch an end of project Climate Change and Innovation Summit	65,000	6,000	71,000
Component V: Execution and Supervision Components	\$ 310,500	\$ 375,800	\$ 671,800
5.1 Executing Agency/ Administrative	156,000	361,400	517,400
5.2 Baseline, M&E and Evaluations	50,000	14,400	64,400
5.3 Ex post reviews	20,000	-	20,000
5.4 Contingencies	30,000	-	30,000
5.5 Impact Evaluation Account	34,500	-	20,000
5.6 Agenda Account	20,000	-	20,000
Grand Total (USD)	\$ 744,600	\$ 449,300	\$ 1,179,400

ANNEX III. QED

MULTILATERAL INVESTMENT FUND



Quality for Effectiveness in Development - (QED)

Donors Memorandum

June 12, 2015

SECTION 1: PROJECT SUMMARY

PROJECT NAME: PROADAPT PPCR Jamaica	Project Number: JA-M1034
DESIGN TEAM LEADER: Steve Wilson	

SECTION 2: QED CONTENT

1. Project Characteristics and alignment	6.9
Specific benefits for women (5 Points)	
1.1.1. The project has specific benefits for women	1
Specific benefits for excluded populations and at-risk youth (2 Points)	
1.1.2. The project has specific benefits for excluded populations	1
1.1.3. The project has specific benefits for this excluded populations	0
The project targets firms with significant growth and job potential (3 Points)	
1.1.4. The project targets firms with significant growth and job potential	1
Specific benefits for the environment(2 Points)	
1.1.5. The project has specific benefits for the environment (GHG reduction, water savings, conservation, biodiversity)	2
Systemic Impact (3 Points)	
1.1.6. The project contributes to systemic impact, by (i) creating or expanding markets, (ii) scaling or replicating development models, or (iii) improving policies, regulations, or legal frameworks, or (iv) promoting adoption of practices by key public or private actors or institutions.	1
Innovation (3 Points)	
1.1.7. The project seeks to introduce new products or services into markets or fosters new processes within businesses or organizations	1
Experimentation (2 Points)	
1.1.8. The project will test new solution(s) to a specific problem under controlled conditions, using rigorous methodologies.	1
Target 1: Private Sector Development (50 Points)	
1.2.1. Foster entrepreneurship including innovative early stage firms	2
1.2.2. Improve the productivity of micro and small firms and small farms	1
1.2.3. Strengthen business environment including public/private collaboration	1
1.2.4. Inclusive Green Growth	2
1.2.5. Expand inclusive access to markets	1
1.2.6. Expand access to financial services and develop financial markets and institutions	2
1.2.7. Expand private sector provision of basic services	0
Target 2: Poverty reduction (20 Points)	
1.2.8. The project will be implemented in a region with a high incidence of poverty or target beneficiaries from the poor strata	0
1.3.1. Collaboration within the Bank Group. The document mentions how the project aligns with other Bank interventions, in both the public and private sectors, as appropriate.	1
1.3.2. Collaboration with outside actors for scalability and policy impact. The project has potential for scalability after execution. Project design includes activities aimed at fostering partnerships with the intention to scale, raising additional funds for replication and/or	2

other similar activities.	
2. Project Diagnosis	7.0
Diagnostic of the problem (60 Points)	
2.1. The problem is identified	2
2.2. The causes of the problem are identified	2
2.3. The effects of the problem are identified	1
2.4. Gender inequality issues are identified	1
2.5. Beneficiary identification	1
Proposed Solution (40 Points)	
2.6. Logic of the intervention	2
2.7. Description of the model	1
2.8. Description of the components	2
2.9. Gender issues addressed by the components	1
2.10. Lessons learned	1
2.11. Evidence	1
3. Additionality	10.0
3.1. Non-financial contribution	2
3.2. Financial contribution	2
3.3. Additional funding	2
3.4. Executing agency strengthening	2
4. Monitoring & Evaluation, Knowledge Sharing and Strategic Communication	7.3
Monitoring & Evaluation (50 Points)	
4.1. Monitoring mechanisms	2
4.2. Evaluation questions	1
4.3. Evaluation methodology	1
4.4. Evaluation activities	1
Knowledge Sharing & Strategic Communication (50 Points)	
4.5. Knowledge gap	2
4.6. Knowledge sharing products are defined and appropriate to the audiences	2
4.7. Communication strategy	1
5. Logical Framework Quality	9.5
5.1. Project impact and results	2
5.2. Vertical logic	2
5.3. Horizontal logic	2
5.4. Baseline, intermediate and target values	2
5.5. SMART Indicators	2
5.6. Indicators are sex-disaggregated	1

MULTILATERAL INVESTMENT FUND

5.7. Source, or means for collecting data	2
5.8. Risks/assumptions column of the logical framework	2
6. Risks	10.0
6.1. Experience and the skills of the executing agency	2
6.2. Risks identification	2
6.3. Mitigation measures	2
6.4. IDB environmental/social policies	2
TOTAL	
	8.4

Draft