

Cover Page for Project Approval Request

1. Country/Region:	Haiti/ Caribbean	2. CIF Project ID#:	(Trustee will assign ID)
3. Source of Funding:	<input type="checkbox"/> FIP	<input checked="" type="checkbox"/> PPCR	<input type="checkbox"/> SREP
4. Project/Program Title:	Strengthening Hydro-Meteorological Services Project		
5. Type of CIF Investment:	<input checked="" type="checkbox"/> Public	<input type="checkbox"/> Private	<input type="checkbox"/> Mixed
6. Funding Request in million USD equivalent:	<i>Grant:</i> 5.0 ¹		<i>Non-Grant:</i>
7. Implementing MDB(s):	World Bank		
8. National Implementing Agency:	Ministry of Agriculture, Natural Resources and Rural Development (MARNDR)		
9. MDB Focal Point and Project/Program Task Team Leader (TTL):	<i>Headquarters- Focal Point:</i> Kanta Kumari Rigaud, PPCR Focal Point	<i>TTL:</i> Gaetano Vivo, Disaster Risk Management Specialist	
10. Project/Program Description (including objectives and expected outcomes):			
<p>Following the endorsement of Haiti’s Strategic Program for Climate Resilience (SPCR) in May 2013, the Strengthening Hydro-Meteorological Services Project (formerly known as: “Haiti - Strengthening Knowledge Management of Hydro-meteorological, Water Resources, and Climate Data to Inform Decision Making and Policy Dialogue Project”) in the amount of US\$5 million (PPCR SCF Grant) has been developed to strengthen the Government of Haiti (GoH)’s capacity to collect hydro-meteorological and climate data and contribute to build its future adaptive capacity by providing improved access to water, weather, and climate information to end users.</p> <p>Hydro-meteorological and climate hazards have taken a heavy toll on Haiti’s economy and society. Data show that over the past 35 years, nearly 2% of annual GDP has been lost due to hydro-meteorological and climate hazards. Performance of the agriculture sector, which contributes more than 25% of the GDP and employs 50% of the population, is critical to sustain economic growth and benefit society at large. Heavily dependent on rainfall (only 1% relies on irrigation systems), Haitian farmers can largely benefit from effective climate information services to increase their productivity. Furthermore, reliable hydro-met information is critical to establish effective early warning systems and save lives. Over the past 10 years alone, nearly 7,000 people have been killed and 1.3 million affected by storm, floods, and landslides.</p> <p>Currently Haiti’s hydro-meteorological services are dispersed across several institutions in charge of collecting, storing, processing, and disseminating data. The lack of clear roles and responsibilities and the absence of a coordination structure have resulted into a constellation of hydro-met stations of different types managed by several public and private entities, installed on a</p>			

¹ The project budget has been reduced by US\$ 500,000. Please see the Notes on Page 3 in Section 10 for detail explanation.

project basis and not connected to a national network. Aside from donor financing, maintenance of hydro-met stations (particularly automatic ones) as well as data collection and transmission are not sustained and have been discontinued also due to other challenges such as the lack of access to remote areas, vandalism, and weather damage. Data currently collected by existing stations is not being stored in a central database and therefore not accessible to end users, with the exception of sporadic donor-funded initiatives. In this context, the proposed project would significantly expand the access to hydro-met and climate data and improve its quality. Strengthening the link between data producers and select end-users, the project will go beyond “business-as-usual” practices, fostering innovative approaches to hydro-met services development and delivery.

Against the backdrop of political instability, made even more acute by the recent events (new government and upcoming elections), preliminary steps for institutional strengthening of hydro-met services have been made under the aegis of the Hydromet Project. With assistance from the Inter-Ministerial Committee for Territorial Planning (CIAT), Haiti PPCR focal point, Agriculture and Environment Ministries signed an MoU to jointly re-organize hydromet services and created an inter-ministerial commission to propose new institutional framework. Archives with hydrological and climatological time series damaged during the 2010 earthquake were rescued and digitized by CIAT and MARDNR thanks to financial support from the PPCR-Phase 1. In September 2014, with support from the World Bank-PPCR and World Meteorological Organization (WMO), the MARDNR hosted a workshop bringing together more than 30 representatives from end-user agencies and reaching consensus on a new institutional set up.

Project Objectives and Components. The project objective is to strengthen the GoH’s institutional capacity to provide hydro-meteorological and climate information services customized to the needs of the civil protection and agriculture sectors, which contributes to increasing disaster and climate resilience.

Project components include: Component 1 - institutional strengthening of hydro-meteorological services and development of data management tools; Component 2 - identification of hydro-meteorological and climate services’ requirements for select end users and development of information services to support decision making; and Component 3 - support to project implementation.

Expected Outcomes. The Project is expected to contribute to strengthening Haiti’s institutional capacity as part of its long-term climate resilience agenda, as endorsed in the SPCR. Specifically, the Project would: (i) integrate existing hydro-met data collecting networks into a national data platform and strengthen capacity for data archiving, validation, and analysis; (ii) identify hydro-meteorological and climate services’ requirements for select end users (including agriculture and civil protection); and (iii) develop information services to support decision making.

Description. PPCR funding will specifically be used to implement the following activities within the referenced three components:

Component 1. Institutional strengthening of the hydro-meteorological services and development of data management tools (US\$3,000,000). The focus of this component will be on the integration of the existing hydromet data collection networks into one national data platform based on an *open data* approach and accessible across end users in the GoH and beyond.

In addition to establishing the technical platform, the component will provide technical assistance to the GoH to gradually move from the current structure of six hydro-meteorological networks managed by five different government entities to a structure with one national data platform and a shared standard operating procedure for operating and maintaining all hydro-meteorological data collection devices. Specifically, the component will: support a country-wide, geo-referenced baseline assessment of stations; define requirements for an optimal national network; repair or replace, where needed, existing hydro-met stations; and establish a data platform that gathers data from all existing stations. Furthermore, this component will provide technical assistance to advance the institutional reform of hydromet and climate services. Finally, the component will support technical capacity building in the hydromet institutions (MARNDR and end-users) through training and study tours.

Component 2. Identify hydro-meteorological and climate services' requirements for select end users and developing information services to support decision making (US\$1,400,000).

The focus of this component will be the definition of hydromet information requirements for end-users. End-users targeted by the project include: civil protection (e.g. parametric thresholds for select high-risk zones, in order to enable use of the hydro- meteorological data platform as a decision support mechanism for the activation of warnings by the Civil Protection Directorate) and agriculture (e.g. leveraging the new data platform to improve existing information services for farmers and the national food security agency). It is expected that several other priority sectors supported by the World Bank in Haiti will benefit from an improved access to reliable hydromet and climate information. These sectors include: public works (e.g. update return periods for select hazards in order to better integrate climate resilience measures into infrastructure design), and public health (e.g. information service for warnings of water-borne diseases and contingency planning).

Component 3. Support to project implementation, monitoring and evaluation, and PPCR knowledge management (US\$600,000).

Component 3 will include two subcomponents. (i) Strengthening MARNDR capacity to comply with Bank fiduciary, safeguard, and M&E procedure and ensure effective and timely implementation of project activities. This will include the recruitment of a Project Coordinator in charge of day-to-day project management, additional human resources, and financing of operating cost. (ii) Supporting MARNDR M&E capacity and PPCR knowledge management. An M&E specialist financed through the project will strengthen MARNDR's capacity to monitor and report progress on the project-level results of the SPCR (in coordination with CIAT). Special attention will be paid to distilling learning and knowledge from the project and disseminating them across the PPCR national and regional partners. This will include, among others, leveraging the hydromet data platform (Component 1) as well as the end user interface (Component 2) across other PPCR projects in Haiti as well as the Caribbean Regional PPCR program.

Note: SPCR coordination. The Project originally included US\$500,000 to finance PPCR coordination for the 4 PPCR projects in Haiti as well as for programmatic level activities, including monitoring and evaluation, knowledge management, mainstreaming activities and dissemination of lessons learned from program implementation. Given the institutional complexity of the implementation of the hydromet project, the GoH (through CIAT) and the World Bank considers more appropriate to embed the coordination of the PPCR program within

the PPCR Additional Financing (AF) to the Disaster Risk Management and Reconstruction Project (formerly known as Haiti-Climate Change Adaptation in the Coastal Cities of the Gulf of La Gonâve Project), which is currently under preparation (concept memo approved on November 19, 2014). The Project Implementation Unit of that operation already exists and has the necessary fiduciary capacity to start with PPCR coordination activities straight away while the AF is approved. As a result, the funding amount of the hydromet project would go from US\$5.5 million to US\$5.0 million and the PPCR AF to the DRM and Reconstruction project would go from US\$7.0 million to US\$7.5 million.

11. **Consistency with Investment Criteria²:**

Consistency with the PPCR goals. In line with the endorsed SPCR, the Project will contribute to Haiti's PPCR goal to improve mainstreaming of climate resilience across sectors in GoH institutions and integrate this issue into policies and future development plans. More specifically, the Project is a key pillar of the SPCR and directly contributes to four of the six SPCR expected outcomes, namely: (i) increased awareness and understanding of the development challenges associated with climate change issues by decision makers and national specialists, (ii) improved income and living conditions and enhanced climate resilience and adaptation capacities of target groups and beneficiaries of the PPCR, including women and other vulnerable groups, (iii) reduced level of vulnerability of target groups in priority areas and sectors; and (iv) reduced economic and social losses and damages resulting from climate-change-related natural disasters.

Building transformative capacity.

One of the main lessons learned from the design and implementation of hydromet projects worldwide is that, to be effective, they need not to have a piece-meal approach and require sufficient investments and capacity building to enable the elevation of the hydro-meteorological institutions from a group of data collection entities to a full-fledge service. Beyond the repair and replacement of existing data-collecting stations, the project focuses heavily on providing technical assistance to advance the institutional reform of hydromet and climate services and support technical capacity building in the hydromet institutions (MARNDR and end-users) as part of long-term climate resilience approach. Additionally, the Bank team joined forces with WMO and developed strong synergies between the PPCR project and the "Climate Services to Reduce Vulnerability in Haiti", funded by Canada and implemented by WMO. Together, the two projects take an integrated sector-wide approach and engage the Government on focusing on sustainability, maintaining the data collection and management systems and retaining qualified staff.

12. **Stakeholder engagement³:**

In order to allow sector-specific input in the preparation of project activities, a multi-sector approach was adopted to engage with government agencies responsible for hydromet data collection and with end-users. Technical-level consultations were held throughout 2014 under the leadership of the "Hydromet Commission" (composed of MARDNR, MDE, CNIGS, and CIAT) and included the end users prioritized by the project: National Food Security Agency (CNSA) and

² Please provide the information in the cover page or indicate page numbers in the accompanying project/program document where such information can be found.

³ Ibid.

the Civil Protection Directorate. Additional key end users of hydro-met information included National Civil Aviation Office, National Directorate for Water and Sanitation, Ministry of Public Works, Maritime and Navigation Service, and the private sector. These consultations pointed to a general consensus on a set of key priorities: (i) rationalizing and streamlining the national data collection and management system; (ii) establishing a feedback-based mechanism to bring together data producers and main end-users (aviation, civil protection, water utility, etc.) and increase the socio-economic value of data; and (iii) ensuring a sustainable financing model based on a cost-recovery principle. With regard to the latter, technical assistance provided during the preparation of the World Bank-PPCR hydromet project carried out a preliminary cost analysis for O&M and indirect maintenance cost (e.g. staff salary).

13. Gender considerations⁴:

Recent evidence⁵ shows that Haitian women and girls are particularly vulnerable because they face important obstacles to the accumulation and use of their assets, particularly their human capital. Adult women are still less well educated than adult men and are more likely to be illiterate, while maternal mortality is still dramatically high. Furthermore, women in Haiti are significantly less likely to be employed than man and earn more than 30% less. In rural areas, woman-headed households have less access to agricultural inputs (such as seeds) which could lead to lower productivity, thereby creating a gender gap. The project will adopt a gender-sensitive approach by fostering equal access to hydro-met and climate information. Project activities will strengthen capacity of Haiti’s women as well as men to develop/improve early warning systems and information services for disaster and climate risk management. The Results Framework includes specific indicators to monitor the hydro-met project’s contribution to reducing gender-specific inequities in the capacity building process⁶. A beneficiary survey will be used to monitor, among others, gender-specific issues related to access to hydromet and climate warnings and behavioral change.

14. Indicators and Targets (consistent with results framework):

Indicator	Target
(a) Data collected from hydro-met networks are accessible on a centralized online data management platform, with standard operating procedures for validation and storage ⁷ .	Targets to be confirmed during appraisal
(b) Number of sub-networks feeding into the centralized platform. ⁸	Targets to be confirmed during appraisal

⁴ Ibid.

⁵ World Bank and Observatoire National de la Pauvreté et de l’Exclusion Sociale (ONPES), Investing in People to Fight Poverty in Haiti, Reflections for Evidence-based Policy Making, 2014

⁶ See indicators (c) and (i).

⁷ Contributes to PPCR Core Indicators #2 (“Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”) and #3 (“Quality and extent to which climate responsive instruments/investment models are developed and tested”)

⁸ Contributes to PPCR Core Indicator #3 (“Quality and extent to which climate responsive instruments/investment models are developed and tested”)

(c) End users’s satisfaction rate towards improved hydromet information services (percentage, gender-disaggregated) ⁹	Targets to be confirmed during appraisal
(d) Number of users and instructors trained on the use of the centralized data platform. ¹⁰	Targets to be confirmed during appraisal
(e) Rehabilitated or improved stations (physical structure). ¹¹	Targets to be confirmed during appraisal
(f) Hydrological and meteorological stations reporting data to the platform in line with agreed SOPs. ¹²	Targets to be confirmed during appraisal
(g) Number of Civil Protection Committees using the customized application from the centralized data platform. ¹³	Targets to be confirmed during appraisal
(h) Number of Departmental Agricultural Directions (DDA) using the customized application from the centralized data platform. ¹⁴	Targets to be confirmed during appraisal
(i) Direct project beneficiaries (number), of which female. ¹⁵	Targets to be confirmed during appraisal
(j) Timely submission of project procurement and financial management reports.	Targets to be confirmed during appraisal
15. Co-Financing:	

⁹ Contributes to PPCR Core Indicator #3 (“Quality and extent to which climate responsive instruments/investment models are developed and tested”)

¹⁰ Contributes to PPCR Core Indicator #2 (“Evidence of strengthened government capacity and coordination mechanism to mainstream climate resilience”)

¹¹ Contributes to PPCR Core Indicator #3 (Quality and extent to which climate responsive instruments/investment models are developed and tested)

¹² Contributes to PPCR Core Indicator #3 (Quality and extent to which climate responsive instruments/investment models are developed and tested)

¹³ Contributes to PPCR Core Indicator #4 (Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability or climate change)

¹⁴ Contributes to PPCR Core Indicator #4 (Extent to which vulnerable households, communities, businesses and public sector services use improved PPCR supported tools, instruments, strategies and activities to respond to climate variability or climate change).

¹⁵ This is a Bank core sector indicator and it also contributes to the CIF Core Indicator #5 (“Number of people supported by the PPCR to cope with the effects of climate change”)

	<i>Amount (in USD million):</i>	<i>Type of contribution:</i>
• Government		
• MDB		
• Private Sector (please specify)		
• Bilateral (please specify)		
• Others (please specify)		
Co-Financing Total:		
Parallel Financing:		
• Government of Canada	5.1 mln USD (grant) for the “Climate Services for Reducing Vulnerability in Haiti” project, implemented by WMO	
16. Expected Board/MDB Management ¹⁶ approval date:		
Expected World Bank Board Approval Date: May 28, 2015		