

## **Inter-American Development Bank**

### **PLAN OF OPERATIONS**

#### **I. BASIC PROJECT DATA**

<b>Country:</b>	HAITI
<b>Project name:</b>	Hand Pump Project in Rural Gonaives (Phase I)
<b>Project number:</b>	HA-T1109
<b>Team members:</b>	Dominique Bouzerma, Team Leader (INE/WSA) ; Lu Shen (INE/WSA) ; Yvon Mellinger (INE/WSA); Sybille Duret Piquion; Rosina De Souza (LEG), and Diana Bejar (INE/WSA).
<b>Date of request:</b>	27 October 2008
<b>Beneficiary:</b>	Ministry of Public Works (MTPTC)
<b>Executing agency:</b>	<b>Cellule EPA MTPTC (Ministry of Public Works)</b>
<b>Financing plan:</b>	IDB (Aquafund): \$100,000 Co-financing from W. K. Kellogg Foundation (WKKF): \$100,000 Total: \$200,000
<b>Technical and basic responsibility:</b>	INE/WSA
<b>Execution and Disbursement dates</b>	September 2009
<b>Tentative dates:</b>	APR: February 2009

#### **II. BACKGROUND AND PROBLEM STATEMENT**

- 2.1 For Haiti, the risk of flooding is high during the hurricane season, leading to frequent pollution of water sources. During the rest of the year, the flow and quality of many water sources is uncertain. Despite the abundance of ground water resources, many hamlets around the country still don't have access to potable water.
- 2.2 In the summer of 2008, Hurricanes Gustav, Hannah and Ike severely damaged over 450 existing water supply and sanitation networks in ten provinces of Haiti over a span of three months, leading to further deterioration of the already dilapidated systems. The area of Gonaives (Artibonite Province) is the most affected by hurricanes, and it is estimated that between 35,000 and 70,000 people are now living in refugee camps because no potable water and food are available in their towns or villages.

- 2.3 Outside of Gonaïves, WASH (Water, Sanitation and Hygiene), a collaborative group that includes the Ministry of Public Works, Transportation and Communications (MTPTC), United Nations Development Program (UNDP), non-governmental organizations (NGOs) and other donors, estimates that over \$8.5 million of reparation is needed to return the country to the status quo prior to the hurricanes, and over \$27.5 million to rehabilitate all of the networks and wells in country.
- 2.4 Based on historical data, hand pumps with correctly installed wells/boreholes are not significantly affected by natural disasters such as hurricanes and floods and can provide a steady supply of potable water while other sources cannot. They are also the most cost effective, with average repair and maintenance costs being less than US\$300 per annum.
- 2.5 The proposed project (the Project) is linked to the post-hurricane assessment conducted by the Haitian Government in September 2008, with support from international organizations and NGOs. It will address cost-efficient access to water by ways of hand pump solutions; it will also finalize concrete terms of reference for hand pump installation capable of withstanding both natural disasters and frequent usage, complementing the quality norms for water supply systems for small towns defined in the rural program for potable water (EPAR); and it will provide the opportunity for testing and complementing through direct experience the guidelines produced under the “National Instruction for Rural Water Project”.

### **III. PROJECT OBJECTIVE AND DESCRIPTION**

#### **A. Objective.**

- 3.1 The overall goal of the Project is to provide sustainable access to water for up to 20,000 to 30,000 people living in rural and flood-prone areas. Specifically, the TC aims to:
- (i) Acquire and install durable hand pumps for rural communities in the Gonaïves region;
  - (ii) train users at the village level for hand pump operation and maintenance; and
  - (iii) define the optimal level of community contribution to cover maintenance costs.

#### **B. Description.**

- 3.2 The post-hurricane assessment (conducted by MTPTC in coordination with donors and NGOs in September and October 2008) has shown that some boreholes and wells need to be rehabilitated and equipped in rural areas of Gonaïves as well as other areas. Under the assessment, 231 boreholes in need of rehabilitation have been identified and inventoried. Rehabilitated boreholes would have annular cementation on their upper part and concrete base to prevent

groundwater pollution. Hand pumps in stainless steel will be installed to withstand use for a 15 to 20 year expected lifespan.

3.3 Following the above objectives, the Project will include:

Acquisition and installation of at least 22 hand pumps that will be installed on selected boreholes. The 22 selected boreholes will be treated through shock-chlorination to prevent bacterial infiltration prior to cementation and closure of the concrete base. Sample tests will be conducted to ensure there are no other contamination risks. The hand pumps will provide access to water for at least 10,000 to 15,000 persons.

- a. Selection of beneficiaries for the Project will reflect the post-hurricane assessment priority list.<sup>1</sup> The pumps will be bought and installed following standard IDB procurement policies and procedures. Minimal technical specifications, as well as a guarantee for the availability of spare parts in country will be required.
- b. Training and certification for at least 2 people per village for regular maintenance of pumps, in accordance to the maintenance plan to be provided under the Project. Training will also be provided for at least one regional maintenance specialist to: (i) safe keep and distribute spare parts and chlorine, (ii) provide special maintenance; and (iii) provide general education for villagers on the use and care of hand pumps.
- c. Evaluation of the level of contribution required from the users for the maintenance and use of the pumps. Support for the establishment of a maintenance fund that will be managed by the water committee<sup>2</sup> elected by villagers.
- d. Establishment of a formal registration system for VLOM (village level operation and maintenance) hand pumps at the MTPTC.<sup>3</sup>

3.4 Lessons from the past indicate that only too often hand pumps have been installed without implementing a comprehensive operations and maintenance program, including access to spare parts and technical support, leading to an accelerated deterioration of hand pumps. An effective maintenance plan, in addition to a high quality pump and state-of-the-art borehole will ensure the durability of the pumps, with a lower running cost for users.

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<sup>1</sup> Assessment criteria include urgency in access to potable water, village community structure and the existence of short-term projects.

<sup>2</sup> The water committee will be responsible for current maintenance and will have to call the repairman in case of need. The cost for the labor and spare parts will be analyzed and a monthly fixed payment will be collected by the water committee among each family to cover for the costs. Currently the maintenance is estimated to be less than 12,000 Gourdes per annum. If 80 families (approximately 500 persons) benefit from the pump, the cost will be less than 12.5 Gourdes (US\$0.3)/ family/ month).

<sup>3</sup> Cellule EPA will regularly update the database, and will use it for monitoring and planning purposes, including new investments and performance monitoring for the water supply systems.

#### IV. COST AND FINANCING

- 4.1 The Project is fully scalable and can be expanded in the event that additional funding becomes available. The total cost of the Project is US\$200,000, of which US\$100,000 are made available through the IDB contribution to Aquafund, and US\$100,000 from the W.K. Kellogg Foundation (WKKF) <sup>4</sup>.
- 4.2 Pursuant to the Operation procedures for grant co-financing contributions administered by the IDB (COFAB) (Document CC-5732), the contribution from WKKF indicated in the previous paragraph will be subject to the terms of an administrative agreement between the WKKF and the IDB. The team is in the process of negotiating the administrative agreement for this project. <sup>5</sup>
- 4.3 Through this Project, the WKKF grant is supporting the Water and Sanitation Initiative of the Bank, and therefore could be taken into account for the purpose of match-funding as contemplated in paragraph 8.1 of the Aquafund (Document 2487).
- 4.4 The budget for the activities described above will be as follows:

Components	Costs (US\$)		Financing (US\$)		
	Unit Cost	Quantity	Aquafund	WKKF	Total
<b>Assesment :</b>					
Assessment of existing boreholes and location for new ones	7,000	1	7,000		7,000
Documentation of the geo-hydrological characteristics of the basins	2,000	1	2,000		2,000
Drafting of the terms of reference for equipment and works	3,500	1	3,500		3,500
<b>Implementation:</b>					
Information dissemination and selection program	10,000	1	10,000		10,000
Capacity building for local water committees and for repairmen					
i. Training of 2 persons / pump for local maintenance	250	22	5,500		5,500
ii. Training of 1 regional repairman	1,000	1	1,000		1,000
iii. Spare parts and chlorine	250	22	5,500		5,500
<b>Installation of 22 hand pumps</b>					
i. Rehabilitation of boreholes	40,000	1	20,000	20,000	40,000
ii. Concrete base for pumps	1,000	22	10,000	12,000	22,000
iii. Acquisition of pumps	3,000	22		66,000	88,000
iv. Installation of pumps	1,000	22	20,000	2,000	88,000
v. Supervision	5,000	1	5,000		5,000

<sup>4</sup> WKKF is a U.S. based private foundation focused on assisting communities both in and outside of the U.S. to improve their quality of life through practical applications of knowledge and resources.

<sup>5</sup> The WKKF funds will be used mainly for investment in equipment while the IDB Aquafund resources will be geared towards community awareness, support and capacity building activities as no more than 30% of this fund can be used towards investment in equipment.

<b>Monitoring and Evaluation</b>	4,000	1	4,000		4,000
<b>Information Dissemination</b>	1,500	1	1,500		1,500
<b>Office Costs and Administration</b>	5,000	1	5,000		5,000
<b>Total</b>			<b>100,000</b>	<b>100,000</b>	<b>200,000</b>

## V. EXECUTING AGENCY AND EXECUTION STRUCTURE

- 5.1 The Ministry of Public Works (MTPTC), through Cellule EPA<sup>6</sup>, will be the execution agency. It will be responsible for the implementation and supervision of the project. Permanent staff will be assigned such tasks, the cost of which will be part of the counterpart local resources.
- 5.2 For its activities, Cellule EPA is employing one director, one potable water senior specialist, one junior potable water specialist, one sanitation specialist, one social engineering specialist, two procurement specialists and two accountants. Three international consultants will support this team until the end of 2009. The capacity of disbursement of this agency is expected to be of US\$12 million in 2009 and of around US\$20 million in 2010.
- 5.3 The goods, works and services will be procured following IDB procurement policies and procedures. NGOs already active in the implementation of similar water systems will be invited to tender for those services.

## VI. MAJOR ISSUES

- 6.1 In spite of the difficulties in project implementation in Haiti, Cellule EPA has a good track record as an Executing Agency for the IDB, World Bank and AFD projects, with the proven capacity to manage over US\$10 million in disbursements on an annual basis. Section 5.2 provides a more detailed description of its organization structure and technical capacity. Cellule EPA has led the post-hurricane assessment and is leading the sector roundtable that includes all the sector stakeholders.
- 6.2 Sustainability of the hand pumps is linked to proper maintenance and community participation. In Haiti, a two-tiered maintenance system is necessary. First tier is the regular maintenance at the village level, with responsibilities like cleaning the pump, changing minor spare parts. It will be important to build awareness at the village level of the importance of preventative maintenance, changing spare parts on a regular basis to compensate for the wear and tear of the hand pumps. Experience also shows that compensating for local maintenance creates the correct incentives for the maintenance. Second tier is the special maintenance at a regional level, where specially trained repairmen are responsible for the complete overhaul of hand pumps as necessary. The proposed project will put great

<sup>6</sup> Cellule EPA is the entity within MTPTC that is responsible for the management and regulation of the water sector in Haiti. It is responsible for the coordination of all donor activities in the sector, including the execution of major projects such as the IDB funded Sector Reform Program (1010/SF-HA).

emphasis on proper compensation, capacity building both at the village level and with the regional repairmen to ensure that the maintenance is properly executed.

## **VII. ACTION PLAN**

- 7.1 The Execution Agency, in coordination with the IDB, is preparing the Terms of Reference for the procurement of goods and consultant services. The Terms of Reference will be included in the Plan of Operations. A monitoring scheme will also be included.

## **VIII. ENVIRONMENTAL AND SOCIAL STRATEGY**

- 8.1 No negative environmental impact is anticipated. In fact, a borehole with correct cementing and a concrete base on top is the best way to protect the ground water from any contaminations, while a traditional well often can become a source of contamination. The Project has been classified as a “C” according to the safeguard classification tool.
- 8.2 The social strategy consists of:
- a. Appropriation and self-management of the hand pumps by the villagers
  - b. Implementing a maintenance program for the hand pumps, based in an available after-sale service at local level


## **IX. RECOMMENDATION**

- 9.1 Dominique Bouzerma, designated team leader for the referenced project, recommends the approval of this operation and the use of resources from the AquaFund (AQN) for an amount of US\$100,000, as a counterpart to the WKKK grant of the same amount of US\$100,000, for a total Project cost of US\$200,000.

## **X. CERTIFICATION**

- 10.1 I hereby certify that this operation was approved for financing under the Aquafund (AQN) and communicated through an email dated on January 6<sup>th</sup>, 2008 and signed by Gehard Lair (VPC/GCM). Also, I certify that resources from the Aquafund (AQN) are available for up to \$100,000 in order to finance the activities described and budgeted in this document. This certification reserves resources for the referenced project for a period of eleven (11) calendar months counted from the date of signature below. If the project is not approved by the IDB within that period, the reserve of resources will be cancelled, except in the case a new certification is granted. The commitment and disbursement of these resources shall be made only by the Bank in US dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except in the case of local consultants working in their own borrowing member country who

shall have their remuneration defined and paid in the currency of such country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this Plan of Operations. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.

  
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Marguerite S. Berger  
Chief  
Grants and Co-financing Unit  
VPC/GCM

2/17/09  
Date


#### XI. APPROVAL

Approved:

  
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Philippe Dewez  
Country Representative  
CCB/CHA

2/18/09  
Date

Vo.Bo.:

  
\_\_\_\_\_  
Federico Basañes  
Chief  
Water and Sanitation Division  
INE/WSA

2/18/09  
Date