

## INITIAL ENVIRONMENTAL EXAMINATION

**Project Location:** Haiti

**Project Title:** Special Objective 7—Tropical Storm Reconstruction Program

**Funding:** US \$34.08 million

**Life of Special Objective:** 12 months

**IEE Prepared by:** Danielle Typinski, Acting MEO  
USAID/Haiti

**Recommended Threshold** Categorical Exclusion/Negative Determination with Conditions

**Decision:**

**CONCURRENCE:**

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**CLEARANCE:**

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## **Background**

Haiti is one of the Caribbean's most disaster-prone countries. In the first nine months of 2004, Haiti suffered two disastrous floods. In May it is estimated that nearly 3,000 people lost their lives in flash floods along the Dominican border at Mapou and Fonds Verrettes. The disastrous floods of mid-September 2004 caused by Tropical Storm Jeanne resulted in over 2,000 deaths and affected an estimated 300,000 people through loss of homes, schools, health facilities, roads, crops, and livelihoods. Although loss of life and property damage was most visible in the city of Gonaives, the surrounding areas of Ennery, Port-de-Paix and Anse Rouge were also affected.

USAID/Haiti seeks to follow up on the U.S. Government's initial emergency support effort for affected areas with a more substantial Tropical Storm Reconstruction Program (TSRP). Through the TSRP, the Mission will provide \$34.08 million of funding assistance for a series of recovery activities. The TSRP will be implemented under a newly created Special Objective 521-007, "More secure lives of Haitians affected by devastating tropical storm flooding in 2004" (SpO7). The Special Objective will help meet the immediate needs of Haitians affected by tropical storms, assist them to regain sources of economic activity, and help them prepare for future natural disaster threats. The proposed program will last approximately 12 months.

## **Program Description**

The proposed activities of this program will support the reconstruction and recovery of the affected Artibonite and Northwest regional departments. To achieve SpO7, two intermediate results (IRs) have been identified.

### **IR1—Targeted Communities Revitalized**

IR1 consists of two sub-categories: (1) *infrastructure repair*, which will focus on the repair of roads, repair to water, sanitation, and urban drainage systems, rehabilitation of public buildings, and municipal cleanup; and (2) *household support*, which will provide resources and training to help affected families repair damaged homes, reestablish small businesses, and better prepare themselves for future disasters.

#### **IR1.1—Infrastructure Repaired (\$15 million)**

**Public Building Rehabilitation (\$2 million):** Public building rehabilitation would focus on repairs to schools and health facilities. School repairs would involve the reconstruction of buildings, playgrounds, sanitation infrastructure and refurbishing of school equipment. Select schools in affected areas outside of the city limits of Gonaives and in the Trois Rivières area of the Northwest region will also be rehabilitated. Final site selection will be conducted in conjunction with a recovery plan developed by the Ministry of Education and a variety of other donors. The rehabilitation of health facilities in the flood-affected areas is expected to constitute a modest part of the recovery

program. Rehabilitation under this activity will not involve the construction of new facilities on new sites.

Road Repair (\$8 million): The objectives of the road rehabilitation component are to restore farm-to-market networks and repair destroyed sections of the National Road from Gonaives to Cap-Haitien in the north. Road rehabilitation work will replace key sections of damaged road with supporting structures that will reduce the negative effects of future flooding to transportation. Three target areas have been suggested for rehabilitation:

- *Gonaives-Port de Paix Road*—This road serves as the only means of transporting agricultural products to the markets in both cities. Activity would focus on rehabilitating a 20 kilometer (km) section of the road extending from Port de Paix south adjacent to the irrigation systems located along the Trois Rivières. In addition, two large culverts and a bridge would be reconstructed.
- *Gonaives-Cap Haitien Road*—Flooding from Jeanne washed out several sections of the National Road northeast of Gonaives. Activity would focus on the rehabilitation of a three km section.
- *Secondary Roads*—Damage reports have identified 100 kms of secondary roads that need to be repaired; activity under this sub-IR would implement 20 kms of secondary road repair.

Municipal Cleanup and Urban Drainage Improvements (\$3 million): Storm surges from Jeanne resulted in the deposit of mud and debris into Gonaives and Port de Paix, clogging the urban drainage systems. Approximately 592,000 cubic meters of mud now needs to be removed from the city of Gonaives. Immediate urban cleanup has focused on removing mud from homes and city streets. Under IR1.1, mud and debris would be reduced to manageable levels that will enable the commencement of reconstruction activities and unclogging of drainage systems. Mud removal would be implemented through labor-intensive cash-for-work activities and through the use of heavy equipment. Illustrative activities related to cleanup include the provision of tools to families and community groups; repairs to existing street drainage canals; cash-for-work activities to continue mud removal from urban areas; establishment of neighborhood cleanup committees; preparation and management of landfill sites for mud and debris disposal; and use of heavy machinery to remove mud from intermediary collection points to designated landfill/dumpsites.

The street drainage system in both Gonaives and Port de Paix was overwhelmed by the flooding resulting from Jeanne. Urban drainage illustrative activities include: the development of an urban drainage design plan for the two cities; the rehabilitation of existing urban primary and secondary canals; the creation of new primary and secondary drainage canals; the rehabilitation of street drainage and gutters; the construction of new gutters; and the enhancement of management capacity of communities to maintain drainage systems.

Water and Sanitation Systems Rehabilitation (\$2 million): *Service Nationale du Eau Potable* (SNEP) is the national water company of Haiti and is responsible for potable water provision in Gonaives and Port de Paix. Floods from Jeanne caused damage to several of SNEP's pumps, pump houses, and switchboards. Floodwaters also infiltrated several private wells, polluting the source. The goals of the water and sanitation component of the TSRP are to repair damaged SNEP equipment and infrastructure and improve the quality and household management of private wells. Illustrative activities include repair and rehabilitation of SNEP's Gonaives and Port de Paix distribution network; assessment and implementation of repairs and improvements to affected private wells; and provision of water, sanitation and hygiene education to communities.

#### **IR1.2—Household Supported (\$7 million)**

The Household Support sub-IR will focus on meeting needs at the household level to help families rebuild their homes and sustain their livelihoods. The major components of IR1.2 are household restoration, income generation, and disaster preparedness and mitigation.

Household Restoration and Income Generation (\$5.2 million): Affected families will be assisted to rebuild their assets and generate income. Illustrative activities include providing building materials to families through vouchers; providing technical assistance on disaster-appropriate building techniques; improving local planning capacity related to land use; purchasing and/or repairing equipment and agricultural inputs lost or damaged during the flood; removing rocks and debris from agricultural lands; and providing income generation training to affected populations.

Disaster Preparedness and Mitigation (\$1.8 million): This component will focus on raising disaster awareness and strengthening response at the levels of community, government, and public schools. Illustrative activities include providing community training and technical assistance towards the development of emergency action plans and committees.

#### **IR2—Targeted Rural Areas Revitalized (\$9 million)**

The watersheds to be targeted under the SpO7 include the Trois Rivieres and the Quinte River and their tributaries. IR2 consists of two sub-categories: (1) *irrigation system rehabilitation*, which will work to bring irrigated agricultural land back into production; and (2) *hillside stabilization and recovery*, which will help stabilize the upper watersheds.

##### **IR2.1—Irrigation System Rehabilitated (\$4.5 million)**

The objective of the irrigation system rehabilitation component is to bring approximately 2,500 hectares of irrigated land in the Gonaives Plain and an estimated 1,068 hectares along the Trois Rivieres into full agricultural production. Illustrative activities include:

Irrigation System Rehabilitation (Gonaives Plain and Trois Rivieres): Illustrative activities include the rehabilitation of pump houses and pumps, repair of gravity intake structures, cleaning of canals and drains, and masonry canal lining.

Electrical System Rehabilitation (Gonaives Plain): This component would focus on the repair of the electrical generator and reconstruction of the electrical distribution network serving the pumps.

Agricultural Roads Repair (Gonaives Plain): Approximately 130 kilometers of agricultural roads would be repaired.

Stream Bank Repairs: Breaches in stream banks would be repaired and gabions and dikes would be constructed where necessary. The use of spur dikes rather than straight gabion walls will be emphasized where possible.

Support to the Ministry of Agriculture (MOA): Technical assistance would include the repair and maintenance of MOA tractors and equipment and the provision of fuel and lubricants.

Support to Farmers and Water User Associations: Under this component, technical assistance and training would be provided to improve business/financial management capacity, and organizational and management skills

#### IR2.2—Hillsides Stabilized (\$4.5 million)

The hillside stabilization and recovery component will focus on establishing upper catchment protection for those areas which suffered extensive damage to agricultural and transportation systems. Components under this sub IR are:

Soil and Water Conservation Measures: Illustrated activities include the implementation of technologies to reduce soil erosion and increase production in the short-term (i.e., gully and ravine plugs) and the sponsorship of community project site visits.

Support to Watershed Planning Committees: This component would focus on the establishment of local committees and provision of training in watershed management, disaster mitigation, and business concepts.

Establishment of a Watershed Information System: An information system would be established to collect rainfall data at critical points along the watershed, analyze the data, and disseminate results to affected areas.

### **Program Implementation**

It is expected that implementation will occur within a combination of the following instruments: an umbrella cooperative agreement for IR1 with subgrant and subcontractual authorities; a single contract for IR2 with subgrant and subcontractual authorities; and

several personal services contracts (an agriculture/environment specialist, a civil engineer, and support staff). Approximately \$2.08 million will be used for studies, audits and evaluations.

### **Environmental Impact and Mitigation Measures**

Technical assistance is an important component of the TSRP will be provided in several forms—training, education, and social/institutional capacity building—as a means of achieving both IRs. Technical assistance activities under the TSRP that will not negatively impact the physical or natural environment include those related to disaster preparedness, support to households, farmers, water users associations and watershed planning committees; the development of a watershed information system; and organizational capacity building.

The following activities may have potential negative impacts on the environment: repair of irrigation and water/sanitation systems; urban drainage improvements; rehabilitation of public buildings; hillside stabilization measures; stream manipulation; road rehabilitation and municipal cleanup. A summary of potential impacts and proposed mitigation measures for each specific activity is provided in the attached table.

It is not expected at this time that the agricultural rehabilitation activities under SpO7 will involve the purchase, handling, or application of pesticides. However, if activities that involve agro-chemicals are subsequently added, a supplemental IEE will be submitted to the LAC Bureau upon the final design of those activities.

Below are other mitigation measures that are to be applied to the appropriate activities under the TSRP:

1. All implementing partners must ensure that the appropriate safety tools, equipment, and training are made available to all community members participating in rehabilitation and cleanup activities.
2. Community workers will receive training in the types of waste that may exist in the wastestream (e.g. solid waste, organic waste, recyclables, hazardous waste, and medical waste) and the characteristics and hazards that are associated with each type of waste. Workers will be instructed not to handle special wastes that appear to be hazardous or medical in nature, or that have questionable characteristics. The primary partner is responsible for providing continual on-site technical advice to workers, for reserving such materials for collection entities that specialize in the disposal of these types of wastes, and for ensuring that no hazardous wastes are disposed of in dump sites. The primary partner must also provide a plan for the management of special wastes prior to beginning drainage canal clean-up and recycling activities.
3. Individual projects under the public building rehabilitation, road repair, water and sanitation systems rehabilitation, and irrigation systems rehabilitation will require

a site-specific environmental review for each construction project, to be approved by the Mission Environment Officer (MEO). Environmental reviews should consist of a description of the planned action and the site, and a matrix detailing all expected environmental impacts and corresponding mitigation measures. The Cognizant Technical Officer (CTO) is responsible for ensuring that partners submit environmental reviews for approval before the project is initiated.

4. The LAC guidelines will be incorporated into project design, implementation and monitoring, where applicable.
5. The manual “Low-Volume Roads Engineering” by Gordon Keller and James Sherar will be used, where appropriate, for design, implementation and monitoring of road rehabilitation projects.
6. Primary partners shall ensure that relevant environmental mitigation and monitoring measures established in this Initial Environmental Examination (IEE) be routinely incorporated into all subgrant and subcontractual agreements with local partners and institutions.
7. Primary partners shall include in semi-annual reports their efforts to summarize environmental monitoring efforts. All mitigation measures in the table shall be tracked for implementation and effectiveness.
8. All local partners involved with the activities will be supplied with a copy of the mitigation measures for relevant activities outlined in this IEE in Creole and/or French.
9. The CTO and MEO will conduct spot checks to ensure that the primary partners implement the measures set forth under this IEE (as the security situation permits).
10. The following language will be included in all contracts and agreements developed under this program:

“The Grantees and/or Contractors agree that all activities funded under this Agreement will comply with all environmental requirements applicable to USAID-financed activities, including those set forth in Title 22 of the United States Code of Federal Regulations Part 216.”

The mitigation measures specified in above and in the attached table should alleviate any significant environmental concerns associated with the proposed program under SpO7. It is therefore concluded that the TSRP can be implemented in an environmentally-sound and sustainable manner in full accordance with all relevant USAID and U.S. Government environmental policies and regulations.

### **Monitoring and Reporting**

Each IR will be managed by a separate CTO. Both CTOs will be responsible for monitoring and verifying the implementation of mitigation measures throughout the life of the activity, ensuring compliance with categorical exclusion and negative determination threshold decisions recommended for the activities under SpO7. The MEO will assist with the monitoring of environmental compliance practices when requested.

All partners, together with their respective CTO, will be responsible for compiling a report on environmental compliance at six and twelve months from the initiation of the activity. The MEO will review and approve these compliance reports.

### **Recommendations for Threshold Decision**

Pursuant to 22 CFR 216.2(c)(2)(i), (v) and (xiv), a *Categorical Exclusion* is recommended for activities which involve the provision of technical assistance, education and training, and social and institutional capacity building, which have no significant impact on the environment.

A *Negative Determination with Conditions* is recommended for activities under IR1 and 2 which involve the repair of irrigation and water/sanitation systems; improvement of urban drainage; rehabilitation of public buildings; implementation of hillside stabilization measures; and municipal cleanup. Significant adverse environmental impacts are not foreseeable from the implementation of these activities if the mitigation measures outlined in this IEE are used. Partners are responsible for identifying potential minor impacts and appropriate mitigation measures for each reconstruction activity. Partners will be required to submit for USAID review activity monitoring protocols with the mitigation measures to be applied.