

**PAN AMERICAN DEVELOPMENT FOUNDATION**  
**Desvarieux Irrigation System**  
**Rehabilitation, Haiti**  
**Final Report**

USAID/OFDA Award Number 521-G-00-99-00023-00

- Start / Finish Dates 26 February, 1999 / August 31, 1999
- USAID Technical Office The Economic Growth Office, USAID/Haiti
- Amount \$153,256
- Report Distribution One original and one copy to the Grant Officer, USAID/Haiti, one copy to USAID/PPC/CDIE/DI Room 6 07-121, RBB, 1300 Pennsylvania Ave, Washington, DC 20523-6802

**Table of Contents**

|  |   |
|--|---|
| Background   | 3 |
| Project Goal   | 3 |
| Specific Goals   | 3 |
| Other Activities   | 4 |
| Training Seminar   | 4 |
| Visit of Representative from the Ministry of Agriculture | 4 |
| Mirebalais Communal Agricultural Office Support          | 4 |
| Extension / Desvarieux System Rehabilitation             | 4 |
| Extension Activity Specific Goals                        | 4 |
| Field Activities Summary                                 | 5 |
| Institutional Reinforcement                              | 5 |
| Completion   | 5 |
| Opening Ceremony   | 6 |

# The Desvarieux Irrigation System Rehabilitation Final Report

## Background

One of the most important irrigated perimeters in Lower Plateau of the Central Department, the Desvarieux irrigation system was seriously damaged by Hurricane Georges. The damage caused included the total sedimentation of the irrigation system intake area and the deviation of the Gascogne and Jeudi river beds. The effect on the planters who rely on the irrigation system was a further deterioration in their already tenuous ability to provide a living for themselves and their families.

The activity was presented to PADF by the Evangelical Committee for Agricultural Development (French acronym COEPDA), a community-based organization from the Desvarieux area, and was supported by the Departmental Office of the Ministry of Agriculture as well as the Mirebalais municipality and the community of Desvarieux in general.

In this context, PADF designed and submitted a rehabilitation project for the Desvarieux irrigation system to USAID for approval and financing. After analysis by the USAID technical staff, the project was approved on February 26, 1999, a financing agreement was signed with PADF for a total of 1,478,352 Haitian gourdes (US\$153,256) and the work started on April 1, 1999. The agreement stipulates that a final report be generated and distributed, this is that report.

## Project Goal

Rehabilitation of the Desvarieux irrigation system to

- Increase efficiency and effectiveness of the system to deliver water to farmers' fields,
- Contribute to the growth of agricultural production in the area served by the system,
- Create opportunities for profit and employment.

*Specific Goals All planned activities were successfully completed (see table below) permitting the irrigation of 500 hectares of agricultural land*

- Dredging of 16,400 meters (m) of irrigation and drainage ditches,
- Diversion of a portion of the Gascogne river to limit the amount entering the irrigation system intake,
- Installation of 450 m<sup>3</sup> of gabions to protect river banks,
- Placing of 1,087 m<sup>3</sup> of masonry
- Installation of 194 m<sup>3</sup> of concrete
- Production of 1,057 m<sup>3</sup> of masonry stones and 335 m<sup>3</sup> of sand
- Selection of 450 m<sup>3</sup> of gabion rocks
- Construction and rehabilitation of 15 distribution basins

## **Other Activities**

### *Training Seminar*

At PADF's request an engineer of the Haitian Government's Irrigation and Rural Engineering Service organized a training seminar on user management of the Desvarieux irrigation system Organizational and Functional Capacity Reinforcement of Desvarieux Users This training was held from June 8 to 12, 1999 and was divided in three modules Small Irrigation Systems, Users Organizations and Water Management, and Irrigation Systems Management Twenty nine participants, of which 25 were area farmers and four were PADF technicians, participated in that seminar

### *Visit of Representative from the Ministry of Agriculture*

The Ministry of Agriculture, Natural Resources and Rural Development (French acronym, MARNDR) sent the Director of the National Program of Small Irrigation Systems and his Chief of Training to visit the site at Desvarieux on June 26, 1999 They inspected the work and were satisfied with the technical quality of the work With the PADF engineer on site, they discussed the need to plan some permanent works such as the construction of a dam upstream from the irrigation intake and the reinforcement of the dikes along the Gascogne river to avoid potential damage after heavy rains PADF plans some follow up from within the USAID/Hurricane Georges Recovery Program, which it manages

### *Mirebalais Communal Agricultural Office Support*

The Representative of the Mirebalais Communal Agricultural Office supplied the project with a dump truck for the transport of sand and rock to the site

## **Extension / Desvarieux System Rehabilitation**

The outputs planned in the initial document were completely realized at a cost of about 90 percent of budget To further diminish the risks of system infrastructure damage from flooding an extension activity proposal was written, proposing the reinforcement of the dikes on the Gascogne river and the protection of the right bank of the Jeudi river above and below the irrigation system intake area This extension was submitted to USAID on July 9, 1999 and was approved on July 12, 1999

Financed by the \$16,000 remaining in the original budget, the extension activities started during the second week of July 1999 and finished at the end of August 1999

*Extension Activity Specific Goals All planned extension activities were successfully completed (see table below)*

- Production of 228 m<sup>3</sup> of rock,

- 150 m<sup>3</sup> of excavation,
- Protection of 70 m of banks with 228 m<sup>3</sup> of gabions,
- Maintenance of selected canals,
- Reinforcement of dikes repaired in the first phase

### Field Activities Summary

The following table shows a summary of project activities implemented (1<sup>st</sup> phase and extension), from April to August 1999 as follows

| Planned activities          | Quantity planned | Unit           | Quantity Achieved | Percentage |
|-----------------------------|------------------|----------------|-------------------|------------|
| Canal Cleaning              | 16 400           | m              | 17 400            | 106        |
| Gabion work                 | 450              | m <sup>3</sup> | 678               | 151        |
| Masonry                     | 1 087            | m <sup>3</sup> | 1 100             | 101        |
| Concrete                    | 194              | m <sup>3</sup> | 200               | 103        |
| Rocks Selection/Masonry     | 1 057            | m <sup>3</sup> | 1 090             | 103        |
| Rocks Selection/Gabions     | 450              | m <sup>3</sup> | 678               | 151        |
| Sand Production             | 335              | m <sup>3</sup> | 350               | 104        |
| Distribution Basins         | 15               | Unit           | 15                | 100        |
| Gasconne Diversion          | ----             | ----           | ----              | 100        |
| Gasconne Dike Reinforcement | ----             | ----           | ----              | 100        |

### Institutional Reinforcement

Training seminars were given to COEPDA administrative and technical staff (accounting, projects management, financing agricultural techniques, participatory approaches, and management of irrigation systems) to reinforce the administrative and technical capacity of the group. COEPDA was able to manage about 60 percent of the activity budget.

### Completion

All contracted outputs were completed or surpassed. The farmers are satisfied with the rehabilitation and are expressing it by renewed planting of irrigated crops -- including rice. Although rehabilitation of the system was necessary to permit area farmers to increase their productive assets lost during Hurricane Georges, it is not sufficient. They need improved seed and access to markets in order to take better advantage of the increase in yields made possible by the rehabilitated irrigation system. They are too financially decapitalized to initiate these measures by themselves. To address this last step, PADF, along with its partner, the Southeast Consortium for International Development, and MARNDR, is planning some joint agricultural development interventions for the area.

## **Opening Ceremony**

The opening ceremony for the rehabilitated Desvarieux irrigation system was held on Tuesday, September 16, 1999, with the following people present

- Mr Emmanuel Grand-Pierre, Agr , Director General, MARNDR
- Mr Guy Lafontant, Agr , Director Natural Resources / MARNDR
- Mr Pierrelus, Departmental Director, Center / MARNDR
- Some Mirebalais and Desvarieux authorities
- Mr Felipe Manteiga, Chief, USAID/Haiti/EG Office
- PADF Representatives
- COEPDA Representatives and some Desvarieux farmers

PADF officially returned the rehabilitated system to the MARNDR representatives and was complimented for the quality of the work accomplished