



# DISASTER CASE REPORT

Agency for  
International  
Development

Washington D.C.  
20523

## HAITI - Floods

Date: June 1-3, 1986

Location: Southern peninsula area of Les Cayes

No. Dead: 79

No. Affected: 85,000; 13,200 homeless

Damage: In addition to damage to housing, regional agricultural losses included: cattle 5%; goats and sheep 14%, pigs 19%; draft animals 13%; and food 7%. One bridge was rendered unusable, 61 culverts, 16 potable water systems, and 154 km of irrigation ditches were damaged; 479 km of roads were damaged as well as 43 km of streets in Les Cayes and other towns.

### The Disaster

When a late May tropical storm system stationed in the Caribbean area of Jamaica and Cuba moved east to Haiti in early June, heavy rainfall resulted in widespread flooding in Haiti's southern peninsula. The southwest coastal town of Les Cayes, population 40,000, experienced the greatest inundation. Within a 24-hour period ending in the early evening of June 3, the accumulated rainfall had caused rivers and streams to breach their banks. The rains and runoff from the plains created up to 1.5 m of standing water in the town of Les Cayes, damaging more than 300 homes and leaving 2,000 to 3,000 residents homeless.

Other coastal towns and two towns in the plains were also severely affected. From La Cahouane in the west to Les Cayes, virtually every town -- including Les Anglais, Chardonnières, Port-a-Piment, Roche-a-Bateau, Port Salut, St. Jean du Sud, and Torbeck -- received some damage. The interior towns of Chantal, Maniche, and Cavailon were also affected; flood waters from the Cavailon River totally destroyed the market in Cavailon about 15 km east of Les Cayes.

In total, more than 85,000 people were affected, 79 killed, 660 injured, and 13,200 rendered homeless. Some 3,400 houses were destroyed while more than 5,350 were seriously damaged. Thousands of head of cattle were reported dead or missing as well as 28,000 small livestock and over 36,000 poultry.

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### Action Taken by the Government of Haiti and Local Voluntary Agencies

The Haitian disaster relief organization, Organization Pre-Desastre et de Secours (OPDES) and the Haitian Red Cross (HRC) immediately dispatched damage assessment teams to the Les Cayes region. A task force was established in the Ministry of Agriculture with FAO and USAID/Haiti representatives to assess crop damage. By June 5, the GOH Road Maintenance Organization had conducted an assessment and reported that a major bridge spanning the Torbeck River, about 5 km west of Les Cayes, had collapsed.

Electricity was restored on Les Cayes almost immediately. On June 4, the diesel plant which had been flooded was cleaned out and returned to operation.

The Service National d'Eau Potable (SNEP), the GOH water company, immediately began work to repair the Les Cayes water system, issuing radio warnings to the population to boil all water before use until the system was restored. In response to the temporary lack of potable water, the HRC sent 10,000 halazone tablets to Les Cayes for use in water purification. On June 11, the system was disinfected with chlorine provided by SNEP and the German Foreign Assistance Agency and was operational by June 14.

On June 7, the HRC attempted to send some emergency food supplies, including powdered milk and butter oil supplied by the HRC and rice supplied by the Ministry of Interior, to Les Cayes. Two military helicopters were used to transport the food. However, as the helicopters approached Les Cayes, a large crowd was forming near the army barracks, the site of the helicopter landing zone. Because of the crowd, the Les Cayes commandant canceled the landing, and the helicopters returned to Port-au-Prince. The Director of the HRC reported that the people in the Les Cayes town did not want food. They wanted jobs. Subsequent reports reiterated this.

On June 11, the Haitian Association of Voluntary Agencies (HAVA) convened a meeting of members and other donors to exchange information on the situation in the flood area. OPDES Director Christian Theodore reported that OPDES was assessing damage to the areas west of Les Cayes using helicopter support provided by the GOH military. An assessment of infrastructure damage was initiated by a five-man team from the Ministry of Public Works. The Ministry of Agriculture conducted a preliminary crop damage assessment and reported that 22,000 pounds of seeds were being procured locally for delivery to the Les Cayes area for replanting. Working with USAID, an UNDR0 consultant, and HAVE members, OPDES initiated a rehabilitation/recovery program to return flood damaged lands to production and improve the vulnerability of housing in the Les Cayes area (See Assistance Provided by the USG).

Assistance Provided by the United States Government

News of the flooding in the southern peninsula reached Port-au-Prince quickly. USAID and Embassy staff monitored the situation, informing OFDA of the evolving crisis. On June 4, 1986, U.S. Ambassador Clayton E. McManaway, Jr., declared that the flooding in the Les Cayes area constituted a disaster. On June 11, a check for \$25,000 was presented to the director of the Haitian Red Cross for the immediate relief of the flood victims. The funds were used by the HRC to purchase beds, mattresses, and household utensils for the homeless of the Les Cayes area.

In support of the OPDES-coordinated agricultural rehabilitation project to restore flood-damaged land to cultivation, the U.S. requested OFDA to supply much needed hand tools to enable the project to begin before the September/October planting season. In response, OFDA identified a quantity of tools available from its regional stockpile in Panama and provided a grant to the U.S. Mission to procure additional tools locally.

A major problem affecting both immediate disaster relief and longer-term recovery effects was the fact that the principal bridge spanning the Torbeck River and providing access to the entire southwestern region was unusable. Severely weakened by the flooding and heavy rains, the Torbeck River bridge finally collapsed.

OFDA was requested to procure the necessary replacement parts and erection equipment to repair the two lane Acrow panel bridge. An AID-funded host country personal services contractor at the Ministry of Public Works was identified as having appropriate experience and was detailed to work on the bridge repairs.

Equipment provided by OFDA was procured from Acrow Corporation of America at a total cost of \$93,731 and included panels, bracing frame trusses, chord bolts and reinforcements, clips, bolts, pins, and lights. Erection tools included wrenches, pliers, ring spanners, hydraulic jacks, and jack shoes. This equipment, transported from Philadelphia to Port-au-Prince via Arrow Airways on a DC-8, arrived in Port-au-Prince on August 18, cleared customs, and was delivered to the bridge site. Reconstruction efforts began immediately, and the GOH was able to launch the new bridge on September 9.

Recognizing both the need to repair or replace damaged homes and the opportunity to improve housing construction techniques, the U.S. Mission encouraged OPDES to design a policy for housing reconstruction in the Les Cayes area. Mission staff worked closely with OPDES, HAVA, Pan Caribbean

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Disaster Preparedness and Planning Project staff, the Center for Human Resource Development (CHRD), and an UNDR0 consultant to help OPDES elaborate a policy and a plan for housing reconstruction. The result of these collective efforts was a two-phase plan in which local builders would be trained in improved construction techniques and a pilot reconstruction project would be implemented in Cavaillon in Phase I. Phase II encompassed the reconstruction of damaged housing throughout the affected area. The U.S. Mission requested OFDA funding for the Phase I effort, totaling \$11,894.

As part of Phase I activities, the regional OPDES subcommittee on housing met with local leaders to select one house builder from each of the 18 affected communes to participate in a pre-training conference. CHRD organized and executed the one-day pre-training conference in Port-au-Prince in order to achieve consensus among the builders that the recommended construction techniques (developed in 1984 by INTERTECT with OFDA funding) were superior, affordable, and acceptable. CHRD, using the INTERTECT study and results of the pre-training conference, developed training materials, including booklets with sketches and illustrations and captions in Creole, for 18 community workshops. Forty participants were expected at each workshop. Posters, models, and samples of critical housing elements such as joints, foundation anchoring, and bracing and roofing techniques were prepared and distributed to each community.

Summary of USG Assistance

Ambassador's Authority to Haitian Red Cross.....	\$25,000
Bridge parts.....	\$93,731
Transport of bridge parts.....	\$36,909
Mission allotment for housing training program.....	\$11,894
Hand tools from Panama stockpile (value not included in total).....	(\$8,300)
Transport of hand tools from Panama to Haiti via ocean freight.....	\$1,326
Mission allotment for local purchase of additional hand tools.....	\$41,923
TOTAL	\$210,783

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### Assistance Provided by U.S. Voluntary Agencies

ADRA - ADRA officials visited affected area and established committees among respected members of the community to identify families needing food assistance and having at least one child under age five. Ration cards were distributed to a total of 100 families who then received SFCM, NFDM, and vegoil.

World Concern of Seattle - supplied medical supplies from in-country stocks consisting of 19,000 doses of antibiotics, 4,000 doses of water purification tablets, cough syrup, syringes, dressing, tylenol, disinfectant, antiseptics, intravenous fluids, 10 bales of blankets, and 10 bales of clothing. In addition, 200,000 analgesic tablets and 32,000 doses of upper respiratory medication were delivered from out-of-country stocks. All these supplies were turned over to the Ministry of Public Health in Port-au-Prince for transport and distribution to the residents of the Les Cayes area.

### Assistance Provided by the International Community

#### International Organizations

PCDPP - dispatched UNDR0 housing specialist Al Wason from Antigua to Haiti in response to a request from OPDES, to assist GOH in developing a housing reconstruction plan involving both the GOH and local PVOs.

UNDR0 - launched an international appeal for assistance to restore rural infrastructure destroyed by the floods and contributed \$18,212 in cash. Project implementation, initiated in October 1986, was arranged through OPDES with technical assistance provided by an UNDR0 delegate made available by the Swiss Government. Also provided contract services of telecommunications specialist Pierre Catala to assist OPDES in emergency communications.

#### Governments

Germany, Fed. Rep. - The Foreign Assistance Agency (GTZ) dispatched chemicals to Les Cayes for use in disinfecting the town water system, value not reported.

Japan - contributed \$100,000 to the Ministry of Public Health for disaster relief/rehabilitation.

Netherlands - contributed \$227,272 through UNDR0 to support recovery projects.

Switzerland - provided \$145,000 through UNDR0 to support recovery projects; \$15,151 to procure a project vehicle; and 7.5 man/months of technical assistance valued at \$55,000.

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United Kingdom - donated \$61,622 through UNDR0.

TOTAL

\$622,257