



Office of U.S. Foreign Disaster Assistance

DISASTER CASE REPORT

Agency for
International
Development

Washington D.C.
20523

DOMINICAN REPUBLIC - Hurricanes David & Frederic

Date: Hurricane David struck on August 31, 1979
Hurricane Frederic struck on September 6, 1979

Location: Entire country; Santo Domingo and areas to the west, southwest, and northwest of the city were most heavily affected

No. Dead: Approximately 1,400

No. Injured: Over 4,000

No. Affected: 1.2 million (23% of total population); the homes of approximately 350,000 people were destroyed or severely damaged

Damage:	Total damages were put at more than \$830 million
	agriculture: \$345 million
	industry: \$160 million
	electricity: \$50 million
	services (commerce, gov't
	bodies, etc.): \$100 million
	other infrastructure (roads,
	buildings, etc.): \$150 million

The Disaster

The twin blows which struck the Dominican Republic in the form of Hurricane David, followed almost immediately by Hurricane Frederic, were considered by Dominican authorities to be the worst natural disaster to hit the country in this century.

Hurricane David struck on the afternoon of August 31, after a sudden change from its expected course. Instead of following the predicted path across the sparsely populated Barahona Peninsula in the southwestern part of the country and continuing into Haiti, David suddenly turned almost 90° to sweep through heavily populated areas west of Santo Domingo. The storm then travelled across the country in a northwesterly direction,

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leaving the northwest coast of Haiti early on the morning of September 1. Coastal communities and those a short distance inland bore the full brunt of David's 150 mph winds. Although its wind velocity lessened as it lost force during its overland passage, the storm still carried 80 mph winds when it departed.

Hurricane Frederic, technically only a tropical storm by the time it reached the Dominican Republic, entered 15 miles southwest of Santo Domingo early on September 6, followed the path that David had taken fairly closely, and departed during the day of September 7. Unlike David, however, Frederic inflicted primarily rain rather than wind damage. Most stations in the Dominican Republic reported 10"-15" of rain during August 29 - September 7; 23.9" at San Pedro de Macoris was the highest figure recorded at a town, although in the mountainous regions hardest hit by water damage the total must have been still higher.

The combination of severe wind and flood damage was devastating, particularly for a small developing country with limited resources such as the Dominican Republic. Damage was especially heavy to roads, and in the areas of electric power, housing, and agriculture. Even before the hurricanes, the Dominican Republic had faced economic difficulties due to high import costs for petroleum and the adverse effect on the agricultural sector of low sugar earnings and African swine fever. These problems were dwarfed by the storm's impact, estimated at approximately \$830 million, or about 16% of current GDP. The sum represented some 80% of total investment in a normal year, more than 120% of the value of exports for 1978, and more than 140% of current government income.

Approximately 25% of the country's 5.2 million people were seriously affected by the disaster. The worst hit area was from Santo Domingo south and west to Azua. The area was overrun with refugees who swarmed down from the mountains, homeless and destitute.

Roads & Bridges. Severe damage to the country's roads and bridges resulted from an unusual sequence of events. Hurricane David's winds created a great deal of debris, and the rapid rainfall careened down mountain slopes, swelling streams into torrents. Debris began to collect at points of constrained flow such as bridges and culverts. When water began to back up around clogged bridges and culverts and then overtop these structures, the already soaked ground began to give way, causing structural failure of what had in effect become dams. Just as the water from David had begun to subside, Frederic struck with its heavy rains and the sequence of events was repeated.

More than 100 kilometers of principal routes and 31 bridges were destroyed by mudslides or washouts throughout the Dominican Republic. Of the country's 6,000 kms of rural roads, between 2,000 and 2,200 kms were rendered unusable and 111 bridges were damaged or destroyed. Communications were knocked out throughout the country; all roads in the central and southern sections were severed and transportation overland became virtually impossible. Hundreds of population centers were isolated, and food and potable water were soon in critically short supply. The damage to the rural transportation network severely limited the rural population's access to food, housing materials, health services, farm inputs, and markets.

Electric Power. The hurricanes caused extensive damage to the Dominican Republic's electric power system. Hydroelectric power plants at Valdesia and Tavera were damaged and knocked out of operation. The transmission system from Santo Domingo southwest to Azua was almost totally destroyed, while more than 35% of the distribution systems in the towns of Bani and San Cristobal provinces were down. In general, 20-70% of the country's power lines were down, depending on the particular area. The financial and other resources of the Dominican Electricity Corporation were not adequate to cope with the task of reestablishing and repairing the system, especially since such materials as poles, wire, and transformers were in very short supply.

Housing. Shelter needs in the wake of the storms could only be termed astonishing. Approximately 57,000 dwellings, housing some 350,000 people, (most of them poor) were severely damaged or destroyed. The heaviest damage was in the provinces west of Santo Domingo, often in isolated and mountainous rural locations. In one area of 100 square miles between and to the north of Bani and San Cristobal, 75% of all housing was destroyed, apparently by wind. Most damage was to roofs, although in many cases doors and windows were also destroyed. The destruction of housing and other community infrastructure created serious health and refugee problems.

Agriculture. The total estimated value of losses of crops and chickens from the combined effect of wind and water damage was set at \$266.5 million, about 25% of estimated agricultural GDP. Most of the damage was to small farms. Physical damage to irrigation, farm and poultry industry installations, and small marine fisheries was estimated at an additional \$46.4 million. As a result of storm damage, there were considerable shortages of traditional low-income food crops, mainly plantains and root crops, necessitating greatly increased food imports. Lost exports, primarily coffee, were valued at about \$100 million. The combined effect of increased food imports and lost export income was to significantly worsen the GODR's already strained balance of payments situation.

Dominican forests were savaged by the storms. Approximately 94,000 trees, mostly pine and primarily in public forests and parks, were felled. The fallen trees represented a potentially valuable resource in terms of the lumber that could be recovered from them. However, damage to the forests represented a serious environmental threat in terms of potential erosion, silting, flooding, etc.

Action Taken by the Government of the Dominican Republic (GODR)

During the warning period before Hurricane David struck, the GODR began coordinating relief efforts through the Secretariat of State for Civil Defense. Subsequently, at the direction of President Guzman, the assessment and relief efforts were coordinated jointly through the Secretariat of State for the Armed Forces and Civil Defense.

About 150,000 people were placed in emergency shelters, primarily in the major towns, before the arrival of Hurricane David. Only about half of them were able to return to their homes after the storms had passed, and in the first days after the storms about 200,000 homeless people were

sheltered in churches and public buildings. Some 1.8 million people received assistance from the Civil Defense Secretariat in September. In addition to 5,075,072 kgs of P.L. 480 food supplies through CARE, CRS, and CWS, Civil Defense also provided supplies from GODR stores and from public and private sources.

The GODR requested UNDRO to mobilize and coordinate assistance efforts internationally. Blanket landing clearance was granted for aircraft carrying relief supplies. In addition, Dominican military personnel carried out relief missions and clean-up activities.

On September 1, the GODR urgently requested assistance from the United States in the form of helicopters for rescue and relief operations in outlying areas. Subsequently, President Guzman made a personal request to President Carter for assistance in restoring the country's electric power system, which the GODR declared its first reconstruction priority. The Dominican Electric Corporation (CDE) restored power to the country's only oil refinery and to the pumping stations for the Santo Domingo water system. By the end of September intermittent electric power had been restored to much of the capital.

The Minister of Public Health determined that the number of doctors and other medical personnel in the country was sufficient to meet emergency needs. However, assistance in the form of drugs and medical supplies was requested from the U.S. and other donors. The Ministry formed pharmacy and supply teams to categorize medical relief supplies as they arrived in Santo Domingo.

The Public Works Secretariat mobilized all possible resources to deal with the problem of restoring road communication. Virtually all privately owned construction equipment was placed under the control of the Secretariat. Within two weeks of the disaster, the major highways had been reopened.

The GODR purchased 500,000 sheets of locally manufactured galvanized roofing for emergency housing repair through the National Housing Institute (INVI). In the two months following the hurricanes, INVI and private agencies repaired more than 12,000 houses using locally available materials and either teams of paid workers or community self-help labor.

The Secretariat of Agriculture started an immediate campaign to assist in clearing fields for replanting and providing seeds and technical assistance to promote planting of 60 to 90-day crops. This campaign had the dual purpose of providing food and income for stricken farmers as well as food for the domestic market.

The GODR Monetary Board approved creation of a \$50 million fund for agricultural and industrial reconstruction credit under the direction of the Central Bank. The GODR also imposed special new taxes on local and imported alcoholic beverages to generate additional monies for reconstruction. In the two months following the storms, the GODR expended approximately \$22 million for relief and reconstruction, divided among agriculture (\$13.0), electricity (\$1.5), housing (\$2.2), public works

(\$3.3), water systems (\$1.9), schools (\$1.0), and health (\$0.2). The first phase of the GODR's longer term recovery plan, with a budget of \$114 million, had as its priorities agricultural production (39%), electric power (23%), public works (9%), housing (7%), and public health (7%).

Dominican voluntary organizations and businesses were active in the relief effort. The Dominican Development Foundation, for example, mobilized Dominican businessmen and their foreign associates (mostly U.S.) in a relief effort that involved hundreds of Dominican volunteers. Students from the National University went into the most devastated areas to collect information on needs. Volunteers packed thousands of family-size, one-week food parcels that were then transported to destitute areas. Clothing, bedding, and shoes were also shipped, and subsequently zinc roofing, lumber, and rails for housing reconstruction were also provided. The GODR contributed \$5 million to help fund the operation; businesses participating in the emergency program added their support.

Assistance Provided by the United States Government (USG)

The Office of Foreign Disaster Assistance (OFDA) had a disaster officer prepared to depart for the Dominican Republic even before Hurricane David struck on August 31. The U.S. Ambassador in Santo Domingo made a formal disaster declaration on September 1 and transmitted President Guzman's request for U.S. helicopters to assist with relief. The Ambassador's disaster authorization of \$25,000 was made available to the GODR for the purchase of food and other relief supplies. Clearance for photo reconnaissance missions was also obtained.

The first 19 members of the U.S. Disaster Assessment Survey Team (DAST), provided by the U.S. Department of Defense (DOD), arrived in Santo Domingo on September 2 and met almost immediately with representatives of the Dominican armed forces, civil defense, electric, telephone, and water companies, etc. to begin coordination of the enormous assessment and relief tasks. As the extent of the devastation became known, and especially after the second blow dealt by Hurricane Frederic, it became clear that normal DAST survey and assessment functions would have to be expanded to include the provision of relief assistance. The widespread destruction of communications facilities and the road network made helicopters the only practical means of identifying and supplying badly affected areas, especially in the country's mountainous rural regions.

As the relief effort continued, the GODR requested additional helicopter support from the USG as well as food, medical supplies and drugs, emergency shelter equipment, and other equipment. Then on September 4 and 5, all relief and supply operations had to be suspended because of Hurricane Frederic. Supplies from the USG and other donors began to arrive on September 6, and the relief effort got underway in earnest. In the initial emergency phase of relief operations the bulk

of the USG effort was borne by the augmented DOD team, which carried out disaster surveys and relief missions concurrently. At its peak 295 men were associated with the team, with up to 17 helicopters and other equipment. (Ten of these helicopters were provided by the Army National Guard in Puerto Rico, which also provided ten water-tank trailers.)

The DOD team carried out a wide variety of assessment and relief tasks under difficult conditions. Because of the disruption of normal government functions and communications, all relief forces had to be self-sustaining. Teams were required to carry their own fuel, rations, medical supplies, repair parts, and communications. By the middle of September, satellite terminals were established at Santo Domingo and San Isidro, augmenting communications and greatly assisting coordination of relief work. Relief efforts were initially concentrated in a 75-mile arc north and west of Santo Domingo, representing the range of the helicopters. By September 14 forward bases for refueling and resupply were established at Azua and Bonao, which extended the operational range to cover the entire country. It was then possible to make contact with isolated areas that had been entirely cut off and whose residents had been in desperate straits since David struck on August 31.

In addition to distributing supplies and transporting technical and medical teams, providing potable water became a major responsibility of the military group. This was accomplished by army engineers using four small and one large water purification units as well as supplies from Puerto Rico. Units were installed and maintained at refugee centers at Bani, Nizao, and in other locations.

The DAST assessment report was completed and submitted to the GODR by October 4. However, in view of still isolated populations and the need for technical assistance in providing potable water, the GODR requested the continued assistance of the water team and some helicopter support. Both were provided through October 24, by which time U.S. helicopters had flown more than 790 missions, carrying more than one million pounds of cargo, most of it food and medicine. The only major mishap was the tragic crash of a helicopter on September 7, in which a U.S. Navy officer, a Dominican Navy captain, and a Dominican doctor were killed.

After observing the work of the military group, the U.S. Ambassador had the highest praise for the "combined operation," which drew on units from all of the U.S. armed services. He reported that all of the men and women involved had been "working endless hours, coordinating shipments of food, medicine, and relief personnel and the flights carrying them to devastated areas, preparing schedules in coordination with the units and the Dominican relief authorities, supervising and carrying out air coordination for arriving supplies, and in

general riding herd on this complex operation, involving 295 military personnel of four service elements, up to 17 helicopters of the same elements, constant resupply operations and the close coordination with the Dominican authorities and organizations that is essential to the success of our humanitarian efforts."

At the request of the GODR, 100 family tents with tent flies, two medium tents, and 250 double cots were air-lifted from the OFDA stockpile in Panama to help meet emergency shelter needs. Also flown in were 120,000 meals of C-rations for delivery to isolated areas by helicopter. To provide potable water by helicopter, 4,500 locally manufactured water jugs were purchased. In addition, thirteen 30-KW generators and two 100-KW generators were provided.

The GODR did not identify a need for medical personnel but did request drugs, medical supplies, and first aid stations. The following drugs and supplies were provided from DOD stocks and commercial sources:

4,000 Ampicillin vials	5,000 Lidocain w/ Epinephrine vials
100,000 Ampicillin tablets	2,650 Surgical dressings
2,000 Benzthene Penicillin vials	3,000 cotton rolls
50,000 Erythromycin tablets	1,000 adhesive tape roles
2,000 Garamycin vials	100 suture silk roles
1,000,000 aspirin tablets	25,000 scalp vein sets
110,000 disposable syringes	500 atropine sulfate vials
20 syringe cartridges	2,500 Chloramphenicol ophthalmic ointment tubes
100,000 hypodermic needles	2,500 Chloramphenicol ophthalmic solution bottles
2,280 catgut suture packages	2,500 Solucortef ampules
30,000 suture needles	20,000 Aldomet tablets
48,000 intravenous infusion sets	25,000 Penicillin g. potassium ampules
1,875 Aminophylline vials	

Medical supplies obtained from Puerto Rico included quantities of normal saline, dextrose saline, lactated Ringer's, and merthiolate. Five field first aid stations were supplied with surgical instrument and supply sets, medical supply sets, and bedding sets.

In order to forestall an outbreak of epidemic disease, the GODR asked for assistance in conducting an assessment. Two entomologists from the Navy Disease Vector Ecology & Control Center, Jacksonville, Florida, spent September 24 - October 10 in the Dominican Republic. In their opinion there was no imminent threat, although they reported a potential for outbreaks of malaria and dengue fever. Assistance would be required only in the case of a major occurrence.

When the hurricanes struck, there were already more than 7.5 million kgs of P.L. 480 food commodities in the Dominican Republic in the hands of CARE, Catholic Relief Service (CRS), and Church World Service (CWS). Little of this was damaged by the storms, and all three agencies, in coordination with the Dominican Secretariat for Civil Defense, developed plans to make these stocks available to hurricane victims. CARE also arranged for the air transport of 100,000 lbs. of vegetable oil from its stocks in Haiti to the Dominican Republic. In addition to their regular programs, in FY 80 (October 1979 - September 1980) CARE and CRS distributed 9,073 MT of P.L. 480 food commodities in hurricane relief programs, to a total of approximately 500,000 recipients.

US Peace Corps volunteers played a significant role in American relief efforts. Peace Corps nutritionists were requested to work in five different hospital/refugee areas to assist in the preparation of food and the maintenance of sanitation. In Santo Domingo volunteers and AID staffers made arrangements to bake a nutritious bread, dubbed "pan de paz" (bread of peace), from P.L. 480 commodities already in the country. By September 8, despite a gasoline shortage, red tape, and a curfew, the volunteers had produced 10,000 loaves for distribution to refugee centers in the capital as well as to rural areas via helicopter. On September 13 five PCV reconnaissance teams were dropped by helicopter into the most isolated mountain areas lying in David's corridor. Their assignment was to make an on-the-ground assessment of needs. They were able to provide much valuable information in planning future helicopter missions.

At the end of the first emergency phase of the relief effort, indicated by the departure of the military team towards the end of October attention turned to longer term repair and rehabilitation needs in the areas of electric power, housing, agriculture, and roads. AID officials, working with their Dominican counterparts, prepared a series of damage estimates and reprogrammed \$12 million in regular development assistance loan funds for small farmer credit and erosion control programs made essential by hurricane destruction.

U.S. grant assistance in the areas of housing repair and rehabilitation and agricultural projects was largely channeled through private voluntary organizations as well as through government-sponsored organizations already working in the Dominican Republic: CARE, CRS, Servicio Social de Iglesias Dominicanas (SSID), Southern Baptist Convention, the American Institute for Free Labor Development (AIFLD), the Dominican Development Foundation (DDF), and the National Institute for Housing (INVI). In the first phase of this assistance, completed by June 1980, some 3500 shelter units were repaired or rehabilitated (\$788,000). A second, larger shelter program was begun in September 1980 at a cost of \$1.42 million. Grants to voluntary organizations for small scale agricultural projects totalled \$212,000. The reconstruction of the badly

crippled electrical power system was one of the highest priorities of the Dominican government noted earlier. The services of a consulting engineering team to assist in assessing damages and planning reconstruction were made available and, in November 1979, a grant was made to the Dominican Electricity Corporation (CDE) to cover the purchase of materials necessary for the restoration of electrical power in the cities of Bani, San Cristobal, and Haina (\$400,000). In the same month a grant agreement was signed with the GODR for the restoration of the high tension transmission line from Bani to Valdesia to San Cristobal. This work was undertaken by the Puerto Rican Electrical Power Authority (PREPA) and was completed in June 1980. A second phase of the project, the reconstruction of the line from Bani to Azua, also carried out by PREPA, was begun in January and will be completed in June 1981. These two construction projects, together costing \$6.68 million, were major undertakings and were carried out in a timely and efficient fashion to the satisfaction of all those involved.

A group of donors contributed towards repairing the severe damage inflicted on the country's road system. The World Bank and the Inter-American Development Bank (IDB) provided financing for the reconstruction of primary and secondary roads. The U.S. contribution covered repair or replacement of 250 kilometers of rural roads, including 16 bridges at a cost of \$5 million. This work was carried out in the summer of 1980.

In the aftermath of the widespread destruction caused by Hurricanes David and Frederic, the U.S. Congress voted a special appropriation for Caribbean hurricane relief, including \$15 million for the Dominican Republic. When these funds became available in 1980, they were used in part to reimburse OFDA and AID for funds already advanced, and in part to fund the second phases of programs for shelter reconstruction (\$1.42 million) and electric power restoration (\$3.58 million).

Summary of USG Assistance

From International Disaster Assistance funds, FY 79:

Ambassador's authorization used for the local purchase of food and other disaster relief supplies.....	\$25,000
Medical supplies (from commercial sources).....	\$34,847
First-aid stations.....	\$4,528
Medical and other supplies through FEMA/Puerto Rico plus transport costs.....	\$75,708
Water purification chemicals through FEMA/Puerto Rico plus transport costs.....	\$8,307

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Replacements costs for 100 tents & tent flies from the Panama stockpile.....	\$46,248
Expenses incurred by the OFDA disaster relief officer.....	\$1,205
Expenses incurred by two Navy entomologists.....	\$2,333
Grant to the U.S. Mission to cover increased administrative costs.....	\$5,000
Reimbursement to CARE to cover transport costs of P.L. 480 oil from Haiti.....	\$10,500
Transport costs for one planeload of food and other relief supplies collected in Miami and Dade County, Florida.....	\$9,200
Total from International Disaster Assistance funds, FY 79.....	\$228,876
An additional sum from IDA funds for FY 79 was expended to met DOD costs for DAST and relief operations in both the Dominican Republic and Dominica.....	\$4,364,865
From International Disaster Assistance funds, FY 80:	
Expenses incurred by the electrical engineering consultant.....	\$2,520
Transport costs for a shipment of nails.....	\$4,340
Replacement costs for 250 cots from the Panama stockpile.....	\$9,704
Reimbursement to Partners of Partners of the Americas to cover part of transport costs for relief supplies collected by Michigan Partners.....	\$1,000
Grant to the Dominican Electricity Corporation (CDE) to purchase materials necessary for the restoration of electric power in the towns of Bani, San Cristobal, and Haina.....	\$400,000
Contract with the Puerto Rico Electric Power Authority (PREPA) for repair and restoration of the high tension electrical transmission line between Bani, Valdesia, and San Cristobal.....	\$3,049,597
Grant to the U.S. Mission for housing repair materials.....	\$250,000
Grant to the U.S. Mission of the unused portion of the PREPA contract obligation towards the second PREPA contract.....	\$42,863
Grants to voluntary organizations for shelter repair and rehabilitation.....	\$538,000
Grant to voluntary organizations for small-scale agricultural projects.....	\$212,000

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A sum of \$3 million was reimbursed to the IDA account for
FY 80 from the special Congressional appropriation for
Caribbean hurricane relief.....\$3,000,000

Total from International Disaster Assistance funds, FY 80.....\$1,510,024

Amount paid out of the account as of 2/28/82; subject to
revision.

Special congressional appropriation for the Dominican
Republic (Caribbean hurricane relief, FY 80)

Approximately 7.5 million kgs. of P.L. 480 foods were
already in the Dominican Republic in the hands of CARE, CRS,
and CWS when the hurricanes struck. 9,073 MT of commodities
were distributed through CARE and CRS as disaster relief
in FY 80, with a value, including freight, of.....\$4,030,000

TOTAL \$10,133,765

Assistance Provided by US Voluntary Agencies

American National Red Cross (ANRC) - cash contribution through
LORCS (\$25,000); 20,000 lbs. of canned food and a disaster
specialist; forwarded 40,000 lbs. of canned soup from Campbell
Co., \$100,000 worth of medicines from American Can Co., 80,000
lbs. milk products from Borden Co., 96,000 lbs. of crackers
from Keebler Co. all valued at a total of \$25,000.

American Institute for Free Labor Development, AFL-CIO - con-
tribution of \$10,000 for purchase of relief supplies by
National Confederation of Workers of the Dominican Republic.

Assemblies of God, Foreign Service Committee - cash contribu-
tion of \$10,000 to Assemblies of God of the Dominican Republic.

Baptist World Alliance - contribution of \$10,000 for relief
activities through the Foreign Mission Board of the Southern
Baptist Convention.

Brother's Brother Foundation - 250,000 sq. ft. of roofing
material plus ocean freight (\$80,000); 12,000 lbs. of baby food
(\$5,000) all valued at a total of \$85,000.

CARE - contributed asbestos sheets, nails, lumber, zinc roofing
(\$29,616), 131,468 lbs. of soy protein powder (\$430,109), 4
school & housing reconstruction projects (\$186,220); distri-
buted shovels, picks, and machetes to the Dominican Republic
Civil Defense Corps (\$50,000); distributed more than 2 million
pounds of P.L. 480 foods to approximately 500,000 people in
Santo Domingo, Boca Chica, La Victoria, Calderas, Salinas,

Bani, and San Jose de Ocoa; arranged for the shipment of food contributions from Nabisco, R. J. Reynolds, and Heinz companies; arranged for shipment of 100,000 lbs. of salad oil from Haiti all valued at a total of \$695,945.

Catholic Medical Mission Board - 12,905 doses of tetanus vaccine, 29,120 doses of cholera vaccine, 4,800 containers of baby formula, 81,000 units of disinfectant Catholic Relief.

Services (CRS) - contribution for local purchase of relief supplies (\$20,000); sent a planeload of relief supplies including 103 rolls & 10 cartons of plastic sheeting, 29 cartons of folding cots, 4 cases of picks, handles & heads, 80 cartons of medicines, 10,704 blankets (\$88,284); distributed more than 4,000 metric tons of P.L. 480 foods to 233,000 persons in a 6-month emergency program; administered a cash grant of \$420,000 from the EEC for relief work valued at a total of \$108,284.

Church World Service (CWS) - contribution to CEPAE for disaster survey & needs assessment (\$2,000); contribution for warehouse repairs & transportation of food relief (\$5,000); provided 2 concrete block making machines, 500 hammers, 500 machetes, 500 lbs. of roofing nails, 1,000 roofing sheets, 80 bales of blankets, 4,500 lbs. vegetable seeds; distributed P.L. 480 foods valued at a total of \$7,000.

Compassion International - cash contribution for the purchase of food, seeds, roofing, medicines (\$10,000); 125 tons of rice all valued at a total of \$50,625.

Direct Relief Foundation - 2,495 lbs. of pharmaceuticals & medical supplies all valued at a total of \$56,132.

Lutheran World Relief - cash contribution of \$10,000 through CADEC.

MAP International - 2,279 lbs. of antibiotics, analgesics, surgical dressings, bandages all valued at \$39,881.

Michigan Partners of Partners of the Americas - canned food sufficient for 500 adults for 8 weeks & 100 children for 90 days, clothing for 20,000 people, hospital equipment, emergency medical equipment, antibiotics, seeds; shipping costs valued at \$1,175.

Missionary Enterprises, International Crusades - in collaboration with other donor organizations, provided medical supplies, emergency shelter, portable generators, clothing, construction supplies (\$37,600); 85,000 lbs. of food provided by Food for the Hungry.

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Pan American Development Foundation - 4 packaged disaster hospitals (\$600,000); 2 large & 13 small generators (\$147,000); 2-person medical team (\$1,554); 28,000 lbs. of infant formula (\$62,000) all valued at a total of \$810,554.

Redemptorists, Baltimore Province - cash contributions for immediate & general relief (\$16,500); parishioners in Puerto Rico donated 5 tons of food, 1 ton of medical supplies, 20 tons of clothing all valued at a total of \$16,500.

Roman Catholic Episcopate of Puerto Rico - 60,000 lbs. of food & medicine.

Salesians of St. John Bosco - cash contribution of \$100,000 for emergency relief operations.

Salvation Army - 3.5 MT of food supplies; building supplies for 155 houses all valued at a total of \$77,000.

Save the Children Federation - cash contribution of \$25,000.

Seventh-day Adventist World Service - shipment of 30,000 lbs., including 225 bales of clothing, 150 tents, 3,000 blankets, 2,000 lbs. of soap, 500 pairs of shoes all valued at a total of \$100,000.

Sister Cities Program - the City of Miami & Dade County, Florida, collected 25,000 lbs. of food & medicines for relief assistance.

Southern Baptist Convention, Foreign Mission Board - contribution for the purchase of beans, rice, other foods (\$40,000); funds for medical relief including DC-3 charter (\$25,000); 12-person medical team to provide medical assistance in rural areas; 6 construction teams (10-15 men each) to assist with repairs and reconstruction of houses (\$15,000) all valued at a total of \$80,000.

World Relief Commission - contributions for food, medicines, & transport costs all valued at a total of \$37,000.

World Vision Relief Organization - contribution towards air transport of relief supplies (\$5,000); 10 tons of rice & beans (\$5,000) all valued at a total of \$10,000.

TOTAL \$2,503,256

Assistance Provided by U.S. Private Organizations

Alcoa Corporation - sent a planeload (80,000 lbs.) of food & medicines; cash contribution; participated in highway reconstruction efforts in the southwest.

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American Airlines - provided free transportation from New York for 37.5 tons of food & drugs supplied by Gulf & Western Industries & the Dominican Medical Society.

American Can Corporation - drugs, medicines, medical supplies through the American National Red Cross valued at a total of \$100,000.

Borden Company - 80,000 lbs. of their products through the American National Red Cross.

Campbell Soup Company - 40,000 lbs. of canned soups through the American National Red Cross.

City Gas Corporation of Miami - donated fuel for Eastern Airlines relief flights.

Eastern Airlines - provided planes to fly in food and relief supplies collected in the Miami area.

Gulf & Western Company - sent 2 planeloads (75 tons) of food, baby food, drugs; chartered an aircraft for one of the planeloads.

Heinz Foods - 40,000 lbs. of food through Brother's Brother Foundation; 700 cases of baby food through CARE.

Keebler Corporation - 96,000 lbs. of crackers through the American National Red Cross.

Nabisco Company - 3 cargo containers of food through CARE.

R. J. Reynolds Company - 6 cargo containers of food through CARE.

Assistance Provided by the International Community

UN & Inter-governmental Organizations

UN General Assembly - passed a resolution appealing to wide range of organizations for further assistance to the Dominican Republic and Dominica, and also requesting individual countries with the opportunity to do so to grant products from these countries preferential access to their markets for a reasonable period in order to allow the stricken nations to obtain the foreign exchange they urgently needed.

FAO - cash for local purchase of seeds (\$96,000); for local purchase of agricultural equipment and supplies (\$154,000) valued at a total of \$250,000.

UNDP - cash contribution of \$20,000 for relief supplies.

UNDRO - cash contribution of \$10,000 for relief supplies.

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UNICEF - assessment team; 3.5 tons of children's milk food plus air transport.

WFP - food supplies transferred from stocks in Haiti; additional food supplies.

World Bank (IBRD) - grants for emergency road construction (\$25 million) and urgent import requirements (\$25 million) all valued at a total of \$50,000,000.

Inter-American Development Bank (IDB) - assessment team; grants for agricultural rehabilitation (\$40 million); infrastructure rehabilitation (\$40 million), industry rehabilitation (\$8 million); loan package for rehabilitation and reconstruction all valued at \$88,000,000.

Organization of American States (OAS) - cash contribution of \$500,000 for relief.

Pan American Health Organization (PAHO) - two medical teams with supplies & a sanitary engineer; 10,000 envelopes of oral rehydration formula.

European Economic Community (EEC) - contribution of \$420,000 administered by CRS.

Governments

Argentina - food, blankets, clothing, medicine.

Austria - 45,722 kg. of milk powder (\$67,892); cash contribution (\$2,829) all valued at a total of \$70,721.

Canada - cash contribution of \$65,789 through League of Red Cross Societies (LORCS).

Colombia - food, blankets, clothing, medicine.

Cuba - airlift of 20 tons of food including condensed milk and baby food, 10 tons of medicines, and other relief supplies.

El Salvador - shipment of drugs.

France - 3 tons of medical supplies (\$23,810) plus air transport (\$11,628) all valued at a total of \$35,438.

Germany, F. R. - 30 tons of food & medical supplies plus air transport; assessment team; team of hydroelectric specialists to assess damage to dams; low-interest loan for repair and restoration of dams; grant for repair of hydroelectric facilities (\$12 million) all valued at a total of \$12,000,000.

Haiti - air transport of WFP food stocks in Haiti to Dominican Republic; 70 tons daily for seven days.

DOMINICAN REPUBLIC - Hurricanes David & Frederic

Japan - medical supplies, mosquito nets, 130 tons of canned meat & fish valued at a total of \$457,665.

Liechtenstein - cash contribution of \$5,750 through LORCS.

Netherlands - 100 chain saws plus 20 spare chains; cash contribution through UNDR0 of \$71,500.

Norway - cash contribution of \$30,000 through UNDR0.

Sweden - cash contributions of \$375,000 through LORCS & UNDR0.

Switzerland - 100 family tents, 2 million water purification tablets through LORCS; logistics expert all valued at a total of \$47,590.

Taiwan - cash contribution of \$100,000.

United Kingdom - cash contribution of \$23,000 through the British Embassy.

Venezuela - 30 tons of food plus air transport; \$50 million loan; grant for import requirements (\$50,000) all valued at a total of \$50,050,000.

Voluntary Agencies

Medicins sans frontieres & Action d'urgence international (France) - 18 personnel including 2 doctors and 3,000 lbs. equipment for 2 hard-hit isolated villages 50 km. northwest of Santo Domingo.

Oxfam (UK) - cash contribution of \$10,000 to CAPAE for transportation and mobilization of work brigades in relief areas.

Australia Red Cross - cash contribution of \$85 through LORCS.

Bahamas Red Cross - cash contribution of \$1,018 through LORCS.

Belgium Red Cross - 14 cases of new clothing valued at \$7,292.

Canada Red Cross - 50 tons of condensed milk valued at \$212,941.

Chile Red Cross - 500 kg. of powdered milk valued at \$1,000.

Colombia Red Cross - 8 tons of food supplies, clothing for 7,000 people; services of a delegate.

Denmark Red Cross - cash contribution of \$9,090 through LORCS.

Finland Red Cross - cash contribution of \$4,360 through LORCS.

Germany, F.R. Red Cross - medicaments, baby food, canned meat all valued at a total of \$59,360.

Honduras Red Cross - cash contribution of \$500 through LORCS.

DOMINICAN REPUBLIC - Hurricanes David & Frederic

Hungary Red Cross - 2,000 kg. of milk powder (\$4,924); 28,000 cartons of medicaments (\$68,932); tents, blankets, sheets, towels all valued at a total of \$73,856.

Italy Red Cross - cash contribution of \$2,918 through LORCS.

Japan Red Cross - cash contribution through LORCS (\$15,000); new clothing (\$83,162) all valued at a total of \$98,162.

Monaco Red Cross - cash contribution of \$566 through LORCS.

New Zealand Red Cross - cash contribution of \$1,047 through LORCS.

Norway Red Cross - cash contribution of \$4,845 through LORCS.

Romania Red Cross - 7,390 kg. of milk powder; rice all valued at a total of \$21,044.

Spain Red Cross - cash contribution through LORCS (\$20,000); 700 kg. of medicaments (\$8,265) all valued at a total of \$28,265.

Sweden Red Cross - cash contribution of \$22,727 through LORCS.

Switzerland Red Cross - 1,000 blankets, assorted clothing all valued at a total of \$22,290.

Thailand Red Cross - cash contribution of \$150 through LORCS.

United Kingdom Red Cross - cash contribution through LORCS (\$6,223); drugs & medical supplies (\$1,369) all valued at a total of \$7,592.

United Kingdom Red Cross, Bermuda Branch - cash contribution of \$2,920 through LORCS.

Yugoslavia Red Cross - 30 kg. of medicaments.

Individuals - cash contributions of \$1,648 through LORCS.

TOTAL	\$203,126,129
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* Please note: the figures for total U.S. voluntary agency and international assistance are an approximation. In many cases the cash value of in kind aid is unavailable.