

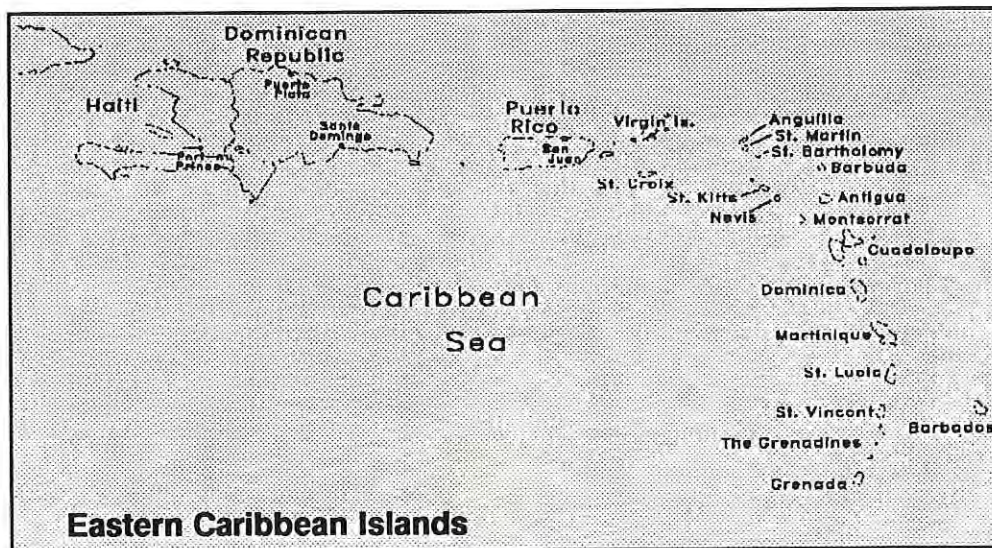


DISASTER CASE REPORT

Agency for
International
Development

Washington D.C.
20523

CARIBBEAN - Hurricane Hugo FY 1989



Date: Sept. 16-19, 1989

Areas Affected: The eastern Caribbean islands of Dominica, Guadeloupe, Montserrat, Antigua, St. Kitts, Nevis, Anguilla, and Tortola (British Virgin Islands)

No. Dead: 21; 6 missing

No. Affected: 50,000; 30,000 homeless; numerous injuries

Summary of Assistance:

USG	\$4,715,028
U.S. Voluntary Agencies	\$325,000
International Community	\$6,631,185
TOTAL	\$11,671,213

The Disaster

Hurricane Hugo ripped through the eastern Caribbean on Sept. 16-17, 1989, causing massive destruction of housing, public buildings, and infrastructure, and leaving thousands homeless. It was the sixth hurricane of the 1989 Atlantic season, and the most powerful storm to hit the Leeward islands in at least a decade. The storm moved into the U.S. Virgin Islands and Puerto Rico on Monday, Sept. 18, skirted the northern coast of the Dominican Republic on the night of Sept. 18, and slammed into the mainland U.S. at Charleston, South Carolina on Sept. 22.

On Sept. 17 and 18, initial damage assessments in the eastern Caribbean were conducted by an international team comprising representatives from OFDA, the Canadian International Development Agency (CIDA), PAHO, and the League of Red Cross Societies. A ground survey was done of Antigua and aerial surveys of Montserrat, St. Kitts, and Nevis. Over the next several days, more detailed damage and needs

assessments began to flow in from the islands, and it became clear that the islands of Montserrat and Guadeloupe had been the most severely affected. Because Guadeloupe is a French department, relief efforts for that island were handled by France. The relief efforts on the other four affected islands, whether independent nations or British colonies, were handled as a multinational effort. Below is a summary of the damage by island and a map of these four islands.

Montserrat, a British Crown Colony with a population of 12,000, took the full force of Hurricane Hugo. Ten people were killed. Ninety percent of the houses were affected: 30% were destroyed, 30% severely damaged, and 30% somewhat damaged. An estimated 10,000 to 11,000 people were left homeless. The storm stripped the island of the lush vegetation for which it is famous (Montserrat is often referred to as the "emerald isle"). The hospital, half of the island's 12 health clinics, the police station, and two of the larger schools were badly damaged. The port was virtually destroyed.

Guadeloupe, a French department with a population of 300,000, reported seven people killed and 84 injured by Hugo. About 12,000 people were rendered homeless. The storm severed telephone lines and seriously damaged houses and tourist hotels. About 70% of the roads were made impassable and an estimated 3,000 head of livestock perished.

The neighboring islands of St. Kitts and Nevis---the two islands form an independent nation with a population of 45,000---were also hit by the hurricane. Two people were confirmed dead, and the sugar crop was devastated. On St. Kitts, about 5% of the houses were damaged and 5% of the power poles were downed. The principal hospital in St. Kitts suffered severe damage: its roof was blown away and serious water leaks made many wards unusable. Hugo caused more extensive damage to Nevis: 20% of the roofs were destroyed and 60% sustained moderate to serious damage. The main hospital lost its roof, mattresses (from water damage), and vaccines (from the power outage). Damage to the electric lines on both islands was serious.

On Antigua---the nation of Antigua and Barbuda has a population of 78,500---the hospital, the Home for the Aged, and the Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) building sustained damage. Two people were confirmed dead. The storm disrupted the electrical system, and damaged

10% to 15% of residences and five hotels. Damage was concentrated in the southwestern corner of the island.

On Dominica, a nation of 77,900, extensive flooding and landslides severely damaged coastal roads and the island's seawall. The water supply was also disrupted. Over 75% of the banana crop, Dominica's major source of foreign exchange, was destroyed.

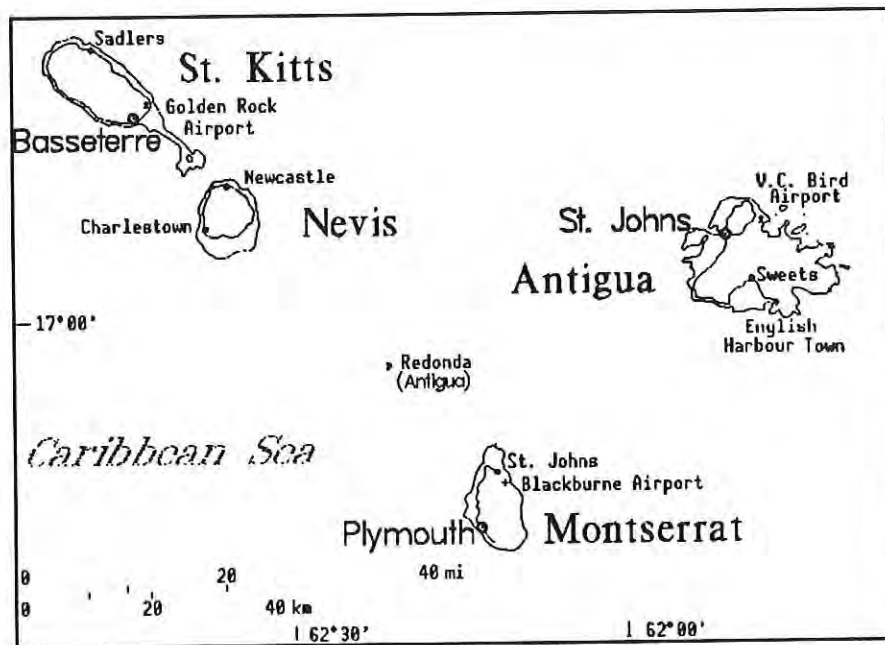
On the island of Tortola (population 10,200) in the British Virgin Islands, an estimated 25% of the houses were damaged by the storm. Coastal roads and infrastructure were also substantially damaged.

Finally, other Caribbean islands suffered damage. The Government of the Netherlands reported that the Netherlands Antilles islands of St. Eustatius, St. Maarten, and Saba sustained damage. On St. Maarten, about 500 people were homeless; 200 victims had to go to temporary shelters. The airport sustained damage to equipment, but remained open. Approximately 45 Dutch Marines were flown in from Curacao to assist the police and those cleaning up. On St. Eustatius, up to 200 people were rendered homeless. Some 71 homes, or 25% of the total housing stock, sustained severe damage on Saba, the most affected of the Netherlands Antilles-affiliated islands. Saba's only harbor pier and communications tower were damaged, and telephone communication after the storm was limited. Anguilla (a British Crown Colony affiliated with St. Kitts-Nevis) also suffered some damage.

Disaster Relief Activities on the Islands

The governments of the affected islands began mobilizing ministries and workers for the relief effort immediately after the storm and appealed for assistance from the international community. Foreign assessment and response teams established Antigua as a base of operations for all the affected islands in a multinational effort to assist the victims of Hurricane Hugo.

Donor coordination meetings were held in both Barbados and Antigua. Daily coordination meetings in Antigua were chaired by Franklin McDonald of the Pan Caribbean Disaster Preparedness and Prevention Project (PCDPPP) and later also by Dr. Carl Mitchell of the Organization of Eastern Caribbean States (OECS). These meetings were attended by donors and disaster relief workers, including representatives



of the League of Red Cross and Red Crescent Societies (LRCS), local and other national Red Cross societies, PAHO, the EC, OFDA, Caribbean Council of Churches, Christian Children's Fund, the U.K., Canada, and the island governments. The donor coordinating meetings in Bridgetown, Barbados, were chaired by the U.N. Resident Representative. The Barbados' group kept a list of pledges, as most of the donors have representatives for the region in Bridgetown, and the Antigua group maintained a list of requirements and donor responses.

Contingents from the defense forces of Barbados, Trinidad and Tobago, Jamaica, and Guyana handled airport loading, clearing, and distribution on Antigua, Montserrat, and Nevis. CARICOM set up a disaster relief unit (the CDRU) at the airport in Antigua to coordinate logistics and monitoring of the relief goods arriving in Antigua for all the affected islands. This unit was headed by Commander Peter Brady of the Jamaica Defence Forces, who contributed to greater efficiency in the movement of goods. The OFDA team worked with this group to develop a chart for tracking requirements and donated commodities. The disaster relief workers in Antigua communicated with each other through hand-held radios provided by OFDA. Radio base stations and two TCS-9000 satellite communications terminals were set up at the U.S. Embassy in St. John's by the OFDA team

members from the Metro Dade Fire Department. PAHO set up a TCS-9000 in Plymouth, the capital of Montserrat. An OFDA team also installed a mobile VHF system on Montserrat.

PAHO conducted assessments of the health sector on all affected islands and provided assistance where needed. Two water engineers from Jamaica and PAHO addressed water issues in Montserrat, while a PAHO engineer was assigned to St. Kitts and Nevis to monitor water quality on the two islands.

The United Kingdom, Canada, and the U.S. divided responsibilities for reestablishing vital services on the islands. Canada focused its efforts on airports and the water sector as needed on all islands; the United Kingdom took responsibility for relief assistance to Montserrat and power restoration on Antigua; and the U.S. assisted in restoring electrical services on the islands of St. Kitts and Nevis.

Assistance Provided by the U.S. Government

On Sept. 15, A.I.D.'s Office of U.S. Foreign Disaster Assistance (OFDA) pre-positioned a team of disaster experts to assess the impact of Hurricane Hugo on the islands. Two team members from OFDA's regional office in San Jose, Costa Rica, and two members from the Miami Metro Dade Fire Department, carrying two

Summary of USG Assistance

RELIEF SUPPLIES AND TRANSPORT

376 rolls of plastic (\$289.80 per roll)	\$108,965
16 3,000-gallon water tanks (\$2,400 per tank)	\$38,400
500 pairs of work gloves (\$3.00 per pair)	\$1,500
7 chain saw kits (at \$257 per kit)	\$1,799
Transport for the above supplies from Panama to Antigua (3 C-130s)	\$47,800
TOTAL	\$198,464

OFDA RESPONSE TEAM AND SUPPORT

COSTS - (includes per diem and transport for OFDA DART team, 10 individual support kits, 12 tents, grant to the PCDPPP to help pay for the costs of the CDRU [\$20,000], and funds for team support) \$62,262

REHABILITATION PROJECT COSTS FOR LEEWARD ISLANDS

Per diem and transport costs for Jay Carter and Richard Harrell to do power assessments	\$4,000
Transport of Lloyd Electric equipment and vehicles on 2 DOD C5As	\$150,000
Contract with Lloyd Electric to restore power on St. Kitts and Nevis	\$1,589,202
Shipping and handling costs of the 588 tons of zinc sheeting from Jamaica to Tortola, St. Kitts, Nevis, Antigua, and Montserrat	\$84,000
Transport cost of a rotor from Antigua to Dover AFB on a DOD C5A (at the request of the Government of Antigua and Barbuda)	\$2,100
TOTAL	\$1,829,302

REHABILITATION PROJECTS FOR DOMINICA

Ambassador's authority given to the Government of Dominica for clearing roads \$25,000

Bilateral grant to the Government of Dominica for rehabilitation of bananas and fisheries and for road clearance \$2,600,000

TOTAL **\$2,625,000**

FUNDS BY FISCAL YEAR

Total FY 1989	\$1,902,166
Total FY 1990	\$2,812,862
TOTAL	\$4,715,028

FUNDS BY SOURCE

Most funds were from OFDA, either from its regular International Disaster Assistance Account (IDA account) or from "borrowed" funds. A.I.D.'s Bureau for Latin America and the Caribbean (AID/LAC) reimbursed OFDA \$1,800,000 in January 1990 and is planning to reimburse OFDA a further \$1,400,00 (for a total of \$3,200,000) for part of the power restoration project and the rehabilitation of the agricultural sector in Dominica.

Currently, the funds come from the following sources:

FY 1989 IDA account	\$738,428
FY 1989 borrowed funds (reimbursed by AID/LAC in FY 1990)	\$1,000,000
FY 1989 stockpile items	\$157,276
FY 1989 disaster travel operating expenses	\$6,462
FY 1990 IDA account	\$2,012,862
FY 1990 AID/LAC funds	\$800,000
TOTAL	\$4,715,028

Assistance Provided by U.S. Voluntary Agencies and Other Private Groups

Adventist Development and Relief Agency (ADRA) - worked on Guadeloupe, St. Croix, Antigua, Montserrat, St. Vincent, St. Lucia, Martinique, St. Kitts-Nevis, and Dominica and sent 150 tents, blankets, WPTs, plastic sheeting, powdered milk, medical supplies, food, and \$150,000 to affected islands.

Allied Universal - donated chlorine through the Chlorine Institute.

American Airlines - provided transportation of ADRA supplies on Sept. 21.

A civil engineer and an electrical engineer from USAID/Barbados, a civil engineer from USAID/Kingston, and an electric power contractor conducted assessments of the electrical systems on the affected islands during the first week after the disaster and then assisted in the design of a rehabilitation program to restore electrical power to St. Kitts and Nevis. During the next week, OFDA, RDO/C, and Lloyd Electric Co. conducted negotiations and made arrangements for the arrival of the power crews and necessary equipment. The next Friday, Sept. 29, and Saturday, Sept. 30, two DOD C5As arrived in St. Kitts with trucks and equipment for the project. The crews also arrived that weekend. Work began on the project on Oct. 3. Power was 95% restored to St. Kitts by Oct. 16, at which time, the Lloyd Electric crews moved to Nevis. After that, the crews proceeded on Nov. 17 to Montserrat to assist in power restoration there. The contract with Lloyd Electric

Joslin and Aaron Williams, USAID/Bridgetown Mission Director, arrived in Antigua soon after the disaster, and they and the team made initial assessments and met with government officials. OFDA agreed to pay for the cost of shipping the roofing to Montserrat, St. Kitts, Nevis, Antigua, and Tortola. An A.I.D. housing team arrived in the area on Oct. 2 and held discussions with the relevant government officials to finalize distribution procedures and delivery schedules.

Jamaica donated a total of 342 bundles of zinc sheeting of 200 sheets each (for a total of 68,400 sheets), which amounted to 588.24 short tons (1,176,480 lb.), or 534.76 MT. Also donated with the zinc sheeting were six bundles (4,350 lb.) of ridge capping, six pallets (7,750 lb.) of tie-down straps, ten pallets (30,000 lb.) of zinc nails, and six boxes (80 lb.) of washers. The roofing sheets left Jamaica on Oct.

<u>COMMODITY/COUNTRY</u>	<u>MONTSERRAT</u>	<u>ST. KITTS</u>	<u>NEVIS</u>	<u>ANTIGUA</u>	<u>TORTOLA</u>	<u>TOTAL</u>
Plastic Sheeting	268 rolls	36 rolls	14 rolls	31 rolls	27 rolls	376 rolls
Chain Saws	5		2			7
Water Tanks	2	1	4	9		16
Work Gloves	500 pairs					500 pairs
Zinc Sheeting*	400.76 tons	51.6 tons	73.96 tons	51.6 tons	10.32 tons	588.24 tons

* Included appropriate roof capping, tie-down straps, zinc nails, and washers.

was initially paid for by OFDA, but A.I.D.'s Bureau for Latin America and the Caribbean reimbursed OFDA for part of the cost. USAID/Bridgetown provided oversight of the work. OFDA also funded the cost of the C5A airlifts.

Meanwhile, there was concern over the devastation to the housing sector, particularly on Montserrat. Bill Joslin, USAID/Kingston Mission Director, informed OFDA and the team that there was a substantial amount of zinc sheeting in Jamaica, left over from the USG contribution after Hurricane Gilbert the previous year. Zinc sheeting is a common roofing material in the Caribbean. The government of Jamaica agreed to donate the surplus roofing sheets to the Leeward islands. Discussions then took place among USAID/Kingston, OFDA, the team, and local government officials regarding the roofing sheets. Bill

11 on the ship *Nordic*. It travelled first to Tortola, arriving on Oct. 15 and unloading six bundles of zinc (10.32 short tons). The ship then proceeded to St. Kitts and Nevis, unloading 30 bundles (51.6 short tons) on the first island and 43 bundles (73.96 short tons) on the second. Then, the *Nordic* went to Antigua to unload 30 bundles (51.6 short tons). Finally, the ship reached Montserrat on Oct. 20 and left the largest amount, 233 bundles (400.76 short tons).

Finally, for Dominica, USAID/Bridgetown developed a bilateral program with the government to rehabilitate the agricultural sector, particularly bananas and fisheries, and to clear the roads. OFDA provided the funds, but USAID/Bridgetown administered the project; A.I.D.'s Latin America and the Caribbean Bureau plans to reimburse OFDA for these costs.

Pan American Health Organization (PAHO) - provided \$30,000 for relief efforts on St. Kitts-Nevis, Montserrat, and Antigua. PAHO stationed a 10-person team with a satellite telephone unit, valued at \$20,000, 2 radio operators, 1 physician, and 3 cameramen in Montserrat. PAHO also sent water engineers to St. Kitts-Nevis and Montserrat, a representative to Dominica, and an environmental engineer to St. Kitts to assist the Ministry of Health. PAHO replaced the vaccines destroyed on Nevis.

Pan Caribbean Disaster Preparedness Project (PCDPPP) - coordinated assistance at its headquarters in Antigua.

U.N. Development Program (UNDP) - furnished \$150,000 for the British Virgin Islands, Montserrat, St. Kitts-Nevis, and Dominica, divided equally among the islands.

U.N. Disaster Relief Organization (UNDRO) - provided \$10,000 for Montserrat, \$5,000 for Anguilla, \$5,000 for the British Virgin Islands, and \$30,000 for Antigua, St. Kitts-Nevis, and Dominica.

Governments

Barbados - sent 32 defense forces personnel to work with the CARICOM Disaster Relief Unit (CDRU).

Canada - donated \$65,000 through PAHO for hospital repairs and emergency medical needs and \$275,000 through the LRCS. The LRCS funds were used to purchase and transport generators, blankets, rolls of plastic, water bottles, and WPTs. Canada also provided personnel and equipment to repair airports and water supplies.

Dominica - sent 2 doctors and 2 nurses to Montserrat.

France - sent 2 DC-8s carrying 450 civil defense personnel and 50 MT of equipment to Guadeloupe on Sept. 17.

Germany, Fed. Rep. - sent building supplies, 12 generators, batteries, and kitchen sets.

Guyana - dispatched defense forces personnel to work with the CARICOM Disaster Relief Unit (CDRU) and positioned a Sky Van in Antigua to assist with inter-island transportation.

Jamaica - sent members of the Jamaican Defence Forces to work with the CARICOM Disaster Relief

Unit (CDRU). Jamaica also gave excess zinc roofing provided to the island after Hurricane Gilbert. A Jamaican Defense Forces plane provided inter-island personnel transport. The Jamaica Public Service Company (JPS) sent a 9-person team of its best linemen to Antigua on Sept. 30 to work with other power restoration crews for a month.

Trinidad/Tobago - provided defense forces personnel to work with the CARICOM Disaster Relief Unit.

United Kingdom - sent 2 naval vessels: 1 to St. Kitts, and 1 to Montserrat. The U.K. sent an initial assessment team by helicopter to Montserrat. A British Airways flight arrived in Antigua on September 19, carrying 11.5 MT of supplies from the British Red Cross. The cargo comprised 154 tents, 640 rolls of plastic sheeting, 2,500 blankets, 1,000,000 WPTs, and antibiotics. A Royal Air Force crew and C-130 was dispatched from its base in Belize to provide inter-island transport. British emergency assistance to the region totaled \$639,700. Rehabilitation assistance was valued at \$2,238,950, and included financing power restoration teams from British Electricity Boards for Montserrat, and equipment and materials for restoring other essential infrastructure.

Venezuela - donated and transported medical supplies and deployed a 21-person defense force contingent to St. Kitts.

Non-Governmental Organizations

The following national societies of the Red Cross contributed to the relief effort:

Australia - \$3,846

Austria - \$5,988

Bahamas - 2 volunteers for the LRCS international team

Belgium - \$10,805

Canada - a relief flight to Antigua on Sept. 21 with \$275,000 worth of the following goods: plastic sheeting, collapsible plastic water containers, 18,000 blankets, 18,000 cots, WPTs, and 12 6-kW generators. A representative assisted the regional delegate in preparing reports for donors.

Denmark - \$13,750

Fed. Rep. of Germany - hand tools, nails, generators, flashlights, batteries, and kerosene lanterns on a charter flight

France - a team of 30 construction engineers and 4 radio technicians with high-

American Red Cross (ANRC) - sent a delegate and a communications specialist to assist the LRCS delegate in Antigua, and loaned telecommunications equipment worth \$20,000; one representative traveled to Montserrat and the other to St. Kitts, where they established satellite communication links. The ANRC also sent 10,000 comfort kits, worth \$24,500. Total ANRC assistance to the eastern Caribbean emergency, as of Sept. 28, was \$52,000.

AmeriCares - donated water pumps, medical supplies, and plastic sheeting.

Catholic Relief Services (CRS) - donated \$10,000 to Caritas/Antilles for the local purchase of food, cooking utensils, and other supplies for Antigua and Dominica.

Chlorine Institute - coordinated the donation of over 90 tons of chlorine provided by its member companies to the PADF for the affected Caribbean islands.

Christian Children's Fund (CCF) - has field offices on Montserrat, Antigua-Barbuda, Dominica, St. Vincent, Anguilla, and St. Kitts-Nevis, and appealed for food, WPT, medical supplies, and building supplies. CCF also assisted with long-term reconstruction.

Church World Service (CWS) - donated \$5,000 to the Caribbean Conference of Churches for relief activities on the affected islands, and appealed to its constituency for \$100,000.

Four Seasons Hotel - contributed 9 MT of food and other goods, including chain-saws, hammers, nails, clothing, generators, and power tools to Nevis. The commodities arrived on Sept. 24.

Intertran - donated its services in emergency supplies preparation and delivery to the Texaco-chartered 707 in Miami.

Jones Chemicals - donated chlorine through the Chlorine Institute.

Northwest Medical Teams - sent medical supplies, WPTs, food, and blankets to Antigua for St. Kitts. The value of the donation was approximately \$75,000.

Oxfam/US - provided assistance on Montserrat, Dominica, and St. Kitts-Nevis. It donated \$20,000 to an indigenous NGO coalition for an agricultural fund and coordinated assistance from the Boston area.

Pan American Development Fund (PADF) - provided first-aid items, blankets, tools, generators, electrical supplies, shovels, blankets, tents, and plastic sheeting worth \$68,000. PADF worked with several U.S. companies in providing assistance after Hurricane Hugo. It also provided \$25,000 for self-help rehabilitation of houses on Nevis and Montserrat.

PB & S Chemical Co. - donated chlorine through the Chlorine Institute.

Pittsburgh Plate Glass - donated chlorine through the Chlorine Institute.

Stanley Works - donated hand tools and reconstruction equipment to St. Kitts, Nevis, and Antigua.

Texaco - sent a relief flight to Antigua on Sept. 23, carrying supplies donated by Texaco and U.S. Red Cross chapters. After unloading supplies for Texaco employees at Antigua, the plane went to St. Kitts.

The following U.S. PVOs also provided assistance to various Caribbean islands: American Friends Service Committee, Direct Relief International, Lutheran World Relief, Operation USA, Partners of the Americas, Presiding Bishop's Fund for World Relief, Salvation Army World Service, SCF/US, and WVRD.

TOTAL **\$405,000**

Assistance Provided by the International Community

International Organizations

European Community (EC) - funded a Sept. 20 British Red Cross airlift (see *U.K. Red Cross*, below). The relief items were divided among the islands. In addition, the EC pledged \$1,309,410 for Guadeloupe, and \$1,050,000 for the cost of the airlift and aid for the following islands: Antigua, Dominica, St. Kitts/Nevis, Anguilla, British Virgin Islands, and Montserrat.

League of Red Cross and Red Crescent Societies (LRCS) - gave \$40,000 for Antigua and Dominica and received pledges of \$313,000 from an appeal. A LRCS representative in Antigua coordinated INTELSAT communications in Antigua. LRCS organized a regional team, comprising volunteers from national chapters in Jamaica, Bahamas, and Trinidad/Tobago.

portable satellite telephone units (TCS-9000), traveled to Antigua. Paul Bell, OFDA's regional advisor based in Costa Rica, headed the team. Based on the initial assessment by the OFDA team, Charge d'Affaires R. James McHugh, who is based in Antigua, declared a disaster in the islands of Antigua, Montserrat, and St. Kitts-Nevis, and exercised his disaster assistance authority, immediately releasing funds for support of relief operations.

Other members of the OFDA Disaster Assistance Response Team (DART) arrived in Antigua on Sept. 19 to survey the damage from the hurricane and to assist with assessments, logistics, information management, monitoring, and press relations. An OFDA DART member established a tracking system for relief commodities, while a Peace Corps volunteer tracked the destination of all in-coming relief.

Meanwhile, because of the extensive damage to Dominica, on Sept. 22, U.S. Charge d'Affaires in Barbados, John Clark, declared a disaster on the island of Dominica and donated the disaster assistance authority of \$25,000 to the government of Dominica for road-clearing projects.

During the relief phase, OFDA arranged for three DOD C-130 aircraft to bring supplies from OFDA's stockpile in Panama. A DOD C-130 aircraft loaded with three 3,000-gallon collapsible water tanks, 12 6-person tents, 140 rolls of plastic sheeting, and seven chain saw kits arrived in Antigua the evening of Sept. 19; this shipment was the first major flight of relief supplies to reach the area. The majority of the supplies were distributed on Montserrat, with some going to St. Kitts, Nevis, and Antigua. The two other flights arrived in Antigua from Panama on the weekend of Sept. 23-24, and brought 236 rolls of plastic sheeting, 13 3,000-gallon water tanks, and 500 pairs of work gloves (the latter were provided to school children who were assigned to clean up trash and debris on Montserrat). From the three shipments of USG relief goods, 268 (71%) of the 376 rolls of plastic were sent to Montserrat. After relief coordinators visited Tortola and saw the extent of the damage there, the team decided to donate 27 rolls of plastic sheeting from the third plane to be used to cover schools.

The USG relief supplies were part of the larger international response. Supplies provided by other donors included medical supplies, plastic sheeting, water containers, food, clothes, generators, blankets,

tents, tarp, flashlights, and toiletries. A primary worry during the first week of the relief effort was air transport for the supplies from V.C. Bird Airport in Antigua to the other affected islands. OFDA offered to provide planes for inter-island transport. However, the Royal Air Force was able to keep its C-130 in the region longer than expected--in fact, the RAF crew and plane, based in Belize, stayed almost three weeks--and the Caribbean forces provided several small aircraft, so it was not necessary for OFDA to make this contribution.

OFDA team members accompanied some of the shipments of the supplies to the affected islands to ensure that they were consigned properly. Team members also held discussions with local government officials in charge of distribution and the relief effort, gave demonstrations on how to cut and use the plastic sheeting, and observed some of the distribution. Later, the team toured Montserrat, St. Kitts, Nevis, and Antigua to monitor the end use of USG-donated supplies. The table below shows how these relief supplies were distributed.

Soon after relief operations got underway, planning began for the rehabilitation phase. This stage consisted of restoring vital services destroyed or damaged by the hurricane, in this case, electricity, airports, and housing. Early in the emergency phase of the program, OFDA/Washington and team leader, Paul Bell, initiated discussions with USAID/ Bridgetown (which also serves as the Regional Development Office for the Caribbean--RDO/C) and A.I.D./W concerning A.I.D.'s strategy for medium-term rehabilitation on the islands. Both the team and OFDA viewed power restoration and the provision of permanent roofing materials as the most appropriate potential interventions by the U.S. However, they wanted to ensure that the U.S., Canada, and Britain coordinated their rehabilitation assistance (this was done in Jamaica after Hurricane Gilbert in 1988 with power restoration and it worked very well). Representatives of the three countries met in Barbados on Sept. 21 to discuss coordination of the rehabilitation phase and decided that Canada would focus its efforts on airports (Canada originally built or expanded many of the airports in the region) and the water sector; Britain would take responsibility for power restoration on Montserrat and Antigua; and the U.S. would concentrate on power restoration on St. Kitts and Nevis, and assist the British if necessary. Work would begin as soon as circumstances allowed.

frequency radio equipment went to Guadeloupe; some of the radio technicians went on to Martinique and Dominica. The French Red Cross also accepted disaster welfare requests for concerned family members.

Jamaica - 2 volunteers for the LRCS team

Japan - \$9,790

Netherlands - \$5,688

Norway - \$14,084

St. Vincent and the Grenadines - a shipment of food, clothing, cooking gas, and blankets to Montserrat

Trinidad and Tobago - 2 volunteers for the LRCS international team

United Kingdom - a relief flight carrying food, 460 rolls of plastic sheeting, 10 1,500-liter collapsible water tanks, 15,000 tropical blankets, 2,000,000 WPTs, and 2 delegates, arrived in Antigua on Sept. 22. The British Red Cross delivered 4 MT of food to Antigua and designated 1 MT for Montserrat, 1.5 MT for St. Kitts, and 1.5 MT for Nevis.

Tear Fund/UK - donated \$3,174 worth of relief supplies.

International Rescue Corps/UK - donated a team with communications equipment for Montserrat.

TOTAL \$6,210,185